



Draft Maidstone Town Air Quality Action Plan 2010

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Executive Summary

Maidstone Borough Council has a statutory duty to periodically review air quality within their area – a process known as Local Air Quality Management (LAQM). This process involves the assessment of both current, monitored air quality levels and future predicted air quality levels. To date, LAQM has identified the main source of air pollution in the borough is attributable to road traffic emissions due to traffic flows and congestion on key areas within the local road network, notably the M2, M20, A20, A229, A249, A26 and A274. Five confirmed hotspot areas have been identified as exceeding the NO₂ annual mean objective for NO₂ involving some major roads, a street canyon and various junctions.

To address the issues related to these five confirmed areas of exceedence an Air Quality management Area (AQMA) was declared in August 2008 and this Air Quality Action Plan (AQAP) has been written in order to identify measures and actions required to manage air quality within the AQMA and specifically the hotspot areas.

In order to reduce pollutant levels below the Air Quality Objective levels required by European legislation this AQAP (based on data from the Further Assessment) has estimated the reduction of pollutant required to meet the AQO for the five confirmed hotspots:

- 1) The Town Centre area, including the High street and Upper Stone Street (a street canyon) requires a 41-88% reduction in NO₂ concentrations across the whole area.
- 2) The Loose road/ Sutton Road junction requires a 51% reduction in NO₂ concentrations
- 3) The Tonbridge Road and Fountain Lane junction requires a 4.8% reduction in NO₂ concentrations
- 4) The Well road/Boxley road Junction has recently fallen 1% below the exceedence level, but any small changes in traffic flows in the area would re-instate its AQO failure.
- 5) M20 J6-7 junction requires an 8.8% reduction in NO₂ concentrations,

The Further Assessment report, which provides the technical backup for the measures to be included within the Action Plan, identified two further potential exceedences of the annual NO₂ mean. There are measures in place within the Action Plan to address both these areas while monitoring is being undertaken to confirm the suspected exceedences. The monitoring data will be reported through the LAQM process. The two sites under investigation include:

- 1) A229 Chatham Road where data to date suggest that a 25% reduction in NO₂ concentrations is required to achieve the AQO.
- 2) Wildfell Close, Walderslade (adj M2) data monitoring ongoing.

The Further Assessment also identified two potential exceedences of the hourly annual NO₂ mean and these are also under investigation through the LAQM process. Within the AQAP measure 8 has been developed specifically to address the issue potential hourly AQO exceedences whilst the investigations are ongoing.

The two sites under investigation for exceedence of the hourly objective are:

- 1) Upper Stone Street
- 2) The Loose road/Sutton road (Wheatsheaf) Junction.

The Maidstone Air Quality Action Plan (AQAP) sets out a series of measures which target both confirmed hotspot areas and areas currently under investigation in order to reduce NO₂ emissions by the required amount. The AQAP sets out which external partners (stakeholders) are involved in the delivery of each measure and provides indicators for assessing progress in achieving the Air Quality Objectives and reporting progress annually (to both Defra and internally). As well as setting out measures specific to the AQMA, the AQAP also sets out measures for Borough wide air pollutant emissions reductions in line with the Council's sustainability aims outlined in the Sustainable Communities Strategy and in support of the Council's carbon emissions reduction targets.

This Action Plan has been written with the support of the Maidstone Air Quality and Transport Steering group, many of whom are key stakeholders and partners who will enable us to deliver this challenging programme of measures.

1. Introduction and Aims of the Action Plan

1.1 Description of the Local Authority Area

Maidstone is the county town of Kent, and is home to 145,400¹ people in 2008, and its population is due to increase to 167,700² by 2026, with the addition of around 11,080 homes to be provided between the planning period 2006 to 2026. The Borough is home to 8.8 per cent of the Kent and Medway population (2001 Census) and borders Swale, Ashford, Tunbridge Wells, Tonbridge and Malling Boroughs and Medway Unitary Authority.

The Borough of Maidstone covers 40,000 hectares located at the heart of Kent. It includes the large urban area of Maidstone and a variety of rural settlements. Its countryside, set within 'the Garden of England', is of a high landscape quality and includes the Kent Downs Area of Outstanding Natural Beauty.

The main source of air pollution in the borough is road traffic emissions from major roads, notably the M2, M20, A20, A229, A249, A26 and A274. An Air Quality Management Area (AQMA) has been declared in August 2008 which incorporates the whole Maidstone urban area and M20 corridor where exceedences of the annual mean objective for nitrogen dioxide (NO₂) and 24-hour mean objective for fine particulates (PM₁₀) were predicted. Maidstone is subject to significant in and out commuting, as well as an influx of school children, shoppers and tourists and suffers from significant congestion, especially on the approach roads to the town centre at peak hours. Other pollution sources, including commercial, industrial and domestic sources, also make a contribution to background pollution concentrations.

1.2 Legislative Background

Part IV of the Environment Act 1995 places a statutory duty on local authorities to periodically review and assess the current and the future air quality within their area – a process known as Local Air Quality Management (LAQM). The air quality objectives that apply to LAQM are defined in Air Quality Regulations 2000³ and Air Quality (England) (Amendment) Regulations 2002⁴ for seven pollutants benzene, 1,3-butadiene, carbon monoxide, lead, nitrogen dioxide, sulphur dioxide, particulates - PM₁₀.

This Action Plan focuses on those pollutants included in Air Quality Regulations for the purpose of Local Air Quality Management, in respect of the key identified pollutant sources affecting air quality within the Council's administrative area – namely nitrogen dioxide and fine particles (PM₁₀). The objectives set out in the AQS for these pollutants are presented in the table below.

¹ Mid Year Population Estimates for 2008, Office of the National Statistics.

