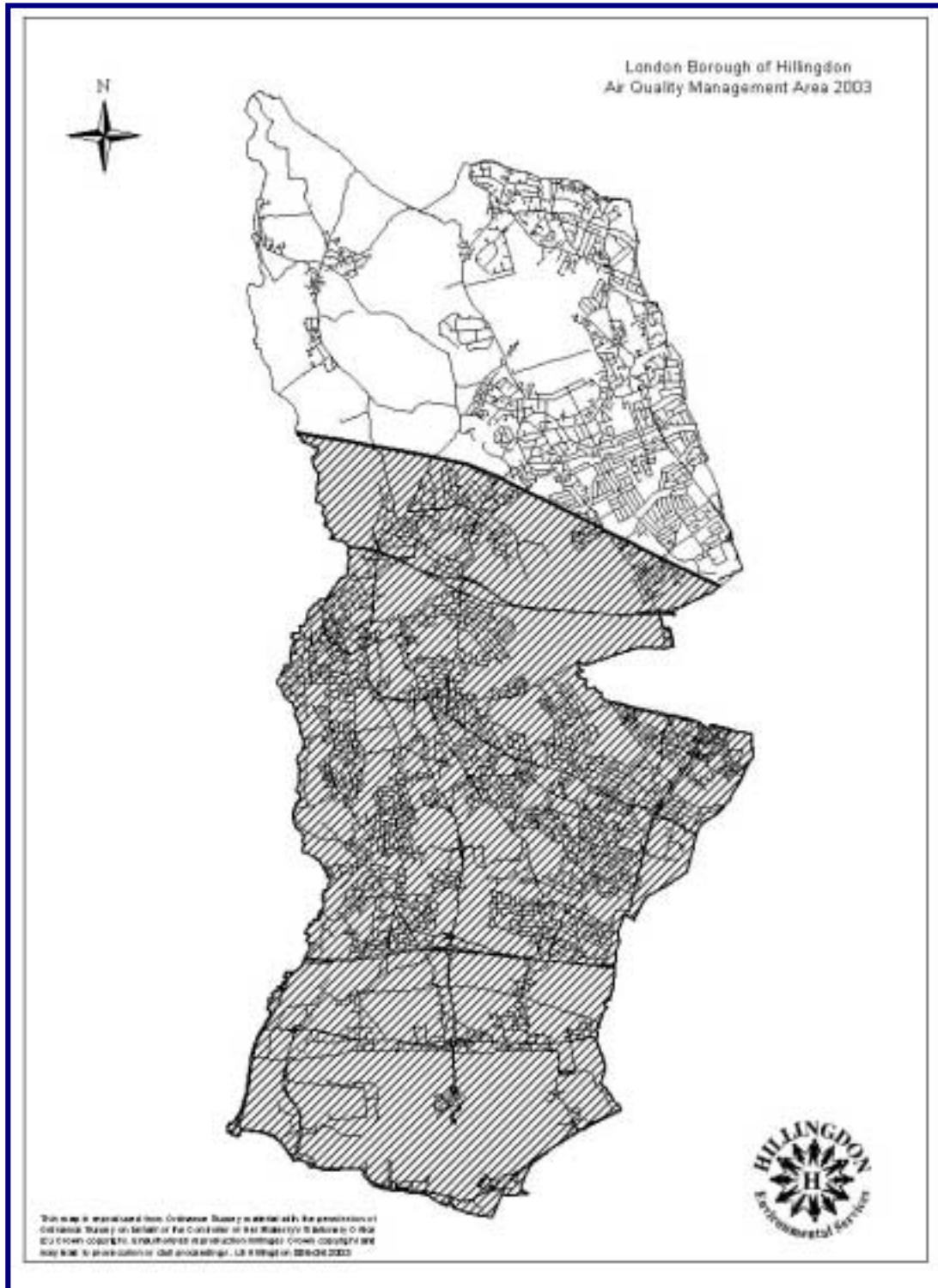


Hillingdon's Air Quality Action Plan: Summary for Consultation



January 2004

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Status of this document:

This summary document has been produced by the Council's Environmental Protection Unit and consultants from AEA Technology and EMRC working for them to inform the consultation process. At the present time the report does not represent the official policy of the London Borough of Hillingdon: this will be developed following comments received on this draft. The document summarises information presented in a fuller version of the plan, which is also available from the Council.

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Executive Summary

National and European air quality standards are forecast to be exceeded across large areas of the London Borough of Hillingdon. As a result, the Council is required to produce an action plan in line with government (DEFRA) guidance. This summary document presents a preliminary view of such a plan. A series of options have been identified and a preliminary assessment made of their suitability for implementation in Hillingdon. The final version of the plan will be submitted to DEFRA and the Greater London Authority (GLA) following consultation on the measures described.

The options considered for the plan have been grouped into a series of packages. The first of these are designed at reducing emissions from road transport;

1. Increase use of public transport;
2. Develop transport infrastructure;
3. Further develop traffic management systems;
4. Promote cleaner vehicles.

Secondly, there are two packages that deal with emissions from specific sources within the Borough;

5. Measures specific to Heathrow Airport;
6. Measures specific to local industries

The next two deal with actions that need to be undertaken by the Council to promote more effective use of resources in the Borough;

7. Use of planning systems to improve eco-efficiency in the built environment and promotion of travel planning;
8. Dissemination of information on ways that the public can contribute to improved air quality.

The final two packages are designed to ensure effective collaboration with other parties;

9. Actions to be taken in liaison with the Mayor and neighbouring authorities;
10. Lobbying International and National government on measures that are outside the control of local government.

Stakeholders should provide written comment on this plan by 16/02/2004, ahead of a meeting to be held on 5/03/2004. Comments should be sent to:

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List of Abbreviations

ALG	Association of London Government
AQMA	Air Quality Management Area
ATM	Air Traffic Movements
BAT	Best Available Techniques
CAA	Civil Aviation Authority
DEFRA	Department for Environment, Food and Rural Affairs
DfT	Department for Transport
EPU	Environmental Protection Unit
EU	European Union
GLA	Greater London Authority
GTP	Green Travel Plans
HA	Highways Agency
HATF	Heathrow Area Transport Forum
HDVs	Heavy Duty Vehicles (including buses, etc., as well as lorries)
HGVs	Heavy Goods Vehicles
HIMP	Health Improvement and Modernisation Plan
ICAO	International Civil Aviation Organisation
ILIP	Interim Local Implementation Plan
IPC	Integrated Pollution Control
IPPC	Integrated Pollution Prevention and Control
LA21	Local Agenda 21
LDVs	Light Duty Vehicles (cars and small vans)
LEZ	Low Emission Zone
LTP	Local Transport Plan
MAQS	Mayor's Air Quality Strategy
NO	Nitric oxide
NO ₂	Nitrogen dioxide
NOx	Oxides of nitrogen (the mixture of NO and NO ₂ in the atmosphere)
PMx	Particulate matter with a diameter of x micrometres (typically 10, as in PM ₁₀) or less
SPG	Supplementary Planning Guidance
TfL	Transport for London
UDP	Unitary Development Plan
WLA	West London Alliance
µg/m ³	Micrograms (10 ⁻⁶ grams) of pollutant per cubic metre of air.

