

CHAPTER ONE

Introduction

Summary

- This Strategy aims to map out, as far as possible, the future of ambient air quality policy in the United Kingdom in the medium-term.
- It aims to provide the best practicable protection to human health by setting health-based objectives for eight main air pollutants.
- It contributes to the protection of the natural environment by setting objectives for two pollutants for the protection of vegetation and ecosystems.
- It describes the current and likely future levels of air pollution in the UK.
- It provides a framework to help everyone identify what they can do to improve air quality.

OVERVIEW

1. Only by a co-ordinated and sustainable approach can we expect to reduce the effect of pollution on our health and our environment, both natural and man-made. We have made great progress since the smogs of the 1950s and air quality in the UK is now generally very good. We have improved air quality considerably by regulating industry and through introducing progressively tighter emissions standards for vehicles. These improvements look set to continue. Nevertheless, air pollution still presents a challenge. As this Strategy explains, there is a range of measures at international, national and local level that will help to deliver cleaner air quickly.

2. This Air Quality Strategy for England, Scotland, Wales and Northern Ireland fulfils the requirement under the Environment Act 1995 for a national air quality strategy which sets out policies for managing ambient air quality. Corresponding legislation is in preparation in Northern Ireland.

3. This is the second edition of the Strategy. The first was published in March 1997 by the previous administration. The Government endorsed the Strategy in July 1997, but promised to review it at the earliest opportunity. The first review took place in 1998, a year earlier than planned. It looked at ways of strengthening the 1997 Strategy, to speed up improvements in air quality. The Government consulted on its proposals in January 1999.

EFFECT OF DEVOLUTION

4. On the 1 July 1999, the devolved administrations in Scotland and Wales took over responsibility for most policy and legislation work affecting their respective countries (although the UK parliament retains responsibility for primary legislation covering Wales). This includes environmental issues and so air quality. Devolution to the Northern Ireland Executive took place on 2 December 1999 and the former Northern Ireland Department's pre-existing powers covering environmental issues were passed to the Executive on that day. The devolved administrations recognise the transboundary nature of many of the air pollutants and have decided to continue with a joint UK Air Quality Strategy with common objectives. However, they may have different policies to reflect circumstances in each country, such as where people are concentrated and the balance between town and country.

5. Scotland, Wales and Northern Ireland will continue to contribute to UK policy on air quality issues for EU and other international negotiations. They will also be responsible for implementing EU and other international commitments as they relate to their respective countries.

6. The Mayor for London will also have a role in air quality management. The Greater London Authority Act gives the Mayor a duty to formulate, keep under review and publish an air quality strategy for London – see paragraphs 92-93.

PURPOSE OF THE STRATEGY

7. The Government and the devolved administrations are committed to meeting people's right to clean air. Their primary objective is to make sure that everyone can enjoy a level of ambient air quality in public places which poses no significant risk to health or quality of life. This Strategy establishes the future for ambient air quality policy in the UK to 2003 and beyond. It addresses the following eight pollutants:

- benzene
- 1,3-butadiene
- carbon monoxide (CO)
- lead
- nitrogen dioxide (NO₂)
- ozone
- particles (PM₁₀), and
- sulphur dioxide (SO₂)

8. It sets health-based standards for these pollutants and objectives for achieving them throughout the UK. For two of the pollutants, NO₂ and SO₂, it also sets objectives for protecting vegetation and ecosystems. The Strategy also identifies what needs to be done at international, national and local level to achieve the objectives. It provides a framework that allows all stakeholders to identify the contributions they can make. The Strategy aims for action to be taken

within the overall framework of sustainable development and for it to take account of the need to balance costs and benefits, as far as our knowledge allows.

9. The air quality objectives in this Strategy take account of recent policy developments, as well as those agreed but yet to take effect. They also cover the process by which, over reasonable planning horizons, the Government and the devolved administrations aim to reach these objectives. The Strategy also takes into account, as far as possible, the comments received on the Government's proposals to amend the 1997 Strategy, published in August 1999 and the draft of this document published for comment in August 1999.