² <https://shareweb.kent.gov.uk/Documents/facts-and-figures/sep-forecasts-sep-09-web.pdf>

³ The Air Quality (England) Regulations 2000 (Statutory Instrument 928)

⁴ The Air Quality (England) (Amendments) Regulations 2000 (Statutory Instrument 3043)

Table 1.1 – Air Quality Objectives included in the Air Quality Regulations for the purpose of Local Air Quality Management in England

Pollutant	Objective	Concentration measured as	Date to be achieved by and maintained thereafter
Benzene All authorities	16.25 µg/m ³	running annual mean	31.12.2003
Authorities in England and Wales only	5.00 µg/m ³	annual mean	31.12.2010
1,3 Butadiene All authorities	2.25 µg/m ³	running annual mean	31.12.2003
Carbon monoxide Authorities in England, Wales and Northern Ireland only	10.0 µg/m ³	maximum daily running 8-hour mean	31.12.2003
Lead All authorities	0.5 µg/m ³	annual mean	31.12.2004
	0.25 µg/m ³	annual mean	31.12.2008
Nitrogen dioxide ^a All authorities	200 µg/m ³ , not to be exceeded more than 18 times a year	hourly mean	31.12.2005
	40 µg/m ³	annual mean	31.12.2005
Particles (PM₁₀) (gravimetric) ^b All authorities	50 µg/m ³ , not to be exceeded more than 35 times a year	24 hour mean	31.12.2004
	40 µg/m ³	annual mean	31.12.2004
	18 µg/m ³	annual mean	31.12.2010
Sulphur dioxide All authorities	350 µg/m ³ not to be exceeded more than 24 times a year	1 hour mean	31.12.2004
	125 µg/m ³ not to be exceeded more than 3 times a year	24 hour mean	31.12.2004
	266 µg/m ³ not to be exceeded more than 35 times a year	15 minute mean	31.12.2005

^a EU Limit values in respect of nitrogen dioxide to be achieved by 1st January 2010. There are, in addition, separate EU limit values for carbon monoxide, sulphur dioxide, lead and PM10, to be achieved by 2005, and benzene by 2010.

^b Measured using the European gravimetric transfer sampler or equivalent.

Where the results of the review and assessment process highlight that problems in the attainment of health-based objectives for air quality will arise, the authority is required to declare an Air Quality Management Area (AQMA) – a geographic area defined by high levels of pollution and exceedences of AQS objectives. Section 84 of the Environment Act 1995 imposes duties on a local authority with respect to AQMAs. The local authority must carry out a further assessment and draw up an action plan specifying the measures to be implemented within the AQMA, and the time-scale for doing so, to move towards attainment of the air quality standards and objectives.

1.3 Scope of the Action Plan

Where local authorities have designated AQMAs, they have a duty to produce an Action Plan. This plan must set out what measures the authority intends to introduce in pursuit of the AQS objectives. The principal aim of the Air Quality Action Plan is to minimise the effects of air pollution on human health within the local authority area using all reasonable measures, within reasonable timeframes and by working towards achieving the AQS objectives and standards. In order to comply with the AQS objectives it may be necessary to include measures beyond

the boundaries of the air quality management areas. Some of the measures may also benefit areas not included within AQMAs thereby improving the health of the population in those areas.

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 may be targeted appropriately.

An air quality Action Plan must include the following⁵:

- quantification of the source contributions to the predicted exceedences of the relevant objectives; this will allow the Action Plan measures to be effectively targeted;
- evidence that all available options have been considered;
- how the local authority will use its powers and also work in conjunction with other organisations in pursuit of the air quality objectives;
- clear timescales in which the authority and other organisations and agencies propose to implement the measures within its plan;
- where possible, quantification of the expected impacts of the proposed measures and an indication as to whether the measures will be sufficient to meet the air quality objectives. Where feasible, data on emissions could be included as well as data on concentrations where possible; and
- how the local authority intends to monitor and evaluate the effectiveness of the plan.

Maidstone Borough Council has responsibility under Section 84 of the Environment Act 1995 to prepare and submit an Action Plan to the Department for Environment, Food and Rural Affairs (Defra). The Environment Act 1995 does not prescribe any timescale for preparing an Action Plan. However, the Government expect them to be completed between 12-18 months following the designation of any air quality management areas. The prime responsibility for preparing and submitting the Action Plan rests with district councils. However, there is a requirement on other relevant authorities to identify proposals in pursuit of the AQS objectives within their respective responsibilities and functions.

This draft Action Plan has been developed, in partnership with other relevant bodies, particularly Kent County Council and the Highways Agency, to incorporate the localised measures at the AQMA. The completed action plan will be circulated to all relevant authorities and strategic partners and to the members of the public.

⁵ Policy Guidance LAQM.PG(09) (2009), Part IV of the Environment Act 1995, Local Air Quality Management, Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland, The Stationery Office

