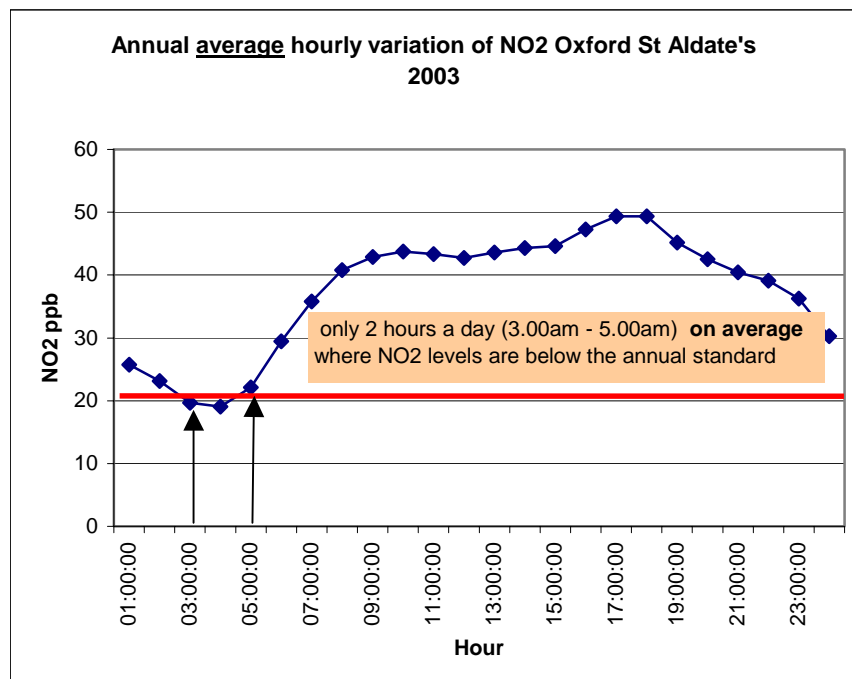




A Breath of Fresh Air



Review Panel Members:

- Cllr. Sibley ~ Chair (Oxon County)
- Cllr. Darke/ Pressel (Oxford City)
- Cllr. Fooks (Oxon County)
- Cllr. Hollander (Oxford City)
- Cllr. Hudson (Oxon County)
- Cllr. Simmons (Oxford City) – until Jun 2004

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Environment
Scrutiny Review
of
Air Pollution

Democratic Services
Nov 2004
EN007

GLOSSARY

This report is written as far as possible in plain English with the minimum of jargon. All acronyms are spelt out in full when they first appear but for sake of clarity their meanings are repeated here.

AQAP	Air Quality Action Plan – a plan of cost-effective measures that must be produced to remedy the problem once an AQMA has been declared
AQMA	Air Quality Management Area - an area that was declared when the City Council found that air quality within it was below government standards – i.e. more polluted
BPR	Bus Priority Route
BQP	Bus Quality Partnerships, Bus Quality Partnerships are agreements between local authorities and bus operators to work together to improve bus services. Partnerships typically include provisions relating to vehicle and service quality and road infrastructure. For example, a bus operator could agree to use new, accessible low-emission buses in return for the council introducing bus lanes.
DEFRA	Department for Environment Food and Rural Affairs
DfT	Department for Transport
EMIT	an atmospheric Emissions Inventory Toolkit – a software tool used to model pollutant sources and their corresponding emission rates (it can estimate emission rates from parameters such as traffic flows and speeds).
EMITS	Environmental Monitoring of Integrated Transport Strategies – a study which researches the impact of the OTS on the City and its environment
FQP	Freight Quality Partnerships, are partnerships between the freight industry, local government, local businesses, the local community, environmental groups and other stakeholders. They aim to develop an understanding of freight transport issues and problems, to promote constructive solutions, which reconcile the need for access to goods and services with local environmental and social needs.
LA	Local authority
LAQM	Local Air Quality Management: a Govt. requirement to ensure air quality is improved by the local authority, this involves a number of steps the authorities must take to assess the extent of the problems and the plans that must be produced to tackle them
LEZ	Low Emission Zone
LPG	Liquid Petroleum Gas
LTP	Local Transport Plan
NO₂	Nitrogen dioxide
NO_x	Oxides of nitrogen – nitrogen dioxide and nitric oxide are together known as NO _x
O₃	Ozone – toxic unstable gas, made up of three oxygen atoms
OTS	Oxford Transport Strategy; the way in which the Councils improve the environment in central Oxford and deal with some of the City's traffic problems. It was endorsed in 1993 and implemented over a number of years, principally through a package of measures, including the creation of a Bus Priority Route, daytime closure of the High Street to through traffic, and the pedestrianisation of Cornmarket in June 1999
PM₁₀	Particulates or particulate matter – general term for a mixture of solid particles and liquid droplets found in the air that are less than 10 microns in diameter (a tenth of the thickness of human hair)
PSA	Public Service Agreement. This is an agreement between local authorities and central government covering the topics identified by central government as the key issues for the public sector to tackle, such as bus passenger growth, school achievement, etc. Extra money is provided to fund activity, and if the targets are reached further money is awarded.
TRO	Traffic Regulation Order
VOCs	Volatile Organic Compounds – chemicals that easily evaporate at room temperature

Contents

SECTION 1 ~ INTRODUCTION.....	5
A) THE PROBLEM.....	5
B) WHAT THE SCRUTINY REVIEW GROUP WERE ASKED TO DO.....	5
C) WHAT THE COUNCILS CURRENTLY DO.....	6
D) FINDINGS	6
RECOMMENDATIONS.....	1
SECTION 2 ~ BACKGROUND.....	9
A) THE NATIONAL FRAMEWORK.....	9
B) THE LOCAL FRAMEWORK.....	11
C) DESCRIPTION OF THE PROBLEM.....	12
D) CAUSES OF POLLUTION	14
SECTION 3 ~ OPTIONS FOR CHANGE.....	17
A) REDUCING POLLUTION DUE TO BUSES	17
B) REDUCING POLLUTION DUE TO DELIVERY VEHICLES.....	19
C) REDUCING POLLUTION DUE TO TAXIS.....	19
D) COUNCIL FLEETS AND LEADING BY EXAMPLE	20
E) ENFORCEMENT OF REGULATIONS AND STANDARDS	21
F) INCREASING CYCLING AND WALKING.....	22
G) INVOLVING THE PUBLIC AND RAISING AWARENESS.....	24
H) JOINT-WORKING	26
SECTION 4 ~ CONCLUSIONS.....	31
APPENDIX 1 SCOPING DOCUMENT	32
APPENDIX 2 BIBLIOGRAPHY.....	34
APPENDIX 3 LIST OF WITNESSES	36
APPENDIX 4 NO₂ DATA 2003 RESULTS	37
APPENDIX 5 AIR QUALITY ACTION PLAN	38
APPENDIX 6 MAP SHOWING A.Q.M.A.....	42
APPENDIX 7 DEFRA LETTER	44

ENVIRONMENT SCRUTINY COMMITTEES – 10/15th Nov 2004

JOINT REVIEW OF AIR POLLUTION

Report of the joint Lead Member Review Group

SECTION 1 ~ INTRODUCTION

A) THE PROBLEM

1. The Local Air Quality Management (LAQM) process in Oxford has shown that there is an air quality problem. Air Quality is not bad all the time but there are certain locations, particularly in central Oxford streets, or close to busy junctions, where the levels of pollution averaged over a year are above the levels that have been set by Government and are sometimes more than twice as high. In open areas pollutants are dispersed fairly quickly by the wind but a 'canyon effect' from the relatively narrow, building-lined streets traps pollution; leading to higher pollutant concentrations adjacent to the roadside in urban areas. Weather and geography further affect pollution levels – low lying areas will build up pollution in still, sunny weather in the summer and still, foggy weather in winter.

B) WHAT THE SCRUTINY REVIEW GROUP WERE ASKED TO DO

2. Government requirements under the Environment Act 1995 mean that in Oxfordshire it is the City Council (Environmental Health) that must prepare an Air Quality Action Plan to remedy air pollution. However, under the transport legislative framework it is the County Council (Transport Planning) that must develop proposals around a transport strategy to reduce traffic growth. Because of this inter-dependence both Councils need to work effectively together to make sure that plans for air quality are harmonised with plans for traffic management. The Review Group were therefore asked to:
 - ❖ assess the impact of current Council policies, especially those relating to traffic management, against the specific government air pollution targets;
 - ❖ ensure that we have an effective integrated approach between air quality and traffic management work;
 - ❖ find out what is being done to inform and engage the public in this important matter, and
 - ❖ to recommend further action be taken where necessary
3. The Review carried out its investigation by reference to relevant literature and interviews with key expert witnesses (see **Appendix 2** for details). Evidence was also gathered from a public meeting held 8th July 2004 attended by 30 members of the public. It was decided to restrict the focus of the Review to Oxford city centre but the Review Group hope that lessons learnt in this context could be applied to working with District Councils in other parts of the County with similar localised problems, such as Horsefair in Chipping Norton and parts of Witney and Bicester.

C) WHAT THE COUNCILS CURRENTLY DO

4. The County Council has already introduced the Oxford Transport Strategy (OTS) with the aim of improving the overall environment in central Oxford, and reducing traffic growth. They also advise firms on 'Travel Plans' and have one for their own staff, to reduce dependence on the private car and the consequential environmental impact. The City Council is in the process of introducing one for their staff. The City Council declared an Air Quality Management Area (AQMA) in the city centre in Sep 2001, which

was verified in May 2003. Local authorities with a designated AQMA are required to produce and consult locally on an Air Quality Action Plan. Legislation also requires that any proposed measures are considered in terms of their cost-effectiveness to deliver the required improvements. Many of the options considered are measures that are routinely used to control traffic in urban areas, for example park and ride schemes, better cycling and walking provision, and improved public transport.

D) FINDINGS

5. The Review Group found that in spite of the improvements brought about by the OTS, poor air quality is a major urban problem and that traffic is the main contributor to excess levels of pollution in Oxford, large diesel-powered vehicles being the chief source of the high level of oxides of nitrogen. There is concern that the present approach may not be sufficient to reduce pollution levels to below government objectives set for Dec 2005. The Review's recommendations suggest ways to reduce the amount of traffic-related pollution. Logically this can be done in 3 main ways:

- (i) by reducing the amount of traffic,
- (ii) by improving traffic flow and the cleanliness of traffic,
- (iii) by removing the pollution or mitigating its effects once it has been created.