10. This Strategy does not give definitive advice or technical guidance on managing air quality. We have provided separate guidance on this, referred to throughout this document. The Strategy should be read together with the guidance and does not replace it.

INTENDED AUDIENCE

11. This Strategy is for everybody with an interest in improving air quality, not just those who are legally responsible for protecting the environment from emissions, such as the Environment Agencies and local government. We can all do our bit to improve air quality.

12. The main role of the Government and the devolved administrations is to establish a framework by:

- introducing legislation;
- introducing financial and other incentives;
- setting policy objectives; and
- providing advice and guidance.

13. Local authorities have a crucial role to play in achieving the air quality objectives. They are responsible for land-use planning and traffic management, and, in England and Wales, for controlling industrial pollution sources through

the local air pollution control (LAPC) regime (paragraphs 390-393). They can tackle pollution hotspots through local air quality management (LAQM) action plans (see paragraphs 405-410). The Environment Agency also has a major role in regulating emissions from industry. In Scotland, the Scottish Environment Protection Agency (SEPA) is responsible for regulating pollution from industrial sources. In Northern Ireland, control of industrial pollution is the responsibility of the Industrial Pollution and Radiochemical Inspectorate (IPRI) of the Department of the Environment's Environment and Heritage Service. District councils regulate the smaller industrial processes on an air pollution only basis.

14. We must also remember the important roles that businesses and individuals can play in improving air quality. People can choose from a range of environmentally friendly alternatives to the car. They can also contribute to reducing the impact of domestic sources of pollution. In Chapter 5, we consider in more detail the roles of everyone involved in delivering cleaner air.

GUIDING PRINCIPLES

15. We have prepared this Strategy according to these guiding principles:

- it should provide the best practicable protection to human health and the environment;
- the Expert Panel on Air Quality Standards' recommendations should be the basis for objectives, except where an objective derives from an Air Quality Daughter Directive limit value, based on World Health Organisation guidelines;
- it should allow us to comply with the EU Air Quality Daughter Directive, but allow for stricter national objectives for some pollutants;
- our objectives should also reflect the practicability of the measures needed to reduce pollutants, their costs and benefits and other social and economic factors; and

- it should take account, as far as possible, of developments in European legislation, technological and scientific advances, improved air pollution modelling techniques and increased understanding of economic and social issues.

16. These principles need to be seen within the wider context of those on which the Government and devolved administrations believe air quality policy should be based in general.

Sustainability	This principle is at the heart of all Government policy and lies behind the push for technologies, behaviour and the use of resources which are sustainable in the long-term.
Effects-based approach	The touchstone for action should be environmental objectives, expressed in terms of environmental quality. This allows the effects on people and the environment to be treated proportionately to the particular risk of harm or damage, using the most appropriate package of measures.
Polluter pays principle	Much environmental pollution, resource depletion and the social costs of both occurs because those people responsible are not those who pay the price. If the polluter, or ultimately the consumer, is made to pay those costs, that gives them the incentive to behave in a less harmful way. It also means that the costs do not fall on society at large. At the same time, it may not always be possible for everyone to bear all these costs, particularly as far as goods and services are concerned.
Precautionary principle	The Rio Declaration defines the precautionary principle as "where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation". Precautionary action means assessing the costs and benefits, and making decisions in a clear and open way.
Taking account of costs and benefits	Decisions must take account of a wide range of costs and benefits, including those which can't easily be valued in money terms. When we can not put a monetary value on a decision, we should quantify the benefits, or failing that, assess them qualitatively. In pursuing any single objective, we should not impose disproportionate costs elsewhere. We should take into account public values, the timing of costs, benefits, risks and uncertainties.
Risk assessment	We must base air quality objectives on an understanding of the relationship between exposure to pollution and its effects on human health and the environment.
Using scientific knowledge	When we take decisions, we must anticipate early on where scientific advice or research is needed, and identify sources of high quality information. Where possible, we should review evidence from a wide range of viewpoints.
Subsidiarity	We should take action to improve air quality at the most appropriate level, be it international, European, national or local.
Effective international monitoring and enforcement	Ratification of international protocols should be followed by national action plans, where appropriate, and reports to the relevant supervisory body. We should monitor and enforce EC legislation rigorously across the Community.