2 Overview of Air Quality in Maidstone

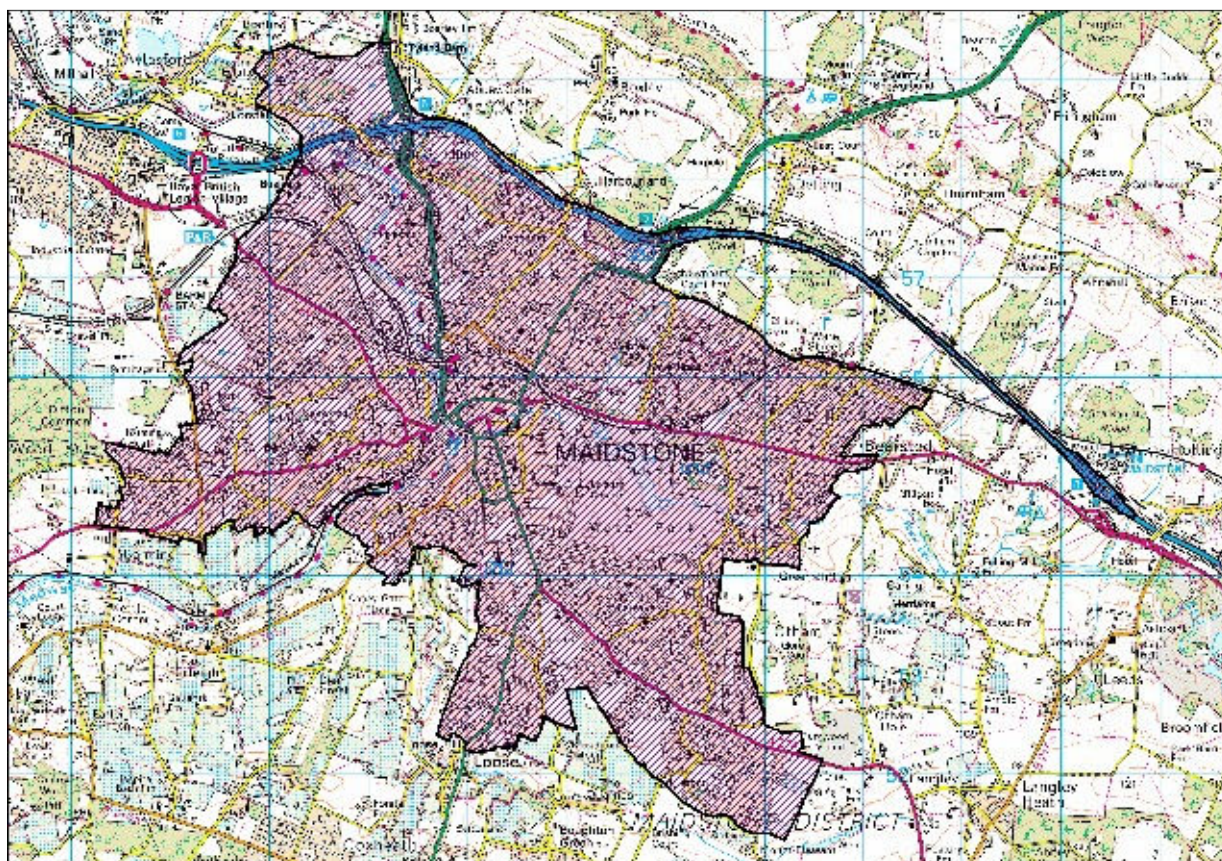
2.1 Local Air Quality Management – Review and Assessment

Between 1998 and 2001, Maidstone Borough Council undertook its first round of review and assessment of air quality. The conclusions of the first round were that it was necessary to declare an Air Quality Management Area (AQMA) based on exceedences of the nitrogen dioxide (NO₂) annual mean objective due to road traffic emissions on the M20. An AQMA was subsequently declared along the M20 corridor between Junctions 6 and 7.

The first phase of the second round of review and assessment of air quality, the Updating and Screening Assessment (USA), was completed in July 2003 and this provided an update with respect to air quality issues within Maidstone. The USA concluded that a detailed assessment was required for NO₂ and particulates (PM₁₀) due to emissions from road traffic in Maidstone town centre. The detailed assessment confirmed the conclusions of the USA, and Maidstone town centre was declared an AQMA in January 2005.

The third round of review and assessment, following the same stages as the second round, began with an Updating and Screening Assessment. Maidstone Borough Council completed this in June 2006, with the conclusion that a detailed assessment was required for NO₂ at the Fountain/ Tonbridge Road junction and on Well Road, and for NO₂ and PM₁₀ at the junction of Loose Road and Sutton Road. The report recommended that the Council consider declaring Air Quality Management Areas at the Fountain Lane/Tonbridge Road junction, the Well Road/Boxley Road junction and at the Loose Road/Sutton Road junction based on the potential exceedences. Following extensive consultation, Maidstone Borough Council decided to declare an urban-wide AQMA. The current M20 AQMA has been revoked and the Town Centre AQMA has been amended to include the M20 AQMA and the whole Maidstone urban conurbation. The amended AQMA was declared in July 2008, the Further Assessment was submitted to Defra for review (November 2009) although some scenario modelling remains outstanding and the Air Quality Action Planning process is underway.

Figure 2.1 – Maidstone Town AQMA



2.2 Monitoring data

There is currently automatic monitoring of nitrogen dioxide (NO₂) and particulates (PM₁₀) undertaken by the Council at one location in the AQMA, Maidstone Roadside (Bridge Gyratory, Fairmeadow) in Maidstone town centre. This site continues to measure exceedences of the NO₂ annual mean objective. All other objectives are currently met.

Table 2.1: Maidstone Roadside continuous analyser concentrations (µg/m³) in 2006 - 2008

Location	Within AQMA?	Description	2006	2007	2008
Maidstone Bridge Gyratory A229 Roadside	Yes	Annual Mean NO ₂ > 40 µg/m ³	51	51	44
		NO ₂ Hourly Mean > 200 µg/m ³ for more than 18 times per year	0	6	0
		% Data Capture	98	99	99
		Annual Mean PM ₁₀ > 40 µg/m ³	33	31	24 (28)
		Number of Exceedences of the 24-hour mean (50 µg/m ³); 35 permitted.	25	27	12 (13)
		% Data Capture	99	99	99

There are additionally 41 diffusion tube sites in the AQMA; 13 of which were exceeding in 2008.