This concurs with prior recognition of the connection between air quality and transport, for instance when in 1999 the Government signed a WHO Charter stating that:

*"reliance on motorised transport continues to increase, resulting in adverse environmental effects. ...These effects may increase in the future if no effective preventative actions are taken."*¹

¹ Charter on Transport, Environment and Health, WHO Regional Office for Europe, 1999, p.3

RECOMMENDATIONS

- R1) The joint Review Group RECOMMENDS the Executives to extend the Membership of the Bus Quality Partnership to all operators and to use it to set targets within two years for the minimum percentage of buses (for each operator) that conform to the highest emission standards (by being equipped with emission reduction technology (including retro-fitting of tail-pipe technology)); AND to include agreements on limiting the number of buses on competing routes.**
- R2) The joint Review Group RECOMMENDS the Executives to ask bus operators to introduce pre-ticketing, greater through-journey ticketing, and cross-operator ticketing arrangements, especially using stored-value cards.**
- R3) The joint Review Group RECOMMENDS the Executives to demonstrate in 12 months time how they have used a strengthened Freight Quality Partnership to reduce the congestion being caused in the city centre from large delivery lorries, by: -**
- i. reducing the number of vehicles**
 - ii. ensuring deliveries only take place between 7 p.m. and 8 a.m.**
 - iii. encouraging increased use of transshipment to smaller vehicles at the edge of the City, and**
 - iv. increasing the proportion of delivery vehicles with reduced emission profiles.**
- R4) The joint Review Group RECOMMENDS the Executives to use the Taxi Quality Partnership to require further emission reduction in return for granting taxis the ability to use Botley Road bus lane.**
- R5) The joint Review Group RECOMMENDS the Executives to recognise that the City Council already has targets in place to get all Council vehicles to conform to the highest emission standards, and to ensure that the County Council undertakes to: -**
- i. set targets for the percentage of its vehicles to be equipped with green technology**
 - ii. set targets for the percentage of current contracts to be renewed or replaced by contracts stipulating the use of green vehicles, especially school buses**
 - iii. reveal the level of improvement achieved every year through the establishment of a fleet emissions audit, as is done by the City Council**
- R6) The joint Review Group RECOMMENDS the Executives to ensure that periodic road-side emission testing is carried out, perhaps in partnership with other councils, in order to ensure greater compliance with emission standards.**
- R7) The joint Review Group RECOMMENDS the Executives to review the quantity and location of on-street parking in the city centre, especially where occurring on bus routes.**

- R8) The joint Review Group RECOMMENDS the Executives to work more closely with cycling and pedestrian groups, and to employ a full-time pedestrians and cyclists officer, in order to give fresh impetus to their walking and cycling strategies and achieve their stated targets**
- R9) The joint Review Group RECOMMENDS the Executives to run a campaign to raise awareness of air pollution issues and what the public can do to help.**
- R10) The joint Review Group RECOMMENDS the Executives to increase City centre parking charges at least in line with inflation so as to increase bus usage, especially Park and Ride.**
- R11) The joint Review Group RECOMMENDS the Executives to implement a policy requiring an environmental impact assessment, that specifically includes air quality, to be done for all proposed major schemes and large developments (e.g. the Westgate and West End proposals). Travel Plans should be required for all major developments.**
- R12) The joint Review Group RECOMMENDS the Executives to include statutory air quality targets in the new Local Transport Plan.**
- R13) The joint Review Group RECOMMENDS the Executives to establish a joint process to manage further development and implementation of an Air Quality Action Plan, so as to guarantee a shared corporate approach now and in the future, and to report back to both Scrutiny Committees on their specific proposals for achieving this closer working between the Councils.**
- R14) The joint Review Group RECOMMENDS the Executives to strengthen the Air Quality Action Plan by including further options as listed in Appendix 5.**
- R15) The joint Review Group RECOMMENDS the Executives to ensure full public consultation on the Air Quality Action Plan and to include improving air quality as a priority in both the Oxfordshire Community Partnership and the City's Local Strategic Partnership.**

SECTION 2 ~ BACKGROUND

A) THE NATIONAL FRAMEWORK

6. The national Air Quality Strategy (Jan 2000) sets health-based objectives for air pollutants including benzene, carbon monoxide, lead, nitrogen dioxide (NO₂), particulates (PM₁₀), sulphur dioxide, and ozone.

“The objectives are the same or similar to mandatory limit values set in European Directives, which the UK Government is legally obliged to meet. ... Local authorities have a duty to review and assess local air quality against the objectives. Where it is found these objectives are unlikely to be met by the due date, they must declare Air Quality Management Areas (AQMAs) and prepare Action Plans setting out proposals to tackle the problems.”²

7. The LAQM system requires Local Authorities to follow a number of steps to assess the extent of their air quality problems. If it looks as if they will exceed the objectives for Dec 31st 2005 they must declare an AQMA and produce an Action Plan to cost-effectively tackle the main sources of pollution. Oxford City Council did these detailed assessments, and declared an AQMA in September 2001 (revised Sep. '03) that covers most of the city centre (shown in **Appendix 5**). Extensions to the AQMA, to include busy ring-road junctions and some minor additions in the city, are being considered.

8. The key strategies of the Governments overall transport strategy, The Future of Transport White Paper, include:

- freer flowing local roads delivered through measures such as congestion charging;
- more, and more reliable, buses – enjoying more road space;

- demand-responsive bus services that provide accessibility in areas that cannot support conventional services;
- looking at ways to make services more accessible, so that people have a real choice about when and how they travel;
- promoting the use of school travel plans, workplace travel plans and centralised journey planning to encourage people to consider alternatives to using their cars;
- creating a culture and improved quality of local environment so that cycling and walking are seen as an attractive alternative to car travel for short journeys, particularly for children.

9. The Transport Act 2000 requires local authorities to produce a Local Transport Plan (LTP). Government guidance for the second round of LTPs, covering the years 2006-07 to 2010-11 reflects the principles of the Government's transport strategy. The shared priorities which the Government has agreed with the Local Government Association includes improving public transport, and reducing problems of congestion, air pollution and safety. A letter from DEFRA dated 18th Oct 2004 (attached as **Appendix 6**) reminds local authorities of the Government's concerns.

10. Until now, the health effects of transport have been dealt with separately but Government guidance now says that policies on transport, environment and health need to be better integrated.

“We will incorporate guiding strategies for moving towards transport sustainable for health and the environment into our transport-related policies.”³

² Full Guidance on Local Transport Plans Second Edition – 02 Aug 2004, p.42

³ Charter on Transport, Environment and Health, WHO Regional Office for Europe, 1999, p.6

“Sustainable development, public health and environmental health are therefore inter-dependent and inter-connected and the Government’s Sustainable Development Strategy, if it is effectively delivered, can only have a beneficial effect on promoting the health and well-being of the Nation.”⁴

In 1956 the Clean Air Act introduced smoke control zones in towns and cities to deal with air pollution. Today curtailing road traffic growth is the main means of dealing with air pollution and now features as one of the Government’s sustainability headline indicators.

⁴ Brain Hanna’s keynote address as President of the Chartered Institute of Environmental Health to NSCA, Oct 2002, p.2

B) THE LOCAL FRAMEWORK

11. In 1973 Oxford adopted a 'Balanced Transport Strategy', which aimed to restrict car use and improve less polluting methods of transport. This strategy was adopted by Oxfordshire County Council, as the Highway Authority following local government reorganisation after 1974. The County particularly supported Park & Ride and explored road schemes and bypasses for example Botley Road. In the 1990s several years were spent reassessing the local strategy and a series of measures were adopted in 1993 and implemented over the next six years to improve the environment in Oxford centre. These formed the Oxford Transport Strategy (OTS) and involved:-
- General traffic reduction in High St, St Aldate's and other central streets to exclude through traffic
 - A reduction in city centre car parking and expansion of the Park and Ride
 - Creation of a bus priority route
 - Better provision for cyclists and pedestrians, including the Pedestrianisation of Cornmarket
12. A number of voluntary partnerships have been established locally to help improve transport planning and traffic management.
- The Bus Quality Partnership, which is an agreement between the County Council and the two main bus operators to work together to improve bus services, is the most long-standing.
 - The Taxi Quality Partnership has given the Councils and the operators a useful dialogue through which changes are being effected.
 - The Freight Quality Partnership was recently introduced, which aims to develop an understanding of freight transport issues and problems, and to promote solutions which reconcile the need for access to goods and services with local environmental and social needs.
13. The County Council has confirmed that their strategy over the next 15 years will include improving access particularly for those without use of a private car, minimising the impact of travel on the environment, implementing measures to reduce the need to travel and encouraging greater use of alternatives to the car.⁵ The key measures that make up their strategy fit into three broad categories:
- (i) *roads and routeing*: route improvement to focus on key congestion bottlenecks
 - (ii) *public transport*: developing expressway services on key corridors and an enhanced bus network throughout the County
 - (iii) *influencing travel behaviour*: encouraging walking, cycling, public transport and car-sharing, and using targeted demand management measures.

⁵ Transport Networks Review: Report to the County Executive, 21 Sep 2004, p.2

C) DESCRIPTION OF THE PROBLEM

14. Air quality is measured and assessed by a combination of methods, continuous monitoring or sampling devices, to give either instantaneous results, or results averaged over a month. These results are combined with local traffic data in a computer model to give predictions of the areas where there are air quality problems. Parts of central Oxford and busy ring-road junctions currently exceed the 2005 objective levels for nitrogen dioxide (NO₂), when measured as an annual mean, and as an hourly mean. The City currently meets the 2005 objective levels for particulate matter (PM₁₀) but there is evidence that the proposed, more restrictive, annual mean objective for particulates in 2010 will be exceeded. This evidence is contained in a series of Assessment Reports by the City Council (see bibliography in **Appendix 2**).
15. Pollution levels fluctuate from location to location within the AQMA, and change over time but **Appendix 4** shows the average levels for NO₂ over 50 sites. The graph on the cover shows pollution is highest during peak traffic hours and on average over the year the levels of NO₂ are only below the government's limits between 3 a.m.– 5 a.m., which provides further evidence that traffic is the major contributor. Moreover, there were only 8 days in 2003 when air quality was within government NO₂ levels for the entire day; with one exception these were either a Sunday, New Year's Day, Christmas Day, or Boxing day – when traffic is at its lowest. The Review Group found that when the time of day is disregarded, then on average there are a total of only 5½ hours per day when NO₂ is below the objective level of 21ppb, in other words for less than a quarter of the day.
16. Some vehicle emissions, especially from slow moving diesel vehicles, include a lot of primary nitrogen dioxide (NO₂). One reason for this is as a side-effect of treating exhausts using diesel particulate filters, as oxides of nitrogen (NO_x) are a component of secondary particulates. Much of the gas in vehicle emissions is nitric oxide (NO) but it then combines with ozone (O₃) to make secondary nitrogen dioxide (NO₂). Volatile organic compounds (VOCs) are emitted into the atmosphere by some vegetation, and through the burning of fossil fuels and certain industrial processes such as paint production. Sunlight causes chemical reactions to occur between VOCs and oxides of nitrogen (NO_x), which leads to ozone formation. Particulate pollution can similarly be primary (i.e. produced directly) or secondary (i.e. produced by chemical reaction). Due to these interactions between different chemicals, NO_x, particulates, and ozone cannot be considered in isolation but need to be considered together in the same package. NO₂ and PM₁₀ are easy to measure but they are used as a proxy for general air quality.
17. These levels of air pollution pose a number of threats – they cause environmental degradation in that fumes are smelly and dirty and they blacken and corrode buildings, and they potentially pose a threat to human health. Acute exposure and prolonged exposure to poor ambient air quality affects not just shoppers and pedestrians, but also some residents living within the worst affected area, and those who regularly drive through the AQMA, as pollution levels inside cars are around twice as great as for pedestrians and 6 times as much as the urban background level of pollution.⁶ The exact degree of harm to human health is difficult to quantify, nonetheless, it is generally accepted, on the basis of evidence from laboratory and epidemiological studies that pollutants are responsible for some degree of heightened mortality amongst the exposed public. The government's

⁶ NSCA Environment Facts website, Personal Exposure to Pollution, 2003

national objectives are based on their best scientific and medical evidence,

“Air pollution can have a serious effect on people’s health. In the short-term, high pollution episodes can trigger increased admissions to hospital and contribute to the premature death of those people that are more vulnerable to daily changes in levels of air pollutants, such as those with lung diseases, and heart conditions. Scientific evidence also suggests that exposure to air pollution has a long-term effect on health – for example, long-term exposure to fine particles could lead to a reduction in life-expectancy.”⁷

18. The Royal Commission on Environmental Pollution (RCEP, 1994) reported that 160 premature deaths had been attributed to a four-day air pollution episode in London in December 1991. The Committee on the Medical Effects of Air Pollutants (COMEAP, 1998) estimated that exposure to PM₁₀ in urban areas from all sources was associated with 8,100 premature deaths and 10,500 hospital admissions p.a. Similarly, exposure to ozone (O₃), also in part a derivative product of vehicle emissions was responsible for at least another 700 deaths per summer (and maybe more). COMEAP concluded it was unable to reach statistically reliable and accurate estimates for the health effects of NO₂ and carbon monoxide (CO).⁸ International organisations such as WHO and the EU back these up.

