

Medway Council

**Local Air Quality Management
Air Quality Review and Assessment**

Air Quality Action Plan

July 2005



Executive Summary

This Air Quality Action Plan concludes the first round of local air quality review and assessment for Medway Council. The system of local air quality management is an integral part of delivering the Air Quality Objectives set out in the Government's Air Quality Strategy and action planning is an important aspect of this process. An air quality action plan needs to describe how the council will use its powers or work in conjunction with other organisations in pursuit of the Air Quality Objectives.

The plan has been prepared to comply with the council's statutory duties for local air quality management under the Environment Act 1995. In fulfilling these responsibilities, the council undertook Stages 1, 2 and 3 of the first round of review and assessment of air quality and published reports between 1998 and 2000. This led to the declaration of the Medway Air Quality Management Area in January 2002 for the pollutants nitrogen dioxide and particles. A further review and assessment predicted that only concentrations of nitrogen dioxide were unlikely to meet the objective requiring a revision of the 2002 declaration. A new declaration was made in May 2004.

The Action plan describes measures which are aimed at working towards improving local air quality and achieving a reduction in the concentration of nitrogen dioxide. The major source of nitrogen dioxide is road traffic and the measures described focus heavily on existing and proposed transport and traffic management initiatives that are being progressed through Medway's Local Transport Plan.

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1 INTRODUCTION

1.1 Policy Background

The Environment Act 1995 required the government to produce a National Air Quality Strategy that contained standards and objectives for air quality and described measures to achieve these objectives. The first edition of the Strategy was published in 1997 and it was updated in 2000.

The 1995 Act also laid the foundation for the system of Local Air Quality Management. (LAQM). LAQM requires local authorities to assess air quality in their area and establish whether there are locations where air quality objectives are unlikely to be met. These locations must then be formally designated as Air Quality Management Areas (AQMA's) and an Action Plan prepared to move towards meeting the objectives.

This is Medway Council's first Air Quality Action Plan. The remainder of this section of the plan describes the policy framework supporting local air quality management.

1.2 International Legislation and Agreements

The United Nations Economic Commission for Europe (UNECE) Convention on Long-Range Transboundary Air Pollution: UNECE Protocols for Sulphur and Nitrogen Dioxides have been ratified by the UK. Under this agreement the UK is committed to reducing annual emissions of these pollutants by target amounts. In terms of local air quality management, the reduction in nitrogen oxides will be the most significant.

The international community has put in place a framework for action on climate change through the United Nations Framework Convention on Climate Change and the Kyoto Protocol. From this commitment the UK Climate change programme has been developed to implement measures aimed at delivering reductions in greenhouse gases, notably carbon dioxide.

1.3 European Legislation – EU Directives

Air Quality Framework and Daughter Directives: The Air Quality Framework Directive introduced in 1996 identified twelve pollutants for which limits were to be set in subsequent Daughter Directives. The first Daughter Directive in 1999 established legally binding limits for sulphur dioxide, nitrogen dioxide, particles and lead to be achieved variously by 2005 and 2010. National governments must introduce actions and implement policies aimed at meeting these limits.

Auto-Oil Programme: This introduced tighter European vehicle emission and fuel quality standards. In 1998 three Auto-Oil proposals were agreed and these are consolidated in two Directives. The key elements are:

- A stringent series of emission standards – known as the Euro 3 standards – to apply to all new vehicles sold from 2001
- More stringent standards applying from 2006 – the Euro 4 standards
- Tighter fuel quality specifications applying to all petrol and diesel sold from 1 January 2000 and 2005
- A ban on the general marketing of leaded petrol from 1 January 2000

The Large Combustion Plant Directive of 2001 establishes controls on emissions from large combustion plants, which include power stations, oil refineries and other large industrial processes.

The 1996 Integrated Pollution Prevention and Control (IPPC) Directive requires site specific permits that take account of the characteristics of each installation, its location and the state of the local environment. The Pollution Prevention and Control Act 1999 introduced provision to enable this Directive to be implemented in the UK and Regulations made in 2000 brought these controls into force. A large number of industrial processes are controlled under this legislation with regulation divided between local authorities and the Environment Agency.

1.4 National Framework

The National Air Quality Strategy was first published in 1997 and, following a review in 1999, the Air Quality Strategy for England, Scotland, Wales and Northern Ireland was published in 2000; an Addendum was issued in 2003. One of the key aims of the Strategy is to provide the best possible protection to human health by setting health based objectives for eight main air pollutants.

The Environment Act 1995 introduced new duties for local authorities relating to local air quality management. Local Air Quality Management forms an important part of the government's strategy to meet both the UK air quality objectives and the EU limit values. Table 1 shows the objectives that are prescribed for local air quality management as set out in the relevant Regulations. It should be noted that carbon dioxide (CO₂) is not a pollutant prescribed for local control as the key environmental impact of CO₂ emissions relates to global climate change. However, measures aimed at improving local air quality are likely to contribute towards reducing CO₂ pollution thereby helping to meet the national objective to reduce greenhouse gas emissions (See Table 5).

The National Air Quality Strategy recognises that national measures will not always be the most appropriate way to deal with localised air pollution. LAQM requires local authorities to carry out regular reviews and assessments of air quality in their area. The assessments must identify any locations where one or more of the objectives are unlikely to be met by the relevant date, taking account of relevant exposure. These locations must then be formally designated as Air Quality Management Areas (AQMA's) and an Action Plan prepared to move towards meeting the objectives. The LAQM

process has to date identified the need for 132 local authorities out of 407 in England, Scotland and Wales, to declare air quality management areas. Of these, over ninety per cent are for nitrogen dioxide, the majority of which are related solely to road traffic.

Table 1: Air Quality objectives for the purpose of local air quality management

Pollutant	Objective	Measured as	To be achieved by
Benzene All Authorities	16.25 µg/m ³	Running Annual Mean	31 December 2003
Benzene Authorities in England and Wales only	5 µg/m ³	Annual Mean	31 December 2010
1,3-Butadiene	2.25 µg/m ³	Running Annual Mean	31 December 2003
Carbon monoxide Authorities in England, Wales and Northern Ireland only	10.0 mg/m ³	Maximum daily running 8 Hour Mean	31 December 2003
Lead	0.5 µg/m ³	Annual Mean	31 December 2004
	0.25 µg/m ³	Annual Mean	31 December 2008
Nitrogen dioxide	200 µg/m ³ Not to be exceeded more than 18 times per year	1 Hour Mean	31 December 2005
	40 µg/m ³	Annual Mean	31 December 2005
Particles (PM₁₀) (All authorities)	50 µg/m ³ Not to be exceeded more than 35 times per year	24 Hour Mean	31 December 2004
	40 µg/m ³	Annual Mean	31 December 2004
Sulphur dioxide	266 µg/m ³ Not to be exceeded more than 35 times per year	15 Minute Mean	31 December 2005
	350 µg/m ³ Not to be exceeded more than 24 times per year	1 Hour Mean	31 December 2004
	125 µg/m ³ Not to be exceeded more than 3 times per year	24 Hour Mean	31 December 2004
µg/m ³ - micrograms per cubic metre			
mg/m ³ - milligrams per cubic metre			

Integrated Transport White Paper: 'A New Deal for Transport' was published in 1998. It sets out policies, including congestion charging, workplace parking charges and Local Transport Plans, which have an important role in working towards meeting air quality objectives.