Table 2.2 - Diffusion Tube Results in Maidstone AQMA

Site ID	Location	Data Capture 2008 %	Annual mean concentrations ($\mu\text{g}/\text{m}^3$) adjusted for bias		
			2006 (Bias factor: 0.97)	2007 (Bias factor: 0.92)	2008 (Bias factor: 0.79)
Maid 01	High Street (Signpost near Argos)	100	51	50	42
Maid 03/04/05	Bridge Gyratory (Fairmeadow AQ Station)	100	49	51	44
Maid 10	Grange Lane South (Telegraph pole by Yew Tree PH)	83	37	44	35
Maid 11	Boarley Lane (Telegraph pole near letterbox)	83	39	36	30
Maid 12	Grange Lane North (Opposite Cookes's cottage)	33*	32	33	24
Maid 14	Boxley Close (lamp post by nos.38 &40)	100	39	40	32
Maid 15	Claremont Road (façade)	100	32	32	25
Maid 17	A20 Ashford Road (façade No. 12)	100	30	33	23
Maid 18	Bell Meadow (sign opposite no.10)	75	29	33	23
Maid 19	196 Loose Road (o/s no.196)	50*	31	34	25
Maid 20	Sheals Crescent (on blue lamppost)	92	39	37	29
Maid 21	Tonbridge Road (signpost Walnut Tree PH)	100	40	48	33
Maid 22	A20 London Road (40mph sign by traffic lights)	83	35	35	31
Maid 23	Park & Ride	75	41	38	35
Maid 24	Brookbank (outside No. 10)	58*	28	33	24
Maid 25	10 Mote Road (Lamppost)	83	46	55	43
Maid 26	Drakes PH (Lamppost)	83	41	41	34
Maid 27	High Street (Lamppost by JPs Bar)	92	47	47	40
Maid 29	Knight rider Street	100	42	44	35
Maid 32	The Pilot Upper Stone Street (3m)	67*	115	109	79
Maid 33	The Pilot Upper Stone Street (1.5m)	92	102	109	96
Maid 34	Walters Upper Stone Street	50*	50	56	57
Maid 36	37 High Street	75	49	50	42
Maid 41	Amberleigh, Boxley Road	92	48	47	40
Maid 43	Well Road (Road sign by prison wall)	92	52	55	47
Maid 44	Well Road (facade between No.3 & 4)	100	47	55	40
Maid 45	Mote Park	50*	26	20	21
Maid 46	Scrubbs Lane (Oakwood Park)	92	20	17	17
Maid 47	Wheatsheaf PH, Loose Road/Sutton Road junction	75	67	61	54
Maid 48	Fountain Lane (Sears)	92	38	37	34
Maid 49	454 Tonbridge Road (façade)	92	44	45	39
Maid 50	157 Chatham Road Springfield	100	27	33	26
Maid 51	121 Boxley Road	92	49	52	44
Maid 52	565 & 567 Tonbridge Road	100	39	47	40
Maid 53	Wheatsheaf PH, Loose Road/Sutton Road junction	58*	81	76	64
Maid 54	42 Hildenborough Crescent	100	-	33	25
Maid 56	243 Loose Road	100	-	35	26
Maid 57	29A Forstal Road Cottages Forstal Road	83	-	77	59
Maid 58	Down Pipe on R & J Carpets Upper Stone Street	17*	-	-	88
Maid 59	Down Pipe on Harts Upper Stone Street	8*	-	-	31

*Less than 9 months data capture. Annualisation undertaken using five background sites in the Kent & Medway air quality monitoring network (Canterbury, Rochester Stoke, Thanet Airport, Tunbridge Wells Town Centre, Swale Sheerness).

2.3 Source Apportionment

The source apportionment work carried out in the Further Assessment 2009 at eight worst-case receptor locations provided the following results.

The source apportionment of NO_2 is estimated through monitoring and modelling the sum of NO_2 and NO which is termed NO_x . This is done because NO_2 cannot be measured directly. Source apportionment of NO_x indicates road traffic emissions of NO_x are the main contribution to total NO_x concentrations, as they account for 69 - 91% of the total NO_x concentrations at receptors. Heavy-duty vehicles (HDV's include heavy goods vehicles, coaches and buses), contribute around 30 - 57% to the total NO_x concentrations at receptors. HDV contributions are disproportionately high given their proportion within the vehicle fleet in the AQMA based on real time traffic monitoring data. Background concentrations account for 9% to 31% of the total NO_x concentration at receptors, with 4 - 14% due to regional background concentrations outside the local authority's influence.

Source apportionment of PM_{10} , indicates background sources of PM_{10} make a significant contribution to total PM_{10} concentrations, as they account for 67-90% of the total PM_{10} concentrations at receptors, with the majority of this being made up of secondary particulates, residual and salt contributions. Local sources (non-background), like road traffic, contributes 10% to 33% of the total PM_{10} concentration at receptors. Light duty vehicles (LDVs include vans, cars and motorbikes) contribute around 3 - 12% and heavy-duty vehicles (HDVs) contribute around 2 - 12% to the total PM_{10} concentrations at receptors. HDV contributions are disproportionately high given their proportion within the vehicle fleet in the AQMA. Brake and tyre wear contribute around 4 - 10% to the total PM_{10} concentrations at receptors. This proportion will become more significant with time, as the brake and tyre wear component is not expected to decrease its contribution with time, whereas vehicle exhaust emissions of PM_{10} are expected to reduce.

The highest concentrations of NO_x were predicted at properties along Upper Stone Street in Maidstone town centre. The highest concentration of PM_{10} were predicted at properties at Harbourland Close near the M20 at Boxley; closely followed by properties along Upper Stone Street.

