

# **Review of Local Air Quality Management**

**A report to Defra and the devolved  
administrations**

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## EXECUTIVE SUMMARY

### Introduction and context (sections I – III)

1. We were commissioned by Defra and the devolved administrations (DAs) to undertake a review of the operation of local air quality management (LAQM) in the UK, and to make recommendations with a view to (i) improving air quality outcomes; and (ii) making better use of available LAQM resources. Proposals for legislative change were within scope.
2. There are some significant institutional and other differences between the air quality situations in different parts of the UK, which we describe in our main report. However, in general these do not affect our conclusions and recommendations.
3. The LAQM regime was established under the Environment Act 1995 and the Environment (Northern Ireland) Order 2002. It falls into two distinct parts: (i) the *review and assessment* of air quality within the local authority area; and (ii) the development and implementation of *action plans* to tackle local air pollution. Local action planning comes into play only in areas where review and assessment has revealed problematic pollution levels, and in consequence a local *Air Quality Management Area* (AQMA) has been declared.
4. The EU has set mandatory air quality targets for certain pollutants. The UK is at present failing to meet EU targets for ambient concentrations of particulate matter (PM<sub>10</sub>) and nitrogen dioxide (NO<sub>2</sub>). Consideration of what additional part LAQM might play in achieving EU targets was a major driver behind the commissioning of our review.
5. There have been significant decreases over the last decade in the amounts of these two pollutants emitted to the atmosphere, but a less marked downward trend in concentrations in the air around us. In Greater London, there is evidence of an upward trend in concentrations of PM<sub>10</sub> and NO<sub>2</sub> at some roadside sites. The relationship between emissions and ambient air quality levels is complex and not fully understood.
6. Road transport is the largest single source of air pollution, accounting for 33% of emissions in the case of NO<sub>x</sub> and 21% in the case of PM<sub>10</sub>. Transport is identified as the main source of pollution in 92% of all AQMAs.
7. LAQM involves a formidable amount of process, dictated by the legislation itself and by statutory guidance. There are issues about whether this is resource efficient, and whether it is consistent with the current policy of disengaging from detailed central intervention in the delivery of local government business.

## **The role of LAQM (section IV)**

8. The architects of the 1995 legislation had a vision of the role of LAQM which has not been fully realised in practice. National policies were expected to deliver acceptable air quality standards everywhere except in a small number of pollution hotspots. LAQM was designed to identify and tackle problems in these hotspots.

9. What has happened in practice has been different. Local authority review and assessment has revealed continuing air pollution problems on a far wider scale than anticipated, with 58% of all authorities declaring AQMAs, many of which cover the whole area of the authority. Measures put in place locally through LAQM action planning have had very limited impact, and few AQMAs have been revoked following the successful implementation of pollution reduction measures. Pollution levels which exceed EU limit values are far more widespread than a few hotspots, and LAQM is contributing little to reducing them.

10. Against this background, we consider that Government needs to look again urgently at the role of LAQM in the light of current realities, and to provide a clear statement of what it is expecting local measures to deliver. This in turn means deciding what kind of measures need to be put in place to deliver the required air quality standards, and which of them can best be pursued through local rather than national policies. It is not possible to reach sensible judgements about how to reform the LAQM arrangements without first establishing what we are expecting them to achieve.

11. There is a statutory requirement for the UK Government and devolved administrations to produce an air quality strategy, in which such matters should be spelt out. The 2007 UK Air Quality Strategy falls short in this respect, and we would hope to see a statement of the measures expected of local authorities in the next update. In the meantime, we recommend that a limited strategy focussed solely on the immediate NO<sub>2</sub>/PM<sub>10</sub> compliance issue is developed urgently, bringing out what measures Government would like to see adopted at local level.

12. In the absence of clarity about what is expected of LAQM, we postulated two alternative models for the purposes of this report. The first 'modest' model is not unlike the current reality, in which LAQM plays an important role in monitoring local air quality and ensuring that air quality concerns are taken into account in local decision taking. The views expressed on review and assessment (section V), improving links with other policies (section VII) and communicating clearer messages (section VIII) are all relevant to this model. The second 'proactive' model assumes that local authorities additionally have a decisive part to play alongside central government in driving through measures to secure compliance with national and EU target levels. The discussion of possible new powers and duties (section VI) is relevant to this model.

## **Review and assessment (section V)**

13. The review and assessment part of the LAQM process is generally considered to be working very well. Local authorities on the whole have developed a good understanding of air quality in their areas. One unforeseen consequence is that no less than 234 authorities have declared AQMAs. The only major criticisms of the system put to us – and these were not widely or strongly argued – were that the amount of process and central prescription is excessive, and that too little is being done to integrate central and local sources of information on air quality.

14. The system is unquestionably very centrally-driven and process-heavy. Authorities are required to produce Updating and Screening Assessments every three years, Progress Reports every intervening year, Detailed Assessments before they declare an AQMA and Further Assessments after they have done so. All this is before going on to prepare action plans. All these reports are scrutinised centrally by contractors working on behalf of Defra and the DAs.

15. We gave some thought to the case for radical change which would remove most or all of these requirements, bringing the system into line with current policies to reduce central intervention in local government activity. We concluded, however, that it would be unwise to abandon arrangements which appear to be widely welcomed by AQ officers themselves, especially at a time when Government is keen to see improvements in air quality. We did however conclude that there was scope for some modest reforms to streamline the requirements, in particular through extending the intervals between reports (which could be done by amendments to the statutory guidance), and removing the statutory requirement for Further Assessments when a legislative opportunity occurs.

16. Under the LAQM arrangements, local authorities run about 1000 automatic air quality monitoring sites across the UK, most of them to high quality standards. We would like to see better use being made of the data generated at these sites for national monitoring and research. A first step would be to include good quality data from these sites on the national Air Quality Archive, and to take account of them in annual UK-wide analyses of trends.

## **Action planning and implementation (section VI)**

17. Unlike review and assessment, the action planning and delivery elements of LAQM are not thought to be working well. Action plans are being generated, but they are not for the most part resulting in improvements to air quality on the scale needed. This is in part because of some failures to deliver what is proposed in the action plans, in part because

some of the measures implemented are not having the impact expected of them, but perhaps most significantly because many of the measures included in action plans have limited potential impact when compared to the scale of the problem. As argued in paragraph 10, this may point to the need to look again at what can reasonably be expected of local as opposed to central policies to tackle air pollution.

18. Those involved with air quality policy in local government and elsewhere attribute the failure of action planning to a range of factors including: the low priority that tends to be accorded to air quality by the public and local politicians, especially when AQ measures conflict with jobs or car-use; the fact that the main instruments of policy fall to other departments or agencies with little interest in or understanding of air quality; and a lack of adequate powers and/or resources to deal with the problem. There are also doubts about the feasibility of removing local exceedences through any realistic combination of local actions.

19. We see scope to enhance action plan delivery by improving the links between air quality and other policy areas, and by communicating clearer messages about what needs to be done and why. These themes are explored in sections VII and VIII. If the 'modest' view of the role of LAQM is adopted, then reforms under these headings should be all that is needed. But Government will need to consider more ambitious reforms if the 'pro-active' view is adopted, and local authorities are expected to play a major part in implementing measures to secure compliance with EU targets.

20. We considered a range of proposals put forward by stakeholders for extending local authorities' obligations and powers. Some stakeholders were keen to see a strengthening of the wording of the current legislation under which the duty to prepare a plan 'in pursuit of' air quality objectives would be replaced by an express duty to deliver air quality objectives. Our view is that it would not be reasonable to impose such a duty on local authorities when their actions are only a part of the story in tackling air pollution. Other stakeholders argued for mandatory local authority targets. Whilst we do not rule these out in principle, we consider that it would be extremely difficult to devise a scheme under which targets could be decided and performance monitored effectively and fairly. Some local authority stakeholders argued for an extension of new powers to local authorities for the management of air quality, though the nature of the new powers sought were not specified in any detail. Again, we do not rule this out in principle, and note that there is provision in the 1995 Act to extend local authority powers without the need to resort to new primary legislation. However, we do not consider that the case for any extension has yet been made.

21. There is a power available to Ministers under section 85(5) of the 1995 Act to direct local authorities to take certain steps to deliver air quality improvement. We consider that the use of this power offers the best prospect of progress if Government concludes that tougher action is necessary. Before taking such a step, however, Government would need to reach a view on what local measures it would like to see put in place and, as advocated

in section IV, set out its views either in an updated UKAQS or in a limited strategy focussed on the immediate NO<sub>2</sub>/ PM<sub>10</sub> compliance issues.

22. We looked also at whether the designation of Air Quality Management Areas remains a useful tool, and concluded that this question should be revisited again in due course. The requirement to make a formal order designating an AQMA continues to be useful in generating priority for air quality issues within local government. However, the concept of focussing on a few defined local management areas does not seem to us to have much bearing on the realities of the current situation. Most urban centres in the UK contain a number of locations experiencing levels of pollution which are above objective levels, and many of the 'local' solutions lie in land-use and transport planning measures which need to be applied not just in a small area around the 'hotspot' but across the district/ borough area and beyond.

## Improving links with other policy areas (section VII)

23. Air quality policy has close links with a number of other policy areas.

- **Health:** links with health policy are crucial in that poor air quality has serious consequences for health.
- **Transport** is one of the main sources of air pollution and transport policies are likely to provide the main remedies; however, few of these are directed specifically at air quality and there has been little central Government effort to co-ordinate work on their air quality impacts.
- **Land-use planning** has a major part to play in managing development with consequences for air quality, and in keeping people away from air pollution sources; however, planning decision-makers have to balance air quality considerations against others, such as job creation.
- **Climate change:** the activities and processes which generate air pollution link closely to those that generate carbon emissions, and it is important to consider air quality alongside policies for climate change; however, there are conflicts as well as synergies between these policies, which have not always been well managed up to now. This is a particular problem in Scotland, where the targets set for PM<sub>10</sub> pollution are much tighter than elsewhere in the UK, and where there are abundant forestry-based supplies of biomass.

24. We looked at linkages across central Government departments. On health, we would like to see Defra and Department for Health, and DA counterparts, work together to develop clearer messages on the impact of air quality on health, as set out in section VIII. On land-use planning, we do not consider that it would be sensible or practicable to give



air quality considerations absolute priority over other considerations in planning decisions. However, we are concerned that the current process of rationalising the existing volume of planning guidance should not result in the loss of important messages on air quality; and we would like to see air quality policy divisions work with planning policy divisions on the implications of the proposed Community Infrastructure Levy so as to avoid adverse implications for authorities' Low Emissions Strategies. On climate change, we believe that some opportunities for integrating the two areas of policy are being missed, and consider it regrettable and unnecessary that climate change initiatives, though welcome in themselves, have sometimes been at the expense of air quality policy.

25. Close working between Defra and Department for Transport, and between equivalent policy departments in the DAs, is particularly important for air quality. We welcome the sharing of responsibilities for air quality between the two Departments in England under PSA 28 and the recent strengthening of the DfT team. We argue that DfT now needs to develop a more concerted plan for delivering its responsibilities, ensuring that its policy teams are aware of them, and generally raising the profile of air quality issues in the Department. The precise form that this plan should take will depend on the view taken by Departments collectively about the future role of LAQM in dealing with air quality.

26. We considered the case for amending the legislation to transfer LAQM responsibilities from district to county level authorities in shire areas in England, but concluded that this should not be pursued. We also looked at the scope for improving linkages across different authorities and departments at the local level. We consider that the statutory framework for involving transport authorities is adequate as it stands, though we see scope to improve the governance arrangements in the metropolitan areas in England using new provisions in the Local Transport Act 2008. We consider that the co-location of air quality officers with climate change officers could help to provide a better focus on measures to improve air quality. And we see some scope for air quality officers to work more proactively to build alliances with transport colleagues and others, and a case for some broadening of their traditional skills base to help achieve this.

### **Communicating clearer messages (section VIII)**

27. The air quality story is a complex one, involving difficult and uncertain science. Detailed analysis of the causes, characteristics and health consequences of air pollution are all subject to continuing scientific debate, and the net present value of many of the possible measures to deal with it remain undecided. In these circumstances, it is possible for the key messages to be obscured by debate on the finer detail, and for some impetus in tackling the problems to be lost. We see this as a problem for air quality policy, and believe that it may have undermined efforts to win essential support among non-experts in local and central government.



28. We would like to see the development of simpler and clearer messages in three areas in particular. First, while recognising that it is important not to prompt unjustified public alarm, we consider that the health impacts of poor air quality need to be communicated much more effectively. In particular, for communication purposes, we would like to see less reliance on measurement in terms of reduced average life expectancy, and the development and publication of new comparative measures which convey the health impacts in a way which is more meaningful to a non-expert audience. We would also like to see clearer communication of key trends in ambient air quality, including the very limited progress over the last decade, and a clearer message from Government that urgent action is needed if EU standards are to be met. In particular, we recommend that Government routinely publishes a fuller statistical overview and analysis of ambient air quality trends to match the published trend information on emissions.

29. Finally, we see a need to provide simpler information to local government about the effectiveness of measures to tackle air pollution, and what is likely to work best in their circumstances. In particular Defra should recast the practice guidance, particularly the guidance on economic appraisal, in more realistic and down-to-earth terms, that AQ officers would find easier to assimilate and to respond positively to. Working together, Defra and DfT should also make a concerted effort to pull together and publish the available evidence about the typical AQ impacts, and cost-effectiveness, of commonly-used or advocated measures, and to commission further study or research to fill the gaps in this.

## **Special features of LAQM in London (section IX)**

30. The Greater London Authority Act 1999 makes some special additional provisions for local air quality management in London. In particular, the Mayor is required to produce an air quality strategy, and has some powers of direction over the boroughs.

31. We welcome the fact that the Mayor, so many of whose functions are relevant to air quality, has a duty to produce his own air quality strategy in support of the national one. It is arguable, indeed, that there should be a wider rethink of the respective roles and responsibilities of the Mayor and the Boroughs in the special circumstances in London. We suggest that the GLA be encouraged to discuss with the boroughs, in parallel with the consultations on the Mayor's draft strategy, whether a different pattern and content of assessment and reporting requirements would be of more help to effective action planning and implementation in London.

## **Resource and legislative implications (section X)**

32. There is very limited information available on the costs of LAQM, and hence on the resource implications of our proposals. However, we would expect our recommendations for streamlining the review and assessment arrangements to deliver only very modest

savings for both local authorities and central government. More substantial savings would be achieved by the removal of the requirement to report centrally on LAQM action planning, which we consider would be justified if Government concludes that local authority action should not be expected to make a major contribution to achieving EU target levels. If implemented, some of our recommendations would involve some additional input of staff time in central government departments.

33. Only one of our recommendations (abolition of the requirement for a Further Assessment) would require a change to primary legislation, and even this we suggest would be worth doing only if it were desired to re-visit the legislation on other grounds.

## SECTION 1: INTRODUCTION

### Terms of reference

34. The In House Policy Consultancy (IHPC) was commissioned by the Atmospheric Quality and Industrial Pollution Programme in Defra (AQIP), in consultation with their colleagues in the Scottish Government, the Welsh Assembly Government, and the Department for Environment Northern Ireland, to undertake a review of Local Air Quality Management arrangements (LAQM), established under the Environment Act 1995 and the Environment (Northern Ireland) Order 2002.

35. Our terms of reference were to review the operation of LAQM in the UK, and make recommendations with a view to:

- improving air quality outcomes;
- making better use of available resources centrally and locally to improve LAQM outcomes;
- making recommendations on legislative change if appropriate.

36. The In House Policy Consultancy is a unit based within the Department of Transport which provides an independent policy advice and review service to programmes within Defra, DfT, CLG and DECC, all Departments with functions inherited from the former Department for the Environment, Transport and the Regions. IHPC consultants all have experience of policy work within central government departments.

37. We commenced work on the review in late July 2009. This is our final report.

### Method of working

38. Our programme of work included:

- Visits to a selection of local authorities across the UK, and telephone interviews with others. These are listed in annex 1.
- Interviews with key officials in government departments and the DAs, their consultants and a number of others. A full list of those interviewed is at annex 2.

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### Policy projects for CLG, DfT, DECC and Defra

- A full-day stakeholder workshop held in early November to discuss emerging conclusions.
- Periodic meetings with Defra and the DAs to report progress.

39. We were fortunate to have help and advice from a large number of people in central and local government and related bodies, and from among the expert air quality community, operating either ad hoc or through our stakeholder advisory group. These people are listed in Annex 3. Many members of this group attended the workshop in early November.

40. We prepared five discussion papers over the period of the review, and were grateful for comments on these from members of the stakeholder advisory group and at the workshop. The papers dealt with the following subjects:

- Topic paper 1: Central/ local relations
- Topic paper 2: LAQM and planning
- Topic paper 3: Policies of the Department for Transport relevant to local air quality
- Topic paper 4: The evidence base
- Topic paper 5: The LAQM process.

41. There are some significant institutional and other differences between the air quality situations in different parts of the UK, which we explored in our meetings with the DAs, and through a working paper shared with them. We highlight these differences where appropriate throughout our report. However, in general these do not affect our conclusions and recommendations.

42. Concurrently with our review, Air Quality Consultants and the University of the West of England undertook a questionnaire survey of all local authority air quality departments across the UK. The full survey results are to be published alongside this report. They were available only when our report was nearing completion, but largely confirm the views we heard in our own earlier soundings. Annex 4 summarises the survey's findings on local authority air quality departments' views on the main strengths and weaknesses of LAQM, and notes the main implications for our conclusions.

## SECTION II: THE AIR QUALITY POLICY CONTEXT

### LAQM origins, statutory framework and procedures

43. Air quality policy is driven by health concerns. Air pollution is currently estimated to reduce life expectancy averaged over the whole population in the UK by an average of 7-8 months. Local Air Quality Management was established to complement national policies – most importantly industrial pollution control and vehicle emission standards – in driving up air quality standards to acceptable levels.

44. The proposal to legislate to introduce LAQM was announced in the White Paper ‘Air quality: meeting the challenge’ published in January 1995. The three main themes in this White Paper were (i) the proposal to develop a general strategy for air quality, based on clear standards and targets; (ii) new systems for local air quality management, based on Air Quality Management Areas; and (iii) effective control of emissions, particularly from vehicles.

45. The thinking underlying the establishment of LAQM was that “it would not be possible to eliminate, in the most cost effective way, all potential air quality problems simply by the use of national policies”. LAQM would be carefully targeted to identify areas where national targets might not be met, and would concentrate action on those areas.

46. Part IV of the Environment Act 1995 flowed from these proposals. It imposes a duty on the Secretary of State to prepare and publish an **air quality strategy** setting out standards and objectives for air quality, and the measures to be taken by local authorities and others for the purpose of achieving those objectives (section 80). It places a duty on local authorities **to review** the quality of air in their areas, and **to assess** whether or not the standards and objectives set out in the strategy are likely to be met (section 82). The Act requires that local authorities designate **air quality management areas** (AQMA) to include any areas where they conclude that standards and objectives are unlikely to be achieved (section 83). Once an AQMA is declared, it requires that the authority undertake a **further assessment** of the nature of the problems in the AQMA and an **action plan** setting out what measures they propose to take ‘in pursuit of the achievement of air quality standards and objectives’ (section 84).

47. In **Scotland and Wales**, the Secretary of State’s powers in Part IV of the 1995 Act were devolved to the Welsh Assembly Government and the Scottish Government respectively under the 1998 devolution legislation. In **Northern Ireland**, provisions comparable to Part IV were made in Part III of the Environment (Northern Ireland) Order 2002, but with some differences mainly reflecting the differences in Northern Ireland institutions.

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### Policy projects for CLG, DfT, DECC and Defra

48. In those parts of England with **two tiers of local government**, local authorities bearing LAQM responsibilities are the lower tier, or district, authorities. District authorities also have responsibility for other local government air quality roles (the Clean Air legislation and control of emissions from smaller industrial and commercial premises) and for key land-use planning functions (development control and the preparation of Local Development Frameworks). Upper tier, county, authorities have responsibility for local transport planning. Part IV makes express provision for the contribution of county councils to LAQM in areas where there are two tiers of authority (section 86). There is however no equivalent provision for the Integrated Transport Authorities (formerly known as Passenger Transport Authorities) in England's six largest urban areas, despite the importance of their work on air quality.

49. There are special provisions for **London** under the Greater London Authority Act 1999. In particular, the Mayor is required to produce a London air quality strategy setting out proposals and policies for implementation of the national air quality strategy and for the achievement of air quality standards and objectives in London. The London boroughs have responsibility for review and assessment, and action planning. There are provisions for the boroughs to work with the Mayor, and vice versa.

50. **Air quality standards and objectives** are set under regulations made under section 87 of the 1995 Act. The section provides authority for regulations to make provision on a wide range of other matters relating to the assessment or management of air, including conferring powers or imposing duties on local authorities. These have been used so far only for setting a minor time period.

51. The Secretary of State and Devolved Administrations have issued extensive **statutory guidance** under section 88 of the Act<sup>1</sup>. This sets out what is expected of local authorities in fulfilling their duties under Part IV. The requirements are described in detail in sections V (on review and assessment) and section VI (on action planning).

52. There are wide-ranging **reserve powers** in Part IV providing inter alia for the Secretary of State to take over review and assessment if he/she judges appropriate, and to direct authorities to take specified action if it appears to him/her that standards and

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<sup>1</sup> Part IV of the Environment Act 1995. Local Air Quality Management. Policy Guidance (PG09). Defra. February 2009.  
Part IV of the Environment Act 1995. Local Air Quality Management. Policy Guidance P(S)(09). The Scottish Government. February 2009.

Local Air Quality Management. Local Air Quality Management Policy Guidance for Wales. Welsh Assembly Government. April 2009.

Local Air Quality Management Policy Guidance. LAQM. PGNI (03). Department of the Environment, Northern Ireland Government. February 2005.

Part IV of the Environment Act 1995. Environment (Northern Ireland) Order 2002 Part III. Local Air Quality Management Technical Guidance LAQM.TG (09). Welsh Assembly Government, DOE Northern Ireland, the Scottish Government, Defra. February 2009

objectives are not being achieved (section 85). These powers are vested in the Scottish Environment Protection Agency in Scotland (acting with the approval of Scottish Ministers), and the Devolved Administrations in Wales and Northern Ireland.