Chapter 1 Introduction

1.1 The Purpose of this Report

This report has been written to inform stakeholders, particularly those living and working in Hillingdon, of progress with the development of the Borough's Action Plan. Stakeholders are invited to send comments on the options identified in this plan to the Council at the address below by 16/02/2004¹. This plan is also to be discussed at a meeting to be held on 5/03/2004. Following this initial consultation the plan will be revised for more general consultation and finally for submission to the Elected Members of the Council.

For those interested in further details, a more complete version of the plan together with a database containing much background information is available from the Council at the address shown on the inside front cover.

Consideration of ways of mitigating the impacts of a third runway for Heathrow is outside the scope of this report because of the time frames of the air quality legislation and associated discussion in the Department for Transport's recent white paper on the future of aviation in the UK. Consideration has, however, been given to attitudes towards expansion of the airport.

1.2 Objectives for Hillingdon's Air Quality Action Plan

The following objectives were developed following consideration of guidance issues by DEFRA and discussion with a number of stakeholders from local communities, businesses, and the regulators at the start of the action planning process.

Objectives for Hillingdon's Air Quality Action Plan

To pursue the air quality objectives laid down in the National Air Quality Strategy, whilst

- improving the quality of life and health of the residents and workers in Hillingdon,
- acting in a cost-effective manner, through careful selection of options,
- integrating our work with other Council Strategies and the activities of Council Departments, regional bodies, outside Agencies and other interested parties,
- taking account of the needs and views of local people,
- and acting, where possible, to stimulate local employment and the local economy.

¹ Val Beale, Hillingdon Borough Council, 3W/01 Civic Centre, High Street, Uxbridge, Middlesex, UB8 1UW. VBeale@hillingdon.gov.uk

These objectives are purposefully described in very broad terms, recognising that many of the measures that may be adopted for improvement of air quality, such as planning or traffic controls, have additional environmental, social and economic impacts that need to be considered.

1.3 Development of Hillingdon's Air Quality Action Plan

The Council has appointed consultants (AEA Technology/EMRC) to lead the development of the air quality action plan. The methods used are based around guidance issued by DEFRA. They include assessment of the source of air quality problems in the Borough, extensive review of options for air quality improvement, and preliminary appraisal of these options in the context of Hillingdon. The success of many of the options being considered is dependent on local factors, and so the present consultation exercise, in which the Council is also being assisted by the Environment Council and Groundwork forms an essential and important part of the development process.

In total more than 200 options have been considered for the plan so far. A prioritised list of measures is included in the next chapter. The process of prioritisation applied in the development of this plan seeks to take an integrated approach in accounting for the different attributes of each option relative to:

- Cost.
- Effectiveness in reducing NO_x emissions;
- Effectiveness relative to NO₂ levels in the Hillingdon AQMA;
- Potential to implement the option before 2005, and then 2010;
- Additional (non-NO₂) benefits of the measure;
- Disbenefits linked to the measure;
- Complementarity of measure with local and regional development objectives.

Additional benefits and disbenefits of air quality improvement measures are being assessed in terms of:

- Other (non-NO_x) air pollutants
- Noise
- Congestion
- Attractiveness of public transport
- Social inclusion
- Economic vitality of local businesses
- Other (to pick up impacts that may be very specific to certain options).

In addition to the list of measures the final version of the plan will need to be more specific about implementation and monitoring than it is at present. This, however, can only be done following consultation and agreement on the measures that should form the plan.

1.4 Air Quality in Hillingdon

Following national guidance, Hillingdon Council has carried out a series of intensive studies to investigate current and future air pollution levels of air pollution in the Borough to see whether standards set for the protection of human health will be met. This work has predicted that the annual average nitrogen dioxide (NO₂) objective for 2005 (40 µg/m³) would be exceeded across the southern third of the borough, particularly in and around Heathrow Airport, and near major roads such as the Uxbridge Road, Hayes Bypass and the A40 (Figure 1).