“Air pollution at current levels still poses a considerable burden on health... and a reduction in life expectancy of a year or more for people living in European cities. Some of these effects occur at very low concentrations that were previously considered safe. Taken together, the evidence is sufficient to strongly recommend further policy action to reduce levels of air pollutants.”⁹

“Road transport contributes considerably to Europe’s continuing air quality problems. These problems include premature mortality, aggravation of respiratory and cardiovascular disease, aggravation of existing asthma, acute respiratory symptoms, chronic bronchitis, and decreased lung function. Numerous studies also link exhaust gases to increased incidence of lung cancer.”¹⁰

19. A study from the EMITS research programme to monitor the OTS’s impact has found, from looking at hospital admissions data (but not deaths), that improvements in respiratory health have occurred but it is difficult to attribute causation directly to air quality improvements. Such research based on the specific local position in Oxford suggests however that

“The difference is small and not statistically significant but translates into an average reduction of 6% in daily, emergency hospital admissions for cardio-respiratory disease.”¹¹

⁷ Full Guidance on Local Transport Plans Second Edition – 02 Aug 2004, p.41

⁸ Air Quality and transport policy objectives in Oxford, Graham Parkhurst, July 2004, p.2

⁹ Health Aspects of Air Pollution, WHO, Jun 2004, p.25

¹⁰ ‘Waiting for Euro 5 & Euro 6’, European Federation for Transport & Environment, 2004, p.1

¹¹ EMITS OTS: its effects on public health, Annex 3, para 9.22

D) CAUSES OF POLLUTION

20. Oxford is by no means unique in having traffic as the main source of the problem.

“95% of the AQMAs in the UK are primarily transport related and reducing road transport’s contribution to emissions is therefore a key part of local authorities’ work.”¹²

Diesel engines such as those in almost all buses and most taxis are seen as the main contributors. However, delivery vehicles (often diesel-powered) also contribute, as do private cars. The current widespread abuse of the bus gate during the day contributes to the pollution both directly from their emissions and indirectly by the increased traffic congestion caused.

21. The OTS has led to an overall improvement in air quality by reducing the volume of traffic using the city centre.¹³ The high level of bus usage it has encouraged has led to Oxford being cited for national recognition and awards. Following the OTS the newly pedestrianised Cornmarket Street was within the Air Quality objective limits in 2002. However, there have been some increases in pollution as a consequence of the changed distribution of traffic. The evidence for these findings is contained in the detailed analyses that are found within the City Council’s various Stage 1, 2, 3 and 4 Assessments and Updated Screening Reports. Overall road traffic emissions at roadside sites are reduced on average by 2% per year as a result of vehicle fleet evolution, but when a closer examination is made on an individual street by street basis of changes in traffic emissions from OTS (using the modelling and measuring behind the City’s Assessment Reports) it shows that, there are 9 out of 24

modelled street sections within the AQMA (37%) where modelled emissions of nitrogen oxides have increased, notably:

Table 1 Traffic emissions changes from OTS

Street section	Increase in emissions
St Aldate’s (Pembroke– Speedwell)	+154%
St Aldate’s (Carfax – Pembroke)	+118%
St Giles	+110%
Longwall	+60%
Worcester St (S)	+43%
Magdalen St (W)	+34%
St Aldate’s (Speedwell – Thames)	+29%
New Rd	+17%
Park End St	+13%

22. As the EMITS study found:

“One of the difficulties facing Oxford is that having already reduced the vehicle volume substantially, this is to a certain extent undermined by the fact that the remaining vehicle fleet constitutes the most polluting type of vehicles. However in transport policy terms these are regarded as the ‘essential’ vehicles for the central area access.”¹⁴

Public transport is essential to enable the majority of people to access the city centre and is vital for the significant number of local people without a car. Sometimes the public are quick to identify the pollution problem with buses; as one person put it ‘buses are using the main shopping streets as a de facto bus station’. However, the general reduction in traffic has led to an increase in their visibility within the AQMA and means that buses make up a higher percentage of the remaining vehicles. According to City Council modelling, the combined totals of NO_x emissions from buses, coaches and HGVs in the AQMA varies between 40% – 95% of the total traffic generated emissions. Outside the AQMA the

¹² Full Guidance on Local Transport Plans Second Edition – 02 Aug 2004, p.42

¹³ Nitrogen Dioxide Emissions in Central Oxford, Report by Head of Transport to the Executive, 27 Jan 2004, p1

¹⁴ EMITS OTS: and air quality, Annex 2, para 5.61

combined totals of NO_x emissions due to these groups are generally no more than 50%.

Table 2 Approx contribution of NO_x emissions in AQMA by vehicle class¹⁵

Vehicle type	%
Buses	64
Private car	15
Heavy Goods Vehicles	12
Light Goods Vehicles	6
Taxis	3

Buses are also vital to achieve modal shift away from the private car and thus reduce congestion. Between 1989 and 2001 the number of cars on British roads increased from 19.7 million to 25.1 million. In 1997 the Government estimated that, left unchecked, national road traffic would increase by 38% between 1996 and 2016.¹⁶ This growth counteracts the recent effects of improved vehicle technology and fuel quality.

23. Idling and slow-running engines emit more pollution than free-moving traffic and a number of factors have been identified that increase congestion and impede the smooth flow of permitted traffic. These include the presence of prohibited traffic, the location of bus stops and the on-board purchasing of tickets, illegal on-street parking and vehicle deliveries. The relief of congestion in central Oxford, particularly on the bus priority route is a major transport management priority.

“The Government will want to ensure in particular that authorities take opportunities offered by better traffic management and other congestion reduction measures to deliver freer flowing traffic, and thereby reduce emissions”¹⁷.

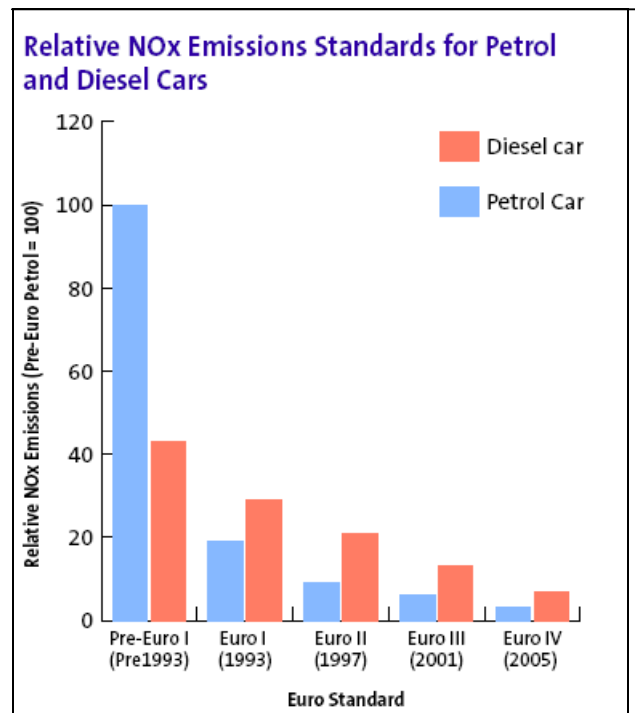
¹⁵ Source: unpublished calculations made from the traffic emissions database by Oxford City Council officers

¹⁶ Energy Saving Trust Practical help for Local Authorities, March 2003, p.1

¹⁷ Full Guidance on Local Transport Plans Second Edition – 02 Aug 2004, p.44

24. These findings are backed up by the emission data. For instance the St Aldate’s (Pembroke – Speedwell St) section has seen a total reduction in traffic flows of 34% after OTS, yet sees a 154% increase in NO_x emissions. This illustrates the impact of an increase in the proportion of buses moving at slower speeds – namely, the total emissions from buses in this section has almost doubled. This alone is probably sufficient to explain why the air quality is not seen to be improving at the monitoring site in St Aldate’s.

25. The age of a vehicle is also important. As the graph below shows, older engines emit much more pollution than newer ones. Petrol vehicles that pre-date Euro I standards introduced in 1993 are almost 40 times as polluting as a modern vehicle meeting Euro IV emission standards. Adjustments to engines need to be done properly to ensure that they are not adding unnecessarily to pollution levels – the Review Group was told that one badly adjusted engine causes as much pollution as 200 good ones.



26. Other sources of pollution include industrial and domestic pollution, from inefficient combustion in old oil and gas boilers, and some organic chemical

reactions which produce volatile organic compounds, as well as dust and smoke. The City already has a smokeless fuel policy, so short of writing to residents and businesses to request they replace old space heating systems, these sources are less obviously within the councils' spheres of influence.

27. In summary, it is estimated that compliance with national objectives throughout the Oxford AQMA, requires transport related NO_x emissions to

reduce by a further 50%. The following sections of the report explore three categories of solution for achieving this – reducing the volume of traffic, improving the traffic flow, and making the traffic cleaner. A wide variety of options are examined, such as: reducing the need for travel, changing the way we travel (modal shift), changing the engines and the fuels they use, effecting better traffic management to ease congestions so that vehicles move more easily and idle less.

SECTION 3 ~ OPTIONS FOR CHANGE

A) REDUCING POLLUTION DUE TO BUSES

28. Bus traffic will increase as a result of further modal shift; the County's Premium Routes policy is designed to encourage greater bus use to Oxford from outside. The County Council agreed a PSA target requiring an average increase of 3% per year in the numbers of passenger journeys by bus up to 2006. Current policies for economic growth will have a similar effect, for example customer growth associated with the Westgate redevelopment is based on bus access.

29. Most (non-tour) buses now meet Euro II standards.¹⁸ None of the open-top tour-buses meet any Euro standards. If all buses were converted to meet Euro III (or Euro IV) standards this is likely to lead to a reduction in emissions of nitrogen oxides of around 31% (or 51%) from current levels respectively.¹⁹ Light vehicles have had their emission standards greatly tightened and introduced much faster, such that:

"New buses now produce significantly more NOx per passenger-km than new cars as large diesel engines have been left behind in the emissions control process."²⁰

Further upgrading of the bus fleet would thus markedly reduce NO₂ concentrations, although this measure alone may not be sufficient to meet the 2005 objective of 21ppb.

30. In the long-term the Review Group feel that diesel buses have no part to play in

a modern city, a view supported by witnesses from the main bus operators.

"The improvement of urban air quality will remain problematic in diesel-dependent cities worldwide until current fuels, engine technologies, and exhaust systems are replaced by cleaner alternatives."²¹

However all three companies interviewed report being unable to afford to use alternative technologies. Moreover they feel that alternative vehicles are not currently reliable enough for the sort of duties to which they must be put. Trials of cleaner buses are taking place in London, often with Transport for London funding, the cost being in the region of twice to six times as much as a conventional vehicle. Local trials in Oxford have demonstrated that SCR Technology fitted to local buses can achieve reductions in NOx emission of more than 70%. This technology is approved for retrofitting to existing vehicles, including buses and taxis, under the government funded transport energy CleanUp programme. Fixed rate grants are available up to a maximum limit of 75% of cost of equipment and fitting. Local operators think alternatives to diesel will only be viable in 5-10 years time. The Review Group would like to see long-term targets set now for operators to begin switching to hybrid buses and other alternatives in 2009, with solely such vehicles in use by 2014.

31. In the short-term, the Bus Quality Partnership needs to be further developed to negotiate emission improvements. Such partnerships typically include provisions relating to vehicle and service quality from operators. The County Council's Premium Routes policy establishes an

¹⁸ As of April 2004, 93% of Oxford Bus Company buses meet this standard; data not provided by Stagecoach

¹⁹ Statistics taken from Air Quality Review & Assessment Stage 4, Oxford City Council, 2003, p.52

²⁰ Air Quality and transport policy objectives in Oxford, Graham Parkhurst, July 2004, p.12

²¹ *ibid*, p.1

intensive level of bus priority measures, and in return the Council expects the routes to be served by low emission vehicles. Bus Priority measures are essential to overcome complaints about bus journeys taking longer than those by car and the unreliability that can occur in bus services due to the effects of congestion. Bus operators feel the County has not succeeded in keeping prohibited traffic out of the Bus Priority Route network. The Council will be better able to encourage the bus companies to further improve emissions if it does better in this respect.²²

32. Commercial concerns for market share have led to over-capacity on some routes. The County Council is heavily constrained as to the measures it can take to manage the bus network within this deregulated environment. However, the introduction of more cross-operator ticketing would be one way of reducing the number of buses whilst still preserving the frequent bus service customers require. Current provision is limited to the cross-operator period travel-pass (Plus+Pass) that is

more expensive than company specific tickets. Despite stating that the “County Council intend to use the new powers given to them by the 2000 Transport Act to extend through-ticketing and ticket interavailability”²³ there have been no improvements in cross-operator ticketing. The decision not to extend such tickets should be re-examined urgently.²⁴

33. Ticketing reforms should be vociferously pressed for, to similarly increase the availability of through tickets and off-board ticketing. Such steps would not only make bus use more attractive they would also speed up boarding times and thus reduce congestion. Now that better Smartcard technology is available, the Review Group would like to see the County Council press for the introduction of stored value tickets (as used by consumers for mobile phone top-ups or in purchasing a carnet of tickets for the Paris Metro). If they can happen in part in Oxford, and are widespread elsewhere, there should be little reason not to see them becoming commonplace.