SCOPE OF THE STRATEGY

17. The Strategy follows the UK's established approach to air quality policy and is founded on an effects-based approach. It addresses eight pollutants that are all known to harm human health and which occur widely throughout the UK, mainly because of the prevalence of vehicles and industry. Several of them can also damage crops, vegetation and ecosystems as well as materials and buildings. The Government and the devolved administrations have introduced new objectives to take account of these other effects. But our main emphasis has been on protecting

human health. We have developed the objectives in the Strategy to take account of proportionate, targeted action, weighing expected benefits against costs.

18. We may add to the list of eight pollutants dealt with by the Strategy in future reviews. The Government and the devolved administrations will consider setting objectives for additional pollutants as there is new evidence which would justify doing so, or as the European Commission proposes legislation covering pollutants not dealt with by this Strategy.

19. The Strategy is tightly targeted on managing ambient air quality. It does not address other aspects of environmental quality, such as water, soil or noise pollution.

20. It is also only concerned with outdoor, ambient air quality. It does not cover occupational exposure, indoor air quality or exposure in vehicles. This is not because the quality of indoor air is not important to health. In fact, as most people spend between 80% and 90% of their time indoors, it is likely to have a direct effect on their exposure to air pollutants. However, it is impracticable to measure concentrations of pollutants inside people's homes on anything like the scale that we can for outdoor air. Nor could we regulate easily on levels of indoor pollutants.

21. The Department of the Environment, Transport and the Regions (DETR) and the Department of Health are jointly supporting a £1 million three year research programme to investigate exposure to air pollutants in the indoor, non-occupational environment. Some areas covered by the research include:

- exposure to indoor air pollution and the risk of upper and lower respiratory tract disease in asthmatic children and their mothers;
- carbon monoxide and nitric oxide exposure in the vulnerable elderly;
- an epidemiological study of the effect of damp and other aspects of poor housing on adult health;
- an examination of the distribution of carboxyhaemoglobin levels in the elderly;
- the use of passive sampling techniques to estimate exposure to particles in a non-workplace environment; and
- an examination of indoor-generated particles and their biological toxicity.

22. This Strategy does not deal with exposure to air pollution through work. Workplace air quality is regulated by the Control of Substances Hazardous to Health Regulations 1999 (COSHH) and parallel legislation in Northern Ireland. Within COSHH, the Health and Safety Commission sets exposure limits for chemicals and related agents, to guide duty holders on controlling exposure by inhalation. There are two types of limit, and they may be set as appropriate in relation to full-day (eight hour) or short-term (15 minute) periods. These limits are only meant to protect the relevant section of the population, which is people of working age who are healthy enough to be at work.

23. We recognise that pollution in vehicles can also contribute significantly to human exposure. A 1997 review looked at recent studies of road users' exposure to air pollution. It reviewed studies that had compared the levels of pollutants from vehicles found within and immediately outside vehicles with background levels. This review also considered the exposure of other road users – particularly cyclists and pedestrians. The report concluded that which part of the road people travel on is crucial to their exposure to pollutants. Those closer to the kerb are better off. People in cars are exposed to higher levels of pollutants than pedestrians and cyclists because they are, in effect, travelling in a tunnel of pollution. Cyclists, who tend to travel closer to the kerb, appear to be exposed to generally lower concentrations of pollutants than motorists. However, where traffic is heavy, cyclists are exposed to higher levels because the effort of cycling causes them to breathe harder. Pedestrians generally experience the lowest exposures of any road users. However, levels of roadside air pollution can still be much higher than background air quality.