



**Maidstone Borough Council
Maidstone Town Centre
Draft Air Quality Action Plan**

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EXECUTIVE SUMMARY

This Air Quality Action Plan is the culmination of the second round of local air quality review and assessment for Maidstone Borough Council (MBC). The process of Local Air Quality Management (LAQM) review and assessment has been set down in Part IV of the Environment Act 1995, which forms part of the Government's response to European Directives on Air Quality to which the UK Air Quality Strategy responds.

The first round of review and assessment resulted in the declaration of one Air Quality Management Area (AQMA) along the M20 corridor between Junctions 6 and 7 for nitrogen dioxide, largely due to road traffic emissions from the M20. An Air Quality Action Plan (AQAP) has already been produced for this AQMA.

The results of the second round review and assessment showed exceedences of Air Quality Objectives in addition to those identified in the first round. Exceedences of the NO₂ annual mean Objective and PM₁₀ 24-hour mean Objective were predicted at relevant receptors within Maidstone Town Centre, with the highest concentrations predicted in Lower Stone Street and Upper Stone Street. At the areas of highest nitrogen oxide concentrations, there were also predicted exceedences of the 24-hour PM₁₀ Objective. An AQMA was declared within the Town Centre on January 1st 2005.

In compiling this Action Plan, Government guidance LAQM.PG (03) and guidance from the National Society for Clean Air has been referred to, alongside guidance provided by the Department for Environment, Food and Rural Affairs through its Air Quality Action Plan Help Desk.

The aim of this Action Plan is to identify how Maidstone Borough Council will use its existing powers and work together with other organisations in pursuit of the annual mean Air Quality Objective for nitrogen dioxide and 24-hour mean PM₁₀ Objective. Measures are proposed to improve air quality both within the AQMA and across the Borough as a whole.

Kent County Council is responsible for the management of the local road network and as such is responsible for any direct actions proposed for the AQMA in order to reduce road traffic emissions. Maidstone Borough Council will work together with the local transport authority Kent County Council (KCC), through the Kent Highways Unit, to improve air quality within the AQMA and throughout the Borough.

The direct measures proposed for the AQMA are:

- Traffic Rerouting using Variable Message Signage (VMS) (linked to UTMC)
- Traffic Rerouting for Motorway Diversions
- New Road Infrastructure
- Junction Improvements at Maidstone Bridge Gyratory
- Pedestrianisation (High Street)
- Emissions Standards for Council Fleet and Public Service Vehicles
- Public Transport (Bus Corridor) Improvements
- Enhancement of Park & Ride Schemes
- Sustainable Parking Strategy

The indirect measures to improve air quality across the whole Borough are:

- MBC will implement the Council's Travel Plan measures and encourage uptake of sustainable modes of transport
- MBC will continue to work together with KCC to encourage the uptake of Employer and School Travel Plans within the Borough.

- MBC will continue to work together with KCC to encourage modal shift from the car to buses through implementation of a strategic approach to school transport provision
- MBC will continue to work with KCC to improve the facilities for cycling and walking within Maidstone and encourage greater uptake.
- MBC Environmental Health will continue to work closely with the Planning Department to ensure that air quality is taken into account in the planning process when located in or close to the AQMA or in areas marginally below air quality objectives.
- MBC will continue to work together with developers to improve sustainable transport links serving new developments.
- MBC will develop, through the Kent and Medway Air Quality Partnership (K&MAQP), supplementary planning guidance to assist with air quality assessments of development proposals
- MBC will continue their commitment to local air quality monitoring within the Borough to ensure a high standard of data is achieved to assess against air quality objectives
- MBC will make details of the Action Plan measures and annual progress reports available on the Website to ensure broad access to the consultation and implementation process. MBC will continue to work together the Kent and Medway Air Quality Partnership on promotional activities to raise the profile of air quality in Maidstone
- MBC will continue to work together with the Kent Energy Centre to promote and implement energy efficiency measures in Maidstone

1 INTRODUCTION AND AIMS OF THE ACTION PLAN

1.1 Project Background

Maidstone Borough Council has drawn up, with the assistance of Bureau Veritas, a Local Air Quality Management Action Plan for the Air Quality Management Area within Maidstone Town Centre identified through the second round of review and assessment of air quality. The Action Plan is required to be undertaken as part of the local authority's statutory duties as defined within Part IV of the Environment Act, 1995.

Bureau Veritas has undertaken previous review and assessment reports for MBC, which includes the Further Assessment (2005).

1.2 Legislative Background

Part IV of the Environment Act, 1995, places a statutory duty on local authorities to periodically review and assess the air quality within their area. This involves consideration of present and likely future air quality against air quality standards and objectives. Guidelines for the 'Review and Assessment' of local air quality were published in the 1997 National Air Quality Strategy (NAQS) ¹ and associated guidance and technical guidance. In 2000, Government reviewed the NAQS and set down a revised Air Quality Strategy for England, Scotland, Wales and Northern Ireland² (AQS). This set down a revised framework for air quality standards and objectives for seven pollutants, which were subsequently set in Regulations in 2000 through the Air Quality Regulations 2000³. These were subsequently amended in 2002⁴.

Where it appears that the air quality objectives will not be met by the designated target dates local authorities must declare an Air Quality Management Area (AQMA) and develop action plans in pursuit of the air quality objectives. Following declaration, MBC are required to develop an Action Plan for the AQMA within 12 – 18 months.

Policy Guidance LAQM.PG(03) was published by the Government in 2003, which included guidance on the development of action plans. The NSCA have published guidance 'Air Quality Action Plans (2000)' and 'Air Quality: Planning for Action (2001)'. These guidance documents have been taken into account in development of this Action Plan for MBC, alongside guidance provided by the Department for Environment, Food and Rural Affairs through its Air Quality Action Plan Help Desk, which provides examples of best practice and an Action Plan appraisal checklist.

1.3 Scope of the Action Plan

The purpose of the Action Plan is to provide the means through which a local authority through joint working with the County Council and other relevant organisations can deliver viable measures that will work towards achieving the Air Quality Objectives within an AQMA. The aim is also to encourage active participation in the achievement of action plan measures by consulting the local community and raising awareness of air pollution issues.

In delivery of the "Freedoms and Flexibilities" agenda, ODPM made an Order under Section 6 of the Local Government Act 2000 which came into effect on 1 February 2005 and removed the duty for those local authorities rated as "excellent" to produce

¹ DoE (1997) The United Kingdom National Air Quality Strategy The Stationery Office

² DETR (2000) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland – Working together for Clean Air, The Stationery Office

³ DETR (2000) The Air Quality Regulations 2000, The Stationery Office

⁴ Defra (2002) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland: Addendum, The Stationery Office

seven statutory plans, including Air Quality Action Plans. The Section 6 Order includes clauses that allow excellent authorities to voluntarily choose to produce an Action Plan. Maidstone Borough Council is rated as an Excellent Authority and has chosen to voluntarily produce an Action Plan setting out the Council's proposals to improve air quality in the Borough.

Local authorities (not rated as "excellent") are required to prepare a written Action Plan for an AQMA, setting out the action plan measures they intend to take forward and the potential costs and benefits of these measures. The Further Assessment provides the technical backup for the measures to be included within the Action Plan. The Action Plan should refer to the findings of the Further Assessment in terms of source apportionment (i.e. where emissions are coming from) so that action plan measures are targeted appropriately.

The Action Plan should contain simple estimates of the costs and benefits and timescales for implementing the proposed action plan measures, so that measures can be prioritised for implementation and subsequently monitored. The Action Plan should also indicate how far the measures will work towards achieving the Objectives.

1.4 Reporting of the Action Plan

The Maidstone Town Centre AQMA has been declared due to road traffic emissions. Kent County Council (KCC) is the relevant transport authority for roads on the local network and will work jointly with MBC through the Kent Highways Unit on transport measures within the Borough. County Councils have a duty under section 86 (3) of the Environment Act 1995 to put forward proposed actions which they themselves can implement to work towards meeting the air quality objectives in an AQMA. KCC should include these measures within the air quality section of the Local Transport Plan (LTP).

The Action Plan reflects the relevant organisational responsibilities for actions within the AQMA and proposed measures (Section 7) are reported as:

- Direct actions proposed for the Maidstone Town Centre AQMA (responsibility of KCC, through the Kent Highways Unit, in partnership with MBC);
- Indirect actions Borough-wide to improve air quality throughout the Maidstone area, including the AQMA (responsibility of MBC and KCC).

2 OVERVIEW OF AIR QUALITY IN MAIDSTONE

The main source of air pollution in the Borough is road traffic emissions from major roads, notably the M20, M2, A20, A249 and A229. Other pollution sources, including industrial, commercial and domestic sources, also make a contribution to background pollution concentrations.