R1) The joint Review Group RECOMMENDS the Executives to extend the Membership of the Bus Quality Partnership to all operators and to use it to set targets within two years for the minimum percentage of buses (for each operator) that conform to the highest emission standards (by being equipped with emission reduction technology (including retrofitting of tail-pipe technology)); AND to include agreements on limiting the number of buses on competing routes.

R2) The joint Review Group RECOMMENDS the Executives to ask bus operators to introduce pre-ticketing, greater through-journey ticketing, and cross-operator ticketing arrangements, especially using stored-value cards.

²² The two main operators have taken a different attitude towards the BQP. The Oxford Bus Company introduced a high-profile environmental policy in 1998 and has voluntarily fitted particulate traps to 65% of its vehicles, whereas Stagecoach prefers instead to invest in newer buses, which pollute less (but their old buses are then used in other areas when they age, which simply moves the air pollution problem to other places). The open-top Tour Bus Operators are using older vehicles and have not retro-fitted exhaust technology to many of their vehicles.

²³ Oxfordshire County Council Best Practice Guide No.6, Jan 2003, p.7

²⁴ No data about the number of buses was made available but bus operators themselves have said they are using 15% extra buses to help them maintain schedules in the face of congestion that has reduced their average speed by 15% between 1991 and 2004 to 12 mph.

B) REDUCING POLLUTION DUE TO DELIVERY VEHICLES

34. The City needs shops, and shops need goods to be delivered, but the current practice of allowing deliveries to take place up to 10 a.m. means that rush-hour traffic-flow can be severely impeded. Moreover, the Review Group found no clear evidence of effective enforcement of delivery vehicles overstaying their allotted loading durations, nor full compliance with other regulations, such as the permitted hours for making deliveries. Such breaches by delivery vehicles are inadequately monitored.
35. The Freight Quality Partnership (FQP), although still in its infancy is to be welcomed. As it becomes more established the Review Group would like to see increasingly effective enforcement of lengths of stay in order to ensure that congestion on the bus priority route is kept to an absolute minimum. The FQP should also look to review loading hours especially for those shops with frontages exclusively on the Bus Priority Route (such as the High Street) that cannot take deliveries from other entrances, so that deliveries are not contributing to the grid-lock that frequently occurs at some of the junctions with the worst air quality problems.
36. The Review Group heard that some pilot schemes have begun that encourage the sharing of loads between companies. More significant improvements to the FQP must look at building up these experiments with a view towards establishing freight transfer stations in the future. Clauses should be negotiated into the FQP to introduce measures by which HGVs can be kept out of the city centre and loads transferred into smaller and alternatively fuelled delivery shuttles.

R3) The joint Review Group RECOMMENDS the Executives to demonstrate in 12 months time how they have used a strengthened Freight Quality Partnership to reduce the congestion being caused in the city centre from large delivery lorries, by: -

- i. reducing the number of vehicles**
- ii. ensuring deliveries only take place between 7 p.m. and 8 a.m.**
- iii. encouraging increased use of transshipment to smaller vehicles at the edge of the City, and.**
- iv. increasing the proportion of delivery vehicles with reduced emission profiles.**

C) REDUCING POLLUTION DUE TO TAXIS

37. The number of private hire cars has increased between 2000–2003, from 220 to 284 (compared to a rise from 99 to 106 for black cabs). It is regrettable that the Review was unable to interview any private hire fleets, but the Review Group acknowledges that many of the private hire operators are very small 'companies' consisting of driver/owners. City taxis are licensed by the City Council and subject to twice-yearly MOT emissions checks but taxis coming in from outside escape such effective controls.
38. The Taxi Quality Partnership is to be welcomed, although it is still in its infancy and needs to be considerably strengthened. From the taxis point of view they feel that they have already

paid money for transponders from which they have seen little benefit, and they would like to see the Council do more to ensure they have better priority. Black cabs are presently allowed to use bus lanes (except on the Botley Road) and this could be extended to more taxis perhaps in return for the introduction of

more stringent regulations governing their emissions and behaviour. The Review Group would like to see an increase in the percentage of vehicles used as taxis that conform to the higher emission standards of more modern car engines.

R4) The joint Review Group RECOMMENDS the Executives to use the Taxi Quality Partnership to require further emission reduction in return for granting taxis the ability to use Botley Road bus lane.

D) COUNCIL FLEETS AND LEADING BY EXAMPLE

39. As the quotation below illustrates, the importance of local authorities leading by example has long been recognised.

“Local authorities as major institutions, employers, regulators and service providers, have the opportunity to improve air quality through their own behaviour and actions.”²⁵

How staff choose to get to and from work is something over which the Council should have considerable influence. Cycling to work is a viable option for many but not all employees working in Oxford²⁶, and effective Travel Plans would reduce the demand for motorised transport during the rush hours. More school travel plans have been achieved than anticipated with 27% of schools having them in place. The County Council anticipates this rising to 50% by 2005 and 100% by 2011.

40. Organisations can receive up to 5 days free consultancy from the Energy Savings Trust to help develop their staff Travel Plan. Despite this there has been a shortfall of 77% in the delivery of

travel plans, due to continuing difficulties in staff recruitment in this area of work.²⁷ The Review Group would like to see efforts made to reverse this shortfall. More monitoring should be undertaken to better understand their impact. Such an assessment, could then be used as a basis for a renewed drive to ensure all large employers within the County have an effective Travel Plan in place.

41. The City has implemented a clear policy to employ the cleanest technologies wherever possible, using zero emission electric vehicles and the lowest emission HGVs on the market. Five years ago they had expected to replace all their vehicles within 5 years, but this has not been possible due to problems with supply. However they are still proud of their record. The County on the other hand instead of leading by example generally uses rather old vehicles for its own fleet and for those it contracts from others, for example in the case of school buses. One of the largest components of both Councils' fleets are the private cars owned by individual employees. Travel Plans and Pool Cars go some way towards minimising their use but both Councils should do more to create incentives for employees to use greener cars – for

²⁵ LAQM Policy Guidance, 2003, 3.13

²⁶ For example half of Oxford City Council employees live within 5 miles of work, and half of them within 3 miles, and a third live over ten miles away. Figures for other large employers are not known but may be similar.

²⁷ Oxfordshire LTP 2001-06 Annual Progress Report 2004, p.8

instance mileage allowances should be reformed to pay a premium to less polluting vehicles and to reimburse employees using less green cars at lower rates.

42. The City Council currently does an emissions audit annually with the help of Culham laboratories at a cost of about £6k. This analysis turns figures on mileage and vehicles into emissions data so they can see the amount of improvement their policy is producing in terms of total emissions. The County must audit all their contracts, find out how many vehicles they use and produce the same annual emissions audit. Such information can then be used to inform management decisions so that all County and City vehicles

conform to the highest emission standards.

43. The Review Group would like to see a schedule from both Councils for the renewal of its entire fleet to run on alternative fuels, such as LPG, or be fitted with emission reduction technologies such as Diesel particulate filters and diesel oxidation catalysts. In future all contracts must make provision for preferential treatment for companies supplying cleaner and greener vehicles, so that considerations are not made entirely on price alone. A comprehensive timetable should be produced showing when each existing contract is due for renewal and these should be treated in the same way.

R5) The joint Review Group RECOMMENDS the Executives to recognise that the City Council already has targets in place to get all Council vehicles to conform to the highest emission standards, and to ensure that the County Council undertakes to: -

- i. set targets for the percentage of its vehicles to be equipped with green technology**
- ii. set targets for the percentage of current contracts to be renewed or replaced by contracts stipulating the use of green vehicles, especially school buses**
- iii. reveal the level of improvement achieved every year through the establishment of a fleet emissions audit, as is done by the City Council.**

E) ENFORCEMENT OF REGULATIONS AND STANDARDS

44. Effective enforcement of traffic regulations is necessary to reduce congestion and thereby reduce the total number of buses needed and improve the traffic flow and lessen the emissions of all permitted vehicles. Clear, consistent and rigorous enforcement along the priority bus route is essential to prevent abuse of parking restrictions. Few witnesses noticed any improvement despite a previous scrutiny review on the subject, and a 'zero-tolerance' campaign by 'Control Plus' in July 2004.

45. The pollution from private cars has been partially dealt with by not permitting them to pass through the bus gate on the High Street during the day. This needs to be enforced with cameras as soon as the necessary regulations have been enacted by government. Roadside emissions testing can be used to ensure compliance with current emission limits for all vehicles, including private cars. Councils with an AQMA can apply for the power to conduct roadside vehicle emission tests and can then issue fixed penalties of up to £90 to

drivers whose vehicles are found to be exceeding current limits. In addition steps need to be taken to persuade motorists to make fewer trips across the city by car (see later sections on cycling and walking p.22 and involving the public p.24)

- 46. Bus engine switch-off when stationary for more than 1 minute is to be made mandatory and enforced. Councils can issue fixed penalties of up to £40 to any motorist running engines unnecessarily and refusing reasonable requests to switch off.
- 47. Meaningful enforcement needs people to do the necessary checks. The Review Group would like to see the Executives urgently get together and

identify where the staff to do this will come from, either by quickly conferring such powers onto existing traffic wardens or police community support officers, or by establishing a special team of environmental health ‘enforcers’. Until this can be done current enforcement staff need to be set clear objectives to target their checks at key areas within the AQMA.

- 48. If such enforcement measures cannot be achieved the alternative is the introduction of a Low Emission Zone within the AQMA, which would prevent all but the cleanest vehicles from using the City’s central streets. This would be a costly and drastic measure but may prove necessary if individual measures alone do not deliver the required emission reductions.

R6) The joint Review Group RECOMMENDS the Executives to ensure that periodic road-side emission testing is carried out, perhaps in partnership with other councils, in order to ensure greater compliance with emission standards.

R7) The joint Review Group RECOMMENDS the Executives to review the quantity and location of on-street parking in the city centre, especially where occurring on bus routes.

F) INCREASING CYCLING AND WALKING

- 49. Oxford has some advantages over many cities in that its relatively compact nature means it has potential for walking and cycling to have very high modal shares. The Councils already do a number of things to promote cycling, such as the introduction of cycle lanes, and advanced stop lines for cyclists at signalled junctions, etc. However, the County is still not on track to meet its target for the percentage of residents commuting to work on foot or by bicycle. In fact the percentage for those walking to work has decreased from 12.1% in 1991 to 10.2% in 2001, and the percentage cycling has decreased from

8.8% to 6.7%.²⁸ This may be due to the fact that for new cycle tracks (–41%), new cycle paths (–67%) and other cycle schemes (–33%) the numbers actually delivered last year were much lower than planned.²⁹ Similarly the number of walking schemes actually completed was 22% down on the planned amount. These results suggest additional impetus is required above that featured in the first LTP, especially if the second LTP is to deliver the air quality improvements anticipated

²⁸ Oxfordshire LTP 2001-06 Annual Progress Report 2003, p.34. (In 1981 14.6% of work journey’s were made on foot and 9.5% by cycle)