## Air Quality Objectives and EU limit values

53. In considering whether they need to declare an AQMA, local authorities must assess whether or not air quality objectives are likely to be met in the area. The objectives are laid down in regulations. The objective levels are a statement of policy intentions set by Government, designed broadly to bring air quality as close as possible to the levels at which no significant health effects would be expected in the population as a whole. They draw on standards set purely with regard to scientific and medical evidence of the effects of each pollutant on health and the wider environment. The Expert Panel on Air Quality Standards, now being merged with the Committee on Medical Effects of Air Pollutants, is the main source of expert advice in the UK, in turn drawing on advice from the WHO.

54. Objectives cover seven pollutants<sup>2</sup> and take the form either of values for the average level which concentrations of the pollutant should not exceed over a specified period – usually a year – or the maximum number of times that mean concentrations should exceed specified levels over a shorter period – usually 24 hours or one hour. LAQM is largely concerned with NO<sub>2</sub>, PM<sub>10</sub> and SO<sub>2</sub>. Objective levels for these pollutants are set out in the table below. Objectives for PM<sub>10</sub> are different in Scotland from the rest of the UK. The Scottish Government reached a different policy judgment, taking account of practicability as well as health effects.

55. EU limit values are EU parameters that must not be exceeded, legally binding on the UK government. They cover the same pollutants as UK objectives, and in many cases are set at the same levels, sometimes with different target dates for achievement. Local authorities have no direct responsibilities for delivering them. The UK Government applied unsuccessfully to the EU for an extended deadline to bring PM<sub>10</sub> levels within EU limits by 2011, and now plans to resubmit its notification with additional details. It plans to apply also for an extension to 2015 of the deadline for achieving the NO<sub>2</sub> limit value.

56. The 2008 Council Directive on ambient air quality and cleaner air for Europe (2008/50/EC) introduced new controls on fine particles (PM<sub>2.5</sub>). It incorporates an “exposure reduction” approach for PM<sub>2.5</sub>, recognising that there is no safe threshold below which exposure does not pose a risk, and designed to focus policy on improving air quality in places where the greatest number of people are likely to be exposed. The UK Government and DAs are currently consulting on proposals for transposing the new Directive into UK legislation.

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<sup>2</sup> Benzene, 1,3 butadiene, carbon monoxide, lead, nitrogen dioxide, particles (PM<sub>10</sub>), sulphur dioxide



Table 1: UK objectives and EU limit values for PM<sub>10</sub>, NO<sub>2</sub> and SO<sub>2</sub>

Pollutant	UK objectives			EU limit values	
	Objective	Measured as	Date to be achieved by	EU limit values	Date to be achieved by
PM <sub>10</sub>	50 µg m <sup>-3</sup> not to be exceeded more than 35 times a year	24 hour mean	Dec 2004	As UK objective	End 2004
	40 µg m <sup>-3</sup>	annual mean	Dec 2004	As UK objective	End 2004
	(Scotland only) 18 µg m <sup>-3</sup>	annual mean	Dec 2010		
	(Scotland only) 50 µg m <sup>-3</sup> not to be exceeded more than 7 times a year	24 hour mean	Dec 2010		
NO <sub>2</sub>	200 µg m <sup>-3</sup> not to be exceeded more than 18 times a year	1 hour mean	Dec 2005	As UK objective	Jan 2010
	40 µg m <sup>-3</sup>	annual mean	Dec 2005	As UK objective	Jan 2010
SO <sub>2</sub>	266 µg m <sup>-3</sup> not to be exceeded more than 35 times a year	15 minute mean	Dec 2005		
	350 µg m <sup>-3</sup> not to be exceeded more than 24 times a year	1 hour mean	Dec 2004	As UK objective	Jan 2005
	125 µg m <sup>-3</sup> not to be exceeded more than 3 times a year	24 hour mean	Dec 2004	As UK objective	Jan 2005

## LAQM in 2009

57. Review and assessment under LAQM is now into its fourth round. 234 authorities across the UK, or 58% of the total, now have Air Quality Management Areas. AQMAs have been required for NO<sub>2</sub> pollution in 93% of cases, for PM<sub>10</sub> in 33% of cases and for SO<sub>2</sub> in 4%. A very small number of AQMAs are required for other pollutants (there is one currently

in place), related to major industrial plants. Transport is the main source of pollution in the large majority of AQMAs (92%), but industrial sources also play a part, and domestic coal burning remains a significant source in Northern Ireland.

**Table 2: numbers of AQMA by country, pollutant and source**

Country	No. of LAs with AQMAs	No. of LAs with AQMAs by pollutant			No. of LAs with AQMAs by source				
		NO <sub>2</sub>	PM <sub>10</sub>	SO <sub>2</sub>	Transport	Industry	Trans/ind	Domestic	Trans/dom
England (exc. London)	170	163	36	8	162	9	7	2	1
London	33	33	28	-	29		4		
Scotland	12	8	8	1	10	1	1	1	
Wales	8	7	1	-	7	1			
N Ireland	11	7	5	1	7			4	
<b>TOTAL</b>	<b>234</b>	<b>218</b>	<b>78</b>	<b>10</b>	<b>215</b>	<b>11</b>	<b>12</b>	<b>7</b>	<b>1</b>

Source: UWE/AQC, December 2009

58. There is little evidence so far that LAQM measures have met with marked success in securing objective levels in AQMAs. 36 AQMA orders have been revoked to date but the Review and Assessment appraisal contractors advise that the large majority of these have been revoked for technical reasons (such as improved monitoring or modelling data indicating that exceedences are no longer considered likely) rather than substantive changes in local air quality, or because air quality has improved for reasons unconnected with action plan activity, such as factory closures or the re-routing of traffic following bypass construction.

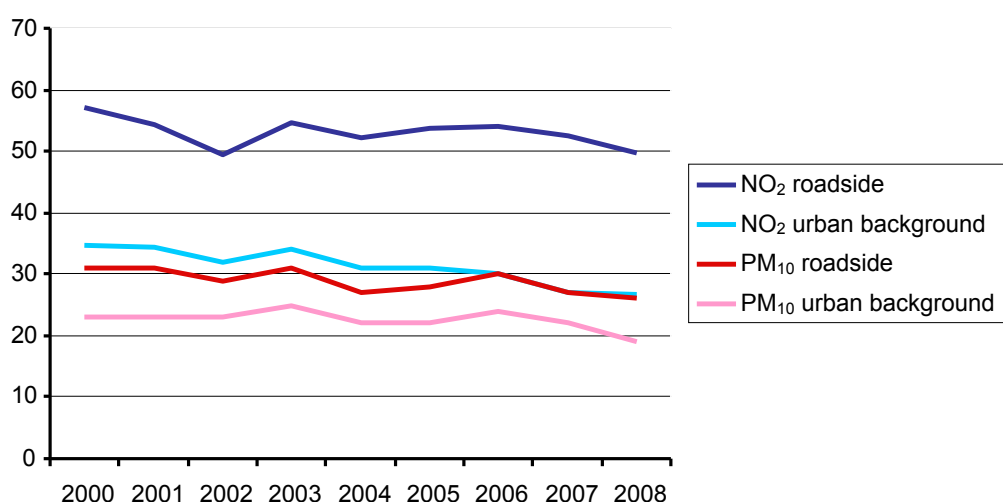
## Wider trends in air quality

59. National policy interventions have resulted in substantial reductions in emissions over recent years, with PM<sub>10</sub> emissions in the UK down by 17.4% and NO<sub>x</sub><sup>3</sup> emissions down by 16.3% over the period 2000 to 2006. The largest single source of pollution in both cases continues to be road transport, accounting for 33% of emissions in the case of NO<sub>x</sub> (down from 43% in 2000) and 21% of PM<sub>10</sub>. Gas sources (i.e., domestic, industrial-commercial gas consumption and gas leakage) are, however, predicted to overtake road transport as the main source of NO<sub>x</sub> emissions in London by 2010.

<sup>3</sup> NO<sub>x</sub> comprises NO<sub>2</sub> and NO. Emissions statistics are available only in this form.

60. Ambient air quality has not been improving at the same rate as emissions. There has been no marked downward trend UK-wide over the period 2000 to 2008 for either NO<sub>2</sub> or PM<sub>10</sub>. In London, pollution levels are considerably higher than the average for elsewhere in the UK, and trends have been static on average, and upwards at some roadside sites. Across the UK, levels of roadside pollution are predictably worse than at other sites, with the average level for NO<sub>2</sub> concentrations across central Government's monitoring network exceeding objective levels and the EU limit value of 40 µg m<sup>-3</sup>. Trends for pollution over the period UK-wide are below.

**Figure 1: trends in average concentrations of NO<sub>2</sub> and PM<sub>10</sub> in µg m<sup>-3</sup> in the UK, 2000 to 2008**



Source: AEAT

61. The relationship between emitted and ambient pollution is not straightforward. An increase in the emission of primary NO<sub>2</sub> from diesel engines (as opposed to NO which subsequently oxidises in the atmosphere) is part of the reason why ambient NO<sub>2</sub> has not declined at the rate expected. PM<sub>10</sub> ambient concentrations include significant contributions either formed by chemical reactions in the atmosphere or from emissions not characterised within emission inventories.

## **SECTION III: CONTEXT – OTHER POLICIES**

### **Introduction**

62. A range of other Government policies need to be addressed in reviewing LAQM. Current policy on how central government should conduct its relationships with local authorities provides an important context for consideration of the mechanisms of LAQM. Transport policy is relevant because the commonest sources of exceedences of limit values are transport-related, and because potential solutions lie in some of the instruments of transport policy. The land-use planning system offers opportunities to manage new developments and settlement patterns so as to minimise air pollution and public exposure to it, but is subject to a number of conflicting pressures. Efforts to minimise climate change by reducing emissions of greenhouse gases can either reinforce or impede air quality management. Finally, the whole purpose of LAQM is to protect public health, and air pollution needs to be considered in the context of what is known about its health impacts and how these compare with other risks to public health.

63. This section describes the current state of these policies and explains their relevance to LAQM. We consider the scope for securing greater consistency between LAQM and current policy on central-local relations when we come to look at the review and assessment and action planning process requirements in sections V and VI below. In section VII, we consider how greater synergies might be secured between LAQM and policies on transport, planning and climate change. Section VIII addresses the prospects for bringing the health impacts of air pollution more effectively to the attention of central and local decision-makers.

### **Central-local relations**

64. Policies on the relationship between central and local government have changed greatly throughout Great Britain since LAQM was introduced. In summary, the Great Britain administrations have sought to modernise and strengthen the governance of local authorities, and give them a wider ‘place-shaping’ role, through a new ‘well-being’ power and new duties to develop community strategies to promote the well-being of local communities. Central controls over inputs, processes and local decisions have been greatly reduced. Authorities, in consultation with their local communities, have been given far greater freedom to determine their own priorities, including spending priorities, and consequently are more accountable to local people. There is much less ‘ring-fencing’ of funding streams for specified purposes. The number of plans for individual services which authorities are required to produce has been radically cut back, the remaining

requirements have been greatly simplified, and central scrutiny of plans has been minimised or abandoned altogether.

65. For historical reasons, the institutions of local government are much weaker in Northern Ireland than in Great Britain, and local authorities' functions are much more limited. However a major reform programme is in train, entailing a reorganisation of local government, transfer to the authorities of some central functions (including important planning powers and lesser roads ones), and a new well-being power. Implementation is scheduled for April 2011. This will be a first step along the road which has already been travelled by the Great Britain administrations.

66. So far, these developments have had no effect on the LAQM process. Central requirements for air quality assessment and reporting are prescribed in detail, and authorities' compliance with these is closely vetted. In all parts of the UK except Wales, specific grant is provided, to varying degrees, towards the costs of air quality review and assessment. Air quality objectives are laid down from the centre, and where these are not met or there is a risk of their not being met, authorities have to produce action plans 'in pursuit of' the objectives – though there is no duty on them to secure compliance with the objectives.

67. On the face of it, then, the requirements of LAQM seem inconsistent with the climate of central-local relations which now applies in Great Britain and to which Northern Ireland aspires in the longer term. We therefore needed to consider in the review

- whether, or how far, the reality matches this appearance;
- to the extent that it does, whether some continuing inconsistency with this policy trend is justified;
- whether there is scope for reducing the degree of central prescription, or the volume of requirements placed on authorities.

## Transport

68. Transport, particularly road transport, is the most important source of exceedences of EU limit values in the UK. A number of current Government transport policies are specifically aimed at reducing air pollution, whether as a primary or (as in most cases) a secondary objective, or have other aims but still affect air quality:

- **cleaner fuels and vehicles:** the negotiation, transposition and implementation of European new vehicle standards. DfT have taken a leading role in securing the development of tough new requirements which will, for example, come close to

eliminating particulate emissions from new generations of diesel vehicles. Euro V (mandatory from 2009) and VI (from 2014) standards for heavy goods vehicles and buses, and Euro 5 (from 2011-12) and 6 (from 2015) standards for cars and light commercial vehicles, will secure important reductions in emissions from new vehicles. Existing and promised tax incentives will encourage adoption of the standards in advance of their statutory deadlines. It is open to local authorities to adopt procurement policies for their own fleets, and (in London) for buses, which anticipate the mandatory dates for the new standards or encourage use of new low-emission technologies (hybrid or electric vehicles). A Green Bus Fund was announced in July 2009 to encourage bus operators to purchase low-emission buses. Low emission zones can be used to discourage use of vehicles in areas of poor air quality that do not comply with specified standards, though these have not yet been demonstrated to be cost-effective in the UK.

- **cycling and sustainable transport:** the development of cycling facilities and the adoption of 'smarter choice' measures to reduce the number of car journeys in favour of public transport, cycling and walking. While these are helpful in principle, there has been no evaluation so far of their actual impact on air quality where they have been applied in a concerted way, as in DfT's three 'sustainable travel towns' demonstration projects. Only a minority of local transport authorities are thought to be giving high priority to such policies as yet, and in some areas the local geography and settlement patterns appear to rule out any serious prospect of a major shift in favour of sustainable transport modes.
- **road transport demand management,** traffic management and parking control measures: a variety of techniques are available, and encouraged by central government, for easing congestion, smoothing traffic flows, discouraging car journeys to town and city centres, and promoting road safety. Improving air quality is usually a secondary consideration. There will often, though by no means always, be potential air quality benefits from such measures, but there is little hard evidence as yet of these impacts, or of how traffic management can most effectively be targeted on air quality improvement. The results of the limited research that has been done<sup>4</sup> have not been communicated effectively to decision-makers, and are probably out of date by now. Local authority take-up of relevant measures is often constrained by lack of resources and skills (e.g. for advanced urban traffic control systems) and by fears that traffic and parking restraints might adversely affect the competitive position of individual town and city centres. Public opinion has also decisively rejected congestion charging in both Edinburgh and Manchester.

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<sup>4</sup> Notably DfT's programme of research on air quality effects of traffic management measures ('TRAMAQ'), completed in 2004

- Exceedences may arise from traffic using motorways and trunk roads, as well as from local traffic. Some of the same techniques may in principle be available in these situations. Decisions however are in the hands of the Highways Agency, and its equivalents in the devolved administrations, rather than the local authority. In Northern Ireland, all roads, including local roads, are the responsibility of the Roads Service.
- **public transport improvements:** new rapid transit systems, bus priority measures, quality partnerships or contracts with local bus operators to improve services, etc. These are helpful to the extent that they secure reductions in car mileage, though there can be offsetting adverse effects (e.g. where urban road space is re-allocated to public transport, congestion and traffic emissions can worsen on the remaining road space), and buses are themselves important contributors to exceedences in some city centres. Funding can be difficult to secure, and lead times can be long and unpredictable, for the more ambitious projects, and bus priority measures often encounter local political resistance. Outside London, bus quality partnerships may provide an opportunity for investment in low-emission vehicles, where operators perceive this to be in their commercial interest; in London, where all services are franchised, this can be achieved more directly.
- **road improvements:** in some situations, these may be helpful to air quality, for example relieving pressure on a congested junction or removing through traffic from a market town high street, though in the absence of other management measures they may risk encouraging traffic growth. Such improvements however are unlikely to be undertaken on air quality grounds alone.

69. Also relevant are current approaches to national, regional and local strategies for transport, and the way in which proposals for transport investment are analysed:

- 'Delivering a Sustainable Transport System' (DaSTS), published in November 2008, explains how DfT is implementing long-term transport planning in response to the Eddington study and the Stern review. It is built around five goals, related to supporting economic growth; tackling climate change; contributing to better safety, security and health; promoting equality of opportunity; and improving quality of life and promoting a healthy natural environment. Poor air quality is referred to in this only briefly, as a health and quality of life issue.
- DfT published its carbon reduction strategy for transport in July 2009. This is discussed at paragraph 84 below.
- English regional bodies' advice to DfT on priorities for local transport investment is now expected to reflect the DaSTS agenda. In the past, regions have tended not to view air quality as a priority. However, DfT have now provided them with information



on the incidence of air quality problems to take account of in framing their advice for the future.

- English local authorities have been required since 2000 to produce Local Transport Plans, until now on a five-year basis. Elaborate and prescriptive central guidance was issued on plan preparation and content for the first two rounds, authorities' plans were scrutinised in detail, and (for the first round) annual progress reports were also required. Authorities with transport-related AQAPs were advised to integrate these with, or subsume them in, their LTPs. In the second round guidance, air quality was identified as one of only four joint central-local priorities for the LTPs, but this did not result in a proportionate effect on the content of the plans themselves. For the third round, the arrangements and guidance have been radically simplified, reflecting the general policy on central-local relations reported above: authorities are free to adopt their own timetables for LTP preparation and review, and to set their own priorities, taking account of DaSTS, and plans will no longer be subject to Departmental scrutiny. The guidance deals only briefly with air quality, though a link is provided to Defra's policy and technical guidance on LAQM.
- in England, DfT requires systematic cost-benefit analysis of all proposed transport schemes. The guidance on this includes advice on estimating the impacts of schemes on air quality and public exposure to air pollution. However, typically, projected air quality impacts account for only a small proportion of scheme benefits (or costs), and are unlikely to be decisive to the outcome.
- a Wales Transport Strategy was published by WAG in 2008. Its first priority is to reduce the environmental impacts of transport in Wales. The Strategy states that transport developments which could increase air pollution levels in AQMAs, or lead to a need to designate new areas, will not normally be supported. Both here and in Scotland, systems of Regional Transport Plans have recently been introduced: in Wales, these take the place of the previous local authority-level Local Transport Plans. It is too early to tell how effectively the regional plans will deal with environmental issues, and with air quality in particular.
- in Northern Ireland, transport planning, in common with all highways matters, is a central rather than local government responsibility.

70. Finally, in England, DfT has been designated as a 'key formal delivery partner' to Defra on PSA Delivery Agreement 28 ('Secure a healthy natural environment for today and the future') and is jointly responsible with Defra under the agreement for ensuring necessary action to deliver compliance with the air quality objectives for PM<sub>10</sub> and NO<sub>2</sub>. There is no equivalent arrangement in the devolved administrations. DfT has not so far developed a concerted plan for delivering these responsibilities and until recently has had

only minimal central capacity for co-ordinating this work.

71. In summary, while many current transport policies and initiatives have a bearing on air quality, air quality considerations are seldom a main driver and the impacts particular types of measures can have on air quality, and the ways in which they can be implemented with most benefit to air quality, are under-researched. New vehicle emission standards are a clear exception to this, but in the absence of more special action to accelerate their take-up they will not deliver sufficient improvement in time to secure compliance with EU limit values. Local transport measures which could be helpful to air quality are often not implemented because of shortage of resources and relevant skills, perceived conflicts with other priorities such as economic development, or public opposition.

## Planning

72. Development plans, and individual planning decisions, matter to air quality because

- they can shape or modify settlement patterns, affecting in particular the extent to which the local community and employers are dependent on road transport and the availability of alternative modes
- they can prevent (or fail to prevent) individual new developments which, directly and/or through the traffic they generate, might worsen air quality
- they can affect the degree of human exposure to existing sources of air pollution.

73. Planning conditions and planning obligations can also be used to make acceptable developments which might otherwise have been difficult to contemplate on air quality grounds, through remedial, offsetting or compensatory measures.

74. LAQM can provide an important input into the planning process. In turn, the success of LAQM in the longer term may be dependent on how effectively air quality issues are dealt with in development plans and development control.

75. Major changes to the planning system are under way throughout the UK. Each administration has its own reform programme, independent of the others, but the broad intentions are much the same in all cases: to clarify and simplify the system, make it more responsive, flexible, and accessible to users, focus it more on principle and less on operational detail, and provide a more effective framework for encouraging sustainable economic development and for tackling, and adapting to, climate change.

76. One element common to all these programmes in Great Britain is a rationalisation, and radical reduction in the volume, of planning guidance. This has a mix of potential disadvantages and advantages from the point of view of LAQM:

- a likelihood that the detail and specificity of existing guidance about, or relevant to, air quality will be reduced
- a possibility that the retained air quality material will have a greater impact in the context of a manageably small total volume of planning guidance.

77. The rationalisation process has been taken furthest in Wales, where a single integrated document, 'Planning Policy Wales' 2002, provides a strategic framework for the preparation of development plans and development control decisions. Planning for sustainability receives heavy emphasis throughout the document, but the specific treatment of air quality is cursory and confined to general principles (e.g. that the planning system should not duplicate or contradict measures more appropriately required under the relevant pollution control regime; and that air quality objectives and local authorities' AQAPs can be material considerations).

78. The Scottish Government plans to complete a similar process shortly. It is thought that the new single volume of planning guidance is likely to retain the substance of existing Scottish guidance on air quality, which, while concise, is less limited than in Wales. This advises that in or near AQMAs air quality is likely to be a material consideration for large scale proposals, or for developments which will be occupied by sensitive groups, or for proposals likely to have cumulative effects. This does not mean that all such applications which are likely to affect local air quality should be refused, but it may mean that conditions have to be applied to mitigate adverse effects. Generally, it may be necessary to consider whether a development could lead to designation of a new AQMA or conflict with an AQAP.