Energy Savings Trust (EST): The use of cleaner fuels is promoted through government funded programmes – *Powershift* and *Cleanup*. Powershift was launched in 1996 and promotes the use of clean fuel vehicles – natural gas (CNG, LNG), liquefied petroleum gas (LPG) and electricity. Grant support is available to help with the purchase of new vehicles. The Cleanup campaign (2001-2004) aims to improve air quality by promoting emissions reduction equipment that can be retrofitted to the most polluting vehicles.

1.5 Local Plans, Policies and Initiatives

1.5.1 Transport Planning

Local Transport Plans: Under the Transport Act 2000, local highway authorities are required by government to submit Local Transport Plans (LTP's). The plans have to cover all forms of local transport and establish measures to tackle problems such as congestion and poor air quality. They are built around a 5-year integrated transport strategy, devised at local level in partnership with the community.

Medway Council adopted its first Local Transport Plan in July 2000. The LTP sets out a range of integrated transport works over the life of the plan and includes a section on air quality. The schemes and measures proposed in the plan are judged against five key aims: Protection of the environment; Economic security; Personal issues; Accessibility and Integration. A number of the measures described in the plan are likely to contribute to improvements in local air quality and these are considered in more detail in section five of this report.

The LTP runs until 2005 and work has already begun on preparing the new plan which will set out the transport priorities for the area in the period up to 2011.

The Local Government White Paper 'Strong Local Leadership – Quality Public Services' published in December 2001 contains proposals to cut back on the number of plans and strategies councils are required to produce. The paper states that, where an air quality problem arises because of transport pollution, councils will be free to address this through their LTP. In these instances a separate Air Quality Action Plan will no longer be required. Statutory guidance on local air quality management published by Defra in 2003 confirmed that local authorities with primarily transport related AQMAs could look forward to integrating their action plans into their LTPs by the 2005 review date. This action plan will form part of Medway's LTP when it is published in 2006.

The Government requires that local authorities report annually on the progress being made in implementing their Local Transport Plan through the production of an Annual Progress Report (APR). Developments in local air quality review and assessment at Medway have been summarised for inclusion in all of the APRs published to date.

The 2003 and 2004 Annual Progress Reports set out the council's achievements made towards the delivery of schemes during 2002/2003 and 2003/2004. A number of the key achievements are of relevance to local air quality management. These are covered in more detail in section five. The 2004 report will be published at the end of July 2004.

Medway's LTP Annual Progress Reports can be viewed on the council's website at www.medway.gov.uk/index/environment/transplanning.

1.5.2 Land Use Planning

Development Plan: The Kent Structure Plan 1996 is currently under review and is due to be replaced by the Kent and Medway Structure plan in 2005. The purpose of the Structure Plan is to guide the preparation of Local Plans and provide a framework within which decisions can be made. It also guides and informs investment decisions made in both the private and public sectors.

The Medway Local Plan: The Medway Local Plan 2003 describes a Development Strategy at Policy S1. This includes the following strategic principle:

Land use and transport will be closely integrated, and priority will be given to a range of new and improved transport facilities, including walking, cycling and public transport.

The plan includes a policy on air quality and other policies in the plan have a bearing on air quality.

The Planning and Compulsory Purchase Act, 2004 came into effect in September 2004. This changed the system of development plans to one based on Local Development Frameworks (LDF's).

Local Development Frameworks will consist of a portfolio of documents instead of a single local plan. In Medway, LDFs will be required to replace the Medway Local Plan, the Kent Minerals Local Plan and the Kent Waste Local Plan. The LDFs are expected to be in place within 3 years of the 2004 Act coming into force.

1.5.3 Medway Council's Plan

In 1999, following wide public consultation, Medway adopted six core values that are set out in it's strategic plan:

- Promoting physical, social and economic regeneration
- Improving the environment
- Realising everyone's potential
- Equal opportunity and access
- Fostering citizenship
- Giving value for money

A set of strategic objectives, framed around these core values, is described in the plan. Air quality falls under the 'Improving the Environment' objective, which states:

'Medway Council is committed to developing a more attractive environment and to safeguard it for the enjoyment of future generations. Working with partners the council will seek to influence transport patterns, the built environment, conservation and the protection of green areas, waste management and the general health of the community'

A Performance Plan is published annually to review achievements over the past year and look forward to the year ahead. Progress on air quality management has been regularly reported in the performance plan.

1.5.4 Medway's Community Plan

Medway's first community plan was published in 2002. The plan, compiled by the Medway Local Strategic Partnership (LSP), aimed to address the key concerns of the local community and serve as a plan of action for transforming Medway.

The Medway Transport Partnership is a lead partnership group on the LSP. The transport section of the community plan identified the need to reduce the impact of road traffic related pollution on air quality, making particular reference to the areas identified as part of the local air quality management process.

The second Medway Community Plan was launched in May 2004 to cover the period 2004 to 2007. The transport section notes the substantial growth in car traffic in Medway over the last 30 years. For example, the percentage of Medway residents owning two or more cars increased from 27% to 37% between 1999 and 2001. The plan identifies a number of LSP priorities that are linked to improving air quality, including contributing to the development of an air quality action plan.

2 AIR QUALITY REVIEW AND ASSESSMENT

2.1 First Round of Review and Assessment

As part of its LAQM responsibilities, the Council undertook Stages 1, 2 and 3 of the first round of review and assessment of air quality and published reports between 1998 and 2000. These reports present a staged approach whereby the prescribed air pollutants were assessed and screened as to their relative importance to air quality within the council's area. These assessments predicted exceedences of the nitrogen dioxide (NO₂) annual mean objective and the particles (PM₁₀) twenty-four hour mean objective in the urban area adjacent to certain parts of the road network.

The conclusion at Stage 3 led to the declaration of the Medway Air Quality Management Area for the nitrogen dioxide annual mean objective and the twenty-four hour mean objective for particles. The declaration was made in January 2002.

The findings of a further of review and assessment (Stage 4) were published in December 2002. This identified more extensive areas of exceedence for the NO₂ objective and a significantly reduced area for the PM₁₀ objective. Following consultation with Defra, a detailed mapping exercise determined that relevant public exposure is unlikely in the areas predicted to exceed the PM₁₀ objective and the AQMA for this pollutant was no longer necessary. Table 2 shows a summary of this process.

Table 2. Pollutants taken forward during Medway’s first round of review and assessment

Stage 1 October 1998		Stage 2 June 1999		Stage 3 August 2000		Stage 4 December 2002
Benzene						
1,3-Butadiene						
Carbon monoxide	→	Carbon monoxide				
Lead						
Nitrogen dioxide	→	Nitrogen dioxide	→	Nitrogen dioxide	→	Nitrogen dioxide
PM ₁₀	→	PM ₁₀	→	PM ₁₀	→	PM ₁₀ To be revoked
Sulphur dioxide	→	Sulphur dioxide	→	Sulphur dioxide		

To reflect this change in circumstances, the 2002 AQMA has been revoked and a new declaration was made in May 2004. The areas covered by an AQMA are shown in Appendix 1.