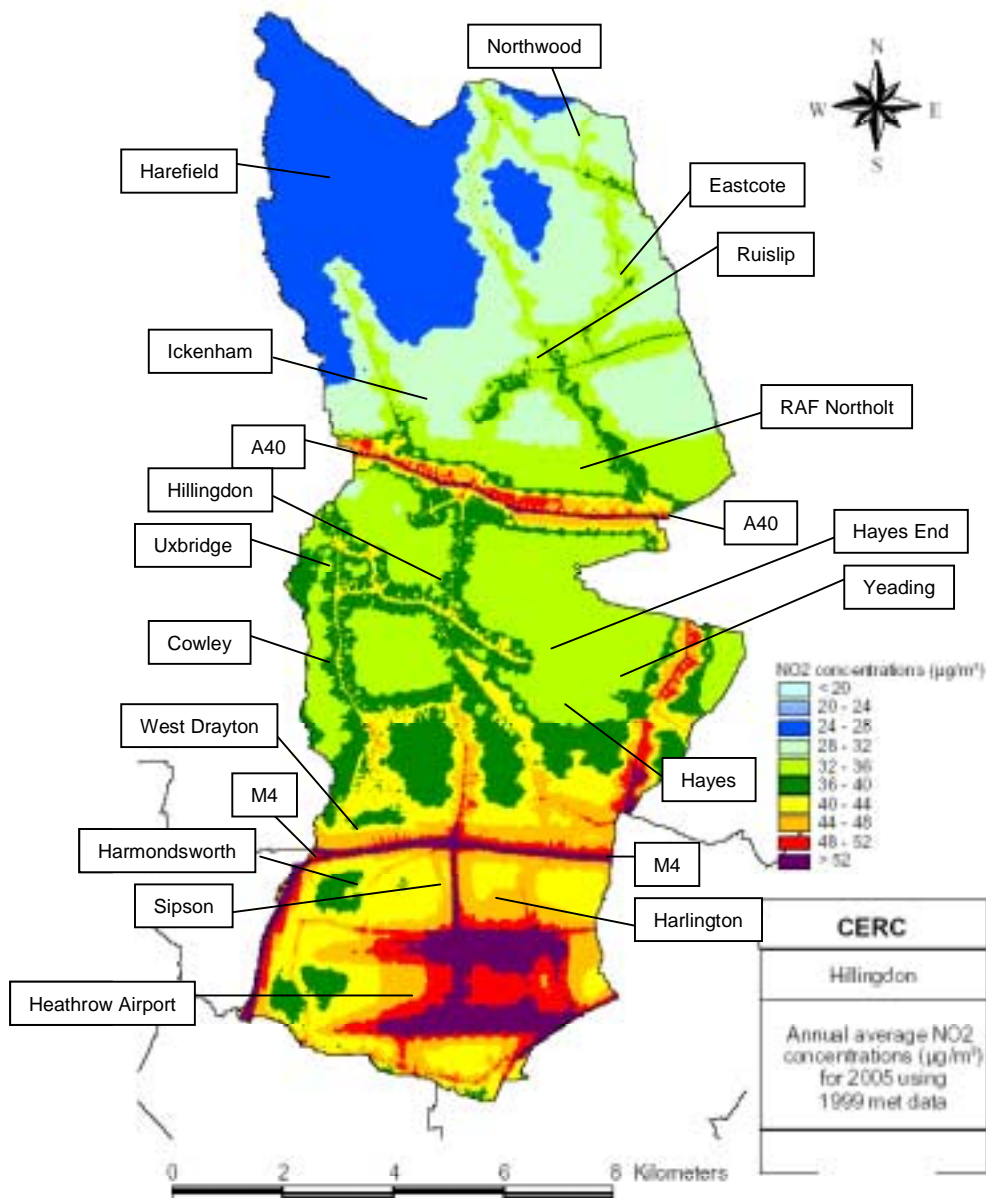
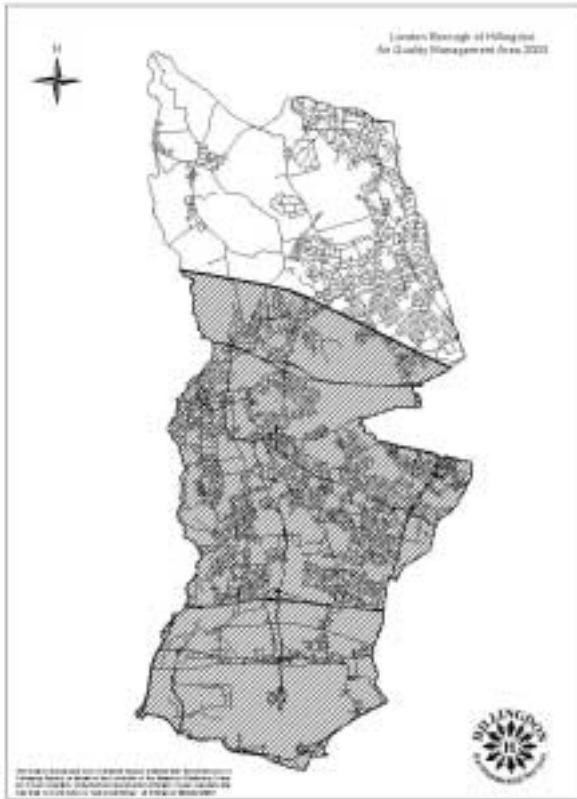


Figure 1. Projected annual mean NO₂ concentrations in the London Borough of Hillingdon in 2005 (from CERC 2003a).

In view of these problems the Council declared an Air Quality Management Area (AQMA) in May 2001 based on forecasts of public exposure to nitrogen dioxide. In the light of new modelling work the AQMA was expanded slightly when the Borough issued a new Order on September 1st 2003. This defines



the AQMA as covering all parts of the Borough south of the Chiltern-Marylebone Railway line. The map to the left shows the revised extent of the AQMA.

Although the AQMA was based primarily upon consideration of concentrations of the pollutant nitrogen dioxide, it was agreed that Hillingdon would continue to monitor airborne concentrations of fine particulate matter (PM₁₀) and include it in any future modelling studies and in the development of the action plan, because of the importance of its health effects. The AQMA includes all areas where there are forecast exceedences of the objectives for PM₁₀.

1.5 Sources of NO_x² in Hillingdon

In order to develop an action plan it is essential to understand how different sources of pollution contribute to concentrations in the AQMA. **Table 1** presents the estimated sector breakdown of NO_x emissions in 2005 within the Borough.

² Much of the information that follows concerns emissions and concentrations of NO_x (oxides of nitrogen, a measure of pollution that combines nitric oxide, NO, and nitrogen dioxide, NO₂). The health-based standards, based on toxicological and epidemiological research, only concern NO₂ concentrations. Chemical reactions in the atmosphere convert NO to NO₂ and vice-versa, establishing an equilibrium that is dependent on concentrations of a third pollutant, ozone. **Whilst the chemistry is complex the outcome so far as this paper is concerned is straightforward: When looking at the causes of high concentrations of NO₂ it is necessary to look at emissions and concentrations of the combined measure of NO and NO₂, NO_x.**

Table 1. Sector breakdown of annual NOx emissions in 2005 within the London Borough of Hillingdon

Sector	Emission (tonnes /year)	% of total
Domestic combustion	320	5.0%
Commercial & small industrial combustion	165	2.6%
Council heating	15	0.2%
Non-council public heating	15	0.2%
Regulated Industry	215	3.3%
Airport on-site activities	3750	58.2%
Public transport	515	8.0%
Road transport – Heavy Goods Vehicles (HGVs)	605	9.4%
Road transport – Light Duty Vehicles (LDVs) other than cars	145	2.3%
Road transport - Cars	645	10.0%
Road transport - Council fleet	30	0.5%
Road transport sub-total	1690	26.20%
Other	20	0.3%
Total NOx emission (tonnes/year)	6440	

These sources contribute to ambient NOx concentrations in different locations in the AQMA to a varying extent. To illustrate this Table 2 presents the contribution of different sources to predicted ambient NOx concentrations at two relevant sites, one close to Heathrow airport and one at the northern boundary of the AQMA close to the A40.

Table 2. Sector breakdown of annual mean NOx concentration in 2005 at two illustrative receptor locations within the London Borough of Hillingdon.