A summary of MBC's second round of review and assessment of air quality, which commenced in 2003, is shown in Table 1.

Table 1: Summary of the second round review and assessment process for MBC

Updating and Screening Assessment (2003)		Detailed Assessment (2004)	Further Assessment (2005)
SO ₂		Predicted exceedences of the annual mean NO ₂ Objective and 24-hour mean PM ₁₀ Objective resulted in declaration of an AQMA in Maidstone Town Centre due to road traffic emissions.	Further assessment of NO ₂ and PM ₁₀ in AQMA. Support for continuance of AQMA – Action Plan required.
NO ₂	Road Traffic →		
PM ₁₀	Road Traffic →		
Carbon monoxide			
Benzene			
1,3 Butadiene			
Lead			

The individual stages are summarised briefly with respect to outcome below:

➤ *Updating and Screening Assessment*

The Updating and Screening Assessment (2003) was the first phase of the second round review and assessment. Similar to Stage One of the previous round, there was consideration of the seven pollutants of concern to health and an assessment was made as to whether Air Quality Objectives for these pollutants would be met. Maidstone Borough Council completed this in May 2003, with the conclusion that a Detailed Assessment was required for NO₂ and PM₁₀ due to emissions from road traffic in Maidstone Town Centre. All other Air Quality Objectives are expected to be met.

➤ *Detailed Assessment*

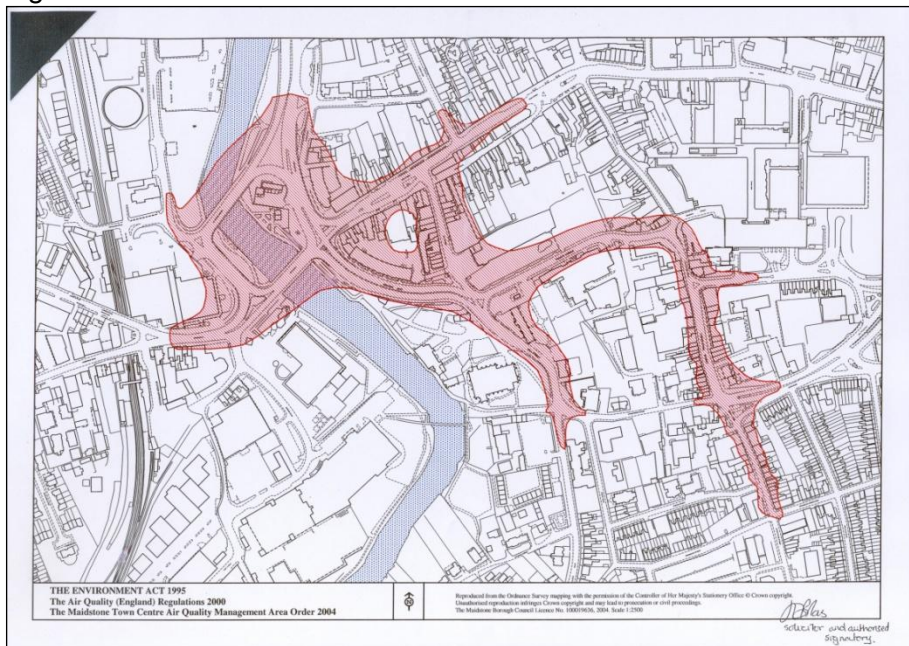
The Detailed Assessment (2004) considered the nitrogen dioxide (NO₂) annual mean objective and PM₁₀ Objectives within Maidstone Town Centre as identified in the Updating and Screening Assessment, through dispersion modelling using ADMS-Roads and additional monitoring undertaken at relevant receptor locations. The results showed that there were predicted exceedences of the NO₂

annual mean Objective and PM₁₀ 24-hour mean Objective identified at the nearest receptors within Maidstone Town Centre.

The Detailed Assessment concluded that Maidstone Borough Council should consider declaring an Air Quality Management Areas (AQMA) on the basis of the potential exceedences in the assessment areas as highlighted in the Detailed Assessment Report where exposure criteria are fulfilled. The Department for Environment, Food and Rural Affairs (DEFRA) accepted the Detailed Assessment conclusions.

MBC declared an AQMA in Maidstone Town Centre for NO₂ and PM₁₀ on 1st January 2005.

Figure 1 Maidstone Town Centre AQMA



➤ Further Assessment

The results of the further assessment source apportionment work indicates that road traffic emissions are the main source of NO_x concentrations in the AQMA, particularly along Lower Stone Street (and Upper Stone Street) where the highest concentrations are predicted. The HDV class vehicles are contributing disproportionately to NO_x concentrations in the AQMA (notably along the High Street); contributing approximately half of NO_x from road traffic but being a relatively small proportion (1.8 – 14.4%; the highest levels being on the High Street) of the vehicle fleet.

Predicted exceedences of the PM₁₀ 24 hour mean Objective are restricted to a small part of the AQMA which is worst affected by the build up of traffic emissions (Lower and Upper Stone Street). The source apportionment of PM₁₀ has been undertaken at the worst case receptor in Lower Stone Street.

Table 2 Source apportionment of NO_x and PM₁₀ concentrations at building façades within the AQMA

Location	NO _x concentrations 2005	%	µg/m ³
Lower Stone Street (x=576224, y=155548)	Background	34.1	51.2
	Road traffic	65.9	99.1
	<i>HDV contribution</i>	35.2	52.9
	<i>LDV contribution</i>	30.7	46.2
High Street (x=576018, y=155740)	Background	60.6	51.2
	Road traffic	39.4	33.3
	<i>HDV contribution</i>	25.0	21.1
	<i>LDV contribution</i>	14.4	12.2
All Saints Primary School (x=576084, y=155347)	Background	57.2	51.2
	Road traffic	42.8	38.3
	<i>HDV contribution</i>	17.4	15.5
	<i>LDV contribution</i>	25.4	22.8
Fairmeadow (Drakes PH) (x=575783, y=155665)	Background	50.6	51.2
	Road traffic	49.4	50.0
	<i>HDV contribution</i>	23.6	23.9
	<i>LDV contribution</i>	25.8	26.1
Location	PM₁₀ concentrations 2005	%	µg/m³
Lower Stone Street (x=576214, y=155546)	Background	50.0	18.3
	Road traffic	50.0	18.3
	<i>HDV contribution</i>	17.8	6.5
	<i>LDV contribution</i>	32.2	11.8

The required reduction in NO_x and PM₁₀ concentrations in the AQMA are shown below:

(1) Required reduction in NO_x/NO₂

The maximum predicted NO_x reduction required within the Town Centre AQMA at the façade in Lower Stone Street [street canyon] (x=576224, y=155548) is 48.1µg/m³ (equivalent to a 32% improvement in NO_x) in 2005 and NO₂ reduction is 15.6µg/m³ (equivalent to a 28% improvement in NO₂). Consequently, the proposed action plan measures aim to reduce the levels of NO_x/NO₂ within the AQMA by this amount.

(2) Required reduction in PM₁₀

The maximum predicted annual mean PM₁₀ in 2005 is 36.6µg/m³, which equates to 58 exceedences of the 24 hour mean PM₁₀ Objective (35 exceedences permitted). The maximum predicted PM₁₀ annual mean reduction required within the Town Centre AQMA at the façade in Lower Stone Street [street canyon] (x=576214, y=155546) is 4.6µg/m³ in 2005. A reduction of 4.6µg/m³ on the annual mean would achieve the 24 hour mean Objective, based on the LAQM.TG(03) relationship between annual mean PM₁₀: Number of exceedences of the 24 hour mean. Consequently, the proposed action plan measures aim to reduce the levels of PM₁₀ within the AQMA by this amount.

Scenario Testing

Modelled traffic data for Maidstone Town Centre (incorporating the AQMA) has been provided by Kent County Council, via their consultants Jacobs Babbie, for expected changes in traffic flows and speeds as a result of proposed transport

measures and new developments within the Town Centre from 2003 up to 2011. It has not been possible to separate out individual measures impacts from the data, so an overall assessment of changes in pollutant concentrations has been undertaken.

The verified model results show (similarly to the further assessment modelled results without inclusion of development proposals) that in 2011 exceedences of the Objectives are restricted to Upper Stone Street and Lower Stone Street with a maximum NO₂ annual mean concentration at a receptor on Upper Stone Street (x=576302, y=155328) of 43.8µg/m³.