As a result of these changes the Air Quality Action Plan is now focused on describing measures aimed at reducing the annual mean concentration of nitrogen dioxide. Box 1 provides information about nitrogen dioxide.

Box 1. NITROGEN DIOXIDE

Nitrogen dioxide is a brown gas, with the chemical formula NO_2 . It is chemically related to nitric oxide, a colourless gas with the chemical formula NO . Together NO and NO_2 are known as NO_x . NO_x is released into the air when fossil fuels are burned.

Nitrogen Dioxide and the UK Air Quality Strategy

The concentration of NO_2 is measured in micrograms in a cubic metre of air ($\mu\text{g m}^{-3}$). The Air Quality Strategy has two objectives for NO_2 :

- The hourly objective, which is the concentration of NO_2 in the air averaged over a one hour period. This aims to make sure that people are not exposed to high concentrations of NO_2 for short periods of time. High concentrations are usually associated with particular weather conditions and can arise as pollution episodes. This objective is set at $200 \mu\text{g m}^{-3}$ not to be exceeded more than 18 times per year.
- The annual objective, which is the concentration of NO_2 in the air averaged over a period of a year. This aims to protect people from long term exposure and is set at $40 \mu\text{g m}^{-3}$.

Both objectives are to be achieved by 31 December 2005.

It is the predicted exceedences of the annual objective at relevant locations that has required the declaration of AQMA's in Medway. Relevant locations are places where members of the public are likely to be exposed to pollution over the averaging time of the objective. For the annual average NO_2 objective the relevant roadside location is taken as the façade of a residential building.

Health Impacts

There is evidence to show that long-term exposure to NO_2 may effect lung function and increase reactivity to allergens such as pollen spores. In some individuals high levels of nitrogen dioxide can exacerbate the symptoms of asthma, bronchitis or emphysema.

Emissions

Despite a decade of decreasing NO_x emissions nationally, there are widespread exceedences of the annual average NO_2 ($40 \mu\text{g m}^{-3}$) objective. With current national policies, some appreciable exceedences of the annual average objective for NO_2 are predicted to remain for 2005 and 2010.

Road vehicles are reported as being responsible for about half of the total emissions of NO_x in the UK in 2000. If future traffic flows exceed current expectations, or if emission control technology does not reduce pollution as expected, exceedences of NO_2 will be more widespread than predicted.

2.2 Second Round of Review and Assessment

LAQM is an ongoing process and the second round of local authority review and assessment commenced in 2003 when new technical and policy guidance was issued by Defra. This further refines the staged assessment process and begins with an Updating and Screening Assessment that continues from the concluding phase of the first round. Depending on the outcome at the Updating and Screening stage, local authorities may need to go on to more detailed stages and make any necessary

declarations of AQMAs. As each stage of this system is completed, reports are submitted to the Secretary of State and consultation takes place.

A new requirement of the second round is that local authorities produce an annual Progress Report in years when they are not carrying out an Updating and Screening Assessment or a Detailed Assessment.

Medway Council published its Updating and Screening Assessment in May 2003. This confirmed the findings of the first round and provided further evidence to support the need for measures to reduce the nitrogen dioxide impact from road traffic in the AQMA's. On the basis of this information, Defra advised that a detailed assessment was not necessary and Medway was therefore required to publish a Progress Report during 2004.

Medway's Annual Progress Reports were submitted to Defra in April 2004 and 2005. They have been accepted as meeting the requirements for reporting developments in local air quality management.

The timetable for review and assessment requires local authorities to begin the next round with an Updating and Screening Assessment in 2006.

3 AIR QUALITY MONITORING

3.1 The Kent And Medway Air Quality Monitoring Network

Air quality monitoring in Medway is undertaken as part of the Kent and Medway Air Quality Monitoring Network, which forms part of the Kent and Medway Air Quality Partnership. All but one of the Kent district authorities participate in the monitoring network, thereby providing a strategically focused monitoring regime. The council takes a lead role in the network as it administers the contract with specialist consultants who manage the data handling, ratification and publication of monitoring results. A network report is published annually and all monitoring data and annual reports are available on the network website. Medway's web page has a direct link to the network website.

Over the past eight years the Kent and Medway Air Quality Monitoring Network has developed into one of the most extensive and long-established regional monitoring networks in the country. Network analysers have been placed in many strategic locations and provide continuous monitoring of a broad range of pollutants relevant to local air quality. Two of the continuous monitoring sites form part of the national Automatic Urban and Rural Network (AURN) of pollution measurement sites, managed by contractors on behalf of Defra. The resulting air quality database provides a central source of robust information about air quality in the region. These data have provided a valuable input into the modelling and forecasting used to predict future pollutant concentrations during the review and assessment process.

Medway has three continuous automatic air quality stations; one at an urban roadside location in Chatham, one at an urban background site at Luton and one at a rural location in Lower Stoke. Monitoring of nitrogen dioxide and particles are carried out at

all three sites. In addition the Lower Stoke site monitors sulphur dioxide and ozone and the Luton site monitors sulphur dioxide, carbon monoxide and ozone. The Lower Stoke site is part of the AURN network and monitoring results from this location are reported nationally.

All of the continuous monitoring sites in Medway are equipped with real time analysers that are maintained and calibrated to ensure the accuracy and reliability of monitoring data is to the standard required for the national network.

Additional monitoring of nitrogen dioxide has been undertaken in Medway at various roadside, background and rural sites using passive diffusion tubes since 1993. Diffusion tubes provide a relatively simple, flexible and cost effective means of measuring monthly average concentrations of NO₂ at a wide range of locations. The method is used extensively across the region and nationally.

Measurements made using diffusion tubes are less precise than those provided by continuous analysers and this needs to be borne in mind when considering results from these monitoring locations. Recent government guidance has recommended that local authorities calculate local bias factors for their diffusion tube monitoring by co-locating tubes with a continuous analyser for a 12 month period. The results can then be compared and diffusion tube figures can be corrected accordingly. Medway carried out a co-location monitoring exercise in 2003.

The diffusion tube sites are kept under review and relocated as necessary in response to the findings of the local review and assessment process. There are currently 24 sites in Medway.

3.2 Air Quality in Medway During 2003

Monitoring data is reported in Medway's annual progress report and also incorporated into the Kent and Medway Air Quality Monitoring Network Annual Reports.

The Medway Annual Progress Report shows that all three continuous monitoring sites recorded NO₂ levels below the annual average objective during 2003 and 2004. Of the kerbside diffusion tube sites only the Strood High Street site exceeded the objective (bias corrected).

The Network 2003 annual report shows that the Chatham roadside continuous monitoring site was the only one out of the 11 sites at roadside locations in the network to have shown a decrease in annual average NO₂ compared to 2002. Although this decrease was small, in the order of 5%, it is encouraging. More broadly the report suggests that, while background NO₂ levels, i.e. common to the whole region and possibly from distant sources such as continental Europe, are not decreasing, local emissions from road traffic are decreasing slowly in most parts of the county.

These results give cause for cautious optimism about local road traffic emissions in Medway.

3.3 Principle sources of air pollution in Medway's AQMAs

Road traffic accounts for the majority of the NO_x emissions in Medway. The Stage 4 Review and Assessment estimated that up to 73% of NO_x concentrations could be related to road traffic emissions.