	Close to Heathrow	Close to major road (A40)
Background	15.3	15.3
Major roads	21.8	28.7
Industry	3.6	2.7
Airport	29.7	3.9
Other	9.3	12
Total	79.7	62.6

Table 2 shows that airport emissions contribute significantly to predicted ambient NOx concentrations in the southern part of the AQMA but not in the northern part. Emissions from traffic on major roads are significant at all locations close to them. Contributions from background and 'other' sources (which includes traffic on minor roads) will also be significant though not dominant throughout the AQMA.

1.6 What is Being Done to Improve Air Quality?

Much has already been done through national and European legislation to control emissions from vehicles, industry and other stationary sources. In addition to this legislation there are a variety of local and regional plans that will be of benefit to air quality, and hence will need to be taken into account when assessing new measures that will be of further benefit. The most prominent of these are:

- The Mayor of London's Air Quality Strategy
- West London Air Quality and Transport Plan
- BAA Action Plan for Heathrow.
- The Unitary Development Plan (UDP),
- Supplementary Planning Guidance on Air Quality,
- Local Agenda 21 (LA21),
- The Health Improvement and Modernisation Plan (HIMP) and the Hillingdon Local Delivery Plan that has followed it,
- The Interim Local Implementation Plan (ILIP) 2002/03 and the Borough Transport Plan which is currently in development,
- The Hillingdon Community Plan,
- The Environmental Services Plan.

Whilst the people that live and work in Hillingdon have an important role to play in improving air quality in the Borough, there are limits on what action led by the Council can achieve. In particular, it is noted that:

- Heathrow airport is run by BAA plc.
- Final decisions on major developments at Heathrow, including approval or otherwise of the third runway, will be taken by central government.
- Major roads are the responsibility of the Highways Agency and Transport for London.
- Major industrial facilities are regulated by the Environment Agency, though a number of smaller processes are regulated by the Council.

Background sources from outside the Borough are also, by definition, outside the immediate control of Hillingdon Borough Council.

Chapter 2 Options for Improving Air Quality

2.1 Overview

This Chapter identifies options that could be adopted for improving air quality across Hillingdon. For ease of understanding (both here and for subsequent implementation), they have been grouped into a series of packages, for example dealing with public transport, industry, and so on. Measures have been prioritised within each package. More detailed information is available in the complete version of this draft of the plan and the accompanying database.

Ideally it would be possible to resolve air quality problems using just a small number of measures. This is not possible in the context of Hillingdon, partly because of the different types of source (traffic and activities at Heathrow Airport) that contribute to the problem and partly because of the extent of exceedences. Given that a very large number of measures have been considered in the plan, it has been appropriate to group them into a series of packages each of which is described in Section 2.2.

Information considered so far on both the costs and effectiveness of options is preliminary. Where possible, data have been taken from examples of schemes that have already been implemented, but as these are generally from distant locations there are questions concerning the reliability of the extrapolation exercise. Development of the prioritised list of options accepts the existence of uncertainties, believing that it is better to start from some estimate of cost-effectiveness (etc.) than not. Uncertainties in data should not be considered a barrier to progress with the plan in the future, as it may evolve over time as new information appears (e.g. through feasibility studies);

It will be noted immediately that some of these packages demand more new activity than others. For example, lobbying central government on certain improvements may be straightforward, whilst measures to reduce emissions by using cleaner vehicles may require new purchasing guidelines for the Council and other bodies, and the fitting of abatement equipment to many vehicles that routinely access Hillingdon.

Each package is listed below, with a description of:

- Which organisation/s or fora should take the lead on implementation
- Measures under consideration
- Measures so far rejected
- Additional comments.

Agreement has yet to be sought with the organisations proposed as leading the implementation of each package in these tables. Indeed, none of this information at the present time should be regarded as final – the consultation process is about bringing together the views of stakeholders to determine where responsibilities should lie and which options should be treated with the highest priority. Organisations are encouraged to say what role they wish to take in the implementation of the plan, whether or not they have been

identified in any package (additional offers of participation are welcome). Devolution of responsibility for each package does not detract from the fact that the overall responsibility for implementation of the air quality action plan lies with Hillingdon Council, but does recognise that other organisations are better placed to implement many of the options under consideration.

It will be noted that many of the actions listed here are vague in terms of precisely where and to what extent it would be appropriate to apply them under the remit of an air quality action plan for the London Borough of Hillingdon. For example, in the first package entitled "Increase Use of Existing Public Transport Services" there is an option "To improve access to, and quality of, public transport travel information". The precise form that this takes could vary from a simple mail-shot telling people where to find detailed information, to systems that provide up to the minute data on (e.g.) when the next bus is due. In the latter case there are further questions to ask, for example, should such systems be introduced on all public transport routes or be limited to the busiest? In the context of Hillingdon where air quality problems are so widespread and where only limited control can be exercised by the local council, it seems more appropriate that these questions are dealt with at a later stage when agreement has been reached on which options seem most sensible to progress with.

It will also be noted that many of the measures listed 'for consideration' are already being implemented in London in one way or another, often for reasons unrelated to air quality improvement. Sticking with the example given above, there are of course a number of initiatives already underway "To improve access to, and quality of, public transport travel information". By listing such measures here we highlight the fact that such options can have an impact on air quality and hence need to be considered in development of the plan. Decisions on appropriate levels of resource and precise details of schemes (including the relative priority for their introduction in different locations) can then be made by the relevant authorities, such as Transport for London (TfL) following informed discussion with Hillingdon Council. Having reached agreement between different parties it is also possible to define reporting structures through which the implementation of the plan can be monitored.

It is to be hoped that the extreme situation of Hillingdon will be noted and resourced accordingly, not just by TfL but also by other Agencies with a national or regional remit.

Within each package a series of options are listed, ranked in terms of the strength of recommendation for each as seen by the consultants to the Council. To some extent the plan plays 'devil's advocate' by suggesting a prioritisation ahead of the main consultation programme, but we feel that this is useful to encourage comment. Given limited resources the options that are most highly recommended when the plan is adopted (i.e. after comments from the consultation have been considered) are more likely to be resourced than those that are less strongly recommended. Failure to identify something as 'Very strongly recommended' does not mean that the consultants think it a bad idea (if they thought that they would have rejected the measure). Instead,

they believe that such options are likely to be less cost-effective or practical in the context of Hillingdon than other measures. The consultants readily admit that their views are subjective, and will welcome comments made by stakeholders, including discussion of measures not included in the listings.