79. In England, broadly similar advice is given, though at greater length, in Planning Policy Statement 23 – Planning and Pollution Control. A range of other PPSs, and to the extent that it is still current, the earlier Planning Policy Guidance on transport (PPG13) are also generally relevant, in that they contain a strong emphasis on the need for development patterns and planning conditions which maximise the opportunities for sustainable transport and reduce the need to travel, particularly by car. To this end, the planning guidance used to be highly prescriptive on matters such as minimum standards for housing development density and maximum levels of parking provision for different types of development, but recent PPSs leave these to planning authorities to decide for themselves, taking account of accessibility and sustainability (including air quality) objectives. A programme for streamlining the entire body of current PPGs and PPSs was started in 2008 and can be expected to lead, as elsewhere, to more succinct treatment of air quality issues.

80. In Northern Ireland, the current suite of planning policy statements is to be revised, alongside the transfer of many planning powers to local authorities. None of the current PPSs focusses specifically on air quality at present. The new version will be available by March 2011. It is not yet clear what effect, if any, it will have on the treatment of air quality issues.

81. Two other current policy developments in England are worth mentioning

- Communities and Local Government have recently consulted on detailed proposals for the introduction of a Community Infrastructure Levy and an accompanying reform of the system of planning obligations, including restrictions in the scope of these. The relevance of this to air quality is that some local authorities have been making imaginative uses of planning obligations in support of low emission strategies, some of which could be affected by the proposed reforms
- planning decisions on certain types of nationally significant infrastructure proposals (for energy, transport, water supply and waste management) will in future be taken by an independent Infrastructure Planning Commission (IPC). The IPC will have a similar role in Wales, though only for energy and ports proposals.

82. A series of national policy statements are being prepared to guide the work of the Commission. Amongst other things these will indicate how any adverse environmental impacts of the proposals are expected to be handled.

## Climate change

83. Under the Climate Change Act 2008, the UK is committed to an 80% cut in domestic greenhouse gas emissions by 2050, compared with 1990 levels. To meet its Climate Change targets in 2020 and 2050 the UK has established carbon budgets which are limits on total UK greenhouse gas emissions over successive five year periods. The first three of these were set in Budget 2009 for the periods 2008-12, 2013-17 and 2018-22. They require reductions in emissions of 22%, 28% and 34% respectively below 1990 levels. Some of the carbon reduction measures which are available, or to which the Government is already committed, are helpful also to air quality (and vice versa), but there are conflicts as well as synergies between the two<sup>5</sup>. The clearest win-wins are policies which reduce demand for (carbon-producing) energy use, or improve its efficiency. Two sets of interactions are considered below.

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<sup>5</sup> For a full discussion of this technically very complex area, see *Air Quality and Climate Change: A UK Perspective* – Air Quality Expert Group, 2007.

### *Transport*

84. In 2007 domestic transport emissions accounted for 21% of total UK CO<sub>2</sub> emissions and had risen by 12% since 1990. The largest contributor to domestic transport emissions is road transport which makes up about 92% of the total. Existing measures to reduce CO<sub>2</sub> emissions from transport are expected to achieve savings of about 15MtCO<sub>2</sub> (about 11%) in 2020. DfT published its carbon reduction strategy for transport - 'Low Carbon Transport: A Greener Future' - in July 2009. The elements of this which have so far been quantified are estimated to deliver a reduction of a further 17.7M tonnes of CO<sub>2</sub> by 2020, on central assumptions about oil prices, making 2020 emissions 14% lower than in 2008. This strategy has been devised so as to secure the desired carbon reductions in the most certain and cost-effective manner rather than in the way which best fits other transport and transport-related objectives. Its impact assessment indeed appears to suggest that the strategy would have substantial negative impacts on some other transport objectives, such as congestion reduction, and would be slightly detrimental to air quality. That is not the full story: some carbon reduction measures already implemented, and therefore not included in the strategy or the impact assessment, are beneficial to air quality, and some new demand-reduction measures, included in the strategy, are excluded from the impact assessment (both for carbon reduction and for air quality) because their effects were considered too uncertain to quantify. Overall, however, this does not seem to be a strategy which has been optimised from the point of view of air quality.

### *Biomass combustion*

85. The UK has a legally-binding, and highly challenging, target to ensure 15% of our energy comes from renewable sources by 2020. Biomass combustion, both for heating and for electricity generation, is viewed as a potentially significant contributor towards this, but is a source of PM<sub>10</sub> and NO<sub>x</sub> emissions and in the absence of effective abatement measures its growth could make compliance with air quality objectives harder to secure, particularly in Scotland where the objective for PM<sub>10</sub> is much tighter than in the rest of the UK.

86. The issue is recognised in the UK Renewable Energy Strategy (July 2009), and various preventative measures are proposed, such as introducing biomass fuel quality standards and emission standards for smaller biomass boilers not currently covered by other legislation, though these will take some time to develop and implement. Principles have also been established to help local authorities develop local planning guidance on the uptake of biomass, suggesting that small biomass boilers should be used primarily to replace existing coal- and oil-fired heating, and in places which are off the gas grid or away from densely populated urban areas. The strategy assumes that air quality problems are less likely to arise from biomass electricity generating plant, which tends to be fitted with

sophisticated abatement technology and to be situated away from areas with existing air quality issues.

## Health policy

87. How air pollution affects health is a highly complex, and in some areas controversial, topic, on which there is extensive literature. For present purposes, we need say only that there is much more epidemiological evidence, some of it quantifiable, of the impacts of air pollution than of those of exposure to other environmental hazards; that the impacts of particulate matter have been much researched, long-term exposure to PM<sub>2.5</sub> in particular emerging as a significant risk, with no safe concentration threshold; and that the much more limited studies there have been of NO<sub>2</sub> impacts have been less conclusive, so far providing no proof of quantifiable health effects from exposure to concentrations in excess of the EU limit values (nor of their absence). A particular difficulty is the close correlation of NO<sub>2</sub> concentrations with those of other pollutants, making any independent NO<sub>2</sub> contribution to health impacts very difficult to identify.

88. The Department of Health have Public Service Agreement targets relating to obesity, smoking, and health inequalities, but not to air quality. However, in DH's view, the health risks posed by air pollution are important in comparison with some other hazards. A study commissioned from the Institute of Occupational Medicine<sup>6</sup> estimated that the impact on life expectancy of a 10µgm<sup>-3</sup> reduction in ambient PM<sub>2.5</sub> (roughly equivalent to the elimination of anthropogenic PM<sub>2.5</sub>) would be much greater than either that of the elimination of all motor traffic accidents or that of the elimination of all passive smoking.

89. DH work closely with Defra on the refinement and development of policy on air quality. The Health Protection Agency provides the secretariat for the Committee on the Medical Effects of Air Pollutants, a committee of independent experts providing advice to Government on all matters concerning the potential toxicity and effects upon health of air pollutants. The Health Protection Agency also assists DH in providing scientific advice on air pollution and health to Defra.

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<sup>6</sup> IOM(2006) Comparing estimated risks for air pollution with risks for other health effects. [www.iom-world.org/pubs/IOM\\_0601.pdf](http://www.iom-world.org/pubs/IOM_0601.pdf)



## SECTION IV: ROLE OF LAQM

### Overview of local authority air quality functions

90. As described in section II above, the 1995 Environment Act places two sets of duties on local authorities. They are required

- to undertake a periodic review of air quality in their area, and to assess whether the standards and objectives set out in the Air Quality Strategy are being achieved; and
- where the assessment is that standards and objectives are not being met, and will not be met within the period set out in the Strategy, then they must designate an Air Quality Management Area (AQMA) and prepare and action plan setting how it intends to apply its powers 'in pursuit of the achievement of standards and objectives in the designated area'.

91. These LAQM duties run alongside other local authority responsibilities for air quality. As described in section III, local authorities are expected to take account of air quality considerations in exercising their planning functions. They also have responsibilities under the Pollution Prevention Control regime for regulating comparatively less polluting industrial processes, except in Scotland where all industrial regulation is the responsibility of SEPA; for local enforcement under the Clean Air Act 1993; and for enforcing statutory nuisance controls (covering, inter alia, nuisance from smoke, fumes, gases, dust etc) under section 79 of the Environmental Protection Act 1990. Most authorities also aim to provide some kind of public information service on local air quality.

### The role of non-AQMA authorities

92. For the 170 authorities that do not have an AQMA, only the first of the two LAQM functions described in paragraph 90 apply. In these authorities, LAQM responsibilities are likely to account for only part of the time of one member of staff, or perhaps a very limited input from each of a small number of staff. Though modest in scale, these responsibilities are important. As noted in section V, **LAQM monitoring has a part to play in its own right and not simply as a foundation for AQMA designation and action planning. It complements and supports local authorities' other air quality responsibilities** as described above. So, while the emphasis of this report is on the action planning and



delivery parts of the process, **it is important not to overlook review and assessment as a self-standing function, nor to lose sight of the needs of this group of authorities.**

## **AQMAs and action planning: original intentions compared to developments in practice**

93. The major issues addressed in this report are, however, about the second of the two LAQM functions noted in paragraph 90, namely the designation of AQMAs and the preparation and execution of action plans. Here **we find that there is a considerable mismatch between the role envisaged when the 1995 Act was devised, and what has actually happened in practice since then.** In 1995, Government foresaw a limited role for local authorities in a relatively small number of areas. The White Paper anticipating the LAQM legislative proposals<sup>7</sup> suggested that “emissions of most major pollutants are expected to decline substantially in coming years, principally as a result of national policies”. However, national policies were not expected to “impact uniformly in all areas”. LAQM was therefore needed “where progress in improving air quality may be slow” and where locally co-ordinated action was appropriate. The White Paper did not say how many areas were expected to experience continuing problems, but the recollection of those around at the time was that authorities needing to declare AQMAs would be very much the exception rather than the rule. One official working on the policy at the time described expectations in terms of ‘a handful’ of authorities.

94. While anticipating that the number of local areas with persistent air quality problems would be small, the 1995 Act architects also appear to have taken the view that relatively draconian action might be necessary to deal with the situation in those areas. The White Paper promised that, as experience developed, “the Government will review with local authorities how far they may require additional powers to achieve the purposes of Air Quality Management Areas”. The Act itself included provisions allowing the Secretary of State to direct that specified steps be taken in order to deliver international obligations (section 85(5)), and for regulations to be made conferring additional powers on local authorities (section 87(2)).

95. What has happened in practice since 1995 has been rather different. While pollution levels are lower than they would have been without government interventions, we have not seen the ‘substantial decline’ in NO<sub>2</sub> and PM<sub>10</sub> concentration levels anticipated in 1995. The average level of NO<sub>2</sub> pollution at roadside monitoring sites across the Government’s AURN network remains persistently and substantially above the air quality strategy objective and EU limit value of 40 µg m<sup>-3</sup>, and has shown only a very small downward

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<sup>7</sup> *Air Quality: Meeting the Challenge*: the Government’s Strategic Policies for Air Quality management. Dept of the Environment, Welsh Office, Scottish Office, Dept of the Environment (N Ireland), Department for Transport. January 1995

trend (see figure 1 page 17). 58% all local authorities have declared AQMAs (Table 2 page 16). And while there is a widespread concern that action planning is failing to make an impact and deliver significant improvement, the additional powers and central directions originally provided for have not been brought into play.

## **The UK Air Quality Strategy and expectations of LAQM.**

96. **We do not think that it is possible to find a way through the shortcomings in action plan delivery without going back to first principles about the role of LAQM.** We need to know what central Government's expectation is of local action as part of the answer to continuing air quality problems before useful thinking can be done about the action necessary to ensure that the system delivers. That in turn means that there must be:

- an understanding of the causes of continuing high levels of air pollution, and of why these have not improved at the rate predicted in government modelling;
- an assessment of the measures that now need to be put in place to achieve the improvements sought by UK policy objectives and EU targets;
- analysis of the extent to which the required measures are best delivered through local action rather than the application of measures applied nationally or UK-wide;
- identification of recommended measures for local implementation and, in quantified terms, what level of AQ improvement they can be expected to deliver.

97. We would expect to find a statement of central Government's views on these matters in the statutory air quality strategy. The legislation requires the Secretary of State and DA Ministers to prepare and publish a strategy containing policies for the assessment and management of air quality. The strategy must set out standards and objectives, and it must include a statement "with respect to measures which are to be taken by local authorities and other persons for the purposes of achieving [air quality] objectives" (section 80(5)/1995).

98. The latest Air Quality Strategy for England, Scotland, Wales and Northern Ireland was published in July 2007. Whilst this is in many respects an impressive document, it does not provide complete clarity on the measures that Government considers need to be put in place to deliver air quality objectives, nor on the part that local measures are expected to play. There is the general comment that "action taken at the local level can be an effective way of tackling localised air quality problems" but there is no more precise statement of how much LAQM is expected to contribute, and in what circumstances. The document includes a list of some of the measures included in action plans which

Government consider “continue to be very important” – see list in Figure 2 below – but there is no guidance on the potential impact or cost-effectiveness of these, nor on the circumstances in which Government would like to see them implemented. Indeed, the Strategy takes the view that “local authorities know what will work best in their area”.

**Figure 2: local measures listed in 2007 UKAQS**

The 2007 Air Quality Strategy lists the following local measures which the UK Government and devolved administrations consider to be very important:

- Corporate commitment to putting air quality at the heart of the decision making process
- Commitment to working closely with authorities responsible for highways and/or environmental regulation where trunk roads and/or industrial sources are major local sources of pollution
- Local traffic management measures to limit access to, or re-route traffic away from, problem areas. Low emission zones are a possible solution
- Commitment to developing or promoting green travel plans and/or to using cleaner-fuelled vehicles in the authority's own fleet
- Strategy for informing members of the public about air quality issues, perhaps via local newsletters or other media
- Quality partnerships with bus or fleet operators to deliver cleaner, quieter vehicles
- In the longer term, perhaps, congestion charging schemes and/or workplace parking levies

99. Part of the problem with the Strategy is an ambivalence about the basis on which remedial measures should be assessed. On the one hand, the Strategy sets out the national air quality objectives and EU limit values, noting that exceedences of the objectives for PM, NO<sub>2</sub> and PAHs are expected to continue well after target achievement dates in major urban areas and along busy roads. On the other hand, when it comes to the assessment of possible new policies to tackle the continuing problems, the Strategy assesses them in terms of net present value (NPV) following cost-benefit analysis. It is not clear from the Strategy that the measures which score positively in NPV terms add up to a programme sufficient to deliver the quantified air quality objectives and EU limit values set out elsewhere in the Strategy. We understand that the IGCB plans to do further work in this area.

100. Looking at the results of cost benefit assessment as set out in the Strategy, local measures do not appear to have anything beyond a marginal part to play. The more ambitious of the measures listed in figure 2 - road pricing and low emission zones – are shown to have marginal or negative NPVs and are being ‘kept under review’ rather than positively advocated or pursued. And while local ‘soft measures’ are said to show positive

NPV, the potential air quality benefits are relatively small, and they are commended only as complementing rather than substituting for other measures.

101. In summary, **we see an urgent need for greater clarity about what measures need to be put in place to deliver air quality objectives and EU limit values, and what part local measures have to play. The right place for a statement on these matters is the statutory UK Air Quality Strategy, and we would expect to see much fuller and more explicit coverage of them in the next update. In the meantime, assuming that Government is not ready to embark on a full strategy update so soon after the last one was completed, we recommend that a limited strategy focussed solely on the immediate NO<sub>2</sub>/PM<sub>10</sub> compliance issue is developed urgently, bringing out what measures central Government would like to see adopted at local level. Given the key importance of transport as a source of local air pollution, this limited strategy will need to be developed jointly by Defra and DfT, and by their equivalents in the devolved administrations.**

## Two models for the future of LAQM

102. It is not possible to come up with a single set of firm recommendations as to what needs to be done to reform LAQM action planning and delivery without a clear view of what it is that Government expects local authorities to deliver. This should emerge from the new limited strategy which we have recommended in paragraph 101 above. In the meantime, to facilitate our own thinking in the absence of an explicit statement of Government expectations, we have postulated two alternative models. The first, modest, model assumes that local authorities' responsibilities are limited to monitoring local air quality, and to having regard to air quality considerations in local decision taking (on local transport planning, land-use planning etc) and in the authority's own operations. This is mainly about local authorities providing a lead, and ensuring that their decisions do not make matters worse. The second, proactive, model assumes that local authorities have a decisive part to play alongside central government in driving through the measures needed to secure air quality improvements in line with those needed to deliver the standards set in national policy and EU legislation. The two models are described in the figure 3.

103. The 'modest' model falls short of the intentions of those who designed the LAQM legislation, but reflects what is happening in practice in many areas at present, including those where AQMAs are in place. Air quality officers and air quality action plans are having some success in raising the profile of air quality concerns within the authority and with other relevant bodies, and in holding the line against deterioration in local air quality, but there is not much evidence that they are succeeding in driving through measurable improvements. The 'proactive' model looks to local authorities to identify and drive through actions to deliver measurable air quality improvement. Success in these terms would be

more in line with the original intentions of the legislation, though the expectation then was that the problems would be limited to a small number of areas.

**Figure 3: two views of the role of LAQM**

	Main functions	Impact
<b>Modest model</b>	<ul style="list-style-type: none"> <li>Monitoring and assessment, acting as local centre of expertise, providing public information and advice</li> <li>Influencing land-use planning, local transport and other relevant local decisions</li> <li>Leading by example in procurement etc</li> </ul>	<ul style="list-style-type: none"> <li>Will improve knowledge and understanding</li> <li>Help to avoid the creation of new hotspots or the deterioration of existing ones</li> <li>Contribute to changing attitudes and behaviours</li> </ul>
<b>Pro-active model</b>	As above plus <ul style="list-style-type: none"> <li>planning and implementing measures to reduce pollution at identified hotspots. Actions might include, for example, low emission zones, major traffic reduction/ redirection schemes.</li> </ul>	As above plus <ul style="list-style-type: none"> <li>deliver measurable reductions in levels of pollution at identified hotspots</li> </ul>

104. We have borne these two models in mind in later sections of this report. Review and assessment functions are relevant to both models, so our conclusions and recommendations in section V apply on either view of the role of LAQM. So too do our conclusions and recommendations on improving links with other policy areas (section VII) and on communicating clearer messages (section VIII); we consider that these areas also are important on either view of the role of LAQM. However, some of our conclusions and recommendations on action planning and delivery (section VI) are relevant only to a pro-active model; placing tougher obligations on local authorities is not an issue if Government decides to go with the modest view of local authorities' role in managing air quality.

## SECTION V: REVIEW AND ASSESSMENT

105. This section explores the review and assessment parts of the LAQM process. It briefly outlines the statutory and process requirements before setting out the main views put to us. It then explores the scope for reforming or improving the arrangements under the following headings:

- the continuing case for review and assessment
- streamlining the process requirements
- checking the adequacy of LA review and assessment
- integrating local and national information.

### The current requirements

#### *Statutory requirements*

106. As noted briefly in section II, the current statutory requirements are that:

- each authority from time to time has to have a review done of current and likely future air quality in its area, and whether the air quality standards and objectives set in the national strategy are being achieved or likely to be so, identifying any parts of its area where this is not the case
- the authority must designate such an area by order as an air quality management area. After a later review, the order can be varied or, if it now appears that the standards/objectives are being achieved and will continue to be so, revoked
- the authority must have an assessment made of current and likely future air quality in the AQMA and prepare a report on this within twelve months of the designation order coming into effect.

#### *Statutory guidance*

107. These requirements are amplified in statutory guidance issued by the Secretary of State and the DAs. The current edition of the Technical Guidance<sup>8</sup> fills out the requirements above and adds some new ones:

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<sup>8</sup> Local Air Quality Management Technical Guidance LAQM.TG(09), Defra and the DAs, February 2009

- an Updating and Screening Assessment (USA) is to be completed by all authorities, every three years. Fourth-round USAs were required by 30 April 2009. The aim is to identify any changes since the last review and assessment that might lead to a risk of an air quality objective being exceeded. The assessments should cover new monitoring data, new objectives, new sources or significant changes to existing sources, and any other local changes that might affect air quality. Authorities are given a checklist to identify significant changes, and screening tools to assess whether there is sufficient risk of an exceedence to justify further examination.
- where such a risk is identified, the authority proceeds to a Detailed Assessment (DA) to establish the likelihood of an exceedence in an area where the public might be exposed to it to a relevant degree, using quality-assured monitoring and validated modelling methods; and also the magnitude and geographical extent of any exceedence. The DA should be completed within a year of its being started. It provides the basis on which the authority decides whether designation of an AQMA is required. Between them, the USA and DA stages cover the statutory requirement for an air quality review from time to time.
- the authority must also submit Progress Reports, one year and two years after submission of the USA – and regardless of whether its circumstances require it to carry out a DA. The intention is to maintain continuity in the LAQM process and ensure a continuing focus on air quality within the authority. (A Progress Report might identify a risk of exceedence which had not been apparent from the USA. In that case, a DA is expected to be started straight away, without waiting until after the next USA.)
- finally, once a new AQMA has been declared, a Further Assessment (FA) has to be completed within 12 months of the designation, as required by statute. The guidance says that the aim of this is to confirm the exceedence, define what improvement in air quality, and corresponding reduction in emissions, is required to attain the objectives, provide information on the sources of the exceedence, and thus assist the subsequent preparation of the action plan.

108. Comprehensive guidance is given on each stage of the review and assessment process, on relevant tools and information required, and on monitoring, emissions estimating and modelling, backed up by helpdesks. Templates which can be completed on-line are also provided in the guidance for the assessments. A further template is under development for progress reports.



### *Central evaluation of assessments etc*

109. The authority submits all its assessments and reports to Defra, the GLA, or the devolved administration concerned. These are then assessed by consultants (currently Air Quality Consultants and University of West of England) for compliance with the guidance, against a published check-list. In rare cases, the assessment or report will be rejected as inadequate, and the authority asked to amend and re-submit, though the authority is first given an opportunity to justify what it has done, or not done. Usually the assessment/report will be accepted, but with a commentary indicating where there might be room for improvement or pointing to issues meriting study in the next assessment/report.