Figure 2.2 – Contribution of pollutant sources to annual mean NO_x concentration in the AQMA

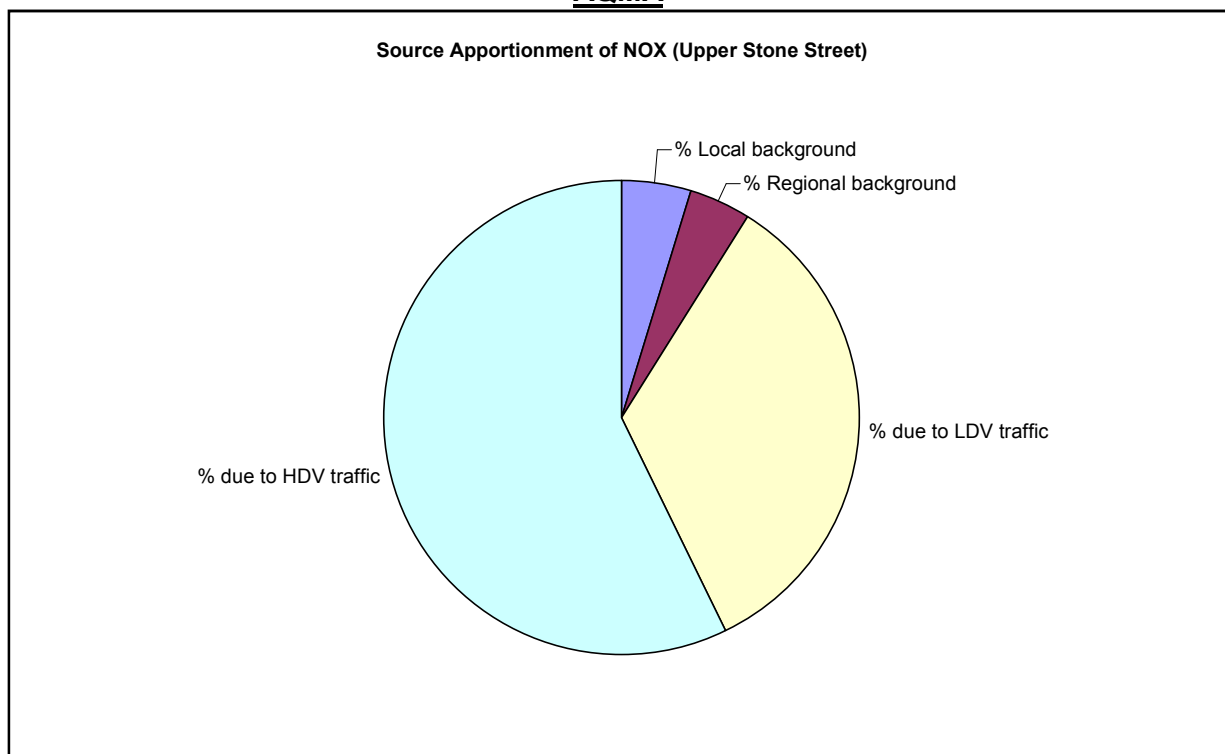
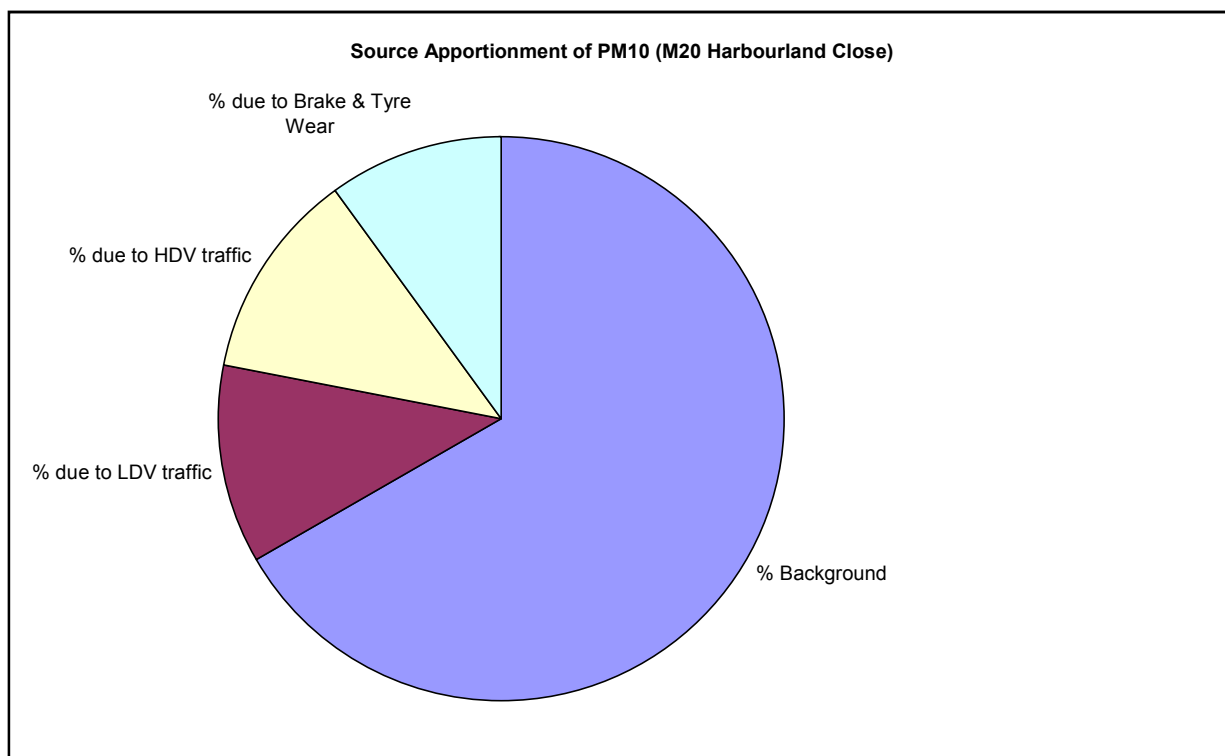


Figure 2.3 – Contribution of pollutant sources to annual mean PM₁₀ concentration in the AQMA



2.4 Required Reductions in NO₂ and PM₁₀

In order to make a decision on the best options to employ, it is first necessary to calculate the exact reduction of NO₂ reduction (as NO_x) and PM₁₀ reduction that would be required in order

to meet the AQS objectives. This approach (LAQM TG09) highlights the maximum reduction in NO₂ (as NO_x) and PM₁₀ required and assumes that all other specific receptors will require less of a reduction.