Table 3 Traffic Model Impact Assessment Results in µg/m³

Receptor Location	2003 Annual Mean NO₂	2011 Annual Mean NO₂	2003 Annual Mean PM₁₀	2011 Annual Mean PM₁₀
Upper Stone Street (x=576302, y=155328)	56.6	43.8	51.9	35.2
Lower Stone Street (x=576224, y=155548)	56.7	42.1	52.2	32.3
High Street (x=576018, y=155740)	43.4	32.2	28.8	18.3
All Saints Primary School (x=576084, y=155347)	49.4	38.3	38.1	26.4
Fairmeadow (Drakes PH) (x=575783, y=155665)	48.5	38.1	36.6	26.1

3 EXISTING POLICIES AND STRATEGIES TO IMPROVE AIR QUALITY

There are a number of related policies and strategies at the local and regional level that can be tied in directly with the aims of the Air Quality Action Plan, and will help contribute to overall improvements in air quality across the Borough.

3.1 Maidstone Borough-Wide Local Plan (December 2000)

The Local Plan, which forms part of the overall development plan for Maidstone, details the land use planning policies and proposals for the Borough.

It is fundamental to the achievement of the aims of the Air Quality Action Plan to have a Local Plan that recognises the importance of air quality in terms of the environmental impact of development and the need for sustainable transport measures. Maidstone Borough-Wide Local Plan 2000 incorporates relevant policies of the Kent Structure Plan and addresses air quality issues through the following policies within the Strategic Objectives chapter (summarised):

Sustainable Development:

“Objective 1 To ensure that all development proposals, land use policies, and transportation schemes, are consistent with the need to ensure a sustainable future, and that the stewardship of the environment undertaken by today's administrators, developers, residents, businesses and visitors, does not create unavoidable problems for their successors.”

“Objective 2 To recognise the importance of Maidstone's rich and diverse environmental resources; to protect and where possible enhance the variety and distinctiveness of the Borough's urban and rural environment; and to ensure that the quality of Maidstone's distinctive identity is protected for current and future generations.”

“Objective 12 To implement a co-ordinated transportation strategy to ensure that accessibility to all parts of the Borough is enhanced to the maximum degree practicable, and to provide an array of transportation modes, including public transport, cycling and walking, in addition to the private car, such that residents and visitors to the Borough are able to choose practical options for sustainable transportation.”

Pollution (Air, Land and Water):

“POLICY ENV1 Planning permission will not be granted for development which, itself or cumulatively, would harm the quality of air, land or water unless satisfactory mitigation measures are provided. Development adjoining polluting uses will not be permitted unless adequate measures are undertaken to eliminate any identified pollution risk.”

In addition to a policy on Pollution the Local Plan includes strategies and policies with the following aims:

- to reduce unnecessary use of the private car;
- to encourage and facilitate the greater use of public transport, cycling and walking;
- to enable the free flow of long distance heavy goods traffic passing through the Borough, in liaison with the Highway Authority, by avoiding unsuitable local roads and through urban areas;

- to address the growing levels of traffic moving between the Medway Towns and the Maidstone and Medway Gap areas by the promotion of alternatives to the private car, i.e. greater utilisation of the Medway Valley Railway Line;
- to ensure that provision is made at major development proposals in the Borough for the needs of pedestrians, cyclists and public transport users;
- to improve pedestrian safety and reduce pollution in the Town through the implementation of environmental improvements, i.e. pedestrianisation and traffic diversion schemes in the Centre;
- to improve the accessibility of the Town Centre for long-stay users under the Park and Ride schemes;
- to improve the accessibility of the Town for short-stay users, i.e. shoppers, through the provision of parking in the Centre.

The adopted Local Plan 2000 covers the period to 2006. A review of the Local Plan has begun in anticipation of the proposed changes to the planning system as required by the new Planning Compulsory Purchase Act.

The Government has introduced a new national planning system which has seen Local Plans replaced by Local Development Frameworks (LDFs) which will comprise of a series of Local Development Documents (LDDs). These documents will be more concise than current local plans and include a core strategy. All authorities will be expected to have in place the new plans by 2007. The new proposals are intended to speed the plan making process up by producing more focused, flexible, and slimmer plans. These include undertaking a Strategic Environmental Appraisal/Sustainability Appraisal that needs to be undertaken alongside plan preparation, and the need to prepare a Statement of Community Involvement. This Statement will identify how the Council intend to consult on the plan in particular those groups that are traditionally hard to reach.

3.2 Maidstone Integrated Transport Strategy (2005 – 2015)

Whilst the Kent Local Transport Plan is the main framework for transport investment in the District, the Maidstone Integrated Transport Strategy sets out the Council's long-term vision for a sustainable integrated transport system. The Strategy is a dynamic document which will evolve with time and be reviewed annually with benchmarking against key targets.

Key targets with particular implications for local air quality include:

- Limit growth in traffic volume to 5% less than predicted over 10 years
- Meet emissions targets for NO₂ and PM₁₀ by 2010
- Increase the use of public transport to 5% above current levels

There are transport measures within the Strategy which go beyond those proposed within the 2nd Local Transport Plan, and these aim to secure long term benefits in terms of reducing congestion and improving air quality problems in Maidstone. These include proposals for major transport infrastructure schemes and these are discussed in more detail in Section 7.

3.3 Maidstone Borough Local Agenda 21 (LA21) Strategy (2001)

LA21 originated from the Earth Summit in Rio de Janeiro in 1992. It incorporates the concept of sustainable development – meeting current needs without compromising the needs of future generations. The LA21 process enables communities to take an

active role in conserving their local environment and improving their quality of life. Maidstone adopted its LA21 Strategy "*Your Future, Your Choice*" in April 2001. The Strategy aims to protect the health and safety of individuals and groups within the community, improve public transport, and make cycling and walking safer and more attractive. This has been largely superseded by the Community Strategy and (draft) Climate Change Strategy.

3.4 Maidstone Borough Community Strategy (2003)

The Community Strategy (April 2003), 'Maidstone Matters', has been drawn up for Maidstone Borough, by the Maidstone Local Strategic Partnership which includes representatives from the County and parish Councils, and public, private, voluntary and community sectors. The Environment and Transport are both listed as key issues within the Strategy and the Strategy promotes sustainable development and transport in the area.

3.5 Maidstone Borough Draft Climate Change Strategy (2005)

The Community Strategy for Maidstone, the overarching long-term strategy for the Borough, identifies 'Address climate change and its impact on the lives of our citizens' as a priority. The development of Climate Change Action Plans is identified as one of 21 headline projects that will help to deliver the priorities in the Community Strategy. One of the key aims of the Plan is to encourage sustainable forms of transport to reduce congestion and pollution and this has clear links to proposed measures to improve local air quality.

3.6 Kent Environment Strategy (2003)

The Kent Environment Strategy was drawn up by Kent County Council in partnership with the District Authorities. The objectives of the Strategy relevant to air quality are shown below in Figure 2. In February 2005, Kent County Council launched the 2005 Kent Environment Strategy Progress Report (2005). Progress with actions relating to air quality is shown in Table 4.

3.7 Kent Local Transport Plan

The White Paper 'A New Deal for Transport' set out new policy initiatives to create a better, more integrated sustainable transport system. This included greater emphasis on public transport, and cyclist and pedestrian accessibility, with initiatives such as Safer Routes to School, Green Transport Plans and Quality Partnerships between the local authority and transport operators. This was to be achieved through Local Transport Plans (LTP) with a five-year strategy for the implementation of local and regional transport measures. LTPs are required to be consistent with County Structure Plans, to ensure consistency and sustainability in transport proposals. KCC in partnership with the district authorities has developed the LTP for Kent. LTP strategies and initiatives are likely to have a significant impact on local air quality and therefore need to be closely co-ordinated with Air Quality Action Plans.

Existing measures developed through the LTP through continued partnership working of MBC with KCC will help work towards the aims of the Action Plan. These include:

- Introduction and ongoing funding of four Park and Ride schemes, and promotion of this to local employers.
- With Arriva and Kent County Council, membership of Maidstone Quality Bus Partnership. This encourages investment on the local bus network and the retention of services that might otherwise be withdrawn.

- Introduction of bus priority measures on London Road, Sutton Road and Ashford Road.
- Increased bus priority measures in the town centre.
- Real time information displays at major bus stops in the urban area.
- Improved bus shelters and passenger facilities at many bus stops, particularly in the Parkwood, Shepway, Senacre and London Road areas.
- Financial support for socially necessary bus services that would not otherwise operate, including Kent Karrier and two Age Concern day centre runs.
- Introduction of six cycle routes, and an associated link, that forms the beginnings of a cycle network for the town.

Kent County Council drew up a consultation document for the 2nd LTP. This document publicised the main themes for the 2nd LTP (2006/07 – 2010/11), which includes air quality as one of four shared priorities (which will be closely linked to 'congestion', also a shared priority). The 2nd LTP will be completed by the end of March 2006. Relevant proposed schemes likely to have both a direct and indirect impact on local air quality within the AQMA have been incorporated within the 2nd LTP and form the foundation for this Action Plan. All relevant transport measures within the Action Plan are aligned with the 2nd LTP and will be reported on through the LTP annual progress reports.