110. Authorities that fail to submit assessments and reports in time are reminded and then if necessary chased, ultimately if need be at Chief Executive level. Failure to submit by the deadline is quite common. There is also a small hard core of long-standing offenders: for example, four English authorities have never submitted third-round USAs. However, we understand that powers of direction and default powers have never been used against an authority failing to comply with its LAQM obligations.

## **Views expressed**

111. The broad consensus among stakeholders, despite some criticisms of detail, is that the review and assessment arrangements are working well, and we detected little appetite for radical change. The process to date was thought to have added greatly to authorities' understanding of where their air quality problems lay, by pollutant and area, and given them clear targets and timetables for improvement and a sound framework for considering the air quality implications of proposed new developments. In general, it was felt to be working smoothly, though some considered it unnecessarily process-bound and burdensome, and/or insufficiently selective or tailored to individual circumstances, and/or a distraction from the priority task of remedying known exceedences. Many stakeholders felt that the process was working so well that there was no need for changes. It was argued (variously) that:

- the arrangements (and technical guidance) had been evaluated at the end of each cycle and progressively refined in the light of the findings, in discussion with local government. They should not be interfered with lightly
- their complexity was more apparent than real – the breaking up of assessment into several stages was intended to ensure that no authority had to do more than was justified in its circumstances, and the detail of each stage was designed to ensure smooth progression to the next one (where required) and thence to action planning

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## **Policy projects for CLG, DfT, DECC and Defra**

- FAs were perhaps less essential than the other parts of the process, but were a statutory requirement. In practice, they had sometimes yielded useful information, indicating for example a need to revise the boundaries of the AQMA
- the introduction of a web-based template for Updating and Screening Assessments (with a further one to follow for progress reports) had provided a ready-made logical framework, minimising the time and effort required to compile them. Only short and simple documents were required, using information which ought to be readily available to AQ officers, though some authorities chose to produce much longer ones. The technical guidance, with the helpdesks in support, was designed to provide ready answers to most difficulties authorities were likely to encounter
- progress reports had been introduced at the prompting of authorities themselves, in order to ensure a continuing focus on air quality within all authorities between USAs (and as a safeguard against corporate pressures within authorities to reduce the resources allocated to air quality)
- the process was still identifying new problems. Around a third of the 2009 USAs pointed to a need to proceed to one or more DAs, slightly more than in the case of the 2006 USAs. This probably reflected in part refinements to the technical guidance, such as a new pointer to authorities to consider potential AQ problems around narrow streets with daily traffic flows in the 5-10,000 vehicles range.

112. On some of these points, there was general agreement. In particular, the web-based templates, the technical guidance, and the support received from the helpdesks were universally, and highly, praised. None the less, a number of interviewees were quite strongly critical of the arrangements, suggesting (variously) that:

- the early cycles of review and assessment had been valuable, but diminishing returns were now setting in. By now we were well aware of where the major exceedences, affecting large numbers of people, lay. The challenge was to deepen our understanding of these exceedences and devise effective remedies for them. Iterative cranking of the USA/DA handle would not greatly advance matters: it would simply pick up more and more exceedences which were relatively trivial in terms of concentrations, geographical spread, exposures, and likely duration
- local air quality was most unlikely to vary significantly from year to year, other than in response to variations in the weather. It was disproportionate to require authorities to produce assessments or reports every year, there was often little of interest or value in them, and the remorseless cycle sucked up resources which could be put to better use

- for some authorities, air quality was only a very minor issue, both absolutely and, perhaps, in comparison with some other environmental health concerns such as contaminated land. Some such authorities (but by no means all) took the view that the requirements of the review and assessment process were disproportionate in terms both of officers' time and of expenditure on consultants.

113. Criticisms going wider than the process requirements themselves were that:

- The system does not allow for any quality control on the competence or thoroughness of local authorities' R & A operations. A number of stakeholders suggested that some authorities did not report air quality problems because they had not looked hard enough for them, or in the right place. Central scrutiny of authorities' assessments and reports does not at present address this.
- The assessment process tended not to focus on the substance of local authority reports as opposed to their timeliness or compliance with the guidelines. There were concerns that Government needed to pay more attention to the information flowing from local monitoring, and to integrate that better with central sources of information on air quality. This was tied to concerns that central forecasts had over many years consistently over-estimated air quality improvements, and that central modelled data on occasion produced very different results from local monitoring.

## The continuing case for review and assessment

114. Despite the general endorsement for the arrangements from stakeholders, we thought it important initially to stand back from the detail and consider whether there might be reasons for considering fundamental alterations to the process. In particular, we asked ourselves whether the current 'command and control' nature of the process is appropriate in today's circumstances. At present, the process is prescribed in great detail, voluminous guidance is supplied to authorities, backed up by a helpdesk service, and authorities' assessments and reports are scrutinised by expert consultants for compliance with the guidance. As noted in Chapter III, this approach is out of line with the new culture of central-local relations which Government has been seeking to bring about in recent years.

**115. The principal purpose of review and assessment is to identify areas where air quality objectives are being or are likely to be exceeded, so that appropriate action may be taken to address the problem. The process also generates information to inform local planning decisions and to support the work that local authorities do in providing advice to the public on air quality matters.**

**116. We have no doubt that these are important functions, and ones that are likely to continue to fall to local authorities.** The alternatives would be either to rely

exclusively on central government monitoring networks and modelled results to identify exceedences and to inform local decision taking, or to transfer the current LA role to the Environment Agency and equivalent bodies in the devolved administrations. Neither of these options seems desirable or likely to attract much support.

117. So the question is not whether local authorities should continue to undertake review and assessment, but whether central government should continue to direct how they go about it. Central intervention could in principle be radically reduced, or removed altogether. The periodicity and form of air quality reviews and reports might be left to the authority itself to determine, and central scrutiny of assessments might be abandoned. Authorities might be wholly responsible, and accountable to their electorate, for decisions on what resources to allocate to review and assessment, taking account of local priorities. If any statutory guidance was still provided, it might be confined to promulgation of best practice. Developments of these kinds would be consistent with changes that have taken place in recent years in other, previously prescriptive, planning systems for local services, such as Local Transport Plans, and that have been strongly welcomed by local government corporate interests.

118. There is no desire for major change of this kind among the air quality stakeholders to whom we have spoken. Some argued that the current reporting requirements provide a useful structure within which to pursue their review and assessment responsibilities. Many suggested that the requirements are not in practice that onerous. Overwhelmingly, however, the concern was that, at a time of remorseless pressure on local authority resources, removal of any centrally-imposed requirements would be bound to lead to cuts in budgetary allocations for air quality work, and a consequent reduction in the priority given to air quality matters in local government decision-taking.

119. **We continue to have reservations about whether the current highly prescriptive arrangements are appropriate in today's world, and would argue that it is right in principle for local authorities to be in a position to make their own judgements about the level of resources to devote to air quality. We have nonetheless concluded that radical change to the R & A arrangements would not be appropriate at this time, because:**

- For many authorities without major air quality issues or AQMAs, the current arrangements appear to be viewed as a support rather than a burden. The centralised reporting structure and support currently provided on Government's behalf by AQC/UWE may be seen in effect as a cost-effective mechanism for supporting very small non-specialist teams in local government, albeit at central rather than local government's expense.
- Local authority review and assessment results do not feed directly into UK reports of air quality concentrations against EU limit values. Nonetheless, it would be likely to

send out the wrong signals if reporting requirements were radically reduced at a time when the challenge of meeting EU targets remains great;

- We would be very reluctant to recommend the dismantling of arrangements which appear to work well and be widely supported. Should that change, we would want to see the arguments revisited.

## **Streamlining the requirements**

120. We do however see some scope for streamlining. We consider that the process requirements are currently more elaborate than they need to be; that at a time of already heavy and prospectively much heavier pressures on local authority resources, it is right to search for possible economies; and that, in this situation, if the process is not streamlined as much as it can be, the temptation for authorities to default on their LAQM obligations, to which a small number have already succumbed, is likely to grow.

121. In particular, we see force in the suggestion that, as they stand, the LAQM requirements involve unnecessarily frequent re-examination of a situation that, for most authorities at least, is by now well-known and is likely to change only slowly. Nothing of substance would be lost in our view if, for example, the interval between USAs were increased to four years and a progress report were called for only two years after the USA. It would be possible also, under such an arrangement, to even out over time the burden of central evaluation of assessments and reports by staggering the requirements on authorities, so that (for example) the fifth LAQM cycle required half the authorities to submit USAs in 2012, with a progress report in 2014, and the other half to submit in 2013 and 2015. All of this could be done by amending the statutory guidance.

122. Discussing these ideas with stakeholders, we encountered much more support for increasing the interval between USAs – some even advocated a five-year interval – than between progress reports. The main argument seemed to be not that annual progress reports were necessary in themselves but rather that in the absence of such an external requirement there was a risk of a loss of continuous focus on air quality within the authority and, above all, a danger that resources would be taken away from the AQ function. A subsidiary one was that, properly understood, the compilation of a progress report should not be a burdensome process and that it would become even less so once the proposed new standard template had been promulgated.

123. We do not find the main argument at all attractive. Unnecessary burdens should not be retained merely to give AQ officers extra grounds for justifying their existence. As for the subsidiary one, we recognise that the savings to authorities would only be very modest, but the costs of central evaluation would also reduce.

124. We also question the need for a separate Further Assessment phase. The rationale for it presented in the Technical Guidance is not convincing. If an authority has done its homework properly before designating an AQMA, there should be no need to review that decision so soon. The other functions suggested for it seem to be part and parcel of action planning. However, any savings achieved from its abolition would be very modest, it is a statutory requirement, and the change would not be worth pursuing unless there were other, more substantial, reasons for revisiting Part IV of the Environment Act.

125. There is also a question in our minds about whether the review and assessment requirements are in fact as burdensome as the critics have suggested – or whether they could be satisfactorily discharged with less expenditure of time and effort than some authorities are devoting to them.

126. The clear intention of the guidance is that the authority should only be expected to undertake a level of assessment that is commensurate with the risk of an air quality objective being exceeded, but this message may have got lost. We have seen some disproportionately long and elaborate reporting documents, from authorities which complain about the burden of the LAQM requirements. The assessors suggest that it is common for authorities to over-estimate substantially the amount of work required, and also to assume too readily that much of it is beyond their own capabilities and that specialist consultants need to be employed. In their view, consultancy help may well be required with some of the more complex issues entailed in DAs and FAs, but hardly for the bulk of the work on USAs and progress reports. Training on the basic LAQM reporting tasks has been offered this year, and authorities which have taken it up appear confident that they can discharge these in future without assistance.

127. We accept that some authorities have been misconstruing the requirements. We think the next edition of the technical guidance should seek to clarify these, and to demonstrate how authorities with only minor AQ issues could discharge the requirements with proportionately little effort.

128. We note also that, in some parts of the country, collaborative networks, of varying degrees of formality, exist between air quality officers of the authorities in a region or sub-region. These can help to reduce the burden of review and assessment and to make the best use of officers' collective expertise. Some of them go further, employing technical officers, or consultants to provide quality assurance and quality control for all the local monitoring, or providing training. Some examples are given in box V.1 below. Some of these arrangements appeared to be more effective and highly valued than others, but they offer the potential at least for more cost-effective and higher-quality review and assessment.

129. On streamlining the requirements, we conclude therefore:



- complaints from some authorities about the burdensome nature of the existing review and assessment requirements are based in part on misunderstandings of what is really required. Future editions of the technical guidance should make it clearer how authorities, particularly those with only modest air quality problems, can discharge them most cost-effectively.
- some groups of authorities besides have entered into collaborative arrangements at regional or sub-regional level, which offer the potential for reducing the costs and raising the quality of review and assessment work. We would like to see the formation of such groups encouraged in areas where they do not already exist.
- nonetheless, we see some scope for slimming down the requirements themselves. As local air quality, and factors affecting it, usually change only gradually, the interval between USAs, currently three years, could be extended, and progress reports could be called for less frequently; this could be done by extending the statutory guidance. AQ officers' (widespread) fears that such changes could lead to resources being taken away from them are not in our view a good reason for retaining unnecessary requirements.
- if the provisions of Part IV of the Environment Act were to be revisited for other reasons, the opportunity should be taken to abolish the requirement for Further Assessments.

Figure 4: Some regional and sub-regional collaborative arrangements

The Welsh Air Quality Forum receives funding from the Welsh Assembly Government and consultancy support from AEA. It has helped to ensure that local automatic monitoring data is generally of a quality comparable with that of the AURN, provides a pool of expertise which is particularly helpful to smaller authorities, and runs annual training seminars.

With strong encouragement from the Department of the Environment, the Northern Ireland authorities have established four regional groups, each of them employing a technical officer to provide a centre of expertise on monitoring, modelling etc for all authorities in the group. The eastern group appears particularly active and successful. There is a less formal arrangement for exchange of information and expertise amongst the Greater Belfast authorities.

The Sussex Air Quality Partnership was established over ten years ago to support Sussex authorities with their LAQM duties. As well as the authorities, it includes local health bodies and universities. It provides technical support and guidance to the authorities on monitoring and modelling, is building a Sussex-wide emission inventory, negotiates centralised contracts for air quality services to the authorities, and provides an airAlert service for people sensitive to air pollution episodes.

The Somerset Air Quality Management Sub-Group is also over ten years old. It has developed a common Air Quality Strategy and planning policy for the Somerset authorities and co-ordinates their review and assessment work.



## Checking the adequacy of LA review and assessment

130. We saw earlier that some stakeholders thought that the assessors approached their task in too much of a 'tick-box' way, judging assessments and reports in terms of compliance with particular aspects of the guidance rather than stepping back to consider the adequacy of the authority's assessment and review work overall. Some authorities which had designated AQMAs in its area expressed surprise that neighbouring authorities had not found it necessary to do the same in some apparently very similar situations, and had apparently not been prompted by the assessors to look harder.

131. We think some authorities may well be overlooking problems in their areas of kinds similar to those identified by neighbouring authorities, through failure to look for them properly or in the right places. The evaluation of assessments is a quick paper-based exercise, supplemented where necessary by questions to the authority, and as currently conceived is not suited to enquiring into these questions: as a result, the adequacy of authorities' monitoring efforts is taken very much on trust.

132. Identifying from the centre where such shortcomings might lie would not be straightforward, however. National modelling of ambient air quality might in some instances give clues, but it is more usual for local monitoring to pick up exceedences which have not been predicted through modelling than the other way round. The presence of AQMAs in one local authority area and their absence from a neighbouring area might provide some indication, but certainly not a reliable one. Even assuming 'suspect' areas could be readily identified, the process of establishing in the particular case whether more, or differently focussed, monitoring effort would be desirable might be quite labour-intensive. Besides, the volume of representations we have had on the matter is only small, suggesting that the concerns are not widely felt.

133. All in all, **while we accept that the lack of central scrutiny of the adequacy of authorities' review and assessment work is a theoretical weakness, we do not consider that the substantial additional scrutiny required to deal with the issue would be justified.**

## Making better use of local data

134. A further suggestion made to us was that the air quality data collected and reported by local authorities should be better integrated with data from the national monitoring networks. There were also criticisms that little if any notice appeared to be taken by central government of the problems reported by local authorities. And there were concerns that Government continued to rely heavily on modelled data which – so it was claimed - over the years had consistently overestimated future improvements in air quality

concentrations, and which generated figures for current concentrations at specific locations which were sometimes at odds with locally monitored data.

135. The UK Government and the DAs run a network of around 130 automatic monitoring sites, the Automatic Urban and Rural Network or AURN, at each of which one or more ambient pollutant levels is automatically and continuously recorded. These sites are managed and quality assured to the high standards required for EU reporting. The results are reported on the national Air Quality Archive. The UK Government and the DAs also run a sophisticated model which estimates current pollutant concentrations and predicts future concentrations across the UK, drawing on emissions data from the National Atmospheric Emissions Inventory and traffic data supplied by DfT. The modelled estimates are compared to monitored information from the AURN, and appropriate adjustments are made to the model to bring the two into line. The UK Government relies exclusively on AURN data and modelled data for its reports to the EU.

136. Alongside this national level work, local authorities run in the order of 1,000 automatic monitoring sites to support their LAQM responsibilities, and a great many more diffusion tube sites measuring NO<sub>2</sub> concentrations. Information from these sites is not pulled together centrally for the UK as a whole, though there are a number of regional networks (in Scotland, Greater London and elsewhere) and a facility for local authorities to record diffusion tube data on the national Air Quality Archive. Some of the sites included in the AURN are local authority-owned, and a wider set of some 200 local authority sites are used as a check on the centrally modelled results. Central government's contractors undertake an annual exercise to identify local authority sites reporting exceedences not picked up in the Government's EU returns. Beyond that, very little use is made centrally of locally generated data.

137. We consider **that there would be considerable benefit in creating a larger national information pool of measured data on ambient air quality, integrating the good quality data generated by local authorities on to the national Air Quality Archive, and including it in annual UK-wide analyses of trends. This will provide a fuller and more robust evidence base for central policy making.** The number of sites included in the AURN – only 20 roadside sites across the whole of the UK producing results for NO<sub>2</sub>, for example – seems to us to be far too small a sample to support useful research into trends in pollution concentrations, and an improved understanding of the factors influencing pollution levels at different times and locations. The far larger numbers of measurements generated by local authorities could be used to provide a more robust overview of what is happening, and provide for more detailed and nuanced analysis – by region, by season, by characteristics of traffic flow etc. Our understanding is that the large majority of the automatic sites run by local authorities meet quality standards sufficient for this purpose; they are of course considered good enough to support the decision on whether or not an AQMA should be declared.

138. We are not proposing that more use be made of local authority measured data in the UK's reports to the EU. We understand that the Ambient Air Quality Directive imposes strict QA and siting requirements for monitored data. Including data from some or all good-quality local monitoring sites into reports to the EU, assuming this to be practicable at all, would entail substantial costs to satisfy these requirements, and we have not enquired into the feasibility or cost-effectiveness of this. However, we should point out that the current discrepancies between the results reported to the EU and authorities' own data do not help the cause of securing full local authority support in the drive to meet EU limit values.

## SECTION VI: ACTION PLANNING AND IMPLEMENTATION

139. This section moves on from discussion of the review and assessment parts of LAQM to explore the scope for improving action planning and delivery. This is the part of the system where most stakeholders feel that the major problems lie.

140. The section looks first at issues about the concept of Air Quality Management Areas, which are the areas to which action planning relate. It goes on to look at action planning and its perceived shortcomings, and at what might be done to address these. Finally, it looks at the scope for reform to the action planning process requirements.

### Air Quality Management Areas

141. As outlined in section II, the 1995 Act requires that the first step a local authority must take once it is established that air quality objectives are unlikely to be met at particular locations<sup>9</sup> is to declare an Air Quality Management Area which includes those locations. It must then go on to produce an action plan setting out the measures it proposes to take towards the achievement of the air quality objectives in the designated area.

142. The legislation is silent on the size and characteristics required of AQMAs other than that they should include locations where objectives are not expected to be met. The policy guidance suggests that it is for local authorities to decide what scale of area to go for. It notes on the one hand that measures to tackle problems are likely to relate to an area which is substantially larger than the one in which the problems are being experienced, but on the other hand that more narrowly defined areas can provide a clearer focus. In practice, AQMAs vary in size from those including only a single property or street to those that cover 100% of an authority's area. Larger AQMAs are increasingly common.

143. We have argued in section IV that LAQM has not in practice developed in quite the way that was anticipated by the architects of the 1995 legislation, and that the UK Government and the DAs now need to re-think and restate what they are expecting from local action. Further consideration of what part AQMAs have to play should form part of this re-think. The earlier expectation was that locations where national measures did not deliver air quality objectives would be very much the exception rather than the rule, and that an AQMA would be a useful device to focus attention on these exceptional locations. The current reality is that the majority of urban centres in the UK contain locations experiencing levels of pollution which are above objective levels, and that many of the

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<sup>9</sup> Regulations refine the definition of 'locations' to include only those which are outside buildings or other structures, and are where members of the public are regularly present. The definition is further expanded in LAQM technical guidance.

'local' solutions lie in land-use and transport planning measures which need to be applied not just in a small area around the 'hotspot' but across the district/ borough area and beyond. In these circumstances, it is questionable whether the requirement to declare an AQMA is a necessary or useful prerequisite to taking action. An alternative would be to tie the requirement to prepare an action plan directly to a duty to develop and implement measures designed to alleviate problems identified through review and assessment.

144. There is a further concern that the focus on AQMAs may encourage the view that problems are solved once objective targets have been met, and the AQMA revoked. This flies in the face of the current expert view that there is no safe threshold for PM<sub>10</sub>/ PM<sub>2.5</sub>, suggesting that it is desirable to decrease current concentrations wherever they exist in the proximity of people.

145. We are not advocating a repeal of the AQMA provisions of the Environment Act at this stage. While there has been some pressure for clearer guidance on the geographic coverage of AQMAs, and there may be new issues to consider as policy on dealing with PM pollution develops, we are aware of no pressing criticisms of this part of the process. On the contrary, the requirement to make a formal order designating an AQMA is generally considered to be helpful in generating some priority for air quality issues within local government. We are, however, suggesting that **further thinking about the role of LAQM may in turn raise questions about the usefulness of the AQMA concept, and that these may need to be resolved in due course.**

## Action planning – current requirements and views expressed

### *Current requirements and practice*

146. The requirement that local authorities prepare actions plans for the use of their powers "in pursuit of the achievement of air quality standards and objectives in the designated area" is in section 84 of the Act. Other statutory requirements are that the plan should include a statement of when each of the measures proposed in the plan will be implemented, and that the plan may be revised from time to time.

147. Central guidance indicates that plans are expected to be completed within 12-18 months following AQMA designation. Annual progress reports are expected thereafter. The guidance also indicates that action plans must include:

- Quantification of the source contributions of the predicted exceedences to ensure that measures are effectively targeted;

- Details of how the authority expects to use its powers and also to work in conjunction with other organisations;
- Clear timescales for implementation of the measures proposed;
- Quantification of expected impacts of proposed measures where possible;
- Evidence that all available options have been considered;
- Proposals for monitoring and evaluation.