The reduction in NO₂ (as NO_x) was calculated in the Further Assessment 2009 from the receptor point of maximum NO₂ concentration measured along Upper Stone Street, for the year 2008. The maximum predicted NO_x reduction required within the Maidstone AQMA to comply with the NO₂ AQS objective is 202µg/m³ (equivalent to a 242% improvement in NO_x). This equates to a 35.5µg/m³ reduction in NO₂ (equivalent to 89% improvement in NO₂). This is at the worst-case location in the AQMA along Upper Stone Street. The required reductions vary across the AQMA, as shown in Table 2.3, and are generally well below the levels in Upper Stone Street.

Table 2.3 – Required NO_x/NO₂ Reduction in Maidstone AQMA

Receptor Location	Modelled NO _x (µg/m ³)	Reduction NO _x required µg/m ³ (83.7 µg/m ³ NO _x equivalent to achieve objective)	% Reduction NO _x	Modelled NO ₂ (µg/m ³)	Reduction NO ₂ required (µg/m ³) to achieve objective (40µg/m ³)	% Reduction NO ₂
M20 – Greenfields Harbourland Close	96.9	13.2	15.8	43.5	3.5	8.8
Forstal Road – B&B	101.8	18.1	21.6	44.7	4.7	11.8
Well Road – 2 Boxley Road	82.2	-1.5	-1.8	39.6	-0.4	-1.0
Tonbridge Road/Fountain Road - 577 Tonbridge Rd	90.6	6.9	8.2	41.9	1.9	4.8
54 High Street	164.8	81.1	96.9	57.3	17.3	43.3
29 Upper Stone Street	286.1	202.4	241.8	75.5	35.5	88.8
Loose Road/Sutton Road - Wheatsheaf PH	183.7	100.0	119.5	60.4	20.4	51.0
A229 Chatham Road – 5 Grey Wethers	126.6	42.9	51.3	50.1	10.1	25.3

- 3 There were no predicted exceedences of the PM₁₀ objectives in the AQMA at the receptors modelled and therefore there was no required reduction to achieve the objective. Particulates are non-threshold pollutants and as such general measures to reduce particulate levels are beneficial. However, the findings of the Further Assessment enables Maidstone Borough Council to focus their attention on NO_x which has now been confirmed as being the only air pollutant to not meet the AQO.

Local and Regional Policies and Strategies

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. Many of these policies and strategies are focused on transportation issues, and therefore are likely to help contribute to overall improvements in air quality in the AQMA and across the Maidstone Borough area.

3.1 Regional Spatial Strategy: The South East Plan

The Planning and Compulsory Purchase Act 2004 (PCPA) laid out new provisions for the replacement of Local Plans with Local Development Frameworks (LDF) and removes Structure Plans at the County level, and replaces them with Regional Strategies (RS). Recent amendments to the PCPA in 2009 has combined the South East Plan, Regional Economic Strategy and Regional Transport Strategy⁶ to form the Regional Strategy for the South East. The South East England Partnership Board (SEEPB) – the Regional Planning Body - is now responsible for commissioning and approving a new Regional Strategy. The South East Region comprises the county areas of Berkshire, Buckinghamshire, East Sussex, Hampshire, Isle of Wight, Kent, Oxfordshire, Surrey and West Sussex.

The final South East Plan⁷ published by Government on the 6th May 2009 guides the future development of the South East to 2026. The Plan records Maidstone as the county town of Kent serving as the focus for administrative, commercial and retail activities. It is designated as a hub under Policy SP2 of the South East Plan as it is well related to strategic rail and road networks and serves as an interchange point between intra and local rail services, with opportunities for new housing development. The Plan states that an indicative 90% of new housing at Maidstone should be in or adjacent to the town. Associated infrastructure to support growth should include the South East Maidstone Relief Route and Maidstone Hub package.

Regional hubs are described as:

- a focus for investment in multi-modal transport infrastructure both within and between hubs, supported by initiatives to re-balance travel patterns through behavioural change
- a focus for other new infrastructure, including health, education, social and green infrastructure, and public services
- a focus for new investment in economic activity and regeneration, including skills and training investment
- a focus for new market and affordable housing, to support the creation of higher density 'living centres'
- a focus for new major retail and employment development

Maidstone is not located within one of the nine sub-regional areas in the Plan, but is identified as an accessible settlement of regional significance. Maidstone is identified as a 'Growth Point' and as having the potential to accommodate significantly higher levels of development during the Plan period than other urban settlements located outside the sub-regional strategy areas. The South East Plan requirement is for 11,080 dwellings to be delivered in Maidstone in the twenty years between 2006 and 2026 (554 annual average).

The South East Plan sets out policies which will be important in securing future air quality benefits and are therefore relevant to this Action Plan. These include policies for sustainable development, climate change, transport and specifically 'Air Quality'.