2.2 The Packages

Package 1: Increase Use of Existing Public Transport Services

Potential Lead Organisations/Fora:

Hillingdon Transportation Team, TfL, West London Alliance, Heathrow Area Transport Forum (HATF), Local Bus Operators, Hillingdon Education Department.

Measures under consideration: Very strongly recommended

1. Improve access to, and quality of, public transport travel information;
2. Seek to ensure improvements in overall public transport service (facilities, cleanliness, safety, frequency, reliability) across the Borough, but particularly in the AQMA, to a level where significant modal shift takes place. This will include measures to ensure the enforcement of public transport priority schemes;

Measures under consideration: Strongly recommended

3. Work in partnership with TfL and the HATF for the provision of low emission buses in the Hillingdon exceedance areas;

Measures under consideration: Recommended

4. Investigate the provision of low or zero emission buses for schools within the high exceedance areas;
5. Work in partnership with TfL to trial new low/zero emissions technology in the Hillingdon exceedance areas;
6. Investigate the feasibility of working with relevant stakeholders to subsidise bus, train and underground fares in order to achieve significant modal shift;

Examples of measures already rejected

Public transport currently generates 8% of emissions in the Borough. The plan cannot therefore support expansion of public transport systems using old technologies that are significantly more polluting than their modern equivalents. The objective of this package is thus to increase patronage of buses, trains, etc., whilst reducing emissions from the vehicle stock.

Comments

A number of additional public transport measures are included in Package 2, dealing with the further development of transport infrastructure.

Package 2: Further Develop Transport Infrastructure

There are strong links between this Package and Package 3.

Potential Lead Organisations/Fora:

Hillingdon Transportation team, TfL, WLA, HATF, HA, neighbouring boroughs such as Slough, Spelthorne, South Bucks.

Measures under consideration: Very strongly recommended

1. Support multi modal travel by further development of public transport interchanges for rail/cycle/bus/walking both within Hillingdon and the West London area;
2. Implement efficient and high quality bus corridors, including the use of bus priority schemes throughout West London, considering substantial infrastructure changes where needed to achieve improvement;
3. Introduce home zones in residential areas subject to significant amounts of through traffic that should use alternative routes. Three areas have previously been identified for potential TfL funding namely a) Heathrow Villages b) Vine Lane/Honey Hill and c) Harefield village;
4. Ensure air quality assessments are made for proposals for new transport infrastructure and changes to traffic management;

Measures under consideration: Strongly recommended

5. High occupancy vehicle lanes and freight priority schemes along the major exceedance corridors such as the M4, A4, A40 and A312;
6. Continue to support the West London Transit Scheme and investigate the use of light rail/tram schemes along other high exceedance corridors such as the A4 and A40;

Measures under consideration: Recommended

7. Improve the north-south public transport provision in the Borough;
8. Investigate provision of new park and ride schemes. These could be associated with the M4 corridor, Heathrow Airport and town centres;
9. Improve provision for pedestrians;
10. Create more cycle priority lanes and signalling;
11. Extend provision of parking for motorcycles, mopeds and bicycles at public and medium and large business sites.

Comments

Although major infrastructure developments will not be able to be implemented before 2005 (UK Air Quality Objective) or in fact 2010 (European Union Limit), it is essential that consideration of air quality issues is factored into the decision making process where such developments are proposed.

From a national perspective it seems fitting to treat Hillingdon as a priority case for investment given the extreme pressures on the Borough arising from the major road network and presence of Heathrow Airport, including the proposal for a third runway.

Package 3: Further Develop Traffic Control and Management Systems

30.2% total NOx emissions in Hillingdon are due to road transport, much of which is associated with the high exceedance areas/corridors.

Potential Lead Organisations/Fora :

Hillingdon Transportation team, TfL, WLA, HATF, HA.

Measures under consideration: Very strongly recommended

1. Introduction of congestion charging particularly in the areas of high exceedance such as Heathrow Airport;
2. Focusing on areas and corridors of high exceedance within residential areas, investigation into the banning or restricting of traffic, or particular types of traffic, from identified roads;
3. Work in partnership with the Highways Agency to investigate measures such as variable message signing and ramp metering to smooth traffic flows on the M4 and surrounding link roads;
4. Implement speed limits on major roads at the optimal level for NOx and PM₁₀ emissions for the current traffic profile;

Measures under consideration: Strongly recommended

5. Provision of Controlled Parking Zones in residential parts of high exceedance areas;
6. Investigate the creation of Clear Zones;
7. Work in partnership with TfL to implement schemes along the high exceedance corridors designed to smooth traffic flows such as the use of SCOOT and other dynamic traffic control systems;
8. Ensure the provision of sufficient signage for public car parks;
9. Improve coordination of road works and provide more effective signing around them.

Examples of measures already rejected

Any measures that bring traffic closer to housing, schools, hospitals, etc., particularly in areas where air quality objectives are forecast to be exceeded clearly act against the objectives of this plan.

Comments

A high level of co-ordination will be needed on these measures between the Borough Council, Transport for London and the Highways Agency. Here as elsewhere, it will be necessary to be much more specific in defining the location of management systems for the final version of the Action Plan.

Package 4: Promote and Adopt Cleaner Vehicles

(30.2% total NO_x emissions in Hillingdon are due to road transport, all are associated with the high exceedance areas/corridors)

Potential Lead Organisations/Fora :

Hillingdon Borough Council, TfL, WLA, HATF, Energy saving Trust, LEZ Steering Group, Fuel Companies/suppliers, West London Freight Quality Partnership

Measures under consideration: Very strongly recommended

1. Progress the recommendations of the London Low Emission Zone Feasibility Study jointly with the GLA, ALG and TfL. This initially includes emission standards for buses, coaches and lorries entering the Zone. Vans and taxis are recommended for consideration in a second phase. Although private cars are currently not recommended for inclusion, Hillingdon should work with the LEZ Steering Group to investigate all measures to assist in removing very old cars from the London vehicle fleet;
2. Ensure fiscal encouragement of the adoption of low and zero emissions vehicles through the provision of discounts when entering any proposed LEZ or Congestion charging zone;
3. Develop and implement an Action Plan via the BAA Heathrow Clean Vehicle Programme to make improvements in the Council vehicle fleet with regard to reducing emissions. The Action Plan should include a baseline fleet register with a procurement strategy for continual improvements in the Council fleet with regard to reducing emissions, and include the provision for trialling new technologies;
4. Provide training for local authority drivers to minimise emissions, and consider opening training opportunities to other drivers working for businesses in Hillingdon;
5. Specify emissions criteria to be used when seeking tenders for public service contracts in line with recommendations under the MAQS.
6. Ensure that the objectives of the West London Freight Quality Partnership include reducing the air quality impact of freight. Any freight developments in the West London area must be subjected to an air quality assessment before implementation;