148. There is also provision in the legislation for the contribution of county councils to action planning in shire areas where there are two tiers of local authority, and guidance on involving all relevant interests in the development and implementation of plans. We return to these provisions and the related issues in section VII.

149. Action plans are required to be submitted to Defra or the relevant DA or, in the case of London authorities, to the Greater London Authority. They are assessed by consultants (currently AEA Technology and Steer Davies Gleave) who provide comments to the authority. Final action plans may in principle be rejected if they fail to respond adequately to comments, but more usually the consultants will note any remaining concerns and ask that they be dealt with in the next progress report. The consultants also assess and comment on the progress reports.

150. Deadlines for submitting draft action plans are often missed. 16 authorities are currently overdue with submission of their action plans, in some cases by several years. 8 English authorities have failed to deliver progress reports on their action plans for three or more years.

#### *Views expressed and possible solutions*

151. We explored views on the quality of action plans with some of those responsible for assessing them. Their view was that many plans approved previously, and many submitted for approval more recently, suffer from serious deficiencies including one or more of the following:

- Lack of sufficient specificity as to the sources and causes of exceedences;
- Failure to identify the reduction in concentrations needed to secure compliance with objectives;
- Failure to concentrate the programme sufficiently on the causes of the exceedence;

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- Failure to quantify the impacts of the proposed measures, and to demonstrate that the programme as a whole was likely to achieve the objectives by the required dates;
- Failure to demonstrate the cost-effectiveness of the chosen measures;
- Failure to specify convincingly how progress was to be measured.

152. Our discussions with local air quality officers suggest that many would recognise at least some of these weaknesses in their action plans, but would argue that these result from a range of systemic faults which were outside their control. These are spelt out in figure 5 below.

**Figure 5: Reasons given for failure of action planning**

- Lack of co-operation, or interest in, or understanding of air quality, on the part of colleagues in the authority or a partner authority or body (usually, the local transport department, the local planning department and the Highways Agency or DA counterpart)
- Most potential measures coming under budgets not controlled by AQ officers and not primarily directed at air quality;
- Climate change taking priority when climate change and air quality considerations conflict;
- The public and local politicians giving low priority to air quality, especially when AQ measures conflict with attracting or retaining investment and jobs in the area, but also more generally when AQ measures are in competition for tightly constrained resources;
- Cost of some measures perceived as prohibitive, and/or their cost-effectiveness doubtful;
- And, crucially, doubts about the feasibility of removing local exceedences through any realistic combination of local actions.

153. The universal view across all categories of stakeholders to whom we have spoken is that the action planning and implementation parts of the system are not working well. This is supported by the evidence on the ground. We have seen in section II that progress towards air quality targets for NO<sub>2</sub> and PM<sub>10</sub> is not proceeding as expected either nationally or, so far as we can judge, in local areas where action plans are in place. AQAP actions have led to very few AQMA revocations.

154. The main reasons suggested to us for the failures in action planning and delivery are those suggested in figure 5. We came across cases where some of these factors



clearly did not apply (eg where there are excellent relations between air quality and transport colleagues), and heard a different emphasis on occasion from those outside the air quality community. Nonetheless, the list is a fair summary of where most people think that the main problems with action plan delivery lie.

## **Making action planning work**

155. Flowing from this analysis of the causes, the following were the main types of solution proposed to us:

- (i) Steps to secure greater commitment from those responsible for other policy areas which impact on pollution, in particular transport and land-use decision takers and those leading on climate change policy.
- (ii) Clearer messages and better information to support action plan implementation, whether in the form of simpler and more forceful messages to convey the urgency and importance of air pollution to non-expert local decision takers, or clearer and more specific guidance to air quality officers on the measures they need to put in place.
- (iii) Tougher obligations or new powers for local authorities, whether in the form of a (a) strengthening the general duty in section 84, (b) mechanisms to impose responsibility for achieving target air quality improvements directly on local authorities, (c) directions from the Secretary of State and Devolved Administrations to authorities to put in place specified measures, or (d) new powers for local authorities.
- (iv) An increase in centrally provided resources, ring-fenced for air quality measures.

156. Before we can address the question of how to make action planning work, we need to postulate a view on what it is that we are expecting it to achieve. This takes us back to the discussion of the role of LAQM in section IV. On the 'modest' view of its role, we believe that useful progress can be made by improving the linkages between air quality and other policy areas (i above) and by better communication on the nature and urgency of the problems, and of what can be done to tackle them (ii above). These opportunities are further explored in sections VII and VIII respectively. On the 'proactive' view of its role, however, these measures alone are not likely to achieve the required results. Tougher powers or duties and/or a major infusion of resources as described under (iii) and (iv) above will have to be considered. We explore these options below.

157. A strong and recurring theme in our discussions was that more priority needs to be given to air quality in local government decision-taking if air quality objectives and EU limit

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values are to be achieved. Local government decision takers face a range of conflicting pressures from constituent interest groups, not least potential investors, local business interests and local car users. Many of those to whom we have spoken – including people working in local government – argue that air quality will only receive the priority it needs if tougher legal obligations are placed on local government. We have given some thought to the form tougher obligations might take, and their feasibility.

#### *Strengthening the wording in section 84*

158. A number of stakeholders put to us the view that the duty imposed on local authorities in section 84 of the 1995 Act is too weak. The suggestion is that the current requirement that local authorities should prepare a plan “in pursuit of the achievement of air quality standards and objectives” might be replaced with a tougher provision requiring local authorities to take steps to ensure that standards and objectives are met in the area. The regulation-making powers in Part IV of the 1995 Act are very wide ranging<sup>10</sup> so such provision could probably be made without having to resort to new primary legislation.

159. We are not persuaded that a provision of this kind would be sensible or justifiable. It would change the nature of the local authority role so that, instead of being required to work towards air quality objectives, authorities were under an obligation to ensure that air quality objectives were actually achieved in their area. Lead responsibility would thus shift from central to local government. Given that many of the more cost-effective measures to address air quality are likely to be best applied nationally rather than locally (such as basic vehicle emission standards and IPPC), this would put local authorities in an intolerable position. It would also fail to take account of the fact that many of the causes of local air pollution lie outside a local authorities boundaries. While local authority actions are seen as complementing rather than replacing national ones, it would not be reasonable to place a duty on local authorities to deliver air quality standards.

#### *Imposing mandatory targets on local authorities*

160. Another variant on this theme is that, just as the UK and national governments are under an obligation to deliver EU limit values or face infraction proceedings and a hefty fine, so local authorities should also face an appropriate mandatory target and enforcement regime.

161. We are aware of one precedent for passing on to local authorities a share in the UK Government’s responsibilities for delivering EU-imposed environmental targets. The

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<sup>10</sup> Section 87(1) provides that regulations may be made for or in connection with implementing the strategy, for or in connection with EU or other international obligations relating to air quality or otherwise with respect to the assessment of management of the quality of the air. Section 87(2)(c) provides that such regulations may make provision conferring powers or imposing duties on local authorities.

Landfill Directive<sup>11</sup> set challenging targets for the reduction of the amount of biodegradable municipal waste sent to landfill in the UK. In order to achieve those targets, the UK Government allocated to each waste disposal authority a reducing allowance for the amount of biodegradable municipal waste which that authority might send to landfill in each of the years to 2020. The regime is supported by the Landfill Allowance Trading Scheme under which authorities may trade, bank or lend their allowances so as to meet their obligations in the most cost-effective way. Authorities face a fine if their landfill operations exceed the allowances they hold, but so far none has done so.

162. There would be very considerable problems to be worked through in attempting to devise comparable arrangements to deliver air quality targets. The idea of simply transferring to local authorities the requirement to achieve EU limit values suffers from the same weakness as the possibility of the strengthened duty discussed above; it would be unreasonable to expect local authorities to carry sole responsibility for achieving limit values in their areas. Giving authorities responsibility for achieving a part of the target – so that for example an authority was required to deliver a reduction of, say,  $10 \mu\text{g m}^{-3}$  for a named pollutant at a specified location – would be impossible to monitor and enforce; there would be no way of deciding conclusively the causes of any change to  $\mu\text{g m}^{-3}$  at the specified location, and hence whether or not the authority had succeeded in meeting its target. So, while we would not totally rule out the possibility of an ingenious scheme being devised to find a way through all these difficulties, we see no prospect of one currently on the horizon.

#### *Secretary of State/ DA directions*

163. Another possibility, mentioned inter alia in the recent Defra consultation paper on the transposition of Directive 2008/50/EC<sup>12</sup>, is that the Secretary of State/ DAs might direct local authorities to take certain actions. The Secretary of State and DAs have powers under section 85(5) of the 1995 Act to make directions requiring local authorities to take such steps as they consider appropriate for the implementation of any EU obligations. The Defra consultation paper sees these powers as relevant to local authorities' role as delivery partners in relation to air quality management, but it does not expand on how the powers might be used.

164. There are various possibilities. Using this power, the Secretary of State and/or the DAs might direct in very general terms that all local authorities with one or more AQMAs take action to eliminate the exceedences in their areas; they might direct that all authorities with AQMAs take specified steps (such as establishing a low emission zone or a retrofitting incentive scheme); they might select authorities of a particular kind and direct that they take specified actions judged to be appropriate to address their particular

<sup>11</sup> Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste.

<sup>12</sup> Consultation on the transposition of Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe. November 2009. Defra. Paragraph 3.13.

circumstances; they might select individual authorities and direct appropriate action in each case; or they might go for a combination of these approaches.

165. A brief examination of what any of this might mean in practice reveals the challenges of the approach, and the considerable distance from the policy set out in the 2007 Air Quality Strategy. The simplest form of general direction hypothesised above, imposing a requirement on all AQMA authorities to eliminate exceedences in their areas, is just another way of imposing the strengthened duty discussed in paragraphs 158-9 above, and suffers from the same major shortcoming; it is not reasonable to impose on local government the prime responsibility for achieving air quality standards in their areas. A general direction which required all AQMA authorities to undertake specified measures is also most unlikely to be attractive; it presupposes that the same measures will be appropriate in all AQMAs; and it conflicts with the notion that local consultation on the content of plans is important.

166. In theory at least, specific directions imposing a defined set of requirements on a particular authority or group of authorities are likely to make more sense than general directions. It is conceivable, for example, that central Government might wish to make a direction to toughen the current rules operating in the London low emission zone, or to require that a low emission zone be established in other major conurbations. But this approach too has problems. In order to make specific directions, central Government will need to develop a clear view not simply on what are the right national measures to tackle air pollution, but also on the measures which are appropriate for defined local circumstances. This would be a major change from the philosophy in the 2007 Strategy, and a very substantial new commitment for central government officers. The development of a new limited strategy, as advocated in section IV, would be a necessary first step before specific directions could be considered.

#### *New powers for local authorities*

167. The final suggestion that we need to cover in this section is the proposal that local authorities should be given stronger powers to secure air quality improvements. One suggestion put to us was that local authorities should be given better tools to enforce appropriate action in AQMAs, comparable to the powers available to them to enforce smoke control areas under the clean air acts. Another suggestion, made by council leaders at the recent Air Quality Summit, was that local authorities should be given greater powers to influence polluters in their areas, such as bus operators and the Highways Agency.

168. We are not persuaded by either of these specific suggestions, nor by the need for blanket new powers to help local authorities to deliver air quality objectives. We do not consider that new powers for local government are the right way to influence Highways Agency operations. As regards bus emissions, we note that the arrangements for

governance of the bus industry outside London were adjusted only very recently, in the Transport Act 2008, in ways which offer potential for more effective agreements between operators and local authorities on improvements to bus services, including in the quality of vehicles and their emissions. Nor do we understand how new powers to enforce AQMAs would help, or how they could be made to work in practice. As we explain in our discussion of air quality and planning in section VII, we cannot see that air quality could ever be given absolute priority over all other considerations even in AQMAs. So the pursuit of action in AQMAs is always likely to involve judgements as much as the rigid enforcement of controls.

169. On the other hand, we do not rule out this suggestion altogether. The 1995 Act includes provision to make regulations conferring new powers on local authorities, and we can envisage circumstances when this provision might be used in a limited and targeted way. Proponents of new powers should spell out their suggestions in more detail as a basis for further consideration.

#### *Conclusions on tougher obligations and new powers*

170. We argued in section IV that central Government needs to develop a clearer view on the role of local authorities in air quality management, and on the contribution that local measures may be expected to make to delivering air quality objectives and EU limit values. **We consider it likely that tougher obligations will need to be imposed on local authorities if Government concludes that local measures should be making a major contribution under the 'proactive' view of its role. However, it will be clear from the discussion above that we see no simple way of achieving this through a change in the wording of the local authority duties set out in the legislation, nor through the imposition of formal quantified targets on local authorities. Nor do we see easy answers flowing from conferring new powers on local authorities. Central Government could contemplate using its powers under section 85(5) to direct local authorities to take certain steps to deliver air quality improvement. If it is to do that, it will first need to develop its ideas on what local measures it would like to see put in place and, as advocated in section IV, to set these out either in an updated UKAQS or in a limited strategy focussed on the immediate NO<sub>2</sub>/ PM<sub>10</sub> compliance issues.** It will also need to accept a new responsibility for assessing different local circumstances.

171. It is also worth noting in passing that the Defra will need to work with other Departments, notably the Department for Transport, in deciding what local measures should be directed centrally. It will also need to consider what extra mechanisms may need to be put in place for monitoring and enforcing local action.

*An increase in centrally provided resources (solution iv)*

172. There will be a cost involved in putting in place effective action to deliver air quality objectives, whether it falls to central or local government, to industry or to individual road users. It would take us well beyond our remit to consider what measures are likely to be most cost-effective, and how they should be financed. We would note, however, that any increase in ring-fenced grants available to support local government's air quality work would need to be reconciled with the current policy emphasis on channelling money to local government through the single multi-purpose Area Based Grant which authorities are free to spend as they judge best.

### **Streamlining the process requirements**

173. We set out in paragraphs 146 -149 above the current requirements for preparing, updating and reporting progress on action plans, and the arrangements that are in place for scrutinising them. In common with the process requirements for review and assessment discussed in section V, these sit somewhat uncomfortably with recent government moves away from detailed central prescription of processes and inputs. We have considered whether they could be streamlined in any way, or removed altogether.

174. As with so much else in this report, the scope for reform to these processes turns on the view that is taken on the role of LAQM in driving major improvements to local air quality. **On the 'modest' model hypothesised in section IV, we see little case for continuing centrally to prescribe the coverage of action plans and for continued scrutiny from the centre. These requirements could be removed by amendments to the statutory guidance.** We also have some sympathy for the local authority view that the central emphasis on quantification can be somewhat irksome when the sum of the actions which the air quality officer is in a position to propose are often so far removed from what is needed to achieve objectives and limit values. **On the other hand, if the view is taken that local authorities have a major role to play in implementing measures to deliver EU limit values under the proactive model described in section IV and/or if they are seen as central government's delivery partners in this respect, then we would advocate retaining the current requirements in largely their current form.** Subject to the point raised below, we heard no strong calls for the reform of these process requirements in the course of our discussions.

175. We heard some criticism of the practical guidance issued to support the action planning process. We return to this subject in section VIII.



## SECTION VII: IMPROVING LINKS WITH OTHER POLICY AREAS

### Introduction

176. In section III we identified the main ways in which LAQM interacts with other policies and services, nationally and locally. Our discussions with stakeholders demonstrated that these interactions are currently being managed with only patchy success. This chapter outlines the difficulties which most often arise, or are perceived to arise, with individual areas of policy and considers the scope for alleviating these.

177. One fundamental factor which applies across the board is that custodians of other policies and services which have a bearing on LAQM often do not consider that improving local air quality is a matter of much importance to them. Chapter VIII below addresses the question of how Government could present the case for action more persuasively to decision-makers. Other options for addressing the problem are considered in this section.

### Transport

#### *Interactions within Government*

178. In England, as we have seen, DfT has been designated as a key formal delivery partner for Defra under the relevant PSA Delivery Agreement, including for ensuring action to deliver compliance with air quality objectives. We found however that this responsibility was not widely recognised or understood in the Department, nor was it reflected in corporate strategy statements such as 'Delivering a Sustainable Transport System', which gives only very cursory treatment to air quality.

179. The work of the Cleaner Fuels and Vehicles team is crucial to the delivery of the air quality objectives but cannot on its own secure sufficiently rapid improvement in air quality to meet the deadlines. We found that other individual policy teams were generally aware of the potential significance of their policies for air quality, and air quality effects were routinely included in impact assessments and cost-benefit analyses. However, such effects usually accounted for only a small proportion of the total estimated benefits, or costs, of a proposed policy or scheme and were not normally of conclusive significance to the eventual decision. These policy teams did not on the whole perceive it as part of their job to seek to persuade local decision-makers to apply their policies in the way most beneficial (or least damaging) to compliance with air quality objectives, or to advise them how that might best be done; consistently with wider Government policy on central-local relations, it was thought to be up to local decision-makers to decide for themselves what

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priority to give to air quality improvement. Teams concerned with promoting the adoption of more sustainable transport modes and practices appeared to view the air quality impacts of these as only of secondary importance; there had for example, as noted earlier, been no attempt to evaluate the air quality effects of the Department's sustainable town demonstration projects.

180. We found also that the very small team responsible for co-ordinating DfT's air quality work had been seriously under strength for a long period until July 2009, and that no concerted plan was in place for delivering the Department's responsibilities under PSA Delivery Agreement 28.

181. We conclude that:

- **the sharing of responsibilities under PSA 28 between Defra and DfT, coupled with the recent strengthening of the air quality co-ordinating team, provides a good base on which to build. DfT now needs to develop a more concerted plan for delivering its responsibilities, ensuring that all relevant policy teams are aware of them, and generally raising the profile of air quality issues in the Department**
- **the appropriate form and status of this plan would depend on whether (see section IV) central Government decided to adopt a 'modest' or a 'proactive' view of the role of local government in LAQM. Under the 'modest' model, DfT should concentrate on**
  - (a) ensuring that their policy teams are fully aware of their PSA28 responsibilities; and**
  - (b) identifying how each area of policy can be applied so as to secure maximum benefit to air quality.**

**Under the 'proactive' model, DfT should, additionally, work with Defra to develop joint guidance on the measures that need to be put in place locally to deliver limit values.**

182. The system of PSA Delivery Agreements does not apply at all to, or within, the Scottish and Welsh Assembly Governments. In Northern Ireland, the equivalent PSA responsibilities rest wholly with the Department of the Environment, rather than being shared with the Department of Regional Development. We did not have the same opportunities as in England to observe the handling of the interactions with transport policies, but understood that the relationship with transport policy interests was not ideally close in any of the devolved administrations. However, we are told that within the Welsh Assembly Government the relationship is now being actively strengthened so as to ensure that air quality is routinely included as an important factor in transport policy and strategy work.

183. **The starting-point in the devolved administrations is not the same as it is for England. The necessary first step is to establish where, within each of these, responsibility for maximising the air quality benefit of transport policies should lie. Thereafter, action should be taken on similar lines as recommended above in England, *mutatis mutandis*.**

*Interactions at the local level*

184. We encountered a number of encouraging examples of close working between air quality officers and (variously) local highways, transport planning, and public transport staff, sometimes replicated at member level, though also some instances where (at either officer or member level, or both) the reverse appeared to be true. While, in principle, such synergies should be easier to secure within unitary authorities than in English shire counties and metropolitan areas, we observed some examples of very constructive relationships in the latter, and vice versa.

185. **We considered the case for amending the legislation to transfer LAQM responsibilities from district to county level authorities in shire areas in England, but concluded that this should not be pursued.** Such a change would clearly remove some potential barriers to close working between local transport and air quality officers and members, but it would bring with it a range of new problems. It would divorce the operation of LAQM from the delivery of industrial pollution control and clean air responsibilities, with the consequence that both tiers of government would need to employ air quality experts. It could create new barriers between LAQM and land-use planning for which responsibility rests at district level. It is also worth noting that county/district authorities have already been replaced by unitary authorities in many parts of England, and more such changes are likely in the future. All this in our view adds up to a case for focussing on how to make the current arrangements work well, rather than devoting time to put in place institutional change which would require primary legislation.

186. We also considered the case for change to the pattern of transport responsibilities in the metropolitan areas, where the divorce of local highways management from local transport planning and public transport responsibilities in particular is a well-known impediment to the delivery of sustainable transport policies. The Local Transport Act 2008 has opened up opportunities for local government in England to propose changes to the governance of local transport in individual areas, and these are being explored by most of the metropolitan areas. The outcome may well be new structures which will be more effective in delivering sustainable transport packages of schemes that would be beneficial to air quality as well as to other objectives.

187. **In metropolitan areas of England, though air quality officers and transport planners often seem to work well together, the current distribution of**

**responsibilities for transport is not conducive to effective delivery of transport measures which could be helpful to air quality. If more workable local arrangements can be agreed under the relevant provisions of the Local Transport Act 2008, air quality should stand to benefit.**

188. How the interactions worked seemed often to be a matter of individual personalities or of historical accidents (such as, in shire counties, district and county councils being under the same political control, or otherwise). Air quality departments often seemed remote from the corporate decision-making processes at the centre of their authorities, and AQ officers had not always found ways of overcoming this disadvantage in seeking to exert influence and build alliances outside their departments. Political judgements about local priorities were also clearly of importance in many cases: for example, measures to discourage or restrict car use in town or city centres were sometimes rejected because of fears that they would weaken the competitive position of the town concerned, or new road-building might be favoured over more sustainable transport measures on economic development grounds. The same was true of local public opinion: in both Greater Manchester and Edinburgh, the local electorate had rejected proposals for congestion charging.

*Suggestions for securing greater co-operation from local transport and highways departments*

189. Understandably, AQ officers who had not managed to secure from transport planning and highways colleagues and committees the action they judged to be necessary sometimes suggested to us that in some way transport departments should be obliged to co-operate in the action planning process. Within unitary authorities and metropolitan districts, it would not be possible to create any such duty, as an individual department of an authority is not a legal identity. Within English shire areas, the county council, which exercises most though not all of the relevant transport functions, is already statutorily obliged to contribute to action planning. In English metropolitan areas, there is no such obligation on the integrated transport authority. However, in our limited observation, there is often good co-operation between air quality officers in the district councils and ITA staff; it is commoner to find resistance within district councils themselves to policies for discouraging car use and promoting sustainable modes, which would favour air quality improvement.