Table 3: Predicted Nox Contributions (%) at the six AQMA's taken from the Stage 4 Review and Assessment

AQMA	Buses	Cars	HGV's	Other Sources
Chatham Centre	0.2	24.9	17.5	57.4
Cuxton* Road	0.5	28.9	28.3	42.3
Frindsbury Road	0.1	17.3	55.8	26.7
Maidstone Road, Chatham	0.2	27.2	19.1	53.4
Rochester Centre	0.8	35.2	33.5	30.5
Strood* Centre	0.5	28.9	28.3	42.3
Notes				
Fleet Classification:				
<ul style="list-style-type: none"> • HGV (i.e all HGVs and LGVs other than cars taxis and motorcycles) • Cars (including all cars, taxis and motorcycles) and • Buses and coaches. 				
Other Sources:				
<ul style="list-style-type: none"> • Industrial/domestic • Background 				

4 ACTION PLANNING

4.1 Action Plans

Where an AQMA has been declared, the local authority has to draw up a written Air Quality Action Plan. The Action Plan needs to examine the options available that could lead to improvements in local air quality. Key factors to be considered are the source of the polluting emissions, the practicality of taking steps towards implementing improvements, and the indicative costs and potential benefits of pursuing identified initiatives. The Action Plan should build upon the work carried out during the staged review and assessment process, particularly the scenarios described in the Stage 4 report.

4.2 Medway's Air Quality Action Plan - Aims and Objectives

The main aim of this action plan is to propose measures that will work towards achieving reductions in NO₂. A further aim is to raise awareness of air quality issues by encouraging active participation in the achievement of proposed measures through a combination of joint working within the council and with external stakeholders.

Existing and proposed measures to improve air quality are set out below. These encompass transport planning, traffic management, land use planning, pollution control, local air quality management and promotional activities. Transport planning measures have a direct impact on the main source of pollution and Medway's Local Transport Plan will be a key platform for delivering initiatives aimed at improving local air quality.

4.3 The effectiveness of possible interventions

In order to meet the annual air quality objective by the end of 2005 it will be necessary to reduce levels of NO₂ in the AQMA's significantly. A computer model has been used to consider a number of scenarios as to how this could be achieved. Full details of this exercise are set out in the Stage 4 report.

The most effective intervention would be to reduce existing daily traffic flows in the AQMA's by approximately fifty per cent across all vehicle types. This is predicted to achieve the annual NO₂ objective by a comfortable margin at all chosen locations. An intervention of this kind is considered unrealistic in the short term.

If car traffic alone is considered, it is estimated that the objective could also be achieved with a fifty percent reduction of cars on the road in the AQMAs. A reduction in car use of this magnitude is also unrealistic.

The modelling exercise also considered how increasing the proportion of less polluting vehicles would contribute to reducing emissions of NO₂. Two scenarios were examined:

- Increase the percentage of Euro 4 cars by 20%
- Increase the percentage of Euro 4 cars by 100%

The first scenario assumes that Euro 4 cars account for 38% of the car mix and the second projection assumes 63% of Euro 4 cars. Both scenarios predict that the NO₂ annual objective will be met at the AQMA locations chosen. The 20% increase in Euro 4 cars should just achieve the objective and the 100% increase will see further reductions in emissions at all locations.

A number of assumptions relating to the national vehicle fleet (i.e. the composition of all vehicles on the road nationally) specified by the Department for Transport (DfT) are relevant to this exercise. The DfT assumes that the current (2004) figure for Euro 4 cars is 22% of the national vehicle fleet. This is predicted to grow to 32% by 2005 and achieve 40% by 2006; by 2010 the figure is expected to reach 68%.

Based on the DfT assumptions, relevant public exposure in the Medway AQMAs should fall below the NO₂ annual objective by 2006 as long as the number of Euro 4 cars expected nationally is reflected in the local vehicle fleet.

5 ACTIONS

It is evident that transport related emissions of nitrogen dioxide are the main issue for local air quality management in Medway. This action plan will concentrate on initiatives aimed at reducing road traffic pollution as it represents the greatest percentage of emissions contributing to exceedences of this air quality objective. However, consideration will also be given to measures that may help reduce emissions from other sources.

Described simply, reducing pollution from road traffic requires one of two things: reducing the number of vehicles on the road or reducing the pollution produced by those vehicles. These measures are not straightforward to achieve and efforts to improve local air quality are expected to require initiatives that involve a combination of the two. The gradual introduction of less polluting vehicles is a matter of national policy derived from European Directives as described at paragraph 1.3. Local transport measures aimed directly at reducing road traffic and congestion are pursued as part of the local transport planning process.

5.1 Direct Actions – Transport Planning

5.1.1 Local Transport Plan

Medway's Local Transport Plan was adopted in July 2000 and covers a five year period. The following local objectives set out in the plan are closely linked to air quality:

- to ensure an integrated, sustainable transport approach is adopted for regeneration sites
- to implement development control policies which will integrate transport and land use planning, reduce the need to travel and generate additional funding for identified transport infrastructure improvements
- to ensure public transport becomes an attractive alternative to the private motor car.
- to restrain demand for car travel by changes to parking standards and charges and improved on street parking enforcement
- to encourage walking and cycling as alternative modes by improvements in road safety, personal and cycle security and priority measures in town centres
- to provide appropriate new infrastructure to improve safety, realise opportunities for environmental enhancement, maintain and improve access for all and serve new development

- to improve the environmental and safety conditions in Strood Town Centre thereby promoting in Medway vitality and viability of the town centre

The additional national transport targets referred to in the plan are also relevant to air quality.

- Reduce congestion on the inter-urban trunk road network, and in large urban areas in England, below 2000 levels by 2010
- Improve air quality by meeting our national air quality strategy objectives for carbon monoxide, lead, nitrogen dioxide, particles sulphur dioxide, benzene and 1-3 butadiene

The 2003 and 2004 LTP Annual Progress Report described the progress made in implementing measures and initiatives aimed at meeting these objectives. All of the measures and initiatives, unless indicated, have wide reaching impacts across the whole of Medway. Of these, the following are of particular relevance to local air quality:

5.1.2 Short term delivered schemes and initiatives

- Work on the Transport for Medway (TfM) concept;
- Increased bus passenger journeys of 15.6% between 2000 and 2003 associated with the introduction of the 20 pence concessionary fare scheme
- Successful Urban and Rural Bus challenge Bids to introduce new bus services to serve the University of Greenwich campus and Medway Valley Park leisure facility;
- Replacement of entire bus fleet through Operation Overdrive carried out in partnership with Arriva;
- Introduction of pilot half fare and yellow bus scheme for school pupils;
- Extensive consultation on cycling and the formation of the Medway Cycle Forum;
- Extension of the cycle network and improvements to the pedestrian environment
- Good progress with the Council's safer routes to school programme and workplace travel plans;
- Strong consultation processes and partnership working.

5.1.3 Medium term ongoing initiatives

- The implementation of short term deliverables arising from the TfM study;
- Progress made with adopted travel plans for schools and workplaces
- Impact of maximum parking standards
- Progression and updating Medway Council staff Travel Plan

5.1.4 Long term planned LTP actions

- A228 road improvements.