⁶ The Transport Chapter in the South East Plan 2009 was considered to be the Regional Transport Strategy in any case

⁷ <http://www.gos.gov.uk/gose/planning/regionalPlanning/815640/>

POLICY NRM9: AIR QUALITY

Strategies, plans, programmes and planning proposals should contribute to sustaining the current downward trend in air pollution in the region. This will include seeking improvements in air quality so that there is a significant reduction in the number of days of medium and high air pollution by 2026. Local development documents and development control can help to achieve improvements in local air quality through:

- i. ensuring consistency with Air Quality Management Plans*
- ii. reducing the environmental impacts of transport, congestion management, and support the use of cleaner transport fuels*
- iii. mitigating the impact of development and reduce exposure to poor air quality through design, particularly for residential development in areas which already, or are likely to, exceed national air quality objectives*
- iv. encouraging the use of best practice during construction activities to reduce the levels of dust and other pollutants*
- v. assessing the potential impacts of new development and increased traffic levels on internationally designated nature conservation sites, and adopt avoidance and mitigation measures to address these impacts.*

SEEPB has a key role in advising Government on significant transport issues in the South East. It is responsible for the Regional Transport Strategy (RTS), which ensures transport projects in the region complement and support sustainable development. As previously mentioned, the RTS forms part of the South East Plan.

Transport policies are included with respect to charging schemes, parking, travel plans and advice, rail freight and regional spokes, which - as road traffic has been identified as a major source of pollutants in the AQMA - could secure air quality improvements. These set out specific recommendations for local authorities which should be considered in local development documents and local transport plans, as outlined below.

POLICY T1: MANAGE AND INVEST

Relevant regional strategies, local development documents and local transport plans should ensure that their management policies and proposals:

- i. are consistent with, and supported by, appropriate mobility management measures*
- ii. achieve a re-balancing of the transport system in favour of sustainable modes as a means of access to services and facilities*
- iii. foster and promote an improved and integrated network of public transport services in and between both urban and rural areas*
- iv. encourage development that is located and designed to reduce average journey lengths*
- v. improve the maintenance of the existing transport system*
- vi. include measures that reduce the overall number of road casualties*
- vii. include measures to minimise negative environmental impacts of transport and, where possible, to enhance the environment and communities through such interventions*
- viii. investment in upgrading the transport system should be prioritised to support delivery of the spatial strategy.*

POLICY T3: CHARGING

Local transport authorities and particularly those responsible for the hubs should consider using the powers available under the Transport Act 2000 and Local Transport Act 2008, and Government funding, to test new charging initiatives. This may be done, where appropriate, jointly with other authorities. Road user charging should be considered as part of an integrated approach to support delivery of the regional strategy. In addition to being consistent with national guidance, any scheme within the region should be matched with promotion of sustainable alternatives to vehicle use, and be designed so as to avoid disadvantaging regeneration areas dependent on road access.

POLICY T4: PARKING

Local development documents and local transport plans should, in combination:

- i. adopt restraint-based maximum levels of parking provision for non-residential developments, linked to an integrated programme of public transport and accessibility improvements*

- ii. set maximum parking standards for Class B1 land uses within the range 1:30 m² and 1:100m²*
- iii. set maximum parking standards for other non-residential land uses in line with PPG13: Transport, reducing provision below this in locations with good public transport*
- iv. include policies and proposals for the management of the total parking stock within regional hubs that are consistent with these limits*
- v. apply guidance set out in PPS3: Housing on residential parking, reflecting local circumstances*
- vi. support an increase in the provision in parking at rail stations where appropriate*
- vii. ensure the provision of sufficient cycle parking at new developments including secure cycle storage for new flats and houses which lack garages.*

POLICY T5: TRAVEL PLANS AND ADVICE

Local authorities must ensure that their local development documents and local transport plans identify those categories of major travel generating developments, both existing and proposed, for which travel plans should be developed. Local transport authorities should also consider piloting the concept of transport planning advice centres for regional hubs in their local transport plans.

POLICY T8: REGIONAL SPOKES⁸

Relevant regional strategies, local development documents and local transport plans will include policies and proposals that support and develop the role of regional spokes by:

- i. providing a level of service that supports the role of regional hubs as a focus of economic activity*
- ii. delivering improvements in journey time reliability that support the rebalancing of the transport system in favour of non-car modes*
- iii. developing a complementary and integrated network of rail and express bus/coach services along spokes and inter-regional corridors*
- iv. addressing identified bottlenecks*
- v. improving access to international gateways.*

POLICY T11: RAIL FREIGHT

The railway system should be developed to carry an increasing share of freight movements.

Priority should be given in other relevant regional strategies, local development documents, and local transport plans, providing enhanced capacity for the movement of freight by rail on the following corridors:

- i. Southampton to West Midlands*
- ii. Dover/Channel Tunnel to and through/around London*
- iii. Great Western Main Line*
- iv. Portsmouth to Southampton/West Midlands.*

3.2 Local Transport Plan for Kent (2006 – 2011)

In 1998, the Government published a Transport White Paper "A New Deal for Transport" which outlined their commitment to a more integrated and sustainable transport system with greater emphasis on alternative forms of transport to the private car. The Government also introduced a system of Local Transport Plans (LTPs) which each highway authority had to prepare every five years which would outline their aims to improve local transport and the funding they required to do this. In the second round of LTPs 2006-11, the Government outlined four shared priorities for local transport, one of which was air quality and required LTPs to consider improvements to the transport network which would reduce air pollution in all declared Air Quality Management Areas.

The Local Transport Plan for Kent 2006-11⁹, which was submitted in March 2006, aims to "stabilise and, where possible, reverse the adverse effect of transport and its infrastructure on the natural and built environment and on local communities". Specifically, the LTP contains an air quality policy EHC1 "to seek a reduction in traffic pollution on the local road network".

⁸ transport designed to support the regional hubs through appropriate linkages that enhance accessibility primarily by public transport

⁹ <http://www.kent.gov.uk/static/local-transport-plan/>

Since Kent lacks one large urban area with a population above 250,000, KCC is not currently required to set an LTP target for reducing congestion, but congestion and its impact on Kent's economy and communities is a priority for KCC. Maidstone has been highlighted as one of the urban areas which suffer from serious congestion. Located close to the County's motorway and trunk road network Maidstone has good links to the rest of the UK and to the coast via the M20. However, localised traffic congestion and poor journey time reliability is increasingly common on many local roads. A "Congestion Plan" is being prepared for Maidstone, which will summarise the key issues relating to congestion and inform future work.