²⁹ Oxfordshire LTP 2001-06 Annual Progress Report 2004, p.8

50. A public meeting, held to debate the issues, endorsed these findings. The meeting whilst not representative of public opinion in general was overwhelmingly pro-cycling. Most witnesses also felt it was important to change the transport culture by doing much more to promote cycling, which both reduces the number of motorised journeys and improves health by giving people exercise. Some witnesses felt people are more likely to respond to messages that directly affect their own health, rather than on those that refer to the community's air quality.
51. A frequently cited reason for not travelling by bike in Oxford is that people feel unsafe. It is perceived as dangerous and life threatening; one council employee said they gave up cycling to work for this reason. "Cycling to work in Oxford is unsafe and downright dangerous."³⁰ Many people from West Oxford are reluctant to cycle into the centre specifically because of perceived danger around the Botley Road bridge by the railway station. In 2003 there was an increase in the number of reported cyclists' casualties (up 8% from '02). It should be noted that these figures for the number of cycling casualties occur against a background of a reduction in the total number of cycle journeys made.
52. A leaflet to show bus drivers and cyclists how they can help each other to improve road safety is mentioned in the Best Practice Guide but the Review Group have not seen any evidence of this being still in circulation. This should be redone and distributed in an effective and targeted way, through colleges and cycling organisations. The Review Group also found that many people felt bus drivers should have half a day's cycling experience included in their training.
53. The Councils do not treat all road-users equally, despite well-intentioned statements. The Government wish to see local authorities promote cycling and walking by providing safe conditions, enforcing speed controls, and designing infrastructure like roads and settlements that take into account pedestrians' and cyclists' needs. Road space therefore needs to be given to cyclists, so that cycle-lanes do not just peter out. Current provision is sometimes viewed as tokenistic and is under-used because cyclists know that after a few yards they will have to return to the main highway. The introduction of a 20 mph speed limit may go some way towards helping people feel safer.
54. The Review Group felt more staff will be needed to actually deliver cycling improvements. The Councils could follow the example of the London Borough of Waltham Forest and provide formal support for its local Cycle Workshop (which currently offers recycled bikes and cycle maintenance training) to start teaching on-the-road skills to children and cycle-confidence lessons for adults who have not cycled for many years. Waltham Forest and their Local Agenda 21 Group came up with the funding and say the scheme's "value cannot be over-estimated in terms of bringing health, happiness and independence to people of all ages and ethnic backgrounds."³¹

Table 3 Cyclist & pedestrian casualties

Casualties	Cyclists only	Pedestrians only	Cyclist & pedestrian
2001	288	251	539
2002	283	249	532
2003	306	243	549
Target 2010	310	250	560
Baseline	345	275	620

³⁰ Respondent from City Council staff survey 2004, quoted in Oxford Times 30th July 2004, p.3

³¹ IDEa Knowledge web-site

R8) The joint Review Group RECOMMENDS the Executives to work more closely with cycling and pedestrian groups, and to employ a full-time pedestrians and cyclists officer, in order to give fresh impetus to their walking and cycling strategies and achieve their stated targets.

G) INVOLVING THE PUBLIC AND RAISING AWARENESS

55. The Review Group feel that many people are not aware of the difference idling or badly adjusted engines make to air pollution. The Review Group concurs with the WHO Charter's recognition that:
- "The public is generally not sufficiently informed of the adverse environmental and health effects from motorised transport and the importance of taking individual action to alleviate the problems."³²*
- Helping the public to understand the issue could go a long way to changing attitudes and behaviour. Specific information campaigns may be more effective if they target say taxi drivers, users of MOT test centres, and large employers.
56. Information is also needed to raise awareness of efficient driving techniques. Bristol has produced leaflets aimed at persuading motorists to drive differently as well as to drive less. Some of the new breed of high efficiency engines require modified driving techniques to unlock their significant fuel economy potentials, and if driven at continuously high revs will actually produce little efficiency gain over a standard vehicle. The Joint Review Group would like to see publicity material being made available to all local driving instructors to equip them with resource material to give to pupils after passing their test to help raise awareness at the very outset of someone's driving career.
57. Publicity material should emphasise the amount of money that individuals can potentially save. Bristol inform motorists that if each car registered in and around the city travelled just 5 fewer miles every week it would cut 100 million miles of travel and save approximately £15 million worth of fuel; a reduction in emissions equivalent to that gained from a hundred extra Park and Ride sites. Combining information with financial forms of influence is likely to be the most effective. There is a need to redress the balance between Park and Ride charges (increased significantly in recent years) and city centre parking (remained static for seven years) to stop making it cost-effective for parties of two to drive into the city centre rather than use Park and Ride. Adjustments to city centre car-parking charges should be accompanied by information on the back of parking tickets or leaflets placed on cars using the car-parks explaining the intentions behind this policy.
58. Other forms of spreading key messages (such as adverts in the press and on the back of buses, or bumper-stickers for drivers to educate other drivers) should be employed as part of a concerted publicity campaign to coincide with 'Don't choke Britain' month in June. This could also be used to make the Vehicle Inspectorate 0870 606 0440 phone number much more widely known.³³ Derbyshire County Council runs a number of special campaign weeks in June during which Walk to

³² Charter on Transport, Environment and Health, WHO Regional Office for Europe, 1999, p.4

³³ It is important that the public know they can report smoky buses, coaches and lorries to the Vehicle Inspectorate, and that following such a complaint the operator is notified and requested to clean up their vehicle.

School Week, Breathe Easy Week, Green Transport Week and Festival of Cycling all take place. Surrey County Council used a 'Golden Boot Challenge' where nearly 30,000 pupils score points when they use alternatives to the car, to encourage pupils to become more involved in school travel planning. Oxfordshire could consider replicating these schemes.

59. Better signage should also be considered. There are no notices asking drivers to turn off their engines at points where they are likely to be held up. Existing signs could be adapted to include information about engine switch-off, for example at road works.
60. The attitudes of those with political influence need to change as much as the behaviours of the individual. Spending on Sustainable Transport Schemes was reduced in 2003/04, partly in order to accommodate increases above planned expenditure

for two major schemes (Henef Way, Banbury (cost 55% more) and Cornmarket St, Oxford (cost 87% more)) and partly because of slow progress. Professor John Whitelegg and Graham Parkhurst conclude that transport policy in Oxford has actually promoted an increase in the use of the most polluting technology, the large diesel engine, whilst making the conditions for the most environmentally neutral mechanised mode – cycling – arguably worse. The latter academic argues that:

"the dominance of the pro-bus policy frame in Oxford has been constructed around convergent economic and broader transport policy interests, with a modern and growing bus system being at once the salient icon of successful local transport policy management and the practical means to enable high volume, comparison goods retailing in a city centre constrained both in terms of activity space and access route capacity."³⁴

R9) The joint Review Group RECOMMENDS the Executives to run a campaign to raise awareness of air pollution issues and what the public can do to help.

R10) The joint Review Group RECOMMENDS the Executives to increase City centre parking charges at least in line with inflation so as to increase bus usage, especially Park and Ride.

³⁴ Air Quality and transport policy objectives in Oxford, Graham Parkhurst, p. 15

H) JOINT-WORKING

(i) Planning

61. The County Council as the Highway Authority should make useful comments on planning applications. They must become much more pro-active in this respect and stop making “no comment” responses, even if this means employing an extra highways officer. As stated in the WHO Charter the Government believes that:

“consideration of the health impacts of policies has to be better integrated into approval procedures, impact assessments, and evaluations of the costs and benefits of transport plans, land use planning and infrastructure programmes and investments.”³⁵

Such audits of health cost implications need to take into account not only direct health costs but also the costs of not adopting health-promoting alternatives

62. The Review Group would like to see it become standard practice for a health audit or an environmental impact assessment to be done on all future traffic plans and large developments, which would include detailing the likely impact on air quality, and greater use being made of the modelling technologies for air quality in transport planning. This is specifically needed for the proposed Westgate development,

which some witnesses felt may be too ambitious as it will place too great a burden on the transport infrastructure.

“Studies have shown that there will be a considerable need for significant improvements to be made to the transport systems of the county if anticipated economic development is to be accommodated without unacceptable environmental consequences... particularly in Oxford and central Oxfordshire.”³⁶

63. The Review Group would like to see proposals worked up for the further pedestrianisation of central Oxford, notably Queen Street, as part of the necessary transport infrastructure changes needed prior to any Westgate development. It would be helpful if greater links were made in general between land use planning and transport development to achieve air quality improvements. The Westgate proposal should be the specific case used to instigate such a change of practice. It is vital that the impact assessment for the Westgate happens well in advance, rather than at the last minute as part of the planning application, otherwise it could undo any potential improvement that the Air Quality Action Plan makes.

R11) The joint Review Group RECOMMENDS the Executives to implement a policy requiring an environmental impact assessment, that specifically includes air quality, to be done for all proposed major schemes and large developments (e.g. the Westgate and West End proposals). Travel Plans should be required for all major developments.

³⁵ Charter on Transport, Environment and Health, WHO Regional Office for Europe, 1999, p.3

³⁶ Oxfordshire LTP 2001-06 Annual Progress 2004, p.10

(ii) Communication and coordination

64. Despite good informal communications between officers of the two Councils, stronger formal links are required to overcome the fact that the legislative streams (and their associated time-tables) that apply to each of the Councils do not align. DEFRA do not prescribe a fixed deadline for the City to submit their AQAP but recommend it be in place 12-18 months after AQMA declaration (i.e. autumn 2003). New guidance highlights the need in a two-tier authority area for traffic management and air quality to be integrated.

“Where air quality issue are primarily transport issues, local Air Quality Action Plans should be integrated in to the LTP... LTPs should report on the range of options considered, and what the quantified impacts of proposed measures are... LTPs should report on how risks to achievement of targets will be addressed.”³⁷

65. Maintaining stable levels of economic growth while ensuring effective environmental protection is difficult. Integrating policies between the two tiers of local government by ensuring that there is effective collaboration and participation is essential to achieving this. At present there is a difference of opinion between the two authorities as to how well the issues are being dealt with. However, air quality is increasingly being viewed as a cross-cutting issue. Guidance for the second edition of Local Transport Planning confirms this.

“Local authorities responsible for local air quality management should integrate Air Quality Action Plans, where transport is the primary factor, into the Local Transport Plan covering their area. The Government strongly recommends its approach, because this integration should

enable air quality problems to be dealt with in a more corporate and multi-disciplinary way and encourages transport planners to work more closely with environmental health departments and other colleagues in devising appropriate solutions.”³⁸

The next LTP will include targets to further reduce traffic and thus improve air quality. At the very least, the government air quality objectives must also be included.

“The Department also requires mandatory targets for LTPs covering designated air quality management areas (AQMAs), targets related to local transport issues identified by local Air Quality Action Plans, aimed at meeting air quality objectives.”³⁹

66. There should be joint mechanisms for policy-making, timetabling, resourcing and public consultation. One way to achieve closer integration might be to have more of a shared team between the City and County. This could take the form of co-location within one building between Transport Planning and Environmental Health, or the secondment of one of the City officers part-time to the County transport team. We would like to see a proper structure and joint ownership of the modelling and the AQAP to ensure the involvement of all relevant expertise. Bristol established a multi-disciplinary group to tackle air quality, an approach that highlights the integration of LAQM not only with the LTP, but also with the key inter-related policy areas of sustainable development and land-use planning. The creation of such a Steering Group needs to happen here in order to ensure that a successful action plan can be delivered within the LTP deadline.

³⁷ Full Guidance on Local Transport Plans Second Edition – 02 Aug 2004, p.7

³⁸ Full Guidance on Local Transport Plans Second Edition – 02 Aug 2004, p.42

³⁹ Full Guidance on Local Transport Plans Second Edition – 02 Aug 2004, p.25

“In ‘two tier’ areas local transport authorities should work in partnership with districts to develop the most cost-effective solutions to air quality problems. County councils have a duty under Part IV of the Environment Act 1995 to put forward proposed actions which they themselves can implement to work towards meeting the air quality objectives in designated areas, and we expect that implementing LTP measures will be their principal means of fulfilling this duty. County councils should therefore set up processes to ensure it engages all relevant districts in developing LTP proposals aimed at improving air quality.”⁴⁰

67. Without a Steering Group, or equivalent mechanism, it is unlikely that a sufficiently corporate approach can be achieved to ensure the activities of different divisions of both Councils are coordinated and not looked at in isolation. Bus priority route management, parking controls, economic development of the Westgate and the West End all need to be considered with an air quality perspective so that the actions of one do not contradict the ambitions of the others.

R12) The joint Review Group RECOMMENDS the Executives to include statutory air quality targets in the new Local Transport Plan.

R13) The joint Review Group RECOMMENDS the Executives to establish a joint process to manage further development and implementation of an Air Quality Action Plan, so as to guarantee a shared corporate approach now and in the future, and to report back to both Scrutiny Committees on their specific proposals for achieving this closer working between the Councils.