- Progression of Medway's Community Strategy;
- Safer route to school projects and school travel plans;
- The implementation of maximum parking standards associated with new developments;
- More effective use of the local highway network through the introduction of SCOOT in Strood and rolling out of UTMC across Medway;

Box 2. Strood SCOOT Project

An urban traffic management control (UTMC) system that co-ordinates traffic signal timings has been in place in Medway since 1980. A study has been undertaken to review the existing traffic control system at road junctions in Strood. This resulted in a recommendation to upgrade the Split Cycle and Offset Optimisation Technique (SCOOT) at a number of these junctions.

The proposed system has four main elements: SCOOT traffic control system, variable message signing; alternative route monitoring; and emission monitoring. It is hoped that the implementation of this scheme will reduce traffic congestion and contribute to improvements in air quality.

If successful, consideration will be given to extending the scheme for key traffic signal junctions through Chatham, Rochester, Gillingham and Rainham.

5.1.5 Transport for Medway (TfM) formerly Medway Waterfront Rapid Transit system

5.1.5.1 TfM - Background and Progress During 2003/2004

Medway has been identified by the Government as an area of substantial regeneration and growth through the Office of the Deputy Prime Minister's (ODPM) Sustainable Communities Plan. This means that travel demands in the area are expected to increase significantly over future years. To enable such growth to be accommodated, a new kind of public transport system is needed to supplement the current bus network and accommodate the growth in people and their associated travel in a more sustainable way. The TfM project will seek to identify a new integrated transport policy and a preferred public transport option for the area to enable this to happen.

Key achievements:

- 2002 Concept Report produced;
- Recognition in Draft regional Transport Strategy for the south east and the Area Investment Framework;
- Detailed survey work undertaken;
- July 2003 announcement of £1million secured from the ODPM through the 'Sustainable Communities Plan' for further developmental work;
- February 2004 release of funding agreed;
- Appointment of Colin Buchanan and Partners.
- March 2004 work on project commenced.

The successful bid made to the ODPM during the summer of 2003 has secured £1m toward funding for the development of a study which will include extensive public and stakeholder consultation, engineering and feasibility studies, environmental impact assessment, outline design, specification and preliminary enabling works for a preferred public transport scheme. Since the announcement was made in July, the procurement of consultants to carry out the main project has been undertaken by the council.

The T/M project started in March 2004, on confirmation of the grant from the Office of the Deputy Prime Minister. Initial work has so far included design and implementation of a telephone household travel diary survey of residents within Medway, establishment of a data base, including existing data sets and material from other sources, initial development of a transport model for the area, and initial work on developing transport options.

5.1.5.2. T/M Next steps – 2004/2005

The main work during 2004/2005 will cover three main strands:

- Carrying out wide ranging public and stakeholder consultation, to gain a full picture of the issues, problems and opportunities which people see for transport in the area
- Developing a full understanding of the options available for public transport, and for other transport modes, and their possible application in Medway
- Developing a multi-modal area wide transport model to reflect travel patterns in Medway, as a basis for appraising the options.

A short-list of possible strategies will be produced, and consultation will be held on these in early 2005 to coincide with the development of Medway's second LTP.

In addition to identifying the best medium term strategy, the project will also identify possible short-term measures to improve transport, and complimentary strategies for other modes and these will be incorporated in Medway's second LTP in 2005 along with the preferred public transport option, which will be subject to a future major scheme bid.

Further details about T/M can be found on Medway's website at:
www.medway.gov.uk/index/environment/transplanning

5.1.6 Travel Plans

The Government is encouraging local authorities, businesses, school, hospitals, and other organisations to develop and implement travel plans in order to cut car use and reduce congestion. School travel plans are seen as a means of tackling congestion caused by the school run and are also important for the promotion of healthier lifestyles for children. Travel plans can help local authorities to meet their obligations to improve local air quality.

5.1.7 School travel plans

The council operates a safer routes to school programme that links to specific targets within Medway's LTP. An important element of the project is changing travel habits for the journey to school to reduce reliance on the car and promote, walking, cycling, public transport and car sharing. The walking bus initiative – an escorted walking scheme for primary school children – is part of the council's safer routes to school project.

Medway has made good progress with these initiatives. The council now has 13 walking bus schemes in operation throughout Medway. The production of school travel plans has been excellent with 9 schools having developed travel plans during 2003/2004. In 2003 the DfT and DfES announced new criteria for school travel plans that enables schools to receive a capital grant if a school travel plan was completed to meet the criteria. The grant will be used by schools to support sustainable travel initiatives and fund the provision of items such as lockers and cycle storage. The 9 plans secured during 2003/2004 all meet the new criteria and the 7 school travel plans reported in the 2002/2003 APR have also been updated to comply. In total Medway now has an exceptional 17 school travel plans in place. The council's School Travel Plan Co-ordinator has also been recently promoted to the status of the South East Regional School Travel Advisor.

School Travel Plans:

- Twydall Junior School;
- Cliffewoods;
- Glencoe Junior School;
- Greenvale Infant School;
- St Peter's Infant School;
- Oakland Infant School;
- Luton Infant School;
- St Mary's – Troy Town;
- Deanwood Primary School.

5.1.8 Workplace travel plans

Workplace travel plans are packages of measures designed to reduce car dependency by supporting more sustainable forms of travel. The LTP describes travel plans as an effective tool to reduce reliance on the private car in connection with business and to reduce the overall need to travel.

The Department for Transport fund travel plan co-ordinator posts at 84 local authorities across England. Medway secured two posts, one for school travel and one for workplace travel plans and both were appointed in 2001. One post is no longer funded by the DfT but has been funded by Medway Council for a further 2 years from April 2004. During the last year, 3 new workplace travel plans have been secured through the planning process and the development of another 3 plans are in the early stages of discussion with employers. Overall this means that Medway now has 9 fully adopted workplace travel plans in place and is working with many more.

5.1.9 Medway Travel Plan

Medway Council's workplace travel plan was adopted in September 2000. The plan contains a number of initiatives to reduce single occupancy car travel and increase alternatives such as walking, cycling, car-sharing, using public transport and flexible working practices. The travel plan continues to be promoted through 'bike 2 work' and 'green travel to work' days as well as a staff newsletter and staff induction packs. New initiatives to promote the travel plan are being explored. Personalised travel plans that provide information on sustainable travel alternatives tailored to individual staff members and an interactive page on the intranet site are planned in the next 6 months.

A measure of the success of the travel plan can be seen in the sales of staff traveller bus tickets, which significantly increased between 2001/2 and 2002/3. The equivalent weekly sales show an increase of 46% from 2051 in 2001/2 to 3840 in 2002/3.

5.1.10 Parking Initiatives

A significant influence on whether people drive into towns is whether they can park. The Road Traffic Regulation Act 1997 permits local authorities to determine parking provision and charging schemes. Local authorities can also use the planning process to regulate the amount of private non-residential parking associated with new development. Medway has adopted a number of parking control practices likely to contribute to improvements in local air quality. Over the period April 2003 to March 2004 97% of planning applications permitted had reduced parking allocations. This effectively provides 984 fewer parking spaces for these developments compared to maximum parking standards.