Measures under consideration: Strongly recommended

7. Facilitate the uptake and use of alternative fuels, including water-diesel emulsion. This should include development of appropriate alternative refuelling infrastructure in Hillingdon where necessary;
8. Encourage local businesses operating in Hillingdon to sign up to the Clean Vehicle Programme and develop and implement action plans for reducing emissions;
9. Support national programmes for improving fleet emissions, for example through the TransportEnergy grant schemes.
10. Ensure the implementation of the Idling Vehicles Regulations and actively promote the use of the Dirty Diesel Hotline for reporting smoky vehicles spotted in Hillingdon;
11. Install signs in waiting areas of Council premises, bus garages, coach stations and major leisure venues, etc. advising drivers to switch off

- engines when stationary;
12. Develop sub-regional Bus Quality Partnerships focussed on addressing the contribution of buses and coaches to emissions.

Measures under consideration: Recommended

13. Lead the way in trialling new technology where appropriate and act as a point of information for businesses and major fleet operators and other stakeholders in Hillingdon for cleaner vehicle technologies, national schemes and grant systems for the use of alternative fuels;
14. Work in partnership with the ALG to participate in the London-wide Vehicle Emissions Testing programme. Sites in Hillingdon will be tested regularly throughout the year and fixed penalty notices given where appropriate;

Package 5: Measures Specific to Heathrow Airport

58% of NOx emissions in Hillingdon are due to on-site airport activities.

Potential Lead Organisations/Fora :

BAA Heathrow, Airline Operators, HATF, Heathrow Air Quality Working Group, Aircraft Emissions Working Group, DfT, DEFRA, GLA, West London Freight Quality Partnership.

Measures under consideration: Very strongly recommended

1. Pursue the full implementation of the BAA Heathrow Action Plan;
2. Work in partnership with BAA Heathrow and the Heathrow Air Quality Working Group to define targets and reporting schedules for the Heathrow Air Quality Action Plan, in order that the Council can report progress as required to national government.
3. Work in partnership with BAA Heathrow and the Heathrow Air Quality Working Group, to investigate ways in which the existing plan can be strengthened. For example, quantified effects of current and future measures to reduce emissions, programmed introductions of technical fixes with projected reductions in emissions, cost-effectiveness analysis of measures considered;
4. Introduce differentiated landing charges for aircraft according to emissions criteria (possibly weighted by passenger numbers);
5. Work in partnership to investigate changes in operating practice to achieve air quality improvements (e.g. considering use of differentiated landing charges depending on aircraft emissions, optimisation of runway usage);
6. Ensure air quality impact assessments are an integral part of all transport and infrastructure proposals;
7. Work with the appropriate fora to support the provision of new rail links to the airport;
8. Specify emissions criteria for Heathrow taxis, buses and coaches using the Central Bus Terminal, and car hire shuttles, hopper buses etc.;

9. Ensure all the relevant air quality conditions as set by the Secretary of State for the construction phase of Terminal 5 are met;
10. Put in place a system by which the ATM limit (480,000) and parking provisions set by the Secretary of State for Heathrow including an operational T5 can be monitored effectively.

Measures under consideration: Strongly recommended

11. All fixed sources on the airport to be assessed for energy efficiency, any new technology to be a minimum of BAT with full use of all available technology for lowering emissions;
12. Revision of the Heathrow Emissions Inventory on a bi-annual basis with inclusion into the GLA London Emissions Inventory;
13. Introduce Congestion Charging at Heathrow to reduce travel movements to the airport;
14. Work in partnership with the HATF, GLA and TfL to achieve the Mayor's target of 50% modal shift to Heathrow by public transport as soon as possible;
15. Work via the HATF to review the BAA GTP to ensure a larger modal shift from private car to public transport for airport workers;
16. Work with the West London Freight Quality Partnership to minimise the air quality impact of freight deliveries to and from Heathrow;

Measures under consideration: Recommended

17. Publish a programmed introduction of new cleaner technology for aircraft;
18. If not covered appropriately by the London-wide LEZ, investigate the implementation of a Heathrow specific LEZ;
19. Investigate the use of bus priority and high occupancy vehicle lanes in the Heathrow area;
20. Introduce a light rail/tram link along the Bath Road;
21. Introduce a Park and Ride scheme specifically for Heathrow with a light rail link into the airport;
22. Decrease the price of the Heathrow Express fares and include more stopping points to encourage further rail use;

Comments

The plan assumes that the Cranford Agreement specified for the airport is retained.

Close collaboration between the Council, Heathrow and other public and private bodies in the AQMA will be of great benefit to the Hillingdon action plan.

There may be significant opportunities for the sharing of resources between BAA Heathrow and other local bodies in areas as diverse as refuelling facilities for alternative automotive fuels and training courses.

Package 6: Measures Concerning Local Industries

3.3% total emissions NO_x in Hillingdon are due to industrial facilities. However, a significant proportion of these facilities operate within the AQMA.

Potential Lead Organisations/Fora

Environment Agency, EPU, neighbouring boroughs.

Measures under consideration: Very strongly recommended

1. Support opportunities for Combined Heat and Power where appropriate within the Borough;
2. Introduce (within reason) progressively stricter conditions on Part A processes (e.g. feedstock/fuel change, operating load, abatement equipment, process technology and relocation of process) especially when located within high exceedance areas or where the impact is predicted to be within high exceedance areas;

Measures under consideration: Strongly recommended

3. Work with the Environment Agency to improve public dissemination of industrial pollutant emissions data and other relevant information, for example on performance against permit conditions;

Measures under consideration: Recommended

4. Discourage the use of bonfires on all industrial sites;
5. Adopt a best practice strategy for all proposed demolition and development projects. This will include the use of low emission vehicles and equipment and the use of dust minimisation techniques.

Examples of measures already rejected

Closure or relocation of plant. Given the relatively small contribution of industry to NO₂ concentrations in the Borough this appears excessive.

Comments

Major industry is already being closely controlled through the permitting system of Integrated Pollution Prevention and Control (IPPC). Given that these should ensure that facilities are using Best Available Techniques (BAT), there is likely to be limited scope for further substantial reductions in emissions.

Provision for taking action in the event that permit conditions are exceeded is not necessary as part of the air quality action plan as it is already covered by regulation.