190. Another comment commonly put to us was that the abandonment for the third Local Transport Plan round of the high priority accorded to air quality in the guidance for the second round was a retrograde step, which should in some way be reversed. This would be operationally awkward, as the third round guidance was issued some months ago and transport planners will already have started to act on it. It would also be difficult to square with the philosophy of the third round as a whole, which is to leave authorities to determine

their own priorities for LTP3, mirroring those adopted by local strategic partnerships in their sustainable community strategies. Furthermore, the adoption of air quality as one of only four shared central-local priorities for the second round (to the exclusion even of reducing greenhouse gas emissions) had no noticeable impact on the content of authorities' actual plans, and we have no reason to suppose that any new exhortation to authorities to give higher priority to air quality in their next LTPs would be any more effective, at least unless accompanied by a powerful new rationale for action (on which see section VIII below).

191. We suggest therefore that, rather than looking to central Government to take formal steps to bolster their position, air quality officers should be considering possible means of taking forward the air quality agenda more proactively with colleagues in transport and corporate strategy departments and also with local members, developing a better understanding of others' priorities and exploring the scope for 'win-win' policies which would advance both these and air quality objectives. This may in some cases require the development of new policy formulation and influencing skills which they have not previously felt the need, or had the opportunity, to acquire. There could also be scope in some local situations for organisational changes, such as co-locating or 'bedding-out' air quality staff with transport or corporate strategy teams.

192. We conclude that **it would not be practicable to create a new formal obligation for the transport departments within an authority to co-operate in the action planning process. Nor can we recommend the issue of supplementary guidance for the third Local Transport Plan round, re-instating the special priority given to air quality in the second round guidance. However, there might be scope for air quality officers to work more proactively to build alliances with transport colleagues and others. A broadening of their traditional skills base might help some of them to achieve this. Options for re-brigading staff so as to bring air quality, transport and/or corporate strategy teams closer together could also usefully be considered.**

#### *Interactions with Highways Agency*

193. Local authorities often expressed frustration with the Highways Agency in England and its counterparts elsewhere, in cases where exceedences were attributable to emissions from traffic using the motorways or trunk roads. Lack of co-operation in the formulation of action plans was frequently alleged. The HA however maintained that solutions suggested often turned out on investigation not to be economically viable, and that, while various traffic management measures on their network were being evaluated for their air quality impact, there was insufficient evidence yet that any one type of measure could consistently deliver air quality improvement: each set of local circumstances had to be considered individually. Air quality besides was only one consideration in the decision whether to bring forward a scheme; other key priorities included providing safe roads and reliable journey times. The Agency therefore did not yet have a business case for undertaking measures solely on air quality grounds.

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194. We conclude that **authorities' complaints of lack of co-operation by the Highways Agency and its devolved administration counterparts may sometimes be misplaced, since cost-effective responses to exceedences arising from the motorway and trunk road network will not always be available. In such cases, it is hard to see how the Agency can commit itself to remedial action unless Government is prepared to treat compliance with EU limit values as an over-riding priority, to be pursued regardless of cost.** Addressing the tensions that we have identified in the current UKAQS between cost-benefit analysis and EU target achievement (see paragraph 99) is relevant to these concerns.

#### *Northern Ireland*

195. In Northern Ireland, the position is further complicated by the fact that responsibility for all highways matters, not just for motorways and trunks roads, rests with the Roads Service rather than local government; and that local authorities have no responsibilities for public transport. We were told that the Roads Service in the past had shown reluctance to adapt their national programmes so as to accommodate action which would help authorities with their local air quality problems, though they now had a number of relevant actions in hand in Belfast.

## **Planning**

#### *Air quality as a consideration in planning decisions*

196. Many of those to whom we spoke over the course of the review were keen to see higher priority being given to air quality considerations in land-use plan making and decision taking. Some have argued for an absolute ban on development with adverse consequences for air quality within AQMAs. Short of an absolute ban, others have argued for stronger central guidance to highlight the importance of air quality to local planners.

197. While we sympathise with the concerns behind these suggestions, we do not think that it is reasonable or realistic to expect air quality considerations to have absolute priority over other considerations (such as jobs, housing, climate change etc) in planning decisions. Land-use planning requires difficult judgements to be made between competing pressures, and provides a transparent and locally accountable mechanism for reaching those judgements.

198. Throughout the UK, the framework of planning guidance already treats the air quality impact, negative or positive, of potential development patterns and individual development proposals as a material consideration, to be taken account of alongside all other material considerations, such as the economic and wider social need for

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development (including potentially polluting development). Planning authorities are expected to consider the need for compliance with air quality objectives, but are not told in terms that they should in no circumstances countenance a development which, despite all available mitigation measures, might worsen air quality within an AQMA.

199. There has, however, been an interesting recent development. The 2008 Planning Act provided that planning decisions on certain types of nationally significant infrastructure proposals in England, and in some instances in Wales, should be taken by a new independent Infrastructure Planning Commission, which would be guided in its work by a series of National Policy Statements. The consultation draft of the over-arching National Policy Statement on energy infrastructure appears to take a more absolutist line: the Commission should refuse consent to a development they consider likely to result in breach of a statutory air quality limit unless it is satisfied that adequate measures will be in place to prevent this.

200. It remains to be seen whether this position will be carried over into the final text of the statement. If it is, it will represent a notable departure from the existing corpus of planning guidance, and the question will arise whether the guidance, at least in England and Wales, should be brought into line with it. While that would certainly strengthen the protection afforded by the planning system to air quality in AQMAs, we question whether the logic of the position could ever effectively be followed through in practice. Government would need to confront the question of whether it was prepared to accord similar priority to the air quality objectives in all other policy areas, including in its investment decisions. And the question would remain as to what should take priority when there are conflicting statutory imperatives, such as proposals for biomass installations to facilitate carbon reduction, itself subject to statutory targets.

201. As noted in section III, a radical rationalisation and simplification of planning guidance has already been completed in Wales and is being progressed in the rest of the Great Britain. Care will be needed to ensure that this does not unduly blunt the impact of the air quality (and related) content of the existing guidance.

202. In summary:

- **We are doubtful whether it is sensible or practicable to give air quality considerations absolute priority over other considerations in planning decisions. However, the terms of the recent draft National Policy Statement on energy infrastructure are an interesting development. Next steps on this need to be watched with care;**
- **We are concerned that the process of rationalising the existing volume of planning guidance should not result in the loss of important messages on air quality. Defra, and air quality interests within the Scottish and Northern Ireland Government, should seek to secure that this does not happen.**



### *Community infrastructure levy*

203. Proposals for the introduction of a Community Infrastructure Levy, and reform of the system of planning obligations, in England are currently under consideration in Government. There is some risk that, in unintended ways, these could cut across the imaginative use of planning obligations that some authorities have been making to help protect and improve air quality, and that is recommended in good practice guidance very recently published by Defra on the use of low emission strategies through the planning system to reduce transport emissions.

**204. Defra should consider with Communities and Local Government the possible implications of the detailed proposals for a Community Infrastructure Levy and the future of planning obligations for authorities' Low Emissions Strategies, before the proposals are finalised.**

### *Interactions at the local level*

205. As in the case of transport, we found evidence of very variable local relationships between LAQM and the planning system. In some cases these worked well, both planning officers and members proving receptive to the advice of air quality officers. Some leading authorities were making creative use of planning conditions and planning obligations to minimise transport emissions from new development, for example by accelerating the uptake of low-emission technologies. In other instances, however, air quality staff experienced great difficulty in getting their concerns recognised by planning colleagues, or members taking planning decisions were reportedly dismissive of any considerations that appeared to run counter to the over-riding objective, as they saw it, of fostering their area's economic development.

206. Given our conclusions above on suggestions that air quality should be given absolute priority in the planning system, we consider that **there is little that can be done by central Government to improve the local interactions between LAQM and the planning system where these are not working well - other than by presenting a more persuasive case for action on air quality, as discussed in section VIII.**



## Climate change policy

### *Interactions within Government*

207. We received the clear impression that Government policy on combating climate change had not only consistently taken priority over tackling air pollution (which is probably a fair reflection of the importance of their relative impacts) but had also in most cases been developed largely independently of air quality policy, with little serious attempt to capitalise on the synergies between the two or to avoid carbon reduction solutions which are counter-productive in AQ terms. Thus, for example, vehicle fuel and excise duty structures have been developed which encourage the uptake of diesel cars, on fuel efficiency and carbon reduction grounds<sup>13</sup>, notwithstanding their higher level of NO<sub>x</sub> and PM<sub>10</sub> emissions compared with those of petrol-engined cars. Similarly, as we have seen, DfT's low-carbon strategy has not been optimised for air quality.

208. This situation has arisen in spite of the fact that, until recently, Defra has (in England) been responsible for both policies and that, in DfT, the climate change and air quality co-ordinating teams form part of the same division. Indeed, it was suggested to us by some that the transfer of climate change policy to the new Department for Energy and Climate Change might be a helpful development, in that it would enable Defra to focus more consistently on air quality, hitherto very much the poor relation.

209. On the other hand, the UK Renewable Energy Strategy (July 2009) presents an encouraging programme for reconciling the desirability of encouraging biomass combustion on climate change grounds with the need for effective control of emissions from this process. The only problem is that the measures proposed on emissions will take some time to develop and implement, while demand for biomass installations is growing fast.

210. A further difficulty is the very different time-scales to which the two sets of policies are operating. Climate change policy is focussed on statutory greenhouse gas emission targets for 2020 and 2050 (though with a very challenging path towards these); the EU limit values for PM<sub>10</sub> and NO<sub>2</sub> have to be met by 2011 and 2015 respectively, even assuming the success of the UK's applications for the deadlines set out in the Directive to be deferred. A rational 'win-win' joint strategy for climate change and air quality would place heavy emphasis on reducing the need and demand for travel and encouraging transport users to shift to more sustainable modes, but the immediate EU deadlines provide very little time for behaviour-changing measures to take effect.

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<sup>13</sup> Though the AQEG report referred to earlier suggests that the advantages of diesel from this point of view may be much less clear-cut than they are generally assumed to be.

211. In the Scottish and Welsh Assembly Governments, there appeared to us to be similar disjunctions between policy-making on climate change and air quality. The need to reconcile these better was heightened in Scotland by the much more restrictive air quality objectives for PM<sub>10</sub> which apply there, coupled with the pressures to capitalise on Scotland's extensive forestry resources for biomass combustion.

212. We conclude that

- **Climate change has rightly become a major priority for central and local government in recent years. However, this has sometimes been at the expense of air quality policy. Some opportunities for integrating the two have been missed, such as in DfT's 'Delivering a Sustainable Transport System' and low carbon transport strategy. The aim should be to identify policies and priorities capable of securing the best available outcomes for both. We are encouraged to see that this principle has recently been recognised in the Cabinet Office/DfT-led report 'The Future of Urban Transport' (November 2009), but so far there seems to be no commitment to specific actions to carry the principle forward**
- **the UK Renewable Energy Strategy (July 2009) is a welcome exception to this. However, the measures it proposes to secure acceptable air quality outcomes from the expansion of biomass combustion will take time to develop and implement, while demand for biomass installations is growing all the time**
- **This is a particular difficulty in Scotland, because of the combination of demanding renewable energy targets, abundant forestry-based supplies of biomass and a much more restrictive air quality objective for PM<sub>10</sub> than applies elsewhere.**

#### *Interactions at local level*

213. Our discussions with stakeholders suggested that many local authorities were now giving high corporate priority to climate change policy. For their Local Area Agreements, a number had selected climate change work as a priority, whereas very few indeed had chosen air quality. Climate change units were often placed close to the authority's corporate centre, whereas air quality officers were usually positioned well away from it. Instances of the two functions being co-located were rare.

214. Lack of integration between air quality and climate change work arguably matters less at local than at national level, in that, within the range of local authority functions, the scope for conflict between the two is probably not as great. However, the opportunity to combine the two agendas and exploit the synergies between them is often being missed.

215. The Greater London Authority is an important exception. A joint energy and climate change unit was established in 2006. A consultation draft of the Mayor's new Air Quality

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Strategy was published in October 2009. This seeks wherever possible to prioritise actions that contribute to achieving more than one policy objective, for example measures which reduce carbon emissions, improve transport choices or promote economic growth, as well as improving air quality.

216. We conclude that:

- **climate change is a corporate priority for many local authorities, but air quality only for a very few. It is rare for the two functions to be co-located. There is less scope for direct conflict between the two policies at local than at national level, but more could be done to exploit and build on the synergies between the two**
- **however, the Mayor of London's new draft air quality strategy, prepared by the joint energy and climate change unit in the GLA, is a promising attempt to capitalise on the linkages between these two policies, and with others.**

## SECTION VIII: COMMUNICATING CLEARER MESSAGES

### Introduction

217. In considering what might be done to improve LAQM action planning and delivery in section VI (see paragraph 155), we identified solutions falling into four broad groups. The second of these groups dealt with improving the information available to support decision takers, whether in the form of simpler and more forceful messages to convey the urgency and importance of air pollution to non-expert decision takers, or clearer and more specific guidance to air quality officers on the measures they need to put in place. We deal with this group of issues in this section.

218. We see considerable scope for strengthening and clarifying the messages put across by Defra and the DAs to support delivery of air quality policies. Clearer messages should help to influence people working on related policies in other Government Departments, as well as decision takers in local government. Better information aimed at the wider public should also help to generate support for measures to tackle air quality. Whatever is concluded about the role of LAQM and next steps needed to improve it, we suggest that work on this should be a priority.

219. We understand the concerns among those who are expert in air quality matters that complex issues should not be reported in an oversimplified way which disregards key elements of the situation. We appreciate also the importance of not presenting information on health threats in a manner likely to provoke unjustified public alarm. Nonetheless, we see this as an issue where the perfect can be the enemy of the good. Some simplification of complex material is essential for effective communication – inevitably at the expense of much of the detail.

220. There are three important areas to be considered in communicating air quality policy better. They are:

- i. The health impacts of air pollution
- ii. The extent of air pollution, and trends over time
- iii. Effective policy interventions

We consider the scope for improvement under each of these headings.

## Health impacts of air pollution

221. Health concerns are at the heart of air quality policy. There is a substantial body of evidence suggesting an association between variations in airborne particles (PM<sub>10</sub>, PM<sub>2.5</sub>) and day-to-day variations in daily deaths, admissions to hospital for the treatment of both respiratory and cardiovascular disease and symptoms from patients suffering for asthma. There is also evidence that long-term exposure to particulate air pollution is associated with a decrease in life expectancy. The main toxic component is thought to be the finer particles (PM<sub>2.5</sub>). Evidence of a similar nature is available linking concentrations of sulphur dioxide with respiratory disease. Some studies have also suggested a link between nitrogen dioxide pollution and respiratory ill-health, but the evidence is less conclusive.

222. Many of those to whom we spoke over the course of the review felt that the link between air quality policy and these health impacts needed to be communicated more effectively. Although there is some evidence of public concern from public attitude survey results in London, the general consensus among those we met – including a group of local councillors serving on the LGA environment and transport boards – was that air quality was not an issue of great significance to the general public, except in the context of controversial development (such as incinerators). Better understanding of the health impacts would be likely to generate more support for measures to tackle air quality both among the general public and among local authority and other decision takers.

223. The way in which Government decides to quantify the impact on health is crucially important to the force and clarity of the message. The only measures used by central Government in recent documents to communicate the total health impacts of air pollution are the estimated impact of air pollution on life expectancy averaged over the population at large, and overall estimates of the cost impact derived from the reduced life expectancy figures. The methodology used relies on the calculation of a risk coefficient, quantifying the relationship between changes in the risk of mortality and in the annual average pollution concentration. Central Government's current view of the impact of air pollution using this measure, as stated in the 2007 Air Quality Strategy, is that "the level of man-made particulate air pollution experienced in the UK in 2005 would be expected to reduce life expectancy averaged over the whole population in the UK by up to about 7-8 months".

224. Whilst we appreciate that this may be the most robust measure for cost benefit assessment and other policy purposes, we do not consider it particularly well-suited as a way of communicating health impacts to a wider audience. It tends to disguise the fact that very substantial health impacts may be suffered by a vulnerable minority, rather than spread equally across the population at large. Nor is a few months reduction in life expectancy a particularly striking way of conveying health impacts when life expectancy

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generally has increased so markedly over recent years (viz. by about five years since the early 1980s).

225. Work was undertaken recently by the Institute of Occupational Medicine for the Health Protection Agency to compare the impact of air pollution with other health threats. It concluded that the impact on life expectancy of a  $10\mu\text{gm}^{-3}$  reduction in ambient  $\text{PM}_{2.5}$  (which is the same as the level of man-made pollution referred to in paragraph 223) would be much greater than that of either the elimination of all motor traffic accidents or the elimination of all passive smoking. Comparative information of this kind can be a very effective way of conveying the scale of a problem to a non-expert audience, and we hope that Defra and the DAs will include it in future published statements on air quality.

226. We would also like to see work done which would allow Government to publish estimates of the impact of air pollution in terms which were more meaningful to a non-expert audience, and gave a better sense of the nature and scale of the health impacts. Two measures that have been suggested to us for this purpose are (i) years of life lost to victims and (ii) numbers of premature deaths.

227. There are various estimates available of health impacts in these terms, which can serve to illustrate the kind of material which Government might use. On (i), there is an estimate of 9.8 years of life lost per statistical victim<sup>14</sup>, produced by Professor Kunzli and others in a paper published in 2001 in the American Journal of Epidemiology<sup>15</sup>. Various estimates have been made on (ii), including the following estimates which all relate to the impact of  $\text{PM}_{10}$  and  $\text{PM}_{2.5}$  in the UK in 2005<sup>16</sup>:

- 32,811 premature deaths: a Campaign for Clean Air in London (CCAL) estimate derived using the COMEAP 6% co-efficient (which CCAL believe is too low) and the same other parameters used by Government for the UKAQS estimates;
- 39,640 premature deaths: an estimate included in a recent European Environment Agency (EEA) Technical report<sup>17</sup>;

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<sup>14</sup> We were informed that this calculation was based on the assumption that those who died earlier due to air pollution would have died according to the usual pattern for heart disease, lung disease and lung cancer. This is an assumption that may or may not apply.

<sup>15</sup> *Assessment of Deaths Attributable to Air Pollution: Should We Use Risk Estimates based on Time Series or on Cohort Studies?* N Kunzli et al. American Journal of Epidemiology. Volume 153, No 11.

<sup>16</sup> It is important to specify the year as, for long-term exposure, the number of deaths saved per year if pollution is reduced varies over time. This issue does not arise when life expectancy is used as a measure. See [www.iom-world.org/pubs/IOM\\_TM0601.pdf](http://www.iom-world.org/pubs/IOM_TM0601.pdf) for discussion.

<sup>17</sup> *Spatial assessment of PM<sub>10</sub> and ozone concentrations in Europe (2005)*. EEA Technical Report No1/ 2009

- 51,537 premature deaths: an estimate by the European Topic Centre on Air and Climate Change in a report to the EEA<sup>18</sup>. The aim of this work was to analyse impacts using a finer spatial resolution than the 10km<sup>2</sup> normally used for this work.

These are big numbers. For comparison, 3,201 people were killed on the roads in Great Britain in 2005, and 28,954 people were seriously injured<sup>19</sup>. It would be helpful to have an official Government view on whether they are soundly based. We understand that the Quantification sub-group of COMEAP is preparing a report on the impact of long-term exposure to PM<sub>2.5</sub> in the UK, due to be published later in 2010.

228. In summary, **we recommend that Defra and the DAs work with their respective health departments to develop a stronger story about the health impact of air quality for communication to decision takers in central and local government, and to the general public. We would like to see the publication of more information endorsed by the Government which compares air pollution health impacts with other well-understood health threats, and the inclusion of additional appropriate measures, possibly including estimated numbers of premature deaths per year as a result of man-made pollution, and of years of life lost to victims.**

## The extent of air pollution, and trends over time

229. We also consider that the overall story of what is happening to air quality is not being communicated in as clear a way as it might be. Given the numbers of pollutants causing concern, the differences in trends in emissions and trends in concentrations, the relationship with UK objectives and EU limit values, the complexities of chemical reactions in the air and the impact of the weather and other factors on dispersal patterns, this is not an easy story to tell in simple and accessible terms. Nonetheless, it is essential that a simple, truthful and up-to-date account of the situation is available to inform and influence the non-expert decision taker.

230. Our first concern is that too little UK-wide quantified information on ambient air quality is available in a ready-made format to inform the decision taker. While there is a large amount of site-specific information on the national Air Quality Archive and elsewhere, the only routinely published UK-wide statistics are for ambient PM<sub>10</sub> and ozone, published as one of Defra's sustainable development indicators<sup>20</sup>. Similar UK-wide trend statistics

<sup>18</sup> *Health Impacts and Air pollution - An exploration of factors influencing estimates of air pollution impact upon the health of European citizens*. December 2008. ETC/ACC Technical paper 2008/13. We were advised that this report used the coefficient for fine particles but applied it to all of PM<sub>10</sub>. This may overestimate the result.

<sup>19</sup> *Transport Statistics, Great Britain*. Dept for Transport

<sup>20</sup> There is a second air quality related sustainable development indicator which measures the number of days in each year when concentrations of a group of five pollutants are moderate or worse.



are not routinely published for NO<sub>2</sub> concentrations or for other pollutants, so it is not easy to establish what are the current figures or the trends. Ideally, we would like to see routine annual publication of trend information for (at least) PM<sub>10</sub> and NO<sub>2</sub>, broken down by type of site, by region, by season and by other relevant categories. Published and authoritative information of this kind would provide a secure evidence base, available to all, from which to communicate concerns and to assess local performance.

231. By contrast, there are good published sources of information on trends in emissions, which bring together the available information at national level. UK-wide statistics by source category over time are reported on both the Defra and DfT web-sites, and both the statistics and explanatory material is available in periodic reports prepared by the National Atmospheric Emissions Inventory and the London Atmospheric Emissions Inventory. In terms of accessibility combined with comprehensiveness in the information presented, the Department for Transport's annual Energy and the Environment Statistics in particular are a model for the type of information which we would like to see routinely published for ambient air quality as well as emissions.