Work on major regeneration proposals at Rochester Riverside are also looking to provide low levels of parking coupled with other measures to create a more sustainable development. The development will seek to provide travel plans for all uses within the site e.g.: education, commercial, retail facilities as well as a residential travel plan. This will be coupled with pedestrian and cycle provision and public transport routes.

5.1.11 Residents Parking Schemes

A number of controlled parking schemes have been introduced in the town centres to discourage commuter and non-essential parking. On street parking offences were decriminalised in January 2000 and more resources have been allocated to combat illegal parking. This has discouraged indiscriminate parking and improved the management of the road network within residential areas and along radial routes.

5.1.12 Park and Ride Schemes

Medway currently operates a park and ride scheme that caters for travel into Rochester and Chatham on Saturdays. The buses operate from Maidstone Road, Horsted and the service is free for both parking and travel.

Another scheme is proposed and the Council has resolved to grant planning permission. The proposal is currently with the Office of the Deputy Prime Minister for his consideration. If approved, this will be situated on the Medway City Estate and will operate from Monday to Saturday. Approximately 420 parking spaces will be provided.

5.1.13 Public Awareness Campaigns

The LTP recognises the importance of campaigning to raise public awareness of transport related issues. Awareness campaigns at Medway range from high profile national campaigns such as Green Transport Week to local projects focused on specific areas. The key objectives of these campaigns are to:

- Increase the public's knowledge of transport initiatives and transport choices
- Raise awareness of the environmental cost of individual journeys

The Council is currently involved in a number of campaigns:

- Walk to school week (local, national and international)
- Streets ahead (Kent Wide)
- Green Transport Week (local and national)
- Safer routes to school (national but tailored to Medway)
- Local transport plan awareness (local)
- Company Transport Plan (local)
- Car Free Day (international)
- Bike to Work Day (national)

6 INDIRECT ACTION

6.1 Land Use Planning.

Statutory guidance on air quality and land use planning issued by Defra explains that local authorities should integrate air quality considerations within the planning process at the earliest possible stage. The guidance stresses the importance of harnessing strategic and development control planning to secure measures that will contribute to improving local air quality in the longer term.

Planning policies relevant to local authorities' air quality responsibilities are set out in Planning Policy Guidance Notes (PPG). A good practice guide on air quality and land use planning was published by the Royal Town Planning Institute in 1999.

6.2 The Kent Structure Plan 1996 has two policies relevant to air quality:

S1: Local planning authorities will seek to achieve a sustainable pattern and form of development which will reduce the need to travel, facilitate the conservation of energy and other natural and environmental resources, and minimise pollution.

ENV20: Development will be required to be planned and designed so as to minimise pollution impacts. Where such impacts cannot be reduced to an acceptable level or together with prevailing background pollution it would produce an unacceptable level, the proposed development will not be permitted.

The Kent & Medway Structure Plan, when finally adopted following consultation, will replace the 1996 Structure Plan. A deposit version of the plan was published in September 2003. In September 2004 an independently appointed panel held an Examination in Public, which examined key issues raised during the consultation and recommended changes to some policies. Modifications are currently being considered and the plan is expected to be adopted by late 2005 / early 2006.

The deposit version contains a number of policies on pollution. Policy NR6 relates specifically to air quality management. At the current stage of consultation this Policy states:

The local authorities are required to

- a) *review and assess air quality and, where necessary, declare Air Quality Management Areas*
- b) *work towards improving air quality in Air Quality Management Areas through preparation of an Air Quality Action Plan*

The scale and character of development in, or adjoining such areas, should be controlled so as not to adversely affect this improvement.

This Policy reflects the importance of air quality as a strategic planning issue. The air quality impact of the proposed development is a key consideration and development proposals should be supported by sufficient information to allow them to be fully assessed.

6.3 The Medway Local Plan: The Medway Local Plan 2003 includes a policy on air quality, Policy BNE24, which states:

Development likely to result in airborne emissions should provide a full and detailed assessment of the likely impact of these emissions. Development will not be permitted when it is considered that unacceptable effects will be imposed on the health, amenity or natural environment of the surrounding area, taking into account the cumulative effects of other proposed or existing sources of air pollution in the vicinity.

Planning applications with air quality implications are submitted to the Environmental Health service for comment. This is particularly important for any development proposals alongside AQMA's or that might have an impact on air quality in an AQMA. This consultation process will continue.

6.4 CONTROL of EMISSIONS FROM NON-TRANSPORT RELATED SOURCES

6.4.1 Regulation of Industrial Emissions – Local Air Pollution Control

Local authorities control emissions from certain industrial processes under the Local Air Pollution Control regime. This regime was introduced under the Environmental Protection Act 1990 and covers emissions to atmosphere from a range of industrial processes with significant pollution potential. The Environment Agency has responsibility for regulating larger industries, known as Part A processes, and local authorities regulate the smaller industrial processes known as Part B.

Local Air Pollution Control is gradually being subsumed by a new regime brought in under the Pollution Prevention and Control Act 1999. The Pollution Prevention and Control (PPC) Regulations 2000 are coming into force across various industrial sectors and full transition is due to be completed by 2007/2008. Responsibility for regulating remains divided between local authorities and the Environment Agency. The Environment Agency is responsible for large processes known as Part A1 installations and local authorities regulate Part A2 and Part B installations.

Each process requires either an authorisation or a permit depending on the applicable regime. This specifies operational conditions and sets limits for the various pollutants emitted from the processes. Process operators are also placed under a general obligation to use the “Best Available Techniques” (BAT) to prevent or minimise polluting emissions. One of the underlying principles of the regime is periodic reviews of emission limits to take account current best practice.

There are currently more than 60 processes in Medway that are regulated in this way. These comprise:

- 6 Part A1 Processes
- 2 Part A2 processes
- 53 Part B processes of which 28 are petrol stations

6.4.2 Industrial Smoke Control

The council can also control emissions from certain industrial processes or trade premises which fall outside the EPA /PPC regulations using the Clean Air Act 1993. This includes the powers to:

- Prohibit dark smoke from a chimney of any building (subject to certain permitted periods and exemptions);
- Prohibit dark smoke from industrial or trade premises (subject to certain exemptions);
- Require notification of installations of industrial incinerators/furnaces;
- Approve chimney heights of certain installations.

6.4.3 Domestic Smoke Control

The Clean Air Act 1993 also allows local authorities to declare a smoke control area to reduce and regulate smoke from domestic sources. This provision has been carried forward from earlier legislation first introduced in 1956. The main urban areas in Medway fall under these controls due to Orders that have been in place for many years.

6.4.4 Statutory Nuisance - Environmental Protection Act 1990

The 1990 Act lists categories of statutory nuisance including, smoke and dust emitted from premises, dust, steam and smell from commercial premises and fumes or gases from private dwellings. If a local authority is satisfied that a statutory nuisance exists it should take enforcement action requiring the abatement of the nuisance.

The nuisance regime complements the more specific industrial pollution control regimes of the Clean Air Act 1993, the Environmental Protection Act 1990 and the Pollution Prevention Control Act 1999. Local Authorities are able to use it to deal with domestic as well as industrial emissions that are prejudicial to health or a nuisance.

Medway's Environmental Health service is responsible for investigating nuisance and taking appropriate enforcement action. Officers also offer information and advice on how to minimise the risk of causing a nuisance of this kind.