Figure 2 Objectives of the Kent Environment Strategy (2003) with respect to Air Quality

How will we get there?			
What?	Why?	Who?	When?
Meeting National Air Quality Objectives			
Develop and implement strategies and action plans to work towards achieving the National Air Quality Objectives.	To reduce the risks on health and the environment from high levels of pollution.	DCs & MC assisted by KMAQP	Prepare, implement and revise AQMA Action Plans from 2002; designation of further AQMAs as necessary
Reducing the impact on environmental health			
Establish and disseminate information about Nitrogen Dioxide (NO ₂), Sulphur Dioxide (SO ₂), Carbon Monoxide (CO), Particulates (PM ₁₀ and PM _{2.5}) and Ozone (O ₃) levels.	To provide a better understanding of air pollution, determine trends, inform the future action required and raise the awareness of those susceptible to high levels of pollution.	Kent and Medway Air Quality Monitoring Network (DCs & MC)	<ul style="list-style-type: none"> Monthly and annual monitoring reports Daily bulletins via the internet (www.kentair.org.uk)
Planning new development appropriately			
Incorporate air quality policies in the Kent and Medway Structure Plan and District Council Local Plans informed by the Kent and Medway Air Quality Model's (KMAQM) predictions of the air quality impacts associated with cumulative effects of proposed new development.	To minimise the impact on air quality from future development across Kent, particularly in areas identified as having poor air quality.	KCC, DCs & MC	<ul style="list-style-type: none"> KMSP - Draft on deposit 2003 Local Plan Review – ongoing Ongoing use of the KMAQM to inform planning application decisions
Raise awareness and encourage greater interaction amongst the relevant decision-makers including environmental health, transport and land use planning officers.	To ensure that the impact of development on air quality is appropriately assessed.	Kent and Medway Air Quality Partnership	Ongoing
Regulate industrial processes through Integrated Pollution Prevention Control (IPPC) and Local Air Pollution Control (LAPC) and raise environmental standards through the use of environmentally friendly technology.	To minimise the impact of current and proposed industrial processes and associated emissions such as volatile organic compounds.	EA, District Councils, DCs & MC	<ul style="list-style-type: none"> Ongoing IPPC and LAPC regulation Raised environmental standards as part of 4 year review of IPPC and LAPC authorisations Ongoing through planning application decisions
Incorporate more sustainable forms of transport, incentives and traffic management measures into the Local Transport Plan (LTP).	To move towards methods of transport which cause less pollution and promote walking, cycling and public transport.	KCC in consultation with DCs & MC	Strengthen policies in Local Transport Plan by 2004
Tackling transboundary pollution			
Tackle transboundary pollutants (i.e. ozone and particles) at a regional level by sharing information and working together with neighbouring authorities in the UK and northern France.	To address pollution at a regional level as airborne pollution does not recognise local authority boundaries.	KCC on behalf of the KMAQP	Ongoing through transnational projects

Table 5

Kent Environment Strategy Progress Report 2005 –Air Quality

What we said we would do	What has happened?	What next?
Develop and implement strategies and action plans to work towards achieving National Air Quality Objectives -implement and revise Air Quality Management Area (AQMA) Actions Plans and designate further AQMAs as necessary	<ul style="list-style-type: none"> •Detailed Assessments completed for Ashford, Dartford, Dover, Gravesham, Maidstone, Tonbridge and Malling and Tunbridge Wells, identifying potential AQMAs •Action Plans prepared by Medway, Dartford, Dover, Gravesham, Maidstone, Sevenoaks and Tonbridge and Malling •Some Air Quality Action Plans stalled or not yet adopted by local authorities –no implementation of actual measures 	<ul style="list-style-type: none"> •Quantify results of modelling undertaken in Detailed Assessments -areas predicted to exceed National Air Quality Objectives will be formally designated as AQMAs •Action Plans to be (i)implemented (ii)produced where further AQMAs designated(iii)incorporated in Local Transport Plans •Thanet and Canterbury to proceed to Detailed Assessment for NO₂ and PM₁₀ •Develop awareness raising campaigns to change behaviour, especially in problem areas
Establish and disseminate information about levels of Nitrogen Dioxide (NO ₂), Sulphur Dioxide (SO ₂),Carbon Monoxide (CO) Particulates (PM ₁₀ and PM ₂₅) and Ozone (O ₃)	<ul style="list-style-type: none"> •Continuous monitoring network exists in the County and a number of new sites have been brought on-line to assist with Local Air Quality Management •New sites located in Swale 	<ul style="list-style-type: none"> •Continue monitoring, including annual reports •Relaunch Kent Monitoring Network website in 2005 to improve user-friendliness •Address further monitoring requirements identified in Ashford (M20 and Canterbury Road)and Tunbridge Wells
Incorporate air quality policies in Kent and Medway Structure Plan (KMSP) and local plans informed by Kent and Medway Air Quality Model (KMAQM) predictions of cumulative impacts of proposed new development	<ul style="list-style-type: none"> •KMSP includes policies to improve air quality and reduce pollution •Some local plans have incorporated air quality policies •KMAQM used to assess impact of major developments (e.g.Cliffe Airport) 	<ul style="list-style-type: none"> •Emerging LDFs to take on board changes in National Air Quality policy •Apply policies in ongoing consideration of planning applications •Update KMAQM in 2005 to allow modelling at regional and local level •Produce Supplementary Planning Guidance for developments
Raise awareness and encourage greater interaction among decision-makers on environment, health, transport and land use	<ul style="list-style-type: none"> •County wide air quality seminar held in 2003 •Local Air Quality Management action has raised awareness 	<ul style="list-style-type: none"> •Hold air quality seminar April 2005 •Re-launch website •Increase involvement of planners and health sector in KMAQP
Regulate industrial processes through Integrated Pollution Prevention Control (IPPC) and Local Air Pollution Control (LAPC)and raise environmental standards through the use of environmentally friendly technology	<ul style="list-style-type: none"> •EA and district councils regulate industrial processes – new system of regulation introduced in past 2 years •KCC and district councils assessing planning proposals on a case by case basis 	<ul style="list-style-type: none"> •Ongoing •Run KMAQM where appropriate to assess cumulative impacts
Incorporate more sustainable forms of transport, incentives and traffic management measures into the LTP 2006-11	<ul style="list-style-type: none"> •LTP reviews and Strategic Environmental Assessment underway 	<ul style="list-style-type: none"> •Submit Draft LTPs July 2005 – Strategic Environmental Assessments will test sustainability
Tackle transboundary pollutants (i.e. ozone and particles)at regional level by sharing information and working together with neighbouring authorities in the UK and northern France	<ul style="list-style-type: none"> •Work underway to understand composition of dust particles and their cross-Channel movement 	<ul style="list-style-type: none"> •Complete project June 2006 – concluding with conference •Conduct further work on ozone with a bid being progressed with Sussex Air Quality Steering Group

3.8 Kent Structure Plan

The Deposit Draft Kent and Medway Structure Plan was published in September 2003 and is due to be adopted in February 2006, following consultation. The adopted Plan will take on board consultation comments, the Examination in Public and the Inspectors Report. The Kent Structure Plan policies provide the foundation for the District's local development plans.

There are three policies relating to air quality in the Deposit Draft.

Policy NR4: Pollution Impacts

The quality of Kent's environment will be conserved and enhanced. This will include the visual, ecological, geological, historic and water environments, good air quality and levels of tranquility and light intrusion. Development should be planned and designed to avoid, or adequately mitigate, pollution impacts. Proposals likely to have adverse implications for pollution should be the subject of a pollution impact assessment. In assessing proposals local authorities will take into account:

- a) Impact on prevailing background pollution levels; and
- b) The cumulative impacts of proposals on pollution levels; and
- c) The ability to mitigate adverse pollution impacts; and
- d) The extent and potential extremes of any impacts on air quality, water resources, biodiversity and human health.

Development which would result in, or significantly contribute to, unacceptable levels of pollution, will not be permitted.

Policy NR5: Development Sensitive to Pollution

Development which would be sensitive to adverse levels of noise, air, light and other pollution, will not be supported where such conditions exist, or are in prospect, and where mitigation measures would not afford satisfactory protection.

Policy NR6: Air Quality Management Areas

The local authorities are required to ensure that air quality in designated Air Quality Management Areas is improved. The scale and character of development in, or adjoining such areas, should be controlled so as not to adversely affect this improvement.

4 FINANCING

Direct measures proposed for the AQMA are the responsibility of Kent County Council (KCC), through the Kent Highways Unit, and will be required to be assessed in more detail for their cost-effectiveness through feasibility studies. These will largely be funded through LTP bids, although Maidstone Borough Council provide a £400,000 subsidy to Park and Ride and £30,000 to improve bus shelters, which aids the Quality Bus Partnership.