⁴⁰ Full Guidance on Local Transport Plans Second Edition – 02 Aug 2004, p.42

(iii) Improving the Air Quality Action Plan

68. The OTS is ongoing and the Councils want to continue with its general direction, i.e. give buses and taxis priority, restrict private cars and increase walking and cycling, but some witnesses fear that a proper analysis of what OTS did and didn't achieve (that includes the insights from vehicle emissions modelling) is still overdue and question the validity of continuing to implement actions that may not be sufficient to clean the air to government standards. The current Air Quality Action Plan (AQAP) largely continues and extends measures introduced with the OTS, whereas the Review Group feel a broader, more extensive set of actions are needed.
69. Local people need to be engaged by a process of open debate and consultation as to what further forms of traffic management they will tolerate, so that we have an Air Quality Action Plan that will effectively address the problems. In Oxford there has been no consultation on the Action Plan measures whereas other authorities – such as York, Bristol, Edinburgh and Croydon – are involving the public in the decision making process (the latter used a steering group consisting mainly of representatives from outside organisations to develop their Action Plan). Bristol City Council was cited by some witnesses as being more willing to think innovatively and add new things into their AQAP that didn't originally feature in their LTP, so as to ensure more rapid improvement.
70. The first task of the steering group or similar mechanism, called for in **R13**, is to ensure a meaningful process is implemented by which additional measures not currently contained in the AQAP can be considered with the necessary public consultation. A number of ways to strengthen the Action Plan have been identified by the Review; these are listed in table 4
71. One further way to improve the Action Plan would be to exploit every opportunity for tree planting. Trees and roof gardens can absorb pollution through their leaf-mass and they can also produce more harmonious, calming and pleasant environments that can slow down cars and encourage walking. Tree canopies also provide shade that reduces temperatures and lessens chemical reactions such as the roadside production of ozone. Where trees cannot be planted into the ground, the joint Review Group would like to see greater use of trees in pots.

Table 4 Further Action Plan options

Reducing traffic:
Reducing demand for travel – e.g. through more effective Travel Plans
Encouraging high volume occupancy (HVO) of private cars
Tackling bus over-supply on the most competitive routes – e.g. by cross-operator bus ticketing
Encouraging cycling and walking
Work-place parking charges (with discounts for low emission vehicles)
Adjusting relative prices of Park and Ride versus city centre parking
Easing congestion
Reduce bus boarding times by through-journey and off-board bus ticketing
Better enforcement of on-street parking
Re-examining traffic light locations and phasing
Further restricting loading hours – and enforcing them better
More School Travel Plans
Reducing Emissions
Roadside emission testing
Encouraging the setting up of transshipment centres
Greater use of cleaner fuels and more retro-fitting of tail-pipe technology

- R14) The joint Review Group RECOMMENDS the Executives to strengthen the Air Quality Action Plan by including further options as listed in Appendix 5**
- R15) The joint Review Group RECOMMENDS the Executives to ensure full public consultation on the Air Quality Action Plan and to include improving air quality as a priority in both the Oxfordshire Community Partnership and the City's Local Strategic Partnership.**

SECTION 4 ~ CONCLUSIONS

72. Evidence of good performance has been found, for instance, the OTS succeeded in removing a lot of cross-town traffic. Oxford has been awarded Centre of Excellence status for encourage modal shift from private cars to buses, despite a general rise in car ownership.
73. Public transport is considered as essential to tackle private car over-dependence but that has led to unforeseen reliance upon polluting diesel engines. The air quality problem occurs despite Oxford having one of the youngest urban bus fleets in Europe (half the national average).
74. Other studies, such as EMITS, similarly conclude that current traffic management measures do not go far enough and further thought needs to be given to the nature of traffic restrictions and not simply focus on a volume reduction.
75. Further work is needed to continue to promote alternative ways of travel and to minimise traffic growth, such as encouraging cycling and walking. Public consultation and partnership working with businesses are necessary to ensure everyone tackles congestion.
76. Enforcement of existing regulations is vital if they are to have any effect on influencing people's behaviour. The UK government has been sent a written warning by the European Commission for failing to tackle urban air pollution and in future the government will expect local authorities to implement stronger measures.
77. Better integration is necessary between air quality work and transport planning. Such coordination will help both Councils ensure all their different sections work together to 'plan out air pollution' just as they have been required to 'plan out crime'.
78. It is not acceptable to view poor air quality as the price to be paid for progress and economic success. We look forward to a cleaner future.

Scoping Document

Review Topic (name of Review)	Air Pollution
Review Reference Code	EN007 v.5
Lead Scrutiny Committee	County and City Environment Scrutiny Committees
Lead Member Review Group (Cllr's involved)	Cllrs. Sibley (Chair), Fooks & Hudson (County) and Cllrs. Darke, Hollander & Simmons (City)
Officer Support (Scrutiny Review Officer lead)	Matt Bramall
Rationale (key issues and/ or reason for doing the Review)	<p>City Council Councillors and officers concerned by potential 'joined-up' difficulties arising from differing legislative streams, (e.g. DEFRA & air quality v DfT & transport) in non-unitary authorities.</p> <p>Levels of NO₂ currently exceed government objective limits and pose a potential danger to health.</p> <p>Issue raised by external letter from DEFRA (24th Nov 2003)</p> <p>Potential serious issue NOT addressed by Executive's new priorities, by BVPP 2003, nor by PSA.</p> <p>Review Group keen to establish what can be done through new powers of community well-being, if otherwise fettered by legislative restrictions.</p>
Purpose of Review/Objective (specify exactly what the Review should achieve)	<p>To assess the air pollution impacts of current Council plans and policies against the specific government targets, especially those policies relating to traffic management.</p> <p>To ensure that we have an effective integrated approach between air quality and traffic management work (look at structures & mechanisms, and attitudes & efforts).</p> <p>To find out what is being done to engage the public in this important matter.</p> <p>To identify what involvement Public Health professionals have, and whether enough is done to help vulnerable populations, e.g. those susceptible to respiratory problems.</p> <p>To establish whether it is feasible to include Air Quality targets in the next round of local PSA targets.</p>
Indicators of Success (what factors would tell you what a good Review should look like)	<ul style="list-style-type: none"> • Review recommends action that will be likely to improve Air Quality and bring pollution within government limits. • Review establishes and proposes an agreed process for successful partnership working that could be a basis for work with other District Councils. Clear recommendations concerning a 'joined-up' approach are produced. • Review identifies a way for full integration of Air Quality issues into Local Transport Plan.
Methodology/ Approach (what types of enquiry will be used to gather evidence and why)	<ul style="list-style-type: none"> • Desk-based review of the available literature • Interviews with officers • Calling 'witnesses' to give expert evidence • Comparisons with other authorities
Specify Witnesses/ Experts (who to see and when)	<ul style="list-style-type: none"> • Cllr. David Robertson (County Exec Member for Transport) • Cllr. Mary Clarkson (City Executive Member for Environment) • Cllr. Colin Cook (City Executive Member for Planning and Transport) • David McKibbin (E&E – Head of Transport) • Samantha Tharme (E&E – OTS Team Leader) • Roger Pitman (City Environmental Health Officer)

	<ul style="list-style-type: none"> • Janice Juneman (City Environmental Health Officer) • Johnathan McWilliam – Acting Director of Public Health Oxford • Philip Kirk – Oxford Bus Company rep • Martin Suttton – Stagecoach rep • Alan Woodward – COLTA secretary (hackney carriages) • Phil Pirouet – City Council Taxi Licensing • Mr Green – 001 private hire taxis • Director – Royal Cars hire taxis • Paul Tappin – Oxford Sightseeing Classic City Tour • Dr. Harry Rutter (expert on health & transport) • Craig Blackwell – County Ecologist • Graham Simmonds – rep from Trees for Cities • Ian Gourlay – rep from Forest of Oxford 		
Specify Evidence Sources for Documents (which to look at)	<ul style="list-style-type: none"> • Environment Act 1995 – part IV • The Role of the Highways Agency in Local Air Quality Management, Nov 2003 • Guidance to Local Authorities on the further (“stage 4”) assessments of air quality required under Sn. 84 of the Environment Act 1995 • Policy Guidance LAQM.PG(03) • Air Quality Information for Scrutiny Members • Environmental Services Performance Plan April 2002 – March 2005; Oxfordshire County Council • Environmental Services Divisional Service Plans April 2003 – March 2004; Oxfordshire County Council • Local Transport Plan 2001/ 06 • LTP Annual Progress Report 2003 • DEFRA letter dated 24th Nov 2003 • City Council Stage 3 Review (Jan 2001) • City Council Stage 4 Review (April 2003) • City Council Updating & Screening Assessment (Dec 2003) • Chapter 6, Bath & N.E. Somerset’s LTP 		
Specify Site Visits (where and when)	<ul style="list-style-type: none"> • Visits to air quality monitors NOT required. • Visit to other authority in a similar County with a historic central city, e.g. Durham, Cambridgeshire, North Yorkshire, Bath or one with a good record e.g. North East Somerset, or Leicester or Bristol 		
Specify Evidence Sources for Views of Stakeholders (consultation/ workshops/ focus groups/ public meetings)	Public meeting (planned for Thu 8 th July 2004, at 7:30 p.m.) with a ‘Question Time’-type panel to prompt debate		
Publicity requirements (what is needed – fliers, leaflets, radio broadcast, press-release, etc.)	<ul style="list-style-type: none"> • Promotional flyer/ leaflet to inform people of the review and to promote the public meeting • Press releases (at beginning and prior to public meeting) 		
Resource requirements <ul style="list-style-type: none"> • Person-days • Expenditure 	40 days £5,500		
Barriers/ dangers/ risks (identify any weaknesses and potential pitfalls)	<ul style="list-style-type: none"> • There is a risk of trying to do too much, so the review aims to limit its research mainly to Oxford City, though much of the work on joined-up approaches will be relevant if and when other Districts declare AQMA. • Getting distracted into broader traffic issues • Being fettered by legislative restrictions (e.g. bus gate enforcement) 		
Projected start date	9 th Jan 2004	Draft Report Deadline	15 th Sep 2004
Meeting Frequency	Monthly	Projected completion date	10 th Nov 2004

BIBLIOGRAPHY

During the course of the review, the following documents were collated, prepared or considered. Copies of all these documents are available for inspection in the Members' Resource Centre:

- Environment Act 1995 – part IV, DETR/ HMSO, 1995
- DEFRA letter dated 24th Nov 2003
- DEFRA letter dated 18th Oct 2004
- Air Quality Newsletter Edition 6, August 2003, DEFRA
- The Role of the Highways Agency in Local Air Quality Management, Nov 2003, Highways Agency
- Guidance to Local Authorities on the further (“stage 4”) assessments of air quality required under Sⁿ. 84 of the Environment Act 1995, Aug 2001, DEFRA
- Policy Guidance LAQM.PG(03), DEFRA, Feb 2003
- Full Guidance on Local Transport Plans Second Edition – 02 Aug 2004
- Air Quality Action Plans: Interim guidance for Local Authorities, NSCA, 2000
- Air Quality: Planning for action (guidance on the development of AQAP and Local Air Quality Strategies), NSCA, June 2001
- Environmental Services Performance Plan April 2002 – March 2005, Oxon County Council
- Environmental Services Divisional Service Plans April 2003 – March 2004, Oxon County Council
- Local Transport Plan 2001-06, Oxon County Council
- LTP 2001-06 Annual Progress Report, July 2003, Oxon County Council
- LTP 2001-06 Annual Progress Report July 2004, Oxon County Council
- Air Quality Review and Assessment Stage 3, Jan 2001, Oxford City Council
- Air Quality Review and Assessment Stage 4, Apr 2003, Oxford City Council
- Updating and Screening Assessment, Dec 2003, Oxford City Council
- LAQM Detailed Assessment, Jun 2004, Oxford City Council
- Executive Report – Premium Bus Routes Network, 8 Jul 2003, Oxon County Council
- Executive Report – Nitrogen Dioxide Emissions in Central Oxford, 27 Jan 2004, Oxon County Council
- Executive Report – Transport Networks Review, 21 Sep 2004, Oxon County Council
- Best Practice Guides N^{os}.1– 6, Oxfordshire County Council, Jan 2003
- Local Transport Plan (Chapter 6), July 2000, Bath & N.E. Somerset Councils
- Briefing Note Practical help for Local Authorities; Improving Air Quality Through Transport Policies, Energy Saving Trust, Mar 2003
- Briefing Note Practical help for Local Authorities; Air Quality Action Plans, Energy Saving Trust, Mar 2003
- Air Quality Information for Scrutiny Members, Feb 2002, Energy Savings Trust
- Air Quality and transport policy objectives in Oxford, Graham Parkhurst, July 2004