6.4.5 Bonfires

Bonfires can contribute to local air pollution particularly fine particles and NO_x. Dioxins and other harmful emissions may also be produced if plastic, bituminous material or rubber is burnt. If bonfires cause a statutory nuisance enforcement action can be taken under the Environmental Protection Act 1990.

The council promotes composting as an alternative to burning garden waste. Medway also operates a kerbside green waste collection service across parts of the district. Three civic amenity sites run by the council have facilities for recycling or disposing a wide range of materials to help reduce the need for bonfires.

6.5 AIR QUALITY MONITORING

6.5.1 Medway's Air Quality Monitoring Programme

Medway's programme of air quality monitoring was described in detail at section three. This programme is a fundamental part of local air quality management as it provides data for review and assessment and information on trends in air quality.

Assessing the effect of transport initiatives and the impact of development proposals on local air quality relies on the continued operation of this monitoring regime.

6.6 ENERGY MANAGEMENT AND HOME INSULATION SCHEMES

6.6.1 Kent Action to Save Heat

Medway participates in the Kent Action to Save Heat (KASH) scheme that provides local residents the opportunity to take advantage of discounted energy saving measures from reliable installers. The scheme was devised by participating local authorities and is managed by the Kent Energy Centre. Originally an insulation discount scheme, this has been expanded to include heating installations. The Kent Energy Centre negotiates the discounted prices on insulation and heating systems with a number of installers and manufacturers operating in the county.

These measures should lead to improvements in domestic energy efficiency and therefore contribute to improving air quality across the area.

6.7 MEDWAY COUNCIL'S PLAN AND MEDWAY'S COMMUNITY PLAN

6.7.1 Medway Council's Plan: Air quality falls under the 'Improving the Environment' core value objective of this plan. A corporate working group is charged with integrating measures emerging from this objective across the authority. This group is currently

developing a corporate sustainability framework for Medway. Air quality is an issue being considered as part of this project.

6.7.2 Medway's Community Plan: The Medway Transport Partnership is a lead partnership group of the Local Strategic Partnership (LSP). The plan identifies a number of priorities that are linked to improving air quality, including contributing to the development of an air quality action plan.

7 PROMOTION OF AIR QUALITY ISSUES

Raising awareness of air quality issues is proposed in a number of ways including:

- Development of the council's website to incorporate additional information on the topic
- The publication of leaflets and other material on air quality
- Information to schools and other organisations
- Talks, presentations and seminars

8 CONSULTATION

An Air Quality Working Group was set up at Medway in 2000 as part of the local air quality review and assessment process. This group, comprising officers from across various professional disciplines, has contributed to the development of this action plan. Presentations on LAQM have been given to the council's Improving the Environment Core Value Working Group. There have also been presentations on air quality to the Medway Transport Forum and voluntary sector groups during the development of this Action Plan.

Consultation with internal groups was ongoing throughout the action plan's development. Working in close partnership with internal groups meant that comments were incorporated into the action plan as they were raised. Partnership working has resulted in an action plan that considers the wider impacts of air quality and its integration into other policies; such as the Local Transport Plan and Transport for Medway etc.

Local authorities are also required to consult with the following statutory and non-statutory consultees on their Action Plan:

- The Secretary of State
- The Highways Agency
- The Environment Agency
- Neighbouring local authorities
- Kent County Council
- Medway Primary Care Trust
- The Health Protection Agency
- The Kent & Medway Strategic Health Authority

- The Local Strategic Partnership
- The North Kent Chambers of Commerce
- The Medway Asthma Self Help Group

The consultees were written to in July 2004, and were asked to consider the proposals contained in the draft action plan. The deadline for written (including via e-mail) and verbal comments was the 25 October 2004. Responses were received from The Highways Agency, who noted the contents of the plan, and Defra. In summary, Defra noted that the plan was well written and provided a clear understanding of the context and reasoning behind the plan, the following recommendations were taken into account in this version of the plan:

- Further details should be included to link the transport measures to specific targeting the six AQMA's.
- A firmer statement on the mechanisms of consultation and inclusion of consultation outcomes.
- Improved linkage with Stage 4 source apportionment work for the six AQMA's.
- Further quantification of the costs and air quality impacts of measures.
- Prioritisation of the action plan measures according to their cost-effectiveness assessment.
- A clear statement of which measures are likely to be taken forward, how far the action plan measures will work towards achieving the objectives in the six AQMA's and by what timescales.

9 SUMMARY OF ACTIONS

The actions described or derived from the previous sections of this plan are listed at Table 4. The various measures aimed at improving local air quality are summarised at Table 5. For each action the stakeholders are identified and indicative quantification of timescales, likely improvement in air quality, cost, practicality, acceptability and other effects are shown.

10 CONCLUDING REMARKS

It was noted in section 3.2 that Medway's monitoring results give cause for cautious optimism about reductions in transport related emissions of NO₂. It would be premature to suggest that the Local Transport Plan initiatives already implemented are the main driver of this improvement and it is important to maintain the monitoring network so that local trends in air pollution can be tracked.

It is hoped that the 2003 monitoring results provide an early indication that Medway's approach to addressing transport related environmental concerns is beginning to deliver improvements in local air quality.

Table 5 describes the key actions that Medway wish to take forward. Several of these measures are transport related and the Action Plan will form part of the Medway LTP

when it is published in 2006. It is hoped that these actions will contribute to the improvement of air quality in each of the AQMA's. It is anticipated that with a combination of local and national initiatives, the NO₂ objective could be achieved by 31 December 2007, resulting in the declarations being revoked; it is hoped that the longer timescales for some of the actions would secure further improvements past this date. However, it should be borne in mind that the progress towards the objective will be considered during the Updating and Screening Assessment that is due to be undertaken by April 2006.

Table 4 - List of actions

Action 1 - Continue to participate in the Kent & Medway Air Quality Partnership and Monitoring Network.

Action 2 - Continue to pursue LTP objectives that will contribute to improving air quality in the AQMAs. Including:

- Implement the introduction of a SCOOT traffic management system
- Promote Medway Council's travel plan and require major new development to implement travel plans
- Implement Medway Council's walking and cycling strategies
- Implement Medway Council's bus strategy and associated public transport information strategy
- Progress the Transport for Medway project

Action 3 - Develop the Medway Council website to provide forecasts of air pollution episodes based on data from the Kent and Medway Air Quality Monitoring Network.

Action 4 - Continue to integrate air quality considerations within the planning system through internal consultation and discussions with developers and other key stakeholders.

Action 5 - Pursue, through the planning process, the securing of Section 106 planning agreements that deliver initiatives for achieving improvements in local air quality in the longer term.

Action 6 - Continue the commitment to comprehensive local air quality monitoring across the district to ensure that robust local data is available for LAQM and other purposes.

Action 7 - Continue to deliver industrial pollution control through the regulation of LAPPC and LA -IPPC processes.

Action 8 - Continue to investigate complaints of nuisance likely to have a detrimental effect on local air quality.

Action 9 - Continue to introduce and review residents parking schemes to discourage non-residents parking, encourage other ways of travelling into town centres and reduce congestion.

Action 10 - Develop promotional material for the Medway website and more general publication.