Indirect general measures to improve air quality in the area will be funded by MBC, such as air quality monitoring and promotional activities, or by KCC through the Kent LTP. The LTP has allocated funding to a number of schemes in the Borough of Maidstone that tie in with Action Plan measures to improve air quality in the area.

2nd LTP 2006/7 – 2010/11 Funding allocations (proposed):

- £1,500,000 for Maidstone UTMC and Variable Message Signage (VMS)
- £550,000 for Maidstone Bridge Gyrotory Improvements
- £370,000 for Bus Corridor improvements
- £190,000 for enhancement of Park & Ride facilities

In addition, annual funding for Quality Partnerships, Safer Routes to School, Railfreight Strategy, Cycle Strategy and Walking Strategy has been made available through LTP bids. MBC will work together with KCC, through the Kent Highways Unit, to review current bids for the area in the light of the findings of the review and assessment of air quality. Additional bids will be made as necessary to secure further improvements in air quality.

5 CONSULTATION

Under Schedule 11 of the Act, Local Authorities are required to consult on their draft LAQM Action Plan. It is important for the success of the Action Plan to have involvement by all local stakeholders including local residents, community groups and local businesses in the drawing up the Action Plan in addition to their active participation in achieving the action plan measures. The Action Plan has been drawn up for consultation with relevant environmental health and transport representatives from MBC and KCC.

The following is a list of statutory and non-statutory consultees to which this draft Plan will be sent:

- The Secretary of State
- The Highways Agency
- The Environment Agency
- Kent County Council
- Kent Highways Unit
- Primary Care Trusts
- MBC Councillors and Officers
- Neighbouring local authorities
- Local residents within and bordering the AQMA
- Relevant local businesses, community groups and forums
- Other relevant local stakeholders

All comments from both Statutory and non-statutory consultees received on the draft Action Plan will be considered and incorporated where appropriate into the final Action Plan. The timescale for consultation shall be a minimum of 8 weeks.

6 PROPOSED MEASURES

The two sections below outline the proposed direct measures for the Maidstone Town Centre AQMA and indirect measures to improve air quality throughout the Borough.

Direct measures to reduce NO₂ concentrations within the AQMA concentrate on the dominant sources of emissions – road traffic. Direct measures incorporate the following themes:

- Theme 1: Reduction of traffic flows within the AQMA
- Theme 2: Reduction of pollutant emissions within the AQMA
- Theme 3: Encouragement of public transport uptake

Indirect measures target those general emissions within an area that aim to further reduce background levels of pollution above and beyond that likely to be achieved by existing national and international agreements. Indirect measures incorporate the following themes:

- Theme 1: Reduction of the need to travel by car
- Theme 2: Reduction of background concentrations

6.1 Proposed Direct Measures for the Maidstone Town Centre AQMA

The following provides the outcome of discussions with MBC and KCC representatives with respect to a number of action plan measures that have been proposed to reduce NO_x/NO₂ emissions in the Maidstone Town Centre AQMA in pursuit of the NO₂ annual mean and PM₁₀ 24-hour mean Air Quality Objectives.

Theme 1: Reduction in traffic flows

Action 1: Traffic Rerouting using Variable Message Signage (VMS)

There are proposals in the 2nd LTP which have the potential to improve local air quality through improvements to the Maidstone Town Centre UTMC and Variable Message Signage (VMS). Improvements are planned over the 5 year LTP period which will enhance car park management, provide live congestion information and enable Active Traffic Management (ATM). This has the potential to enable management of traffic flows through the town centre, particularly at peak hours, and relieve congestion in the AQMA by diverting traffic via alternative routes. There will also be potential improvements to public transport through bus prioritisation.

Objective	To divert traffic away from pollution hotspots (AQMA), particularly at peak hours. Reduce emissions of NO _x in AQMA.
Responsibility	KCC/Kent Highways Unit
Air Quality Impacts	High.
Non Air Quality Impacts	Potential reduction in journey time; reduction in congestion; improvements to public transport.
Perception	Likely to be perceived as positive.
Cost-effectiveness & Feasibility	Cost – Moderate. High cost-effectiveness/feasibility.

Action 2: Traffic Rerouting for Motorway Diversions

In addition to LTP proposals, MBC has made representations to the Highways Agency to address the problems on the motorway network which lead to diversions and gridlock in the town centre. The Highways Agency is looking into the provision of improved signage on the M20 and signed diversion routes to the M2.

Objective	To divert traffic away from pollution hotspots (AQMA) when motorway network problems occur. Reduce emissions of NO _x in AQMA.
Responsibility	Highways Agency
Air Quality Impacts	Low.
Non Air Quality Impacts	Potential reduction in journey time; reduction in congestion.
Perception	Likely to be perceived as positive.
Cost-effectiveness & Feasibility	Cost – Low. High cost-effectiveness/feasibility.

Action 3: New Road Infrastructure

The Maidstone Integrated Transport Strategy includes proposals for three improvements to infrastructure which will divert traffic from the town centre AQMA

and ease congestion (notably for schemes 2&3). This forms part of longer term aspirations to improve traffic flows and pollution problems within the area and is expected to be delivered by 2015 (post LTP2). Feasibility Studies will be undertaken in 2006/7 to take forward these improvements.

1. Leeds/Langley Bypass – The bypass would provide an alternative route between the M20 and south east Maidstone (particularly important in relation to HGV movements to Parkwood Industrial Estate)
2. All Saints Link Road – This link road would provide the missing link to the gyratory system and provide air quality improvements in one of the main pollution hotspots (Knight Rider Street and Lower Stone Street)
3. Upper Stone Street (Southern Access Initiative) – Improvements to Upper Stone Street (including dualling) would improve congestion on this route and improve access to and from the South of the Borough. Upper Stone Street currently has the highest measured levels of nitrogen dioxide and therefore infrastructure improvements combined with active traffic management could deliver significant air quality improvements.

Objective	To relieve congestion hotspots and improve access
Responsibility	KCC/Kent Highways Unit
Air Quality Impacts	High
Non Air Quality Impacts	Potential reduction in journey time, through reduced congestion.
Perception	Likely to be perceived as positive.
Cost-effectiveness & Feasibility	Cost – High. Cost-effectiveness and feasibility to be investigated through traffic assessments.

Theme 2: Reduction in pollutant emissions

Action 4: Traffic Management – Urban Traffic Management System (UTMS) and Junction Improvements

There are proposals in the 2nd LTP which have the potential to improve local air quality through UTMC (as referred to in Theme 1, Action 1) and junction improvements. Improvements are planned over the first three years of the 2nd LTP to redesign the layout of the Maidstone Bridge Gyratory (within the AQMA) which is a critical part of the network being the only road crossing point of the river within the town centre. The proposals include construction of a new east-west lane, which will allow traffic on the A229 to avoid the gyratory. This has the potential to reduce pollutant emissions by relieving congestion and improving traffic flows in the AQMA. In addition, there is potential to increase public transport uptake through improved bus reliability. In the longer term, through the Maidstone Integrated Transport Strategy, the potential for an additional river crossing will be explored. This would potentially be delivered in the 3rd LTP period.

Objective	To smooth traffic flow through improvements to junctions in order to reduce emissions from stop, start driving. Should tackle congestion hotspots.
Responsibility	KCC/Kent Highways Unit
Air Quality Impacts	Moderate. Air quality improvements will largely be localised, where NO _x emissions are due to low speeds and congestion.
Non Air Quality Impacts	Improvements in journey times; potential for public transport improvements
Perception	Likely to be perceived as positive
Cost-effectiveness & Feasibility	Low Cost.

Action 5: Pedestrianisation

There are pedestrian proposals for the High Street, through developer funding to further improve the environment for pedestrians. Consideration is being made to further reallocation of roadspace to pedestrians. The High Street currently has a bus priority and is a key route for a number of buses, including Park & Ride buses. Any proposals would need to be considered carefully in partnership with transport operations and bus users.

Objective	To remove traffic emissions completely along specific streets. May be part of a wider environmental improvement scheme.
Responsibility	KCC/ Kent Highways Unit
Air Quality Impacts	High locally within pedestrianised area. Low overall.
Non Air Quality Impacts	Potential for reduction in noise levels
Perception	Likely to be perceived as positive
Cost-effectiveness & Feasibility	Low cost.

Action 6: Emissions Standards for Council Fleet and Public Service Vehicles

This measure would lead to reductions in emissions of NO_x and PM₁₀ by improving emissions standards of vehicles in the public service sectors. A Maidstone Bus Quality Partnership has been established with partnership working with transport operators Arriva to improve public transport facilities. The potential for improving emissions through the BQP will be explored by the Council. Emissions from taxis are checked as part of the requirements of receiving a licence through the Certificate of Compliance. Consideration will be given to opportunities to initiate further checks on emissions and setting of minimum emissions standards for taxis through the licensing system.