Implementation of Maidstone's Hub Transport package will help alleviate local congestion. Urban Traffic Management and Control (UTMC) for Maidstone is already established and will be developed further to manage local traffic more effectively and provide better journey time information for all road users. Achieving a more sustainable modal share is also seen as an effective way of alleviating local congestion problems. The investment programmes outlined for the Channel Corridor area, which includes Maidstone, will continue to support public transport services and provide improvements to local walking and cycling networks. Investment in local bus infrastructure will benefit local services and for Park and Ride routes, enhance the accessibility of the town centre, and contribute to the continuing success of the local Quality Bus Partnership (QBP). Bus user satisfaction will also be addressed by providing new and improved infrastructure such as new interchanges.

There is also consideration in the Plan to the Major Scheme development of the South East Maidstone Strategic Route, linking the A274 with the A20 roundabout adjacent to M20 Junction 8. Relevant proposed LTP schemes likely to have direct and indirect impacts on local air quality within the AQMA are referred to where relevant within this Action Plan.

3.3 Local Transport Plan for Kent (2011 onwards)

The Local Transport Plan for Kent 2011 onwards (LTP3) is due to be published in the spring of 2011. Before its publication the document will be subject of to consultation, although the exact details of that process have yet to be finalised.

The Guidance on local transport plans emphasises the links between climate change and air quality saying that "it is important that LTPs are effectively co-ordinated with air quality, climate change and public health priorities – measures to achieve these goals are often complementary". For example it also states that "with the transport sector representing 21% of total UK domestic greenhouse gas emission, action to move towards a low carbon transport system will be a key component in meeting our obligations under carbon budgets", which will be of benefit to air quality as well.

The key goals which will support reduction in air quality emissions are:

Contribute to better safety, security and health – reduce social and economic costs of transport to public health, including air quality impacts in line with the UK's European obligations.

Reduce Carbon Emissions – deliver quantified reductions in greenhouse gas emissions consistent with the Climate Change Bill and EU targets

The Local Transport Plan for Kent 2011 onwards will be key to the production of the transport elements in the core strategy and will supplement the guidance found in PPS1 with regards to emissions from developments. The LTP long term vision will be aligned with the LDF development objectives, so that it coordinates the transport and planning goals within the statutory process.

The importance of air quality in the development of policy documents was recently raised in the House of Commons Environmental Audit Committee report (2010)¹⁰. It emphasises that “air quality targets will not be met without a significant shift in transport policy” and that “what is needed is the political will to make this a priority and to commit the resources to address it now so that we can reap the benefits of improved health”. The report also highlights the need for better understanding of air quality issues.

3.4 Kent Environment Strategy 2003

The Kent Environment Strategy¹¹ was drawn up by Kent County Council in partnership with Kent Local Authorities and includes objectives relevant to air quality:

- Meeting National Air Quality Objectives
- Reducing the impact on environmental health
- Planning new development appropriately
- Tackling transboundary pollution

The Kent Environment Strategy Progress Report (2007) provides an update with respect to progress with actions relating to air quality, as shown below:

- Despite reductions in some air pollutants, overall air quality in Kent is showing no clear improvement;
- Long-standing problems have been exacerbated by traffic growth, increased ozone pollution from distant sources and extreme weather such as heat waves which are becoming more likely as a result of global warming;
- The identification of new Air Quality Management Areas (AQMAs) is an indication of the problem – but only a first step in solving it;
- The effort going into ‘monitoring and action planning’ is still not being matched by ‘implementation’ of actual measures to improve air quality;
- Reducing emissions from HGV and car traffic remains the key challenge to improve air quality.

Kent County Council is currently reviewing the Kent Environment Strategy and will publish a revised Strategy early 2010

3.5 Maidstone Integrated Transport Strategy (2005 – 2015) into Maidstone Hub Transport Strategy (up to 2026)

Whilst the Local Transport Plan (currently LTP 2) for Kent is the main framework for transport investment in the Borough, the Maidstone Integrated Transport Strategy (MITS) produced in 2005 set out the Borough Council’s vision for a sustainable integrated transport system. The Strategy was intended to be a dynamic document which would evolve with time and be reviewed annually with benchmarking against key targets.

The targets of the MITS 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

The MITS was developed based on the situation 5 years ago. In the near future, MITS will be replaced by the Maidstone Hub Transport Strategy (MHTS), which will support the LDF Core Strategy and become the statutory document. When this takes place the MITS targets will also be replaced by targets for the LDF timescale (i.e. up to 2026)

¹⁰ <http://www.publications.parliament.uk/pa/cm200910/cmselect/cmenvaud/229/229i.pdf>

¹¹ <http://www.kent.gov.uk/publications/environment/environment-strategy.htm>

MHTS will become the framework for all future investment – both public and private – in the transport network. Its role will be to coordinate this investment towards the LDF vision and objectives. It will apply the principles of the LTP 3 (i.e. national policy guidelines and objectives) to the local conditions and issues within Maidstone Borough which have been identified in the sustainability appraisal scoping report¹² as detailed in section 3.6.

3.6 Maidstone Local Development Framework

The Maidstone Borough-Wide Local Plan was adopted in December 2000. As from 28 September 2007, only some of the policies in the Local Plan continue to form part of the development plan and are used in the determination of planning applications. Such policies are called 'saved' policies. This is part of the process whereby new local development framework documents will delete or replace adopted local plan policies. Planning Policy ENV1 with respect to control of pollution (air, land and water) was not saved. National and regional policies¹³ more than adequately cover the same matters contained within ENV1. It is expected that the LDF will provide greater detail on how these national and regional policies relate to local circumstances.

The