232. Our second concern, which connects to the first, is that there is some ambivalence in the high level messages being conveyed by central Government about the urgency of action needed to tackle air quality. For example, while the Executive Summary to the 2007 Air Quality Strategy noted that "there is still more to do", it suggested also that the UK was meeting its objectives for air quality in 99% of the UK. Similarly, in the published text for a speech at the recent air quality summit, the Transport Minister noted that the UK is meeting air quality targets for six of eight pollutants, that key air quality pollutants from road transport have fallen by 50% since 1990, and that improvements in air quality between 1990 and 2001 helped to avoid an estimated 4,200 premature deaths each year. While the speech went on to note the high costs of continuing air pollution – between £4.5 billion and £10.6 billion in urban areas, it was suggested – the general thrust of his argument did not come over as a rallying cry to local authorities for urgent action to deal with ongoing problems.

233. There are other parts of the story that need to be given equal prominence if the Government wants to make the case for urgent action involving difficult decisions at local level. In particular:

- The ongoing health impacts need to be conveyed more forcefully, as set out in paragraph 228 above;
- The good news on emissions reductions need to be balanced by recognition of the far more mixed picture on ambient air quality concentrations, which have not declined in a proportionate manner;

- For NO<sub>2</sub> and PM<sub>10</sub>, it needs to be recognised that ambient air quality concentrations are now declining at a far slower rate than in the 1990s, and that there is evidence of increasing concentrations at some roadside sites in the Greater London area.
- The problems are not ones which just affect exceptional sites like the Marylebone Road. The UK Government is reporting exceedences of EU limit values for NO<sub>2</sub> at a large number of sites across the UK.
- For NO<sub>2</sub> in particular, the challenge of meeting EU limit values is very severe. Over the last 10 years, the average level of NO<sub>2</sub> pollution at roadside monitoring sites across the UK has consistently been more than 25% above the EU limit value; and, in London, the roadside average has consistently been more than 50% above the limit value.

234. In summary, **we recommend that Government routinely publishes a fuller statistical overview of ambient air quality trends to match the published trend information on emissions. To win over support for further action in local government and elsewhere, central Government needs to combine fuller information on current levels of air pollution with better information on the health impacts, and to present the information in a way which is designed to highlight the need for further action, rather than to celebrate policy successes to date.**

## Effective policy interventions

235. Finally in this section, we deal with the need to provide fuller information to local government about the effectiveness of measures to tackle air pollution, and what is likely to work best in their circumstances. As we have seen in section VI, a common failing of action plans is that they fail to spell out clearly what actions are proposed, what air quality impact they are expected to have, what are their costs and how the programme as a whole is expected to eliminate exceedences by the due date. To counter this problem, many of those to whom we spoke argued that much more detailed and specific guidance was needed from Government on measures worth considering for inclusion in action plans, how best they might be applied, and their likely air quality impacts.

236. We recognise that non-mandatory practice guidance is provided on establishing low emission zones, encouraging the uptake of low emission vehicles, encouraging the uptake of retrofitted abatement equipment on vehicles, and economic principles for the assessment of air quality measures.

237. However:

- while the guidance on economic principles in particular is rigorous and systematic, it gives the impression of having been written at a considerable distance from the practical conditions in which it would need to be applied. It is likely to be more accessible to economists and policy analysts than to AQ officers, who may well find it more intimidating and off-putting than helpful
- environmental health departments are likely to lack the capacity and expertise to carry out much of the analysis which is being looked for. It would be more helpful if the practice guidance recognised this, and provided more pointers to where the sort of expertise required might typically be found within an authority.

238. There is also a dearth of research data on the air quality impacts that commonly-advocated measures have had, and on their overall cost-effectiveness, in particular situations, for example evaluation of DfT's Sustainable Towns initiative has not so far included its effects on air quality. Where they exist, such data have not always been promulgated in a form accessible to decision-makers (for example, a substantial DfT research programme on the AQ impacts of various traffic management measures, completed in 2004, has not so far led to a revision of the guidance on this topic which was issued to traffic managers in 1996). The 2007 UK Air Quality Strategy reported provisional, and not very encouraging, assessments of the cost-effectiveness of various measures, including low emission zones: the results of promised further analyses of these have not so far appeared. Given the cost and difficulty of studies of this kind, it is not realistic to expect most authorities to carry out such work for themselves. It is equally unrealistic to expect them to commit themselves to implement (sometimes controversial and costly) measures in their area which have not yet been shown to have proved cost-effective elsewhere.

239. We consider that:

- **Defra should recast the practice guidance, particularly the guidance on economic appraisal, in more realistic and down-to-earth terms, that AQ officers would find easier to assimilate and to respond positively to. It would be important to engage some local AQ practitioners in this process.**
- **Defra, with DfT, should make a concerted effort to pull together in a form accessible to decision-makers the available evidence about the typical AQ impacts, and cost-effectiveness, of commonly-used or advocated measures, and to commission further study or research to fill the gaps in this. The work should cover not only measures primarily aimed at air quality improvement, such as low emission zones, but also instruments with other main aims, such as reducing congestion and smoothing traffic flows.**

## SECTION IX: SPECIAL FEATURES OF LAQM IN GREATER LONDON

### Introduction

240. In the main, the conclusions and recommendations set out in earlier chapters are as applicable to London as to the rest of the UK. However, both the LAQM and other institutional arrangements there and the underlying air quality problems have some special features which require separate consideration.

### The LAQM arrangements

241. Part IV of the Environment Act 1995 generally applies in Greater London, as in the rest of Great Britain. However, the Greater London Authority Act 1999 makes some special additional provisions: for example, the Mayor produces his own air quality strategy, and has some powers of direction over the boroughs. Details are in Figure 6.

**Figure 6: special LAQM provisions in London**

- The Mayor is required to produce a London Air Quality Strategy.
- This must contain his proposals and policies for :
  - implementing the Secretary of State's Air Quality Strategy
  - achieving in London the air quality standards and objectives prescribed under the Environment Act.
- It must also contain information about current and future air quality in London, the measures proposed by the Greater London Authority, Transport for London and the London Development Agency, and the measures which the Mayor will encourage others to take.
- In preparing his strategy the Mayor has to have regard to the boroughs' reviews and assessments, AQMA designations, and action plans under Part IV, and any guidance from the Secretary of State.
- The boroughs have to have regard to the Mayor's strategy in carrying out their Part IV functions.
- The Secretary of State can issue directions to the Mayor about the content of his strategy, eg. to ensure that it is consistent with the national air quality strategy.
- The Mayor can issue directions to the boroughs asking for their help in preparing his strategy. He also has the same reserve powers and powers of direction in London that the Secretary of State has elsewhere under Part IV. However, he has to consult the borough concerned before exercising them, and have regard to the Secretary of State's guidance.
- Where a borough is preparing an action plan, the Mayor has to submit proposals for the use of his own powers in pursuit of the achievement of air quality objectives and standards.

## Other Mayoral strategies

242. The Mayor is required to prepare a number of other strategies as well, including a spatial development strategy and a transport strategy. In framing all of these, he has to comply with a range of general duties, including ensuring that the strategies are consistent with national policies, and any UK international obligations notified to him; having regard to the resources available for implementation; and including policies and proposals to improve the health of people in London, and contribute to the UK's sustainable development.

## Other special features of London arrangements

243. Transport for London's powers and duties over most major highways and all of the public transport system save for most surface railway lines give them a key role in improving London's air quality. In addition, unlike local transport authorities elsewhere in Britain, they are directly responsible for the London bus network, which is operated under contract by franchisees. This enables TfL to determine all aspects of bus service provision, including the emission standards of the vehicles.

244. The boroughs' role in transport is a subsidiary one. The transport strategy for London is determined by the Mayor. The boroughs prepare plans for the local implementation of the strategy, but these are subject to the Mayor's approval and the Mayor controls the allocation of capital funding for them.

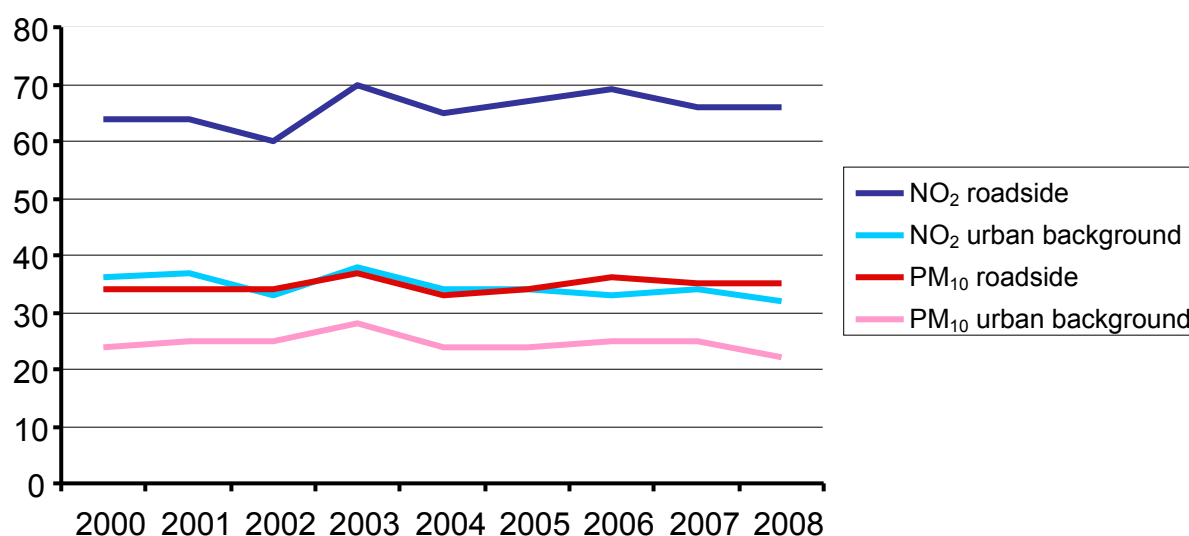
245. Planning powers rest mainly with the boroughs, but they have to have regard to the Mayor's spatial development strategy and the Mayor has a say on the most significant proposed developments.

## London's special air quality problems

246. Concentrations of PM<sub>10</sub> and NO<sub>2</sub> are relatively high in London, and trends over the last decade have remained static or marginally upwards. The average mean concentration level of NO<sub>2</sub> at roadside sites is well in excess of the EU limit value of 40 µg m<sup>-3</sup>. These trends are shown in figure 7.

247. Traffic remains the predominant source of PM<sub>10</sub> emissions in London, emissions from brake and tyre wear, which there is currently no means of controlling, becoming of increasing relative importance as measures to reduce emissions from exhausts take more effect. Gas combustion – domestic, industrial, and commercial – is an increasingly important source of NO<sub>x</sub> emissions, but over London as a whole is still exceeded by the level of emissions from traffic.

Figure 7: trends in average concentrations of NO<sub>2</sub> and PM<sub>10</sub> in µg m<sup>-3</sup> in Greater London, 2000 to 2008



Source: Environmental Research Unit, King's College, London

248. AQMAs designated by the boroughs cover 70% of the area of Greater London, and the entirety of many boroughs. The boroughs, particularly in Inner London, are relatively small geographically, and many road journeys through a borough start and/or finish elsewhere. As a generalisation, and while there remains an important supporting role for the boroughs, the most significant tools for air quality improvement in London are mainly London-wide, and in the hands of the Mayor.

## The LAQM arrangements in practice

249. The pattern of LAQM responsibilities is at first sight a complex and confusing one, as some stakeholders pointed out. So we needed to consider whether the complexity was justified. It was also suggested by some that the requirements of the Secretary of State's technical guidance were not very appropriate in the special circumstances of the London air quality scene, and that as a result the assessments and reports produced were of less practical value or interest than they could be, either to the boroughs themselves or to the GLA.

250. **We consider that the complexity of the current pattern of LAQM powers and responsibilities in London is probably unavoidable.** In particular, we consider it highly desirable that the Mayor, so many of whose functions are relevant to air quality, should have a duty to produce his own air quality strategy in support of the national one, for the part of the country where air quality is worst. We note, too, that some very important and forward-looking measures on air quality, going beyond anything that has been done elsewhere in the UK, have been taken by the Mayor, or are proposed in his new draft

strategy issued for consultation in October 2009. There is of course the potential for disagreements to arise between the Mayor and the Secretary of State over the content of the strategy and its resourcing, and for these to take time and trouble to resolve, but we see no way of avoiding this. The Secretary of State's powers of direction also provide a means of cutting the knot should any differences with the Mayor prove impossible to resolve through negotiation.

251. **It is arguable, however, that the legislation should provide for a more complete separation between the LAQM arrangements in London and elsewhere.** For example, while we have our doubts about the long-term value of the AQMA concept in the UK generally, there are particular questions about the utility in London of AQMAs designated by the boroughs, and individual action plans for these, which the boroughs take the lead in preparing, given the extent to which both the air quality problems and their causes and potential solutions cross borough boundaries, and the importance of the Mayor's pan-London powers. **We make no recommendations for immediate change, and are in no position to do so on the basis of our very limited discussions with a small sample of London authorities. Consideration of legislative change would also be an unwelcome distraction from the immediate tasks of finalising the Mayor's new strategy and securing compliance with the EU limit values. However, we think the issue would merit discussion in the longer term.**

252. As regards the requirements of the technical guidance, again our discussions have been far too limited to enable us to put forward particular proposals for amending these for London. However, **we suggest that the GLA be encouraged to discuss with the boroughs, in parallel with the consultations on the Mayor's draft strategy, whether a different pattern and content of assessment and reporting requirements would be of more help to effective action planning and implementation in London. Any changes agreed between them, and with Defra, could then be provided for in a supplement to the current guidance.**



## SECTION X: RESOURCE IMPLICATIONS

253. We were asked to assess what costs might be saved by what changes to the LAQM arrangements. This short section pulls together the very limited available information on the costs of LAQM, and considers the resource implications of our recommendations.

### Local authority LAQM costs

254. So far as we are aware, no complete set of information on local authority LAQM resource costs is collected centrally. We know of only three sources of very partial information, namely (i) the information we collected ourselves from a few authorities as part of our programme of visits and interviews; (ii) information collected through the AQC/UWE survey of local authorities undertaken alongside our review; and (iii) work done recently by the Chartered Institute of Public Finance and Accountancy for the Local Better Regulation Office on costing the administrative burden of local regulatory services.

#### *LAQM review visits and interviews*

255. We asked a small selection of authorities how much staff time was devoted to LAQM, and were given the following information.

Type of authority	Staff involved with LAQM	Other comments
Non-met district with no AQMA	1 AQ officer who also deals with noise, pests, smells and similar functions	Supported by active and helpful county air quality strategy group
Non-met district with no AQMA	1 AQ officer with other responsibilities, working approx 10 weeks a year on air quality	Estimated perhaps 3 weeks work annually in preparing USA/ annual progress report
Non-met district with AQMA	Estimated 1.5 FTE on LAQM	Figure excludes back office costs, senior management and consultancy costs
London boro with AQMA	0.8 FTE working exclusively on air quality	
Unitary with AQMA	3 staff working part-time amounting to perhaps 1 FTE in total	Excludes senior staff time. Part of team of 10 dealing with noise, contaminated land as well as AQ.
Unitary with AQMA	1 AQ officer – also dealing with IPCC, contaminated land, and petroleum licensing.	Bulk of technical work farmed out to consultants
Unitary with AQMA	1 officer spends most of time on AQ. Up to 10 work on it on occasion. Typical input is 1.5 FTE	

256. From this very small survey, a starting hypothesis might be that LAQM on average accounts for staff costs in the order of 0.25 FTE in authorities without AQMAs, and for costs ranging from 0.5 to 1.5 FTE for the majority of authorities with AQMAs.

*(ii) AQC/UWE survey*

257. Survey respondents were asked to provide a short description of the resources available to their council in carrying out LAQM duties. 229 respondents provided detailed information in response to this question.

258. The survey report indicates that on average authorities reported two members of staff working on LAQM. How much input this amounted to in FTE terms was unclear. 65% of respondents reported that they employed consultants, usually for more technical aspects of the work. Surprisingly, the researchers suggest that “there was no obvious difference (from the responses received) between the level of resources available to those authorities with, and those without, an AQMA”.

259. Further detailed analysis of these 229 responses would be useful to explore in particular what information could be extracted on resource inputs in FTE terms, and to probe further the relative time inputs of authorities with and without AQMAs.

*(iii) LBRO/CIPFA work*

260. One of the findings of this recent study of the costs of LA returns on regulatory functions was that “the most expensive return is the Local Air Quality Management (LAQM) System which has a single cost per local authority of approximately £4,000”. This information came from a sample survey of local authorities in England and Wales, 52 of whom responded. Unfortunately, LBRO/CIPFA have not published the precise terms of the questions put to local authorities, and it is not clear to which part of the LAQM reporting arrangements this figure is supposed to relate. Nor is it clear how far local authorities will have included the costs of collecting air quality data, as well as the costs of completing LAQM returns. It is, therefore, difficult to draw any useful conclusions about the costs of LAQM from this survey report.

## **Central Government costs**

261. Defra have advised that the contract cost for work undertaken by consultants on behalf of Defra and the DAs to support and scrutinise local authority LAQM activity is £497,189 for the three years 2007- 2010. This is equivalent to an annual cost of £165.7k. It covers the cost of advising local authorities and assessing their reports and action plans, and of running the helpdesk.

262. Provision of £1m a year has been made available in each of Scotland and Northern Ireland and £2.365m a year in England for specific grant payments to support local authority LAQM work. While this has been focussed largely on support for monitoring and modelling activity in the past, there has been a shift towards support for action planning activities in England in recent years. Additional funds have been made available in Scotland to support roadside emission testing and the retrofitting of abatement equipment on vehicles. The Welsh Assembly Government make no use of specific grant to support local authority LAQM work.

## Conclusions on potential cost savings/ additions

### *Review and Assessment*

263. Our recommendation is that there should be a continuing obligation on local authorities to review and assess air quality in their areas, and that there should be no radical change to the system for central reporting. We recommend some relatively modest reforms to the reporting requirements.

264. Working on the basis of the starting hypothesis in paragraph 256, a discontinuation of the local authority AQ monitoring function (which we do not recommend) might save local authorities an average of around £8k/ £9k a year in staff costs<sup>21</sup>, and a further sum in consultancy costs. Discontinuing the requirement to report R & A work centrally would be likely to result in much the same cost saving in many cases, in that much AQ monitoring work would be likely to be discontinued in those circumstances. Discontinuation of central appraisal of LA review and assessment would save Defra and the DAs in the order of £110k a year<sup>22</sup>.

**265. We recommend a reduction in the frequency of reports to the centre on review and assessment, and some clarification of the guidance to ensure that LAs do not do more than is necessary. We would expect these changes to deliver only modest savings against current central and local government budgets.**

### *Action planning*

266. Our recommendations on the future of the LAQM action planning function turn on what view central government takes about the role of LAQM. If a 'modest' view of the role of LAQM is adopted, then we consider that central overview and appraisal of the action planning function should be discontinued. If the 'proactive' model is favoured, then we recommend that the action planning process requirements should remain much as they are now.

<sup>21</sup> Calculations in the recent LBRO/ CIPFA report on costing the admin burden of regulatory services assumes an annual FTE staff cost of £33k. Using the same figure, staff savings of 0.25 FTE work out at £8,250.

<sup>22</sup> Defra have advised that R&A assessment contract costs are £327k over three years.

267. Working again on the basis of the starting hypothesis in paragraph 256, we estimate that the air quality staff costs of action planning are in the range £8k to £40k per year for the majority of authorities. **These costs might be reduced significantly if the requirement for central reporting was discontinued, as recommended on the 'modest' view of the role of LAQM. On this same assumption, central government costs would be reduced by £56k pa<sup>23</sup>.**

#### *Additional costs*

268. **The acceptance of a number of our recommendations would involve additional input of staff time from central Government departments and the DAs.** In particular, the development of a limited strategy to deliver EU air quality targets for NO<sub>2</sub> and PM<sub>10</sub> (paragraph 101) will have staff resource implications for central government, as will steps to make better use of LA data for central policy making (paragraph 137) and to improve the way messages about the state of air quality and its health implications are communicated (section VIII). **We have not attempted to quantify these additional costs.**

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<sup>23</sup> Defra have advised that contract costs for assessing action plans are £169.8 over 3 years.

## LIST OF CONCLUSIONS AND RECOMMENDATIONS

### The role of LAQM (section IV)

C1. LAQM monitoring has a part to play in its own right and not simply as a foundation for AQMA designation and action planning. It complements and supports local authorities' other air quality responsibilities. It is important not to overlook review and assessment as a self-standing function, nor to lose sight of the needs of authorities without AQMAs (paragraph 92).

C2. On the action planning and delivery function, we find that there is a considerable mismatch between the role envisaged when the 1995 Act was devised, and what has actually happened in practice since then (paragraph 93). We do not think that it is possible to find a way through the shortcomings in action plan delivery without going back to first principles about the role of LAQM (paragraph 96).

C3. We see an urgent need for greater clarity about what measures need to be put in place to deliver air quality objectives and EU limit values, and what part local measures have to play. The right place for a statement on these matters is the statutory UK Air Quality Strategy, and we would expect to see much fuller and more explicit coverage of them in the next update. In the meantime, assuming that central Government is not ready to embark on a full strategy update so soon after the last one was completed, we recommend that a limited strategy focussed solely on the immediate NO<sub>2</sub>/PM<sub>10</sub> compliance issue is developed urgently, bringing out what measures central Government would like to see adopted at local level. Given the key importance of transport as a source of local air pollution, this limited strategy will need to be developed jointly by Defra and DfT, and by their equivalents in the devolved administrations (paragraph 101).

### Review and assessment (section V)

#### *The continuing case for review and assessment*

C4. The principal purpose of review and assessment is to identify areas where air quality objectives are being or are likely to be exceeded, so that appropriate action may be taken to address the problem. The process also generates information to inform local planning decisions and to support the work that local authorities do in providing advice to the public on air quality matters. We have no doubt that these are important functions, and ones that are likely to continue to fall to local authorities (paragraphs 115-116).