The Council provides many of its services through contractors e.g. refuse collection, amenity cleansing and ground maintenance. The Council does not own or directly operate a fleet of vehicles or plant, but will continue to liaise with contractors to investigate the prospects for reducing emissions from their vehicles through renewal of contracts.

Objective	Reduce NO _x emissions within the AQMA, through improvement in emissions standards of Council vehicles, buses and taxis. To be achieved through promotion of Energy Saving Trust (EST) grants, Quality Partnerships, contract review and licensing.
Responsibility	MBC/KCC/Transport operators
Air Quality Impacts	Low – Moderate; dependant on uptake.
Non Air Quality Impacts	Socio-economic implications of increased costs to transport operators, contractors and MBC.
Perception	Likely to be viewed as positive by majority of local stakeholders.
Cost-effectiveness & Feasibility	Cost-effectiveness & Feasibility to be investigated.

Theme 3: Encouragement of Public Transport Uptake

Action 7: Public Transport Service Improvements

There are proposals in the 2nd LTP which have the potential to improve local air quality through improvements to bus corridors. The improvements are programmed over the 5 year LTP period targeting improvements to bus stops in the north, east, and south sectors of Maidstone and specifically improvements along the A20 Corridor (west of the town centre) and A274 Sutton Road corridor. These measures have the potential to improve public transport uptake and reduce traffic entering the town centre AQMA.

In addition, the introduction of free passes for older and disabled people is expected to encourage modal shift from the car to bus services.

Rail services within the Borough are considered slow, have a lack of connectivity and are overcrowded at peak times. MBC, in partnership working with KCC and rail operators are considering measures to improve rail services. The Medway Valley Line is currently under-utilised, but could be significantly improved through linkage to London via Strood and the potential to develop this link is being explored during 2005/2006. The Medway Valley Community Rail partnership has recently been formed and Maidstone Borough Council is a member together with KCC and many local Parish Councils and other organisations. There are also proposals, through developer funding, to improve the Maidstone East Railway station and develop a Maidstone East Interchange with improved facilities for buses, taxis, cars and cycle parking.

Objective	Improve public transport uptake. Reduce car use and congestion.
Responsibility	KCC/Public transport operators
Air Quality Impacts	Low.
Non Air Quality Impacts	Potential reduction in noise; reduced congestion; safer roads
Perception	Likely to be perceived as positive.
Cost-effectiveness & Feasibility	Cost- Low.

Action 8: Enhancement of Park & Ride Schemes

There are proposals in the 2nd LTP which have the potential to improve local air quality through enhancement of existing Park & Ride schemes over the 5 year period of the 2nd LTP. This measure has the potential to increase uptake of public transport and reduce traffic in the AQMA at peak hours. The upgrade of existing schemes includes real-time information (2007/2008), and improved bus priority at the Sittingbourne Road site (2006 -2009). There are also proposals, through developer funding, for upgrade and expansion of the Sittingbourne site and Coombe Quarry site (2006/7) where demand is highest.

In addition to enhancement of existing Park & Ride Schemes, the potential for new Park & Ride schemes on the A229 and A26 is currently being explored to develop services on all radial routes.

Objective	Improve public transport uptake. Reduce car use and congestion at peak hours.
Responsibility	KCC/Kent Highways Unit
Air Quality Impacts	Low. Potentially moderate if new schemes introduced.
Non Air Quality Impacts	Potential reduction in noise; reduced congestion; safer roads
Perception	Likely to be positive for Park & Ride schemes.
Cost-effectiveness & Feasibility	Cost – low.

Action 9: Sustainable Parking Strategy

A sustainable parking strategy is being developed for the Borough in the next two years (2005 – 2007) through a mix of local plan policies (through the Local Development Framework) and pricing regime at the Council owned town centre car parks. The strategy will include a review of street parking, off-street parking, residents parking, Park and Ride schemes and parking standards for development.

Objective	Improve public transport uptake. Reduce car use and congestion.
Responsibility	KCC/Kent Highways Unit
Air Quality Impacts	Low to Moderate; dependant on levels of traffic reduction.
Non Air Quality Impacts	Potential reduction in noise; reduced congestion; safer roads
Perception	Likely to be positive for Park & Ride schemes; less positive for parking restrictions.
Cost-effectiveness & Feasibility	Cost-effectiveness and feasibility to be investigated through the development of the Strategy in the next two years.

Direct Measures considered but dismissed during internal consultation on the grounds of cost-effectiveness and feasibility

Low Emission Zone (LEZ) or Clear Zone

A Low Emission Zone (LEZ) is a geographic zone defined for an area where vehicles of an acceptable emissions standard (normally Euro III) can enter and move around. The concept is held widely as a way of achieving air quality objectives within large urban area where economies of scale can be achieved with respect to set-up and operating costs. Further consideration to the implementation of an LEZ within Maidstone has been dismissed on the grounds of cost alone.

A Clear Zone is a defined urban area, usually a City, which exploits new technologies and operational approaches to improve quality of life and support economic growth, whilst minimising the adverse impacts of its transport systems. The implementation of a Clear Zone within Maidstone has been dismissed on the grounds of cost-effectiveness.

Road User Charging or Workplace Parking Levy

The Transport Act 2000 gave local authorities powers to introduce road user charging or workplace parking levy schemes. The revenue generated from such schemes would be used to improve local transport in the area.

The costs of introducing a road charging scheme can be offset by the revenue that is generated. Area wide charging is likely to be more costly than a designated route. The feasibility of area wide schemes is being considered in the regional Multi-modal Studies and it is unlikely that they will be introduced in the short term to achieve the air quality objective. Any scheme in Kent could only be introduced on a co-ordinated basis that dealt with all urban centres and did not give economic advantage to one over the other.

Based on charging workers for parking at their place of work, the implementation of a workplace parking levy could reduce the number of private vehicles entering Maidstone. The proposal is considered likely to be controversial and unpopular with voters due to the economic implications for the local workforce. This has therefore been dismissed at this stage on the ground of feasibility. Future consideration to such schemes may be required if other action plan proposals do not deliver sufficient air quality improvements.

Roadside Emissions Testing

Under new powers of authority (Roadside Vehicle Emissions (Fixed Penalty) Regulations 2002) local authorities are able to undertake roadside emissions testing of vehicles. The aim is to identify those vehicles that make a disproportionate contribution to emissions through poor maintenance with on-the-spot fines for those that fail. The scheme of a formal roadside emissions testing programme is not considered economically viable for stand-alone authorities following trials by a number of pilot authorities and has therefore been dismissed as a possibility for inclusion in the current action plan. The air quality impact of such schemes is also low and therefore cost-effectiveness is low.

The use of voluntary vehicle emissions testing as a promotional and educational tool is being explored through the Kent and Medway Air Quality Partnership.

Idling engine emissions

The Road Traffic (Vehicle Emissions)(Fixed Penalty) (England) Regulations 2002 permit all English local authorities to take action against drivers who leave their vehicle engines running unnecessarily when parked. The local authority can issue a fixed penalty (£20) to any driver blatantly running their engine unnecessarily and who refuses all reasonable requests to switch off.

Tackling congestion and the large traffic volumes passing through the town centre will be the main deliverer of air quality improvements in Maidstone. Idling emissions from parked vehicles are not considered a significant issue to warrant introducing specific measures with necessary resource implications. The proposal has therefore been dismissed on the ground of cost-effectiveness.

A Summary of the direct measures for the Maidstone Town Centre AQMA is shown in Table 5.

The ranking of options has been based on professional judgement through the assessment of a number of considerations; including the costs and benefits of all the options, feasibility and acceptability, and whether they will achieve the Air Quality Objective. It is likely that the NO₂ annual mean Objective will only be achieved through a combination of measures.

The costs are provided as:

- **'Low' (up to £1 million);**
- **'Moderate' (between £1 million – £5 million); and,**
- **'High' (greater than £5 million).**

The benefits are provided as:

- **'Low' (<0.2µg/m³);**
- **'Moderate' (between 0.2 – 1 µg/m³); and,**
- **'High' (greater than 1 µg/m³).**

6.2 Proposed Indirect Borough-wide Measures to Improve Air Quality

There are indirect measures that can be implemented by MBC, or which MBC can feed into, aimed at improving the air quality throughout the Borough. These will reduce background pollution concentrations and indirectly will work towards achieving the Air Quality Objectives within the AQMA.