- Nitrogen Dioxide in the United Kingdom: summary, Air Quality Expert Group/ DEFRA, 2004
- Guidelines for the implementation of Clearzones, DfT/ Babbie, Feb 2003
- Powering Future Vehicles: The Government Strategy First Annual Report, Oct 2003, DfT
- The air quality impact of Water-Diesel Emulsion Fuel (WDE) and Selective Catalytic Reduction (SCR) Technologies, King's College/ Mayor of London, July 2003
- The London Trees Manifesto, Trees for London, 2003
- Trees & Sustainable Urban Air Quality, Lancaster University, 2003
- Waiting for Euro 5 & Euro 6, European Federation for Transport & Environment, 2004
- Charter on Transport, Environment and Health, WHO Regional Office for Europe, 1999
- Brian Hanna's keynote address as President of the Chartered Institute of Environmental Health to NSCA, Oct 2002
- A note on PSAs and Public Health, NHS Health Development Agency, Nov 2002
- Health Aspects of Air Pollution: results from the WHO project "Systematic Review of Health Aspects of Air Pollution in Europe, WHO, Jun 2004
- EMITS Project Technical Report, November 2003, Life 95

List of Witnesses

Oral evidence was obtained from the following 'witnesses' during the review public hearings:-

- ❖ Cllr. David Robertson (County Exec Member for Transport)
- ❖ Cllr. Mary Clarkson (City Executive Member for Environment)
- ❖ Cllr. Lord Bill Bradshaw
- ❖ David McKibbin (E&E – Head of Transport)
- ❖ Samantha Tharme (E&E – OTS Team Leader)
- ❖ Roger Pitman (City Environmental Health Officer)
- ❖ Janice Juneman (City Environmental Health Officer)
- ❖ Nigel Eggleton – Commercial Director, Oxford Bus Company
- ❖ Martin Suttton – Director, Stagecoach Oxford
- ❖ Thomas Knowles – Oxford Sightseeing Classic City Tour
- ❖ Mohamed Dill Pazir – COLTA representative (hackney carriages)
- ❖ Phil Pirouet – City Council Taxi Licensing
- ❖ Johnathan McWilliam – Acting Director of Public Health Oxford
- ❖ Dr. Harry Rutter (expert on health & transport)
- ❖ Craig Blackwell – County Ecologist
- ❖ Ian Dougliss – County Forrester
- ❖ Ian Gourlay – representative from 'Forest of Oxford'

Public Meeting heard evidence from:-

- ❖ Professor John Whitelegg, Stockholm Environmental Institute in York
- ❖ Dr. Richard Lawson
- ❖ Mike Ginger, Bristol City Council, Transport Planning Group Team Manager -Special Projects
- ❖ Nigel Eggleton, Commercial Director, Oxford Bus Company

Nitrogen Dioxide Diffusion Tube Data 2003 Results

Location	Cat*	2003 Ann mean ppb	2005 Ann mean ppb	Location	Cat'	2003 Ann mean ppb	2005 Ann mean ppb
Abingdon Rd / Weirs L	K	30	26	Mansfield Road	B	17	15
Beaumont Buildings	B	16	14	New Road	K	43	36
Beaumont Street	K	29	25	Norfolk Street	K	19	16
Beckett Street	K	23	19	Oxpens Road	K	22	18
Binsey Lane	B	9	8	Paradise Sq	B	16	14
Blue Boar Street	I	23	19	Park End Street	K	34	29
Bonn Square	K	29	25	Parks Road (Science Library)	K	24	20
Broad Street	K	22	19	Parks Road (Wadham Coll)	K	20	18
Butterwyke Place	I	24	20	Pike Terrace	I	25	21
Cornmarket Street	I	26	22	Pusey Street	I	21	18
Duke Street	I	18	15	Rewley Road	K	31	26
Floyd's Row	K	29	25	Sadler Walk	B	16	14
Folly Bridge	K	25	22	Shirelake Close	I	18	15
Gloucester Street	K	24	20	Speedwell Street	K	29	25
Green Rd Roundabout	K	36	31	St Aldate's (Town Hall)	K	36	31
High Street	K	46	39	St Cross Road	K	18	15
Hollybush Row	K	22	19	St Giles	K	37	32
Iffley Rd / Mag Coll Sch	K	22	18	Thames Street	K	24	20
Iffley Rd/ Boundary Brook Rd	K	25	22	Trinity Street	I	17	15
Keble Road	K	23	19	Walton Street	K	18	16
Lenthall Road	B	13	11	Woodbine Place	B	18	16
Longwall Street	K	35	29	Worcester Street	K	35	29
Lyndworth Close	B	19	16	York Place	I	24	20
Magdalen Bridge	K	23	19	St Ebbe's First Sch	B	14	12
Queen Street	K	57	49	St Clements St.	K	43	37
George Street	K	48	40	Hythe Bridge Street	K	28	24
George Street / Magdalen St	K	41	35	Botley Road	K	25	22
High Street (RPM)	K	45	38	South Parks Rd.	K	23	19
Station Junction (bus stop)	K	44	38	Worcester College	B	16	14

(shaded sites indicate likely to exceed 2005 objective of 21 ppb (or 40 µg/m³))

* Category **K**erbside 1-5 metres from a major road, **I**ntermediate 20-30 metres from a major road, urban **B**ackground in residential area greater than 50 metres from a major road.

Action Plan Measures – outline submission. Subject to further investigation and consultation

New measures specific to Central Oxford – targeted at area covered by AQMA

	Measure	Roads Affected	Current Status	Timescale	Traffic Impact	Stakeholders	Outside Constraints & Decisions	Funding Issues
1.	Bus gate enforcement	High St Magdalen St George St Castle St New Road bus priority route (BPR)	implementation 2004/5; Exec approved; pending statutory powers (in programme)	short term	medium – estimate 20% general traffic reduction on BPR	supported by bus operators	still subject to formal consultation on revisions necessary to traffic orders	funding approved by County Executive March 2003
2.	engine switch off while stationary (buses)	St Aldates High St Castle St Magdalen St Butterwyke Pl Speedwell St New Rd	powers available; Exec approval required; aim for implementation 2004/5; enforcement procedure needs clarifying	short term	low/medium	supported by bus operators; already a voluntary code to switch off when stationary	still subject to Executive approvals and formal consultation on necessary traffic orders;	revenue (enforcement) cost to be assessed
3.	higher emission standards – Low Emission Zone (LEZ)	all streets on bus priority route	legislation and enforcement process not clear – further funding and approvals required	long term	high	no consultation or involvement of stakeholders has taken place; significant support would be required from freight groups, local traders/retailers, bus operators and taxi drivers	would require formal approval by County Executive following further investigation of practicalities and likely effectiveness; need to seek further guidance on possible restrictions from DfT	funding not agreed; costs dependant on extent of scheme and enforcement requirements
4.	Bus quality partnership	all streets on bus priority route	further development and agreement with bus operators needed (in programme) – major focus needed on improving emission standards	medium term	medium	Bus quality partnership established in 1998/99 to complement the OTS. Further development needed although in principle agreement by major bus operators	further agreement with bus operators	no substantial cost associated with developing the agreement; however may require further investment commitments from bus operators

	Measure	Roads Affected	Current Status	Timescale	Traffic Impact	Stakeholders	Outside Constraints & Decisions	Funding Issues
5.	taxi quality partnership	all central area streets	Exec approved; further devt and agreement with taxi companies needed –(in current programme)	medium term	low	taxi drivers: private hire and hackney carriage; taxi licensing authority (District Councils)	subject to acceptable agreement with taxi drivers. Would require agreement to enforce from taxi licensing authority	some administration cost for taxi licensing and enforcement authority; potential cost implication for taxi drivers dependent on agreement
6.	bus boarding time improvements – Smart card ticketing	all central area streets; particularly where large number of stops	in development by bus operators	short term – dependant on operators	low	dependent on decisions taken by bus operators	dependent on bus operators; County Council supports in principle but no budget for major investment by County Council	cost to bus operators
7.	Westgate redevelopment	potential for very substantial improvements to traffic flow and particularly bus waiting/stop facilities in central area	2005/6?	long term	high	County and City Councils and other major landowners; also Railtrack and bus operators;	subject to substantial negotiation and funding decisions	major infrastructure costs – some possibly subject to statutory Planning Approvals and possibly developer contributions
8.	Station relocation		2006 + ?	long term	high			
9.	Gloucester Green – removal of services from GG		linked with Westgate redevelopment and Station relocation	long term	high			

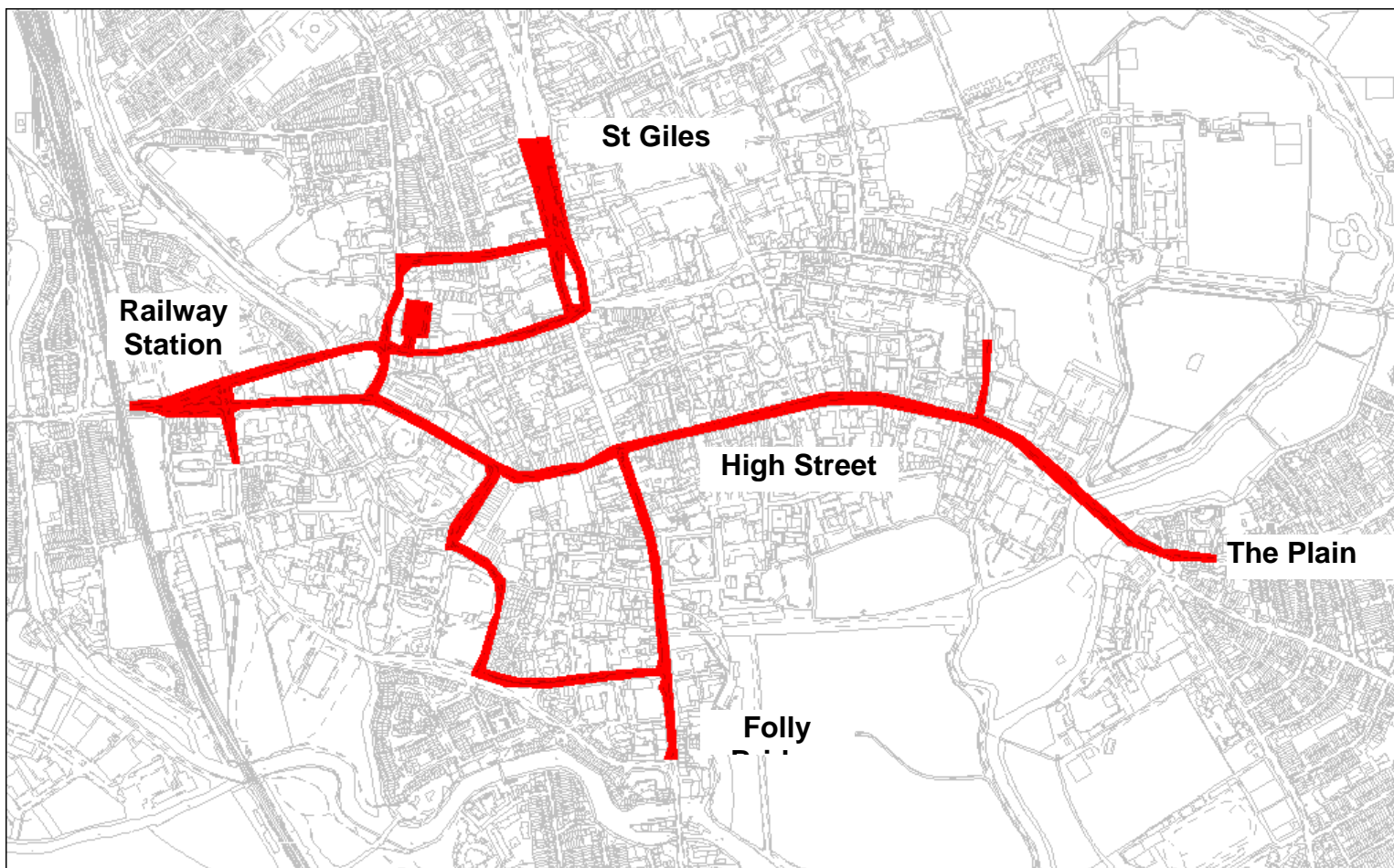
General and existing measures not targeting Central Oxford, but could be expected to have some impact on central area and have already had some impact to reduce traffic to current levels.