C5. We have reservations about whether the current highly prescriptive arrangements are appropriate in today's world, and would argue that it is right in principle for local authorities to be in a position to make their own judgements about the level of resources to

devote to air quality. We have nonetheless concluded that radical change to the R & A arrangements would not be appropriate at this time (paragraph 119).

#### *Streamlining the requirements*

C6. Complaints from some authorities about the burdensome nature of the existing review and assessment requirements are based in part on misunderstandings of what is really required. Future editions of the technical guidance should make it clearer how authorities, particularly those with only modest air quality problems, can discharge them most cost-effectively (paragraph 129).

C7. Some groups of authorities besides have entered into collaborative arrangements at regional or sub-regional level, which offer the potential for reducing the costs and raising the quality of review and assessment work. We would like to see the formation of such groups encouraged in areas where they do not already exist (paragraph 129).

C8. Nonetheless, we see some scope for slimming down the requirements themselves. As local air quality, and factors affecting it, usually change only gradually, the interval between USAs, currently three years, could be extended, and progress reports could be called for less frequently; this could be done by amending the statutory guidance. AQ officers' (widespread) fears that such changes could lead to resources being taken away from them are not in our view a good reason for retaining unnecessary requirements (paragraph 129).

C9. If the provisions of Part IV of the Environment Act were to be revisited for other reasons, the opportunity should be taken to abolish the requirement for Further Assessments (paragraph 129).

#### *Checking the adequacy of LA review and assessment*

C10. While we accept that the lack of central scrutiny of the adequacy of authorities' review and assessment work is a theoretical weakness, we do not consider that the substantial additional scrutiny required to deal with the issue would be justified (paragraph 133).

#### *Making better use of local data*

C11. There would be considerable benefit in creating a larger national information pool of measured data on ambient air quality, integrating the good quality data generated by local authorities on to the national Air Quality Archive, and including it in annual UK-wide analyses of trends. This will provide a fuller and more robust evidence base for central policy making (paragraph 137).

## Action planning and implementation (section VI)

### *Air Quality Management Areas*

C12. Further thinking about the role of LAQM may raise questions about the usefulness of the AQMA concept which will need to be resolved in due course (paragraph 145).

### *Making action planning work*

C13. We consider it likely that tougher obligations will need to be imposed on local authorities if Government concludes that local measures should be making a major contribution in achieving EU limit values. We see no simple way of achieving this through a change in the wording of the local authority duties set out in the legislation, nor through the imposition of formal quantified targets on local authorities. Nor do we see easy answers flowing from conferring new powers on local authorities. Central Government could contemplate using powers under section 85(5) to direct local authorities to take certain steps to deliver air quality improvement. If it is to do that, it will first need to develop its ideas on what local measures it would like to see put in place and to set these out either in an updated UKAQS or in a limited strategy focussed on the immediate NO<sub>2</sub>/ PM<sub>10</sub> compliance issues (paragraph 170).

### *Streamlining the process requirements*

C14. On the process requirements for action planning, we see little case for continuing centrally to prescribe the coverage of action plans and for continued scrutiny from the centre if a modest view is taken of the role of LAQM. These requirements could be removed by amendments to the statutory guidance. On the other hand, if the view is taken that local authorities have a major role to play in implementing measures to deliver EU limit values and/or if they are seen as central government's delivery partners in this respect, then we would advocate retaining the current requirements in largely their current form (paragraph 174).

## Improving links with other policy areas (section VII)

### *Transport*

C15. In England, the sharing of responsibilities under PSA 28 between Defra and DfT, coupled with the recent strengthening of the air quality co-ordinating team, provides a good base on which to build. DfT now needs to develop a more concerted plan for delivering its responsibilities, ensuring that all relevant policy teams are aware of them, and generally raising the profile of air quality issues in the Department (paragraph 181).

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## Policy projects for CLG, DfT, DECC and Defra



C16. The appropriate form and status of this plan would depend on whether (see section IV) Government decided to adopt a 'modest' or a 'proactive' view of the role of local government in LAQM. Under the 'modest' model, DfT should concentrate on

- (a) ensuring that their policy teams are fully aware of their PSA28 responsibilities; and
- (b) identifying how each area of policy can be applied so as to secure maximum benefit to air quality.

Under the 'proactive' model, DfT should, additionally, work with Defra to develop joint guidance on the measures that need to be put in place locally to deliver limit values (paragraph 181).

C17. The starting-point in the devolved administrations is not the same as it is for England. The necessary first step is to establish where, within each of these, responsibility for maximising the air quality benefit of transport policies should lie. Thereafter, action should be taken on similar lines as recommended above in England, mutatis mutandis (paragraph 183).

C18. We considered the case for amending the legislation to transfer LAQM responsibilities from district to county level authorities in shire areas in England, but concluded that this should not be pursued (paragraph 185).

C19. In metropolitan areas of England, though air quality officers and transport planners often seem to work well together, the current distribution of responsibilities for transport is not conducive to effective delivery of transport measures which could be helpful to air quality. If more workable local arrangements can be agreed under the relevant provisions of the Local Transport Act 2008, air quality should stand to benefit (paragraph 187).

C20. It would not be practicable to create a new formal obligation for the transport departments within an authority to co-operate in the action planning process. Nor can we recommend the issue of supplementary guidance for the third Local Transport Plan round, re-instating the special priority given to air quality in the second round guidance. However, there might be scope for air quality officers to work more proactively to build alliances with transport colleagues and others. A broadening of their traditional skills base might help some of them to achieve this. Options for re-brigading staff so as to bring air quality, transport and/or corporate strategy teams closer together could also usefully be considered (paragraph 192).

C21. Authorities' complaints of lack of co-operation by the Highways Agency and its devolved administration counterparts may sometimes be misplaced, since cost-effective responses to exceedences arising from the motorway and trunk road network will not

always be available. In such cases, it is hard to see how the Agency can commit itself to remedial action unless the Government is prepared to treat compliance with EU limit values as an over-riding priority, to be pursued regardless of cost (paragraph 194).

### *Planning*

C22. We are doubtful whether it is sensible or practicable to give air quality considerations absolute priority over other considerations in planning decisions. However, the terms of the recent draft National Policy Statement on energy infrastructure are an interesting development. Next steps on this need to be watched with care (paragraph 202).

C23. We are concerned that the process of rationalising the existing volume of planning guidance should not result in the loss of important messages on air quality. Defra, and air quality interests within the Scottish and Northern Ireland Government, should seek to secure that this does not happen (paragraph 202).

C24. Defra should consider with Communities and Local Government the possible implications of the detailed proposals for a Community Infrastructure Levy and the future of planning obligations for authorities' Low Emissions Strategies, before the proposals are finalised (paragraph 204).

C25. There is little that can be done by central Government to improve the local interactions between LAQM and the planning system where these are not working well - other than by presenting a more persuasive case for action on air quality, as discussed in section VIII (paragraph 206).

### *Climate change*

C26. Climate change has rightly become a major priority for central and local government in recent years. However, this has sometimes been at the expense of air quality policy. Some opportunities for integrating the two have been missed, such as in DfT's 'Delivering a Sustainable Transport System' and low carbon transport strategy. The aim should be to identify policies and priorities capable of securing the best available outcomes for both (paragraph 212).

C27. The UK Renewable Energy Strategy (July 2009) is a welcome exception to this. However, the measures it proposes to secure acceptable air quality outcomes from the expansion of biomass combustion will take time to develop and implement, while demand for biomass installations is growing all the time (paragraph 212).

C28. This is a particular difficulty in Scotland, because of the combination of demanding renewable energy targets, abundant forestry-based supplies of biomass and a much more restrictive air quality objective for PM10 than applies elsewhere (paragraph 212).

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## **Policy projects for CLG, DfT, DECC and Defra**

C29. Climate change is a corporate priority for many local authorities, but air quality only for a very few. It is rare for the two functions to be co-located. There is less scope for direct conflict between the two policies at local than at national level, but more could be done to exploit and build on the synergies between the two (paragraph 216).

C30. However, the Mayor of London's new draft air quality strategy, prepared by the joint energy and climate change unit in the GLA, is a promising attempt to capitalise on the linkages between these two policies, and with others (paragraph 216).

## **Communicating clearer messages (section VIII)**

### *Health impacts of air pollution*

C31. We recommend that Defra and the DAs work with their respective health departments to develop a stronger story about the health impact of air quality for communication to decision takers in central and local government, and to the general public. We would like to see the publication of more information endorsed by central Government which compares air pollution health impacts with other well-understood health threats, and the inclusion of additional appropriate measures, possibly including estimated numbers of premature deaths per year as a result of man-made pollution, and of years of life lost to victims (paragraph 228).

### *The extent of air pollution, and trends over time*

C32. We recommend that central Government routinely publishes a fuller statistical overview of ambient air quality trends to match the published trend information on emissions. To win over support for further action in local government and elsewhere, central Government needs to combine fuller information on current levels of air pollution with better information on the health impacts, and to present the information in a way which is designed to highlight the need for further action, rather than to celebrate policy successes to date (paragraph 234).

### *Effective policy interventions*

C33. Defra should recast the LAQM practice guidance, particularly the guidance on economic appraisal, in more realistic and down-to-earth terms, that AQ officers would find easier to assimilate and to respond positively to. It would be important to engage some local AQ practitioners in this process (paragraph 239).

C34. Defra, with DfT, should make a concerted effort to pull together in a form accessible to decision-makers the available evidence about the typical AQ impacts, and cost-effectiveness, of commonly-used or advocated measures, and to commission further study

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## **Policy projects for CLG, DfT, DECC and Defra**

or research to fill the gaps in this. The work should cover not only measures primarily aimed at air quality improvement, such as low emission zones, but also instruments with other main aims, such as reducing congestion and smoothing traffic flows (paragraph 239).

## **Special features of LAQM in Greater London (section IX)**

C35. We consider that the complexity of the current pattern of LAQM powers and responsibilities in London is probably unavoidable. It is arguable, however, that the legislation should provide for a more complete separation between the LAQM arrangements in London and elsewhere. We make no recommendations for immediate change, and are in no position to do so on the basis of our very limited discussions with a small sample of London authorities. Consideration of legislative change would also be an unwelcome distraction from the immediate tasks of finalising the Mayor's new strategy and securing compliance with the EU limit values. However, we think the issue would merit discussion in the longer term (paragraph 250-251).

C36. We suggest that the GLA be encouraged to discuss with the boroughs, in parallel with the consultations on the Mayor's draft strategy, whether a different pattern and content of assessment and reporting requirements would be of more help to effective action planning and implementation in London. Any changes agreed between them, and with Defra, could then be provided for in a supplement to the current guidance (paragraph 252).

## **Resource implications (section X)**

C37. We recommend a reduction in the frequency of reports to the centre on review and assessment, and some clarification of the guidance to ensure that LAs do not do more than is necessary. We would expect these changes to deliver only modest savings against current central and local government budgets (paragraph 265).

C38. Local authorities' air quality staff costs might be reduced significantly if the requirement for central reporting on action planning was discontinued, as recommended on the 'modest' view of the role of LAQM. On this same assumption, central government costs would be reduced by £56k pa (paragraph 267).

C39. The acceptance of a number of our recommendations would involve additional input of staff time from central Government departments and the DAs. We have not attempted to quantify these additional costs (paragraph 268).

## ANNEX 1: LOCAL AUTHORITY VISITS AND INTERVIEWS

Air quality officers in the following local authorities or groups of authorities were visited, or interviewed by telephone.

### England

Brighton and Hove City Council	
Bristol City Council	
Mendip District Council	
Oxford City Council	
Oxfordshire County Council	
Sefton Borough Council	
Sheffield City Council	
Stafford Borough Council	
Greater London Authority	(group discussion)
Transport for London	”
Royal Borough of Kensington and Chelsea	”
Common Council of the City of London.	”

In addition, we took part in meetings between Defra and groups of authorities in Greater Merseyside and South Yorkshire to discuss preparations for the proposed UK application for postponement of the compliance date for the NO<sub>2</sub> limit values under Directive 2008/50/EC.

LACORS also kindly organised for us two discussions with groups of, respectively, senior pollution control officers and elected members representing the Regeneration and Transport Board and the Environment Board of the Local Government Association.

### Scotland

City of Edinburgh Council  
Perth and Kinross Council.

### Wales

Monmouthshire County Council  
City and County of Swansea.

### Northern Ireland

We had a meeting with the Chief Pollution Officers' Group, at which many of the district councils were represented.

## **ANNEX 2: OTHER INTERVIEWS**

The following people were interviewed face to face or by phone (individually or in groups) during the review.

### **Defra**

Tim Williamson  
Robert Vaughan  
Janet Dixon

### **Department for Transport**

Michael Hurwitz  
Chris Parkin  
Charlotte Dixon  
Stephen McFarlane  
Iain Forbes  
Vicki Butler  
Joe Finlay  
John Cooper

### **Highways Agency**

Louise Pritchard

### **Department for Communities and Local Government**

Natasha Knight  
Charlotte Palmer  
Mark Plummer

### **Department for Energy and Climate Change**

Martin Nesbitt

### **Department of Health**

Kevin Holton

## **Health Protection Agency**

Heather Walton

## **Scottish Government**

David Wallace  
Andrew Taylor

## **Scottish Environment Protection Agency**

Chris Connor  
John Lamb

## **Welsh Assembly Government**

Rhodri Griffiths  
Russell Bennett

## **Northern Ireland Department of the Environment**

Dan Kennedy  
Stephen Kerr

## **Consultants advising Defra and the devolved administrations on LAQM**

Professor Duncan Laxen	Air Quality Consultants
Professor James Longhurst	University of the West of England
Enda Hayes	University of the West of England
Gwyn Jones	AEA Technology
Beth Conlan	AEAT
Susannah Grice	AEAT
Paul Willis	AEAT

## **Other bodies**

Nick Clack	LACORS
Helen Howlett	LACORS
Ed Dearnley	Environmental Protection UK
Simon Birkett	Campaign for Clean Air in London.

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## **Policy projects for CLG, DfT, DECC and Defra**



## **ANNEX 3: OTHER ACKNOWLEDGEMENTS**

In addition to those listed in Annex 2, we are very grateful to the following people who provided advice and information, commented on our working papers and/or attended our stakeholder workshop.

The views set out in the report, and any mistakes, are ours alone.

Tim Chatterton (UWE), Steve Moorcroft (AQC), John Stedman (AEAT), Rachel Yardley (AEAT), Gary Fuller (Kings College, London), Jim Storey (EA), Cassandra Harrison (LACORS), Rupert Furness (DfT), Steve Simmons (Sheffield), Stephen Potter (East Sussex), Kyri Eleftheriou-Vaus (Kensington and Chelsea), Gary Mahoney (Sefton), Jon Tubby (Leeds), Rebecca Pointon (Cheshire East), Caroline Greenan (Oldham), Nick Howard (Lancaster), Robert Lloyd (Sandwell), Olivia Flint (Spelthorne), Siobhan Toland (Belfast), Nigel Jenkins (Lewes), Huw Morgan (Swansea), Janet Brown (Edinburgh), Roger Pitman (Oxford), Lucy Thomas (WAG), Simon Cousins (GLA), Tony Bush (AEAT), Professor James Longhurst (UWE), Yvonne Brown (Bureau Veritas UK), Claire Holman (Peter Brett Associates), Stephen Hedley (Kings College London).

We are also grateful to Daniel Instone, Robert Vaughan, Sean O'Byrne and Eko Deinne of Defra for their support in managing our stakeholder workshop.

## **ANNEX 4: SUMMARY OF MAIN VIEWS TO EMERGE FROM AQC/UWE SURVEY OF LOCAL AUTHORITY AIR QUALITY DEPARTMENTS**

### **Context**

A4.1. Air Quality Consultants/University of the West of England received responses from 239 local authorities, representing a response rate of 55%. The questionnaires were completed by officers in environment departments dealing with air quality.

A4.2. AQC/ UWE analysed the responses by identifying parent themes and sub-themes emerging in response to their various questions. Software was applied to identify the number of references to each sub theme<sup>24</sup>.

A4.3. The questions referred to in this note are as follows.

B1: What do you identify as the main strengths of LAQM as a whole?  
B2: What do you identify as the main weaknesses of the LAQM process as a whole?  
B3: Could any further actions and support be usefully provided by central government to facilitate local authorities undertaking their LAQM duties?  
B4: What do you identify as the main changes you would like to see implemented to improve the LAQM process as a whole?

C1: Are there any ways in which the review and assessment stages of LAQM have assisted your Council?  
C2: Are there any particular difficulties you have encountered in undertaking your review and assessment duties?  
C3: What changes would you recommend to make the review and assessment process more effective and/or efficient?

E3: What have been the main factors that have constrained the development of your AQAP?  
E4: Are there any ways in which the whole process of AQAP development and implementation could be improved?

A4.4. The numbers of references to selected main themes in response to these questions are analysed in tables A4.1 and A4.2.

### **Weaknesses of LAQM**

A4.5. In response to question B2, the main weaknesses of LAQM were identified as:

<sup>24</sup> The number of references to a particular sub-theme may not be identical to the number of responses dealing with the sub-theme as there may be one distinct reference within the same response.

- lack of support from other policy agendas (202 references)
- resource issues (119 references)
- LAQM framework and reporting issues, including excessive bureaucracy (115 references).

A4.6. Local air quality officers' concern about lack of support from other policy agendas is the strongest single theme to emerge from the survey. It received far and away the most references as a major weakness of LAQM. It was also the area in which respondents were keenest to see change (question B4), and the area which attracted most comments in the context of action planning (questions E3 and E4).

A4.7. Lack of support was particularly keenly felt in relation to the transport agenda (44 references under the relevant sub-theme on B2). Land-use planning was also mentioned (14 references under this sub-theme) as was climate change.

A4.8. Resource constraints were also a major issue for respondents. The issue provoked by far the largest number of references in response to question C2 about difficulties encountered in dealing with review and assessment, and it was the second largest theme emerging in response to the question about weaknesses in LAQM at large (although concerns about the LAQM framework received only four less references). It was also the area which featured most strongly in response to the question about what central government might do to improve things (B3). More surprisingly, it did not emerge as a particularly strong contender in response to any of the questions about what changes respondents would most like to see (B4, C3 and E4).

A4.9. LAQM framework and reporting issues, defined to cover concerns about excessive reporting requirements and other criticisms of the processes, also attracted large numbers of references as a major weakness of the system (B2), and was the issue attracting most suggested changes in the context of review and assessment (C3). However, it is noteworthy also that lack of resources was highlighted more than four times as often as a source of difficulty in the context of review and assessment (C2), and that the number of suggestions for change in this area were substantially smaller than the number of calls for greater support from other agendas (B4).

## **Strengths of LAQM**

A4.10. In response to question B1, the main strengths of LAQM are identified as:

- Providing a framework and reporting structure (151 references)

- Providing guidance and support mechanisms (112 references)
- Offering opportunities for profile raising (105 references).

A4.11. The first and third of these themes also feature strongly in responses to the question about how the review and assessment stages of the process have assisted the council (C1) and, to a lesser extent, how the AQAP processes have helped (E2).

### **Implications for IHPC review**

A4.12. The findings of this survey are very much in line with what we have learnt from our discussions with individual stakeholders, with some modest differences of emphasis. The concern expressed about lack of support from other policy agendas is an even stronger theme than we might have expected from our discussions, perhaps reflecting the air quality officer profile of survey respondents. Links with other policy areas are dealt with fully in our report.

A4.13. On resource issues, it is no great surprise that greater financial support features most strongly in responses about what more central government should be doing to help. In so far as this relates to resources for AQAP implementation, we consider this to be a matter of prioritisation outside our remit. The number of references to resource problems in the context of review and assessment was, however, larger than we might have expected from our discussions with stakeholders, suggesting that this may be more of an issue than we appreciated. Whilst only very small numbers of local authorities are defaulting on their review and assessment responsibilities at present, this could be a growing problem.

A4.14. We were particularly keen to learn what the survey revealed about attitudes to the process requirements, which seem to us to be exceptionally full and prescriptive by current standards. We were not surprised to see that process issues featured as one of the main weaknesses identified in response to question B2, nor that comments like “reduce the reporting frequency” and “give more autonomy for local authorities to make decisions to prioritise work loads” made up the largest theme in response to question C3 on proposed changes to the review and assessment processes. On the other hand, the large number of authorities who cited the structure and reporting framework as one of the main strengths of the arrangements was also very striking, and confirmed our conclusion that radical change to the arrangements would not be appropriate at the current time. Our report makes a number of proposals for streamlining, most of which echo suggestions which emerge from this survey.

A4.15. We were also interested to note that 80% of those who drew attention to reporting inflexibility and the burdensome nature of the arrangements were authorities with AQMAs (see para 4.2.3.2 of survey report). This tends to confirm our impression that frustration with the LAQM reporting arrangements is felt most strongly among authorities with

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### **Policy projects for CLG, DfT, DECC and Defra**

AQMAs, and that many officers in non-AQMA authorities welcome the support and structure provided by the R & A arrangements.

**Table A4.1: analysis of key problems identified and changes sought**

	<b>B2</b> Main weaknesses in LAQM	<b>B3</b> Further central govt. support sought on..	<b>B4</b> Main changes required to deal with..	<b>R &amp; A</b>		<b>AQAP*</b>	
				<b>C2</b> Difficulties encountered	<b>C3</b> Changes recommended concerning...	<b>E3</b> Main constraints on development of AQAP	<b>E4</b> Ways to improve development and delivery
Lack of support from other agendas	202	67	104	47	21	64	27
Resource issues	119	94	18	134	9	63	11
LAQM framework and reporting	115	31	70	32	73	N/a	N/a

**Table A4.2: analysis of main strengths identified**

	<b>B1</b> Main strengths of LAQM	<b>C1</b> Ways in which R&A has assisted council	<b>D4</b> Ways in which the declaration of an AQMA has been helpful	<b>E2</b> How has the development of an AQAP helped?
Provides useful framework and reporting structure	151	108	N/a	42
Provides guidance and support mechanisms	112	19	N/a	N/a
Helps to raise profile of air quality	105	104	112	36

The numbers included in these tables are the number of references made across all responses to the issue stated on the left of the table. Each column deals with a specific question, as identified in the column head.