Theme 1 Reduction of the need to travel by car

1. Transport measures

Sustainable Travel Plans

A Travel Plan is a general term for a package of measures tailored to the needs of an organisation to introduce greener, cleaner and sustainable travel choices and reduce the reliance on the car. It involves the development of a set of mechanisms, initiatives and targets that together can enable an organisation to reduce the impact of travel and transport on the environment. This will include the consideration of alternative fuels.

- School Travel Plans – The 2nd LTP Objective is for all schools to have a school travel plan and increase the number of children walking and cycling to school by 2010. Annual funding allocations are made to support the ‘Safer routes to school’ schemes and support school Travel Plans.
- Employer Travel Plans – The 2nd LTP Objective is to approach all major employers with more than 200 personnel and offer assistance to establish Sustainable Travel Plans and assist in the implementation of 10 Travel Plans per year. Within Maidstone it is already a planning requirement for all new business developments to submit travel plans as part of their planning permission.

Kent County Council as the major town centre employer has a work place Travel Plan in place.

- Maidstone Borough Council’s Travel Plan - MBC have developed a Council Travel Plan to help manage and reduce the Council’s impact on the environment and improve travel choices for staff. Maidstone Borough Council’s Travel Plan will be completely revised in preparation for its move to new offices in December 2007.

The key proposed actions within the Plan include:

- Joining and promoting the Kent County Council’s Car Share scheme
- Members of the Council’s Travel Plan Club having a free and guaranteed ride home if car share arrangements break down
- Exploring a range of discounted fares for staff on public transport
- Providing advice on pedestrian and cycling access to the Council offices
- Providing personal travel plans to staff on request
- Encouraging home working and providing necessary equipment
- Providing a dual fuel pool car and encouraging lease car drivers to choose cleaner fuel vehicles

- Providing necessary changing facilities for staff choosing to cycle

Indicators that will allow modal shift to be measured have been identified as:-

- % reduction in home-to-work mileage
- % staff car sharing
- % staff travelling by public transport
- % staff walking and cycling to work and meeting within Maidstone

Measure 1: MBC will implement the Council's Travel Plan measures and encourage uptake of sustainable modes of transport

Measure 2: MBC will continue to work together with KCC to encourage the uptake of Employer and School Travel Plans within the Borough.

School Transport

In addition to School travel plans, proposals are in place to further reduce car use for school journeys through a strategic school transport provision approach i.e. Yellow Buses. The first of these operated by Nu-venture is already in operation and others are under consideration.

Measure 3: MBC will continue to work together with KCC to encourage modal shift from the car to buses through implementation of a strategic approach to school transport provision.

Cycle and Walking Strategies

Regional strategies are in place through Kent County Council to improve cycling and walking facilities throughout Kent and increase uptake.

MBC works with KCC to encourage greater uptake of cycling in the Borough and improve cycle facilities and routes in the Borough. MBC is working with KCC on progress with cycle routes in the area, including the town centre cycle route to Maidstone West train station, the Loose to town centre cycle route and Coxheath and Loose to Tovil cycle routes.

Measure 4: MBC will continue to work with KCC to improve the facilities for cycling and walking within Maidstone and encourage greater uptake.

2. Land Use Planning

Section 4 .1 summarises the main Maidstone Borough-Wide Local Plan 2000 policies which will contribute to improvements in air quality. Policies have been incorporated to ensure developments with the potential to cause environmental impacts are adequately assessed and to refuse development proposals where there are unacceptable impacts (Policy Env1). In 2005, Maidstone Borough Council Environmental Health appraised 12 Air Quality Assessments as part of the Planning Application process.

Measure 5: MBC Environmental Health will continue to work closely with the Planning Department to ensure that air quality is taken into account in the planning process when located in or close to the AQMA or in areas marginally below air quality objectives.

Land use planning has a key role in delivering sustainable transport systems within the area by influencing the location, scale, density, design and mix of development and encouraging alternative modes of travel.

Measure 6: MBC will continue to work together with developers to improve sustainable transport links serving new developments.

To provide support to local plan policies, the development of supplementary planning guidance for air quality assessments of developments and, in particular, for development which may impact on an AQMA is recommended in the Policy Guidance LAQM.PG(03).

Measure 7: MBC will develop, through the Kent & Medway Air Quality Partnership, supplementary planning guidance to assist with air quality assessments of development proposals

Theme 2 Reduction of background concentrations

3. Local Air Quality Management and Pollution Control

Air Quality Monitoring

The air quality monitoring network in MBC provides more accurate information and understanding of air quality within the Borough. Continuous monitoring stations are installed at two sites within the Borough to monitor NO₂ and PM₁₀ concentrations so that modelled predictions can be verified and the progression of action plan measures can be monitored and assessed. This is supplemented by NO₂ passive diffusion tubes at 25 sites throughout the Borough, a large number of which are within the two declared AQMAs, and a PM₁₀ gravimetric sequential analyser. MBC is also part of the Kent and Medway Air Quality Monitoring Network, which was set up in 1997 and provides information on a wide range of pollutants through the County.

Measure 8: MBC will continue their commitment to local air quality monitoring within the Borough to ensure a high standard of data is achieved to assess against air quality objectives

Promotion and Education

It is important that information on air quality is provided in a clear and accessible way. The Council web site <http://www.digitalmaidstone.co.uk/> provides details on air quality within the Borough and summaries of LAQM Review and Assessment Reports are available for viewing.

Measure 9: MBC will make details of the Action Plan measures and annual progress reports available on the Website to ensure broad access to the consultation and implementation process.

MBC is a member of the Kent and Medway Air Quality Partnership, which was formed in 1992. The members of the Partnership are shown below.



The major aims and objectives of the Partnership are:

- To facilitate a co-ordinated approach throughout Kent and Medway to the Local Air Quality Management (LAQM) obligations placed on local authorities under the Environment Act 1995.
- To compile, update and maintain an Emissions Inventory of air pollution sources in and around Kent, to assist with the LAQM process.
- To comment on and influence the economic, planning and transport policies within the county so that air quality issues are properly considered and dealt with.
- To gain an understanding of the health implications associated with poor air quality and the extent to which air quality threatens the health of Kent and Medway's communities.
- To work with national agencies, neighbouring authorities and European partners to promote an awareness of air quality issues and to participate in joint initiatives to further the knowledge and understanding of air quality issues.
- Liaise with DEFRA and government bodies to assist with the implementation of the National Air Quality Strategy.

Measure 10: MBC will continue to work together the Kent and Medway Air Quality Partnership on promotional activities to raise the profile of air quality in Maidstone

Pollution Control

Industrial Emissions: The Environmental Protection Act 1990 introduced new controls over industries with significant air pollution potential. The Environment Agency was given the responsibility of regulating larger industries (Part A processes) and local authorities were given the medium and smaller industries (Part B processes). The

regulatory regime was phased in over several years and has significantly reduced emissions from these industries. There are 49 Part B processes regulated by Maidstone Borough Council and no Part A processes. Further revisions to the number of industrial processes being regulated by the Environment Agency and local authorities are being brought in under the Pollution and Prevention Control Act 1999 and subsequent regulations. This brings the UK in line with European legislation. The new legislation does not have a significant impact on the number of industrial processes regulated in the Borough of Maidstone, but there are some changes in the regulation of existing processes.

Statutory Nuisance: With regard to nuisance emissions from unregulated processes, Statutory Nuisance is enforced by Environmental and Public Health Services under the Environmental Protection Act 1990 Part III and this controls smoke, dust, fumes or gas emissions from commercial and domestic premises which are causing a nuisance or are prejudicial to health. Advisory leaflets have been produced and these are distributed when nuisance problems are anticipated or occur.

Energy Management

The Council employs an Officer responsible for delivering the Home Energy Conservation Act Strategy (HECA) who works within Housing Services. The HECA Strategy promotes energy efficiency in the Borough and aims to deliver a 30% improvement in home energy efficiency during the lifetime of the Strategy (10 – 15 years based on a 1996 baseline).

Maidstone Borough Council, through its HECA officer, is a participating member of the Kent Energy Centre (KEC). The KEC provides advice to all members of the public and helps with Kent-wide initiatives and grant funding. The KEC services are financed by the local authorities and Energy Savings Trust, in addition to additional project funding from other organisations.

The Council also has close links with a Home Improvement Agency run by Hyde Housing Association. This Agency assists the Council in delivering advice to more vulnerable residents, offering access to the warmfront grants to help heat and insulate their homes. In 2003, the Council adopted a Kent-wide strategy (Kent Health & Affordable Warmth Strategy) for tackling 'Fuel Poverty', targeting those people who have to spend more than 10% of their income on heating their homes. In addition, grants are offered for solar water heating for households who would benefit from lower fuel costs and who qualify for warmfront grants.