Lead responsibility is shared between the Environment Agency and the Council on this package because of the legal division of responsibility for different industrial activities.

Package 7: Use of Planning Systems to Improve Eco-Efficiency in the Built Environment and Promotion of Travel Planning

Use of the planning system offers long term improvements in air quality. Action taken now can have beneficial effects over periods of decades.

Potential Lead Organisations/Fora:

Hillingdon Borough Council, local businesses, schools

Measures under consideration: Very strongly recommended

1. Require that the Unitary Development Plan, Borough Transport Strategy the Community Plan and future corporate strategies incorporate the borough air quality action plan and local air quality strategy measures where appropriate;
2. Implement supplementary planning guidance on air quality requiring it to be a material consideration in planning decisions in the AQMA (see planning application form at Appendix 7). This includes:
 - a. Establishing when an air quality assessment is required for a proposed development, taking into account any cumulative effects of other developments in the area
 - b. Determining significance in terms of air quality impacts. In areas of exceedance where the development would cause a further deterioration, however small, in the quality of the air, these developments would be termed significant
 - c. Establishing appropriate mitigation of the air quality impacts. This would include increasing public transport provision, car parking restrictions, specific vehicle restrictions based upon emissions, establishment of green travel plans, establishment of fleet management plans, air quality monitoring programmes etc
3. Require that future developments meet the highest standards of sustainable design and construction;
4. Integrate land use planning policies and mechanisms with transport and air quality objectives to reduce the overall need for travel.
5. Ensure continued use of existing mechanisms such as section 106 agreements for improvements in air quality. The agreement will relate to the location of the development with regards to exceedance areas, the scale of development and the projected emissions;
6. Develop an environmental management system for Hillingdon Borough Council.

Measures under consideration: Strongly recommended

7. Offer a Green Travel Planning service to the public and private sector operating in the Borough. Priority should be given in the first instance to the Council's own activities and to activities in the AQMA. Green Travel Planning should be a requirement for all businesses (new and existing) employing more than a specified number of people in the Borough. This should include investigation into workplace charging, car-sharing schemes, car pooling etc.

8. Establish an Environment Coordination Office for more effective integration of actions to improve environmental performance within and outside the Council.
9. Implement an integrated procurement strategy so that purchase of goods and services is evaluated against London sustainability targets. This to include support to environmental industries in London, where appropriate.
10. Work with the London Sustainable Distribution Partnership to implement infrastructure for effective and integrated distribution of goods in London.

Measures under consideration: Recommended

11. Introduce Safe Routes to School throughout the Borough with special regard to the schools within the highest exceedance areas
12. Encourage businesses to participate in environmental management schemes and to continue to improve environmental performance.
13. Investigate the use of planting to reduce emissions from bare surfaces and to remove particles from the air.

Comments

The potential for the use of non-road transport modes for freight is highlighted by a recent plan to ship aggregates and sand from Denham to ARC in West Drayton. This is forecast to reduce lorry movements by 45,000 over a 7 year period.

Package 8: Dissemination of Information on Ways that Businesses and the Public can Contribute to Improved Air Quality

Potential Lead Organisations/Fora:

Hillingdon, Regional Groupings, Schools, Healthy Hillingdon.

Measures under consideration: Very strongly recommended

1. Provide a consolidated platform for advising the public and businesses on:
 - a. The health effects of air pollution;
 - b. Regulations in Hillingdon from its status as a smoke-free zone;
 - c. Ways of reducing vehicle emissions, e.g. through proper maintenance and alternative fuel choices, and of the financial savings and grants that are available;
 - d. Driver training to encourage behaviour that reduces fuel consumption and hence emissions, for example, reducing time spent with engines idling, smoother vehicle operation;
 - e. Energy efficiency measures and grants and advice that are available;

- f. Participation in events such as Don't Choke Britain, Bike to Work week, Walk to School week, and Car Free day.
- g. Healthy Hillingdon campaigns designed to promote walking and cycling.

Measures under consideration: Recommended

- 2. Raise awareness of sustainable waste management practices such as home composting for use by residents and businesses in the Borough, and discourage the use of bonfires.

Comments

The role of the general public in causing air quality problems through use of vehicles, domestic heating systems, etc., is often overlooked. The benefits of improved efficiency beyond improvement in air quality need to be highlighted.

Air quality should be a major factor considered during discussion on where measures such as those listed should be targeted.

Ideas should be shared between councils on the best way forward for dissemination programmes. A variety of methods have been used up and down the country, including public meetings, use of the internet, and advertising through car stickers and bookmarks distributed through public libraries.

Package 9: Actions to be Taken in Liaison with the Mayor and Neighbouring Authorities

Potential Lead Organisations/Fora:

Hillingdon Borough Council, GLA, West London Air Quality and Transport Group, Heathrow Area Air Quality Group, HATF.

Measures under consideration: Very strongly recommended

- 1. Work with the Mayor and BAA Heathrow in incorporating the MAQS measures into the Heathrow Air Quality Action Plan;
- 2. Work with the Mayor, TfL and the London sustainable distribution partnership to assist in the development and implementation of proposals for accelerated take-up of cleaner and quieter vehicle technologies, to promote better vehicle maintenance and considerate and economical driving;
- 3. Work in partnership with the West London Air Quality and Transport group, Heathrow Area Air Quality group, HATF and other partners to ensure consistency of Action Plan measures and explore all opportunities for regional measures for reducing emissions;

Measures under consideration: Strongly recommended

4. Consider the development of regional Air Quality Strategies to cover all the national air quality objectives, climate change etc;
5. To support the Mayor's work with the London Fire and Emergency Planning Authority and the Metropolitan Police Authority to ensure that their vehicles and buildings have the lowest possible emissions consistent with their operational requirements.

Measures under consideration: Recommended

6. Promote the use of rail and other non-road modes for freight traffic;

Comments

A commitment to implementing all relevant proposals in the Mayor's Air Quality Strategy is implicitly included in the plan through actions raised under other packages.

Package 10: Lobbying International and Central Government

Given limits on the powers of Hillingdon Council, further action will need to be taken at national and European levels. The options identified here are those considered most likely to be of benefit to Hillingdon. The bodies to be lobbied would include DEFRA, DfT, the European Commission, ICAO and CAA.

Potential Lead Organisations/Fora:

Hillingdon in association with neighbouring boroughs and the GLA, DEFRA, and DfT.