Action 11 - Continue to ensure appropriate regulation of Medway's designated smoke control areas.

Action 12 - Develop a corporate sustainability framework for Medway.

Table 5: Summary of Existing and Proposed Actions

	RESPONSIBILITY MC – MEDWAY COUNCIL KCC – KENT COUNTY COUNCIL CG – CENTRAL GOVERNMENT LA – LOCAL AUTHORITIES	TIME SCALE Short term to 2006 Medium term 2006-2009 Long term 2009+	AIR QUALITY IMPROVEMENT- REDUCTION IN NO2 1 = Low 2 = Medium 3 = High	COST (£) 1 = Low 2 = Medium 3 = High	PRACTICALITY 1 = Easily Achievable 2 = Achievable 3 = Difficult to implement	OTHER ENVIRONMENTAL EFFECTS E.G. CO2, NOISE' CONGESTION 1 = No effect 2 = At least one effect 3 = More than one effect	ACCEPTABILITY 1 = Does not support key actions 2 = Supports one action 3 = Supports more than one action
National Measures							
Implementation of EU Directives on vehicle emission and fuel standards	CG	S-M	2	1	1	2	3
Council wide measures:							
Develop corporate sustainability framework for Medway (<i>Action 12</i>)	MC	S-M	1	1	2	3	3
Land Use Planning:							
Kent & Medway Structure Plan (<i>Action 4 & 5</i>)	MC-KCC	S	2	1	1	3	2
Planning conditions and development controls (<i>Action 4 & 5</i>)	MC	S	3	1-2	1	3	3
Transport Planning:							
SCOOT System, Strood (<i>Action 2</i>)	MC	M	1-2	2-3	2	2	2
Council Travel Plan (<i>Action 2</i>)	MC	on going	1-2	1	2-3	1-2	1-2
Pedestrian- Cycle Networks (<i>Action 2</i>)	MC	S	1	1	2	1	2
Transport for Medway (<i>Action 2</i>)	MC	M-L	3	3	1-2	2-3	2-3

SUMMARY OF EXISTING AND PROPOSED MEASURES	RESPONSIBILITY MC – MEDWAY COUNCIL KCC – KENT COUNTY COUNCIL CG – CENTRAL GOVERNMENT LA – LOCAL AUTHORITIES	TIME SCALE Short term to 2006 Medium term 2006-2009 Long term 2009+	AIR QUALITY IMPROVEMENT- REDUCTION IN NO2 1 = Low 2 = Medium 3 = High	COST (£) 1 = Low 2 = Medium 3 = High	PRACTICALITY 1 = Easily Achievable 2 = Achievable 3 = Difficult to implement	OTHER ENVIRONMENTAL EFFECTS E.G. CO2, NOISE/ CONGESTION 1 = No effect 2 = At least one effect 3 = More than one effect	ACCEPTABILITY 1 = Does not support key actions 2 = Supports one action 3 = Supports more than one action
Parking Management (Action 2 & 9)	MC	S-M	2	2	2-3	1-2	1-2
Pollution controls:							
Domestic emissions:							
Enforcement of statutory nuisance legislation (Action 8)	MC	S	2-3	1	1	1	2
Enforcement of Smoke Control Area (Action 11)	MC	S-L	1	1	3	1	1
Bonfire leaflets and advice (Action 10)	MC	S	3	1	1	1	3
Industrial emissions:							
Licensing and enforcement of LAPPC and LA-IPPC regulated processes (Action 7)	MC	S	3	1	1	3	3
Enforcement of statutory nuisance legislation (Action 8)	MC	S-M	1	1	3	1	1
Local Air Quality Management:							
Air Quality Monitoring (Action 3, 6 & 10)	MC	L	1	2	1	1	3
Continued participation in partnership working (Action 1 & 6)	MC LAs, KCC	ongoing	1	2	1	1	3

ABBREVIATIONS

AQMA	Air Quality Management Area
APR	Annual progress report
AURN	Automatic Urban and Rural Network
CO ₂	Carbon dioxide
CNG	Compressed natural gas
DEFRA	Department for Environment, Food and Rural Affairs
DETR	Department of the Environment, Transport and the Regions
DfES	Department for Education and Skills
DfT	Department for Transport
EPA	Environmental Protection Act
EST	Energy Savings Trust
IPPC	Integrated pollution prevention and control
KASH	Kent Action to Save Heat
LA	Local authority
LAQM	Local air quality management
LDF	Local development framework
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
LSP	Local Strategic Partnership
LTP	Local Travel Plan
mg/m ³	Milligrams per cubic metre
NAQS	National Air Quality Strategy
NO _x	Oxides of nitrogen
NO ₂	Nitrogen dioxide
NSCA	National Society for Clean Air and Environmental Protection
ppb	Parts per billion
PPC	Pollution Prevention and Control
PPG	Planning Policy Guidance Notes
ppm	Parts per million
PM ₁₀	Fine particle matter less than 10 microns diameter
TfM	Transport for Medway
µg/m ³	Micrograms per cubic metre
UNECE	United Nations Economic Commission for Europe
UTMC	Urban traffic management and control

References

DETR (2000), LAQM.G1(00), Framework for Review and Assessment of Air Quality

DETR (2000), LAQM.G2(00), Developing Local Air Quality Action Plans and Strategies: the Main Considerations, HMSO

DETR (2000), LAQM.G3(00), Air Quality and Transport, HMSO

DETR (2000), LAQM.G4(00), Air Quality and Land Use Planning, HMSO

DETR (2000), LAQM.TG1(00), Review and Assessment: Monitoring Air Quality, HMSO

DETR (2000), LAQM.TG2(00), Review and Assessment: Estimating Emissions, HMSO

DETR (2000), LAQM.TG3(00), Review and Assessment: Selection and Use of Dispersion Models, HMSO

DETR (2000), LAQM.TG4(00), Review and Assessment: Pollutant Specific Guidance, HMSO

DEFRA (2004) Nitrogen Dioxide in the United Kingdom

Kent County Council and Medway Council (2003) Deposit Kent and Medway Structure Plan

Medway Council (1998), First Stage Review and Assessment, Medway Council

Medway Council (1999), Second Stage Air Quality Review and Assessment, Medway Council

Medway Council (2000), Stage Three Air Quality Review and Assessment

Medway Council (2002), Further review and assessment of air quality (stage four)

Medway Council (2003), Medway Local Plan Adoption Version 2003, Medway Council

Medway Council (2003), Updating and screening assessment

Medway Council (2004), Air Quality Progress Report for 2003

NSCA (2000), Air Quality Action Plans: Interim Guidance for Local Authorities, NSCA

NSCA (2000), Consultation for Local Air Quality Management: the How To Guide

NSCA (2001), Air Quality: Planning for Action, NSCA

Internet links

Medway Council Web Page - Air Quality

<http://www.medway.gov.uk/index/environment/9990/9991.html>

Kent and Medway Air Quality Monitoring Network

http://www.seiph.umds.ac.uk/envhealth/kent/k_home.htm

Local Air Quality Management

<http://laburnum.aeat.co.uk/archive/laqm/laqm.php>

Medway's Local Transport Plan / Transport for Medway

<http://www.medway.gov.uk/index/environment/transplanning>

Appendix 1 – Air Quality Management Areas in Medway