The average SAP in the Borough is 52, based on the Housing Conditions Survey 2003. Progress reported to DEFRA for improvements in Energy Efficiency for the period April 2003 to March 2004 was 2.8% with an overall improvement in energy efficiency of 18.31% for the period 1996 to 2004, indicating that the Council is on schedule with the HECA strategy target.

Building Control

Building Control can contribute to the development of policies for air quality improvement through the promotion of emission-reducing technologies in new developments and buildings. The Council's Building Control Service (part of the Directorate of Regulatory Service) has policies in place to improve energy efficiency in buildings, as described below.

The Building Control Service has a statutory responsibility to ensure that new building works within the Borough meet minimum technical standards in relation to health, safety, welfare and energy conservation, as prescribed under the Building

Regulations 1991. The Legislation sets out substantive requirements and technical guidance to achieve minimum standards. This technical guidance is contained in Approved Documents giving general as well as practical guidance about some of the ways of meeting the requirements of the Regulations. Approved Document L, "Conservation of Fuel and Power" requires reasonable provision to be made for the conservation of fuel and power in buildings by:

- limiting the heat loss through the fabric of the building;
- controlling the operation of the space heating and hot water systems;
- limiting the heat loss from hot water vessels and hot water service pipe work;
- limiting the heat loss from hot water pipes and hot air ducts used for space heating; and
- installing in buildings artificial lighting systems which are designed and constructed to use no more fuel and power than is reasonable in the circumstances, and making reasonable provision for controlling such systems.

Revisions to this document were introduced in April 2002. The key changes are:

- much more stringent requirements with regard to the thermal insulation of all building elements;
- new requirements in respect of controls, boilers and lighting;
- a separation of requirements in respect of domestic and commercial buildings; and
- the testing of structures for air leakage, with effect from October 2002

Measure 11: MBC will continue to work together with the Kent Energy Centre to promote and implement energy efficiency measures in Maidstone
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A summary of the proposed indirect Borough-wide measures to improve air quality is provided in Table 6.

Table 5 Summary of direct measures proposed for the AQMA

Action	Description	Organisation responsible	Date to be achieved by	Cost	Air quality improvement in AQMA	Other potential impacts	Rank (based on cost-effectiveness)
1	Traffic Rerouting using Variable Message Signage (VMS) (linked to UTMC)	KCC/Kent Highways Unit	2010/11	Moderate (£1,500,000)	High	Improved journey times; Reduction in noise and congestion; safer roads.	1
2	Traffic Rerouting for Motorway Diversions	Highways Agency	2005/6	Low	Low	Improved journey times; Reduction in congestion.	7=
3	New Road Infrastructure	KCC/Kent Highways Unit	Post 2 nd LTP (2015)	High	High	Improved journey times; Reduction in congestion.	3
4	Traffic Management – Junction Improvements at Maidstone Bridge Gyrotory	KCC/Kent Highways Unit	2008/9	Low (£550,000)	Moderate	Improved journey times; improved bus reliability	2
5	Pedestrianisation of the High Street	KCC/Kent Highways Unit	2008 - 2011	Low	Low (High locally)	Reduction in noise	7=
6	Emissions Standards for Council Fleet and Public Service Vehicles	KCC/MBC/transport operators	To be agreed	Cost-effectiveness & Feasibility to be investigated.	Low – moderate; dependant on uptake.	Socio economic impacts of increased costs	4
7	Public Transport Improvements – Bus Corridors	KCC/Kent Highways Unit/ transport operators	2010/11	Low (£370,000)	Low	Reduction in noise and congestion; safer roads.	7=
8	Enhancement of Park & Ride Schemes	KCC/Kent Highways Unit/ transport operators	2010/11 (existing) Ongoing (investigation of new sites)	Low (£190,000 for existing schemes)	Low - Moderate	Reduction in noise and congestion; safer roads.	5=
9	Sustainable Parking Strategy	MBC/KCC	2005 - 2007	Cost-effectiveness to be investigated.	Low – Moderate; dependant on measures introduced	Reduction in noise and congestion; safer roads.	5=

The costs are provided as: 'Low' (up to £1 million); 'Moderate' (between £1 million – £5 million); and, 'High' (greater than £5 million).

The air quality improvements are provided as: 'Low' (<0.2µg/m³); 'Moderate' (between 0.2 – 1 µg/m³); and, 'High' (greater than 1 µg/m³).

Table 6 Summary of Proposed Indirect Borough-wide Measures to Improve Air Quality

Proposed measure	Description	Organisation responsible	Indicator	Date to be achieved by
1	MBC will implement the Council's Travel Plan measures and encourage uptake of sustainable modes of transport.	MBC	% modal shift to car share/public transport/walking/cycling	Ongoing
2	MBC will continue to work together with KCC to encourage the uptake of Employer and School Travel Plans within the Borough	MBC	No. of travel plans in place	Ongoing
3	MBC will continue to work together with KCC to encourage modal shift from the car to buses through implementation of a strategic approach to school transport provision	MBC	No. of Yellow School Bus routes	Ongoing
4	MBC will continue to work with KCC to improve the facilities for cycling and walking within Maidstone and encourage greater uptake	MBC	%modal shift to cycling/walking No. miles new cycle lanes/routes	Ongoing
5	MBC Environmental and Public Health Services will continue to work closely with the Planning Department to ensure that air quality is taken into account in the planning process when located in or close to the AQMA or in areas marginally below air quality objectives	MBC	No. planning applications with air quality conditions/assessments	Ongoing
6	MBC will continue to work together with developers to improve sustainable transport links serving new developments	MBC	No. planning applications where improvements secured	Ongoing
7	MBC will develop, through the Kent and Medway Air Quality Partnership (K&MAQP), supplementary planning guidance to assist with air quality assessments of development proposals	MBC/ K&MAQP	Completion of supplementary planning guidance	December 2006
8	MBC will continue their commitment to local air quality monitoring within the Borough to ensure a high standard of data is achieved to assess against air quality objectives	MBC	No. monitoring sites % data capture	Ongoing
9	MBC will make details of the Action Plan measures and annual progress reports available on the Website to ensure broad access to the consultation and implementation process	MBC	Availability of recently published reports on the Website	Ongoing
10	MBC will continue to work together the Kent and Medway Air Quality Partnership on promotional activities to raise the profile of air quality in Maidstone	MBC	No. promotional activities undertaken with the Partnership	Ongoing
11	MBC will continue to work together with the Kent Energy Centre to promote and implement energy efficiency measures in Maidstone	MBC	% improvement in energy efficiency SAP rating	Ongoing

7 IMPLEMENTATION AND MONITORING

MBC will work jointly on the action plan measures with the relevant partners including Kent County Council (Kent Highways Unit), Highways Agency, transport operators, schools and local businesses. To secure the necessary air quality improvements there must be involvement by all local stakeholders and MBC will actively work to encourage community participation in the process.

The implementation and effectiveness of the Action Plan will be carefully monitored through monitoring of NO₂ and PM₁₀ at relevant receptor locations within the AQMA. In addition, traffic flow changes on the key roads will also be assessed through the review and assessment process, and the uptake of local measures such as Travel Plans will be monitored. Indicators have been provided for the indirect measures to be undertaken by the Council to monitor progress annually.

The Action Plan will be integrated into the LTP to provide additional support to the proposed measures and allow the principal measures to be monitored annually through the LTP process. This will enable the success of proposed action plan measures to be assessed and additional measures proposed within the LTP bidding process as appropriate. Annual trajectories will be set within the LTP for the principal measures to enable progress to be monitored.

There will be regular review and assessment of the action plan proposals to evaluate progress and this will be reported annually.

8 GLOSSARY OF TERMS

Abbreviation	Full name
AQMA	Air Quality Management Area
AQS	Air Quality Strategy
ATM	Active Traffic Management
BAT	Best Available Technology
CTRL	Channel Tunnel Rail Link
DEFRA	Department for Environment, food and Rural Affairs
DETR	Department for Transport and Regions
DOE	Department of the Environment
HGV	Heavy goods vehicles
KCC	Kent County Council
K&MAQN	Kent & Medway Air Quality Network
K&MAQP	Kent & Medway Air Quality Partnership
LA21	Local Agenda 21
LAQM	Local air quality management
LDD	Local Development Documents
LDF	Local Development Framework
LEZ	Low Emission Zone
LTP	Local Transport Plan
MBC	Maidstone Borough Council
NAQS	National Air Quality Strategy
NO ₂	Nitrogen dioxide
NO _x	Oxides of nitrogen
NSCA	National Society for Clean Air
PM ₁₀	Fine particle matter less than 10µm diameter
ppb	Parts per billion
SO ₂	Sulphur dioxide
µg/m ³	Micrograms per cubic metre
UTMC	Urban Traffic Management Control
VMS	Variable Message Signage

9 REFERENCES

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