Measures under consideration (all very strongly recommended):

1. Resist further expansion at Heathrow;
2. Abolition of the General Development Order covering Heathrow Airport giving permitted development rights within the airport boundaries which are not subject to planning permission from Hillingdon;
3. Introduce more stringent emission standards for plant, aircraft and airside vehicles, fiscal and other measures to reduce emissions from airports;
4. UK Government to join with local stakeholders to implement air quality initiatives in the Heathrow area to reduce pollution by 2010, reflecting statements made in the recent white paper on the future of air transport in the UK;
5. National Government to prioritise public transport provision to Heathrow, particularly rail links to the west;
6. Support the Mayor's call for the government to seek more stringent emission standards and National Emissions Ceilings for the UK in the next round of negotiations where practicable and cost-effective.
7. Promote best practice in terms of emissions management with the train operators, the Strategic Rail Authority and Network Rail;
8. Work with the Mayor in urging the government to provide incentives

through the fuel duty system for water-diesel emulsion and other such proven cleaner fuels.

- a. making vehicle excise duty reductions for retrofitting for smaller vehicles more significant
- b. extending the fuel duty differential guarantee to beyond 2004
- c. seeking to increase retrofitting grants towards 100% and encourage more smaller operators to use the grants
- d. increasing grants for taxi conversions from 65% to 75% on a par with most other CleanUp grants
- e. extending and additional funding PowerShift and CleanUp beyond 2004 until national and EU limit values have been achieved.

Comments

Consideration will need to be given to how best any lobbying should be progressed – for example, is it appropriate for Hillingdon to act on its own, or would it be better for the Council to act in association with others, perhaps through the Mayor's Office or the WLA?

Chapter 3 Implementation of the Plan

3.1 Planning the Implementation of each Measure

It will be necessary to develop a detailed implementation programme *once a final list of options is agreed for the Hillingdon Air Quality Action Plan*. This is key to the success of the plan as it will determine the effectiveness of each of the measures included in it. The implementation programme is especially important in Hillingdon because of overlap with other action plans and strategies led by other bodies. Without effective collaboration there are serious dangers of confusion between different bodies and of reduction in the cost-effectiveness of the plan as a whole. Implementation needs to be seen as operating at two levels, described in the following sections:

1. Overall project management and delivery of the plan.
2. Delivery of each individual option.

3.1.1 Project management and delivery of the overall plan

Given the large number of options that are likely to be written into the plan, and the variety of different organisations and council departments that will take a significant role in implementation of one or more options, the overall delivery of the plan needs to be well planned and co-ordinated. It is proposed that EMRC's Action Plan Tracker is used as the principal management tool for tracking progress with each option. It is recommended through this report that the plan is implemented by staff from Hillingdon's Environmental Protection Unit (EPU) acting under a steering group. If this is agreed, the precise structures of the steering group and of EPU in relation to this plan need further consideration.

Starting with the steering group:

- a) It could be drawn exclusively from officers employed by Hillingdon Borough Council.
- b) It could be drawn from Hillingdon Council's Elected Members as well as council officers.
- c) It could be drawn from the Councils that are members of the West London Alliance. This could work well if final air quality action plans for the councils in the WLA are broadly similar.
- d) It could involve stakeholders from a variety of organisations and from local residents groups. This would have the advantage of bringing together people with a variety of experience, but may be too large a group for effective decision making. Recognising the benefits of involving these stakeholders in the process it may be better to define a programme for ongoing consultation throughout the implementation phase.

Turning to EPU:

- a) Implementation could be carried out through EPU as it is currently structured.
- b) The profile of the Council's work for environmental improvement could be strengthened through the development within EPU of an Environment Co-ordination Office, charged with co-ordinating action on sustainability within the Borough. This would have a wider brief for environmental action than EPU has at the moment through liaison with other groups working in the area and across London on energy efficiency, transport planning and so on. This could also have advantages in terms of cost-effectiveness and of providing a more effective forum for future consultation.

These are simply suggestions made by consultants working on the plan on behalf of the council. Alternative structures should be considered if necessary. Views of stakeholders on this matter will be welcomed.

3.1.2 Implementation of each option

Turning to delivery of each individual option, the following details are needed:

- Who is the task leader with overall responsibility for delivering the option?
- Who will provide support to the task leader to ensure that the option is implemented effectively and to time?
- What are the specific actions that need to be undertaken for implementation of the option?
- How will success be measured?
- When, how and to whom, should progress be reported?

It may become apparent during the implementation process that some options are either not working, or are inadequately resourced. Decisions will need to be taken as to whether these options should be taken forward or abandoned in favour of others that are proving more successful.

3.2 Resourcing the Plan

Given the large number of measures that are likely to feature in the plan, implementation will be a complex task. For the plan to generate improved air quality it is therefore essential that sufficient resources are given both to its management and to the options adopted under it. To ensure that resources are used cost-effectively, all stakeholders should consider what may reasonably be achieved under the action plan. This will assist in identifying those options that should be treated with the highest priority.

Despite the brevity of this section, these issues are extremely important. There is no point in taking forward an adventurous and apparently dynamic plan if it will not be backed up by adequate funding for staff and the options selected for adoption.

Chapter 4 Questions for Consultees

Consultees are requested to respond to the following questions in order for the Council to assess support for the different parts of the plan, and to incorporate the knowledge of other stakeholders where possible. Responses should be sent to Val Beale at the Environmental Protection Unit³ by 16/02/2004. Additional opportunity for comment will be provided at a meeting to be held on 5/03/2004:

1. Do you support the air quality plan covering a broad range of sources (traffic, Heathrow Airport, industry, domestic, commercial and public sectors), or do you think that it should be more focussed?
2. Do you think that the emphasis placed on each of the sources listed in question 1 at the present time is correct? Or would you like to see a greater emphasis on some of these sources than is apparent from this draft of the action plan?
3. Where relevant, do you agree with the level of your organisation's involvement in each package? Are you able to suggest the mechanism through which the relevant measures could be investigated and implemented and, where relevant, the appropriate funding mechanism?
4. If not appropriate, are you able to suggest alternative organisations/fora that Hillingdon could approach through which the options could be investigated and implemented?
5. With the information available are you able to indicate which measures you feel should be prioritised with regard to reducing emissions in Hillingdon?
6. Are there any other measures not listed that Hillingdon could investigate?
7. Do you support the process outlined in Section 1.3 for prioritising measures? What are its strengths and weaknesses?
8. What are your views on the management structure for the implementation process outlined in Chapter 3?

³ Val Beale, Hillingdon Borough Council, 3W/01 Civic Centre, High Street, Uxbridge, Middlesex, UB8 1UW. VBeale@hillingdon.gov.uk