	Measure	Roads Affected	Current Status	Timescale	Traffic Impact	Stakeholders	Outside Constraints & Decisions	Funding Issues
1.	Oxford Transport Strategy*	substantial impact on central area already achieved up to 60% traffic reduction on some streets	implementation 1993 – 1999	long term	high			
2.	Travelwise	general	programme in place					
3.	Better Ways to School	general	programme in place	long term	low (in central Oxford)			
4.	Corporate Travel Plans	general	programme in place	long term	medium-high	agreement with individual businesses		
5.	Public transport information	general	programme in place – real time information pilot implementation planned 2003/4	long term	medium	agreement with bus operators	subject to budget decisions	if successful further development across the City
		general	development of web site and information at bus stops has already been implemented although under continued improvement and development	long term	medium			
6.	Homezones	general	programme in place – pilot locations currently under investigation	long term	low (for central Oxford)	agreement with residents	subject to Executive and budget decisions	

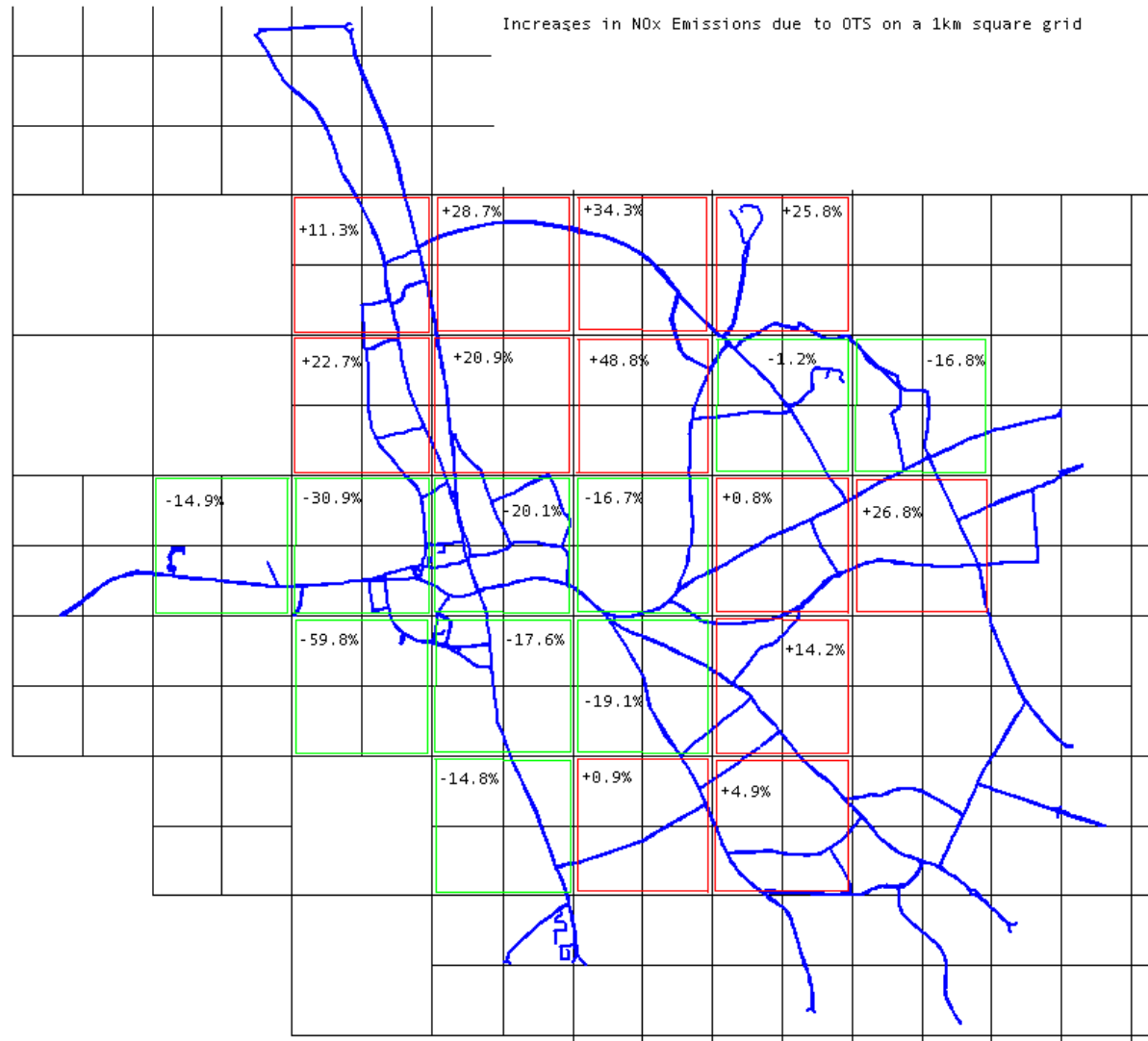
* note that further assessment of the impact of OTS implementation so far can be expected as part of the Action Plan submission. ('In programme' – indicates that there is a current commitment to carry out the necessary work or investigation)

Further Action Plan options proposed by the Scrutiny Review Group, affecting all areas but with particular influence on air quality in central Oxford'

Reducing traffic:
Reducing demand for travel – e.g. through more effective Travel Plans
Encouraging high volume occupancy (HVO) of private cars
Tackling bus over-supply on the most competitive routes – e.g. by cross-operator bus ticketing
Encouraging cycling and walking
Work-place parking charges (with discounts for low emission vehicles)
Adjusting relative prices of Park and Ride versus city centre parking
Easing congestion
Reduce bus boarding times by through-journey and off-board bus ticketing
Better enforcement of on-street parking
Re-examining traffic light locations and phasing
Further restricting loading hours – and enforcing them better
More School Travel Plans
Reducing Emissions
Roadside emission testing
Encouraging the setting up of transhipment centres
Greater use of cleaner fuels and more retro-fitting of tail-pipe technology



Roads defining City Centre Air Quality Management Area - Air Quality Review and Assessment – Stage 4
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The Chief Executive
Oxford City Council
PO Box 10
Oxford
OX1 1EN

Date 18 October 2004

Dear Chief Executive

AIR QUALITY AS A CORPORATE ISSUE

I am writing to remind you of the importance of carrying out your air quality duties under Part IV of the Environment Act 1995 and to encourage you to continue ensuring that your authority adopts a corporate approach when dealing with air quality issues.

As you know tackling air pollution is one of the Government's top environmental priorities. The Government's Air Quality Strategy published in January 2000 sets objectives for reducing the levels for the nine main air pollutants (benzene, 1,3 butadiene, carbon monoxide, lead, sulphur dioxide, nitrogen dioxide, particles, ozone and polycyclic aromatic hydrocarbons) that harm human health and the environment. Many of these objectives reflect the mandatory EU air quality limit values, which Member States have to meet. The Government is currently considering what additional measures are needed to meet the air quality objectives through, for example, the Review of the Air Quality Strategy, the Transport White Paper and the Review of the Climate Change Programme.

Local authorities have a very important role to play in helping the Government deliver cleaner air. They have a statutory duty under Part IV of the Environment Act 1995 to identify those areas where the national air quality objectives for seven of the main air pollutants will not be met and take local action, in partnership with local stakeholders, to work towards meeting the objectives. The Government expects local authorities to produce a draft air quality action plan within 12-18 months following the designation of any AQMAs.

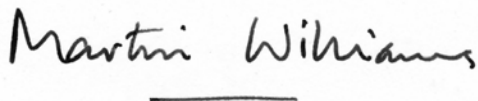
Your authority has designated (an) air quality management area(s) (AQMAs) and it is therefore essential to ensure that air quality issues are taken into account in other policy areas, such as local transport and land-use planning, as well as in other local authority plans and strategies. We have reinforced these messages in our statutory

LAQM policy guidance LAQM.PG(03), to which local authorities have to have regard. There is also the need for effective consultation and liaison amongst local authority departments when dealing with action planning and other air quality matters. In order for this to happen, we would look to yourselves to encourage a corporate approach on air quality and disseminate these messages to each local authority department.

You should also be aware that within the second round of Local Transport Plans (LTPs), which are due to be submitted in Summer 2005, local authorities have four shared priorities on which they have to focus, one of these being air quality. Local authorities with AQMAs that primarily relate to local transport are being encouraged to integrate their air quality action plans into the LTP. In our view this way forward is sensible given the fact that the majority of AQMAs are road traffic related and this should help to increase communication across local authority departments in unitary authorities and also strengthen links in two-tier areas between the districts and the county councils in taking local action to reduce road transport emissions. The Department for Transport are currently consulting on draft guidance for the second round of LTPs, which includes guidance on the process of integrating air quality actions plans into the LTP. Defra will also be issuing an addendum to the LAQM policy guidance, providing further background and guidance on the process of integration.

The Government recognises the important role that you play in tackling air pollution and the influence you can have at a local level in raising the profile of air quality within the local authority and amongst the local community. The Government therefore wants to continue working in partnership with local authorities in working towards meeting the air quality objectives.

Yours faithfully



A handwritten signature in black ink that reads "Martin Williams". Below the signature is a short horizontal line.

Dr Martin Williams
HEAD OF THE AIR AND ENVIRONMENT QUALITY DIVISION

Alternative formats of this publication are available on request. These include other languages, large print, Braille, audiocassette, computer disk or email.

“Formate alternative te ketij publikimi ofrohen me kerkese. Kjo perfshin dhe gjuhe te tjera, me shkronja te medhaja, shkronja per te verberit, kasete degjimi, disk kompjuteri ose email.”

Albanian

আপনি যদি অনুরোধ করেন তাহলে এই পুস্তিকাটি বিকল্প ছাঁদে, যেমন, অন্য কোনও ভাষায়, বড় হরফে, ব্রেইলে, অডিও-ক্যাসেটে, কমপিউটারের ডিস্কে বা ইমেলের মাধ্যমে পেতে পারেন।

Bengali

“本刊物備有其他的格式可供索取。這些包括有其他語言版，大字版，盲人用版，錄音帶版，電腦磁碟版或電子郵件版。”

Chinese

प्रार्थना करने पर यह प्रकाशन दूसरे रूपों में प्राप्त किया जा सकता है। जिस में सम्मिलित है, दूसरी भाषाओं में, बड़े छापे में, ब्रेअल, सुनने की टेप पर, कम्प्यूटर की डिस्क पर या ई-मेल द्वारा।

Hindi

“ਇਹ ਪੁਸਤਕ ਬੇਨਤੀ ਕਰਨ ਤੇ ਹੋਰ ਰੂਪਾਂ ਵਿਚ ਵੀ ਉਪਲਬਧ ਹੈ। ਜਿਵੇਂ ਕਿ ਹੋਰ ਭਾਸ਼ਾਵਾਂ ਵਿਚ, ਵੱਡੇ ਛਾਪੇ ਤੇ, ਬ੍ਰੇਲ ਵਿਚ, ਸੁਣਨ ਵਾਲੀ ਟੇਪ ਤੇ, ਕੰਪਿਊਟਰ ਡਿਸਕ ਜਾਂ ਈ ਮੇਲ ਤੇ।”

Punjabi

اس اشاعت کو متبادل اشکال میں درخواست کرنے پر حاصل کیا جاسکتا ہے۔ اس میں دوسری زبانیں، براہرٹ، بریل (جسے اندھے چھو کر پڑھ سکیں)، آڈیو کیسٹ، کمپیوٹر ڈسک یا ای میل شامل ہیں۔“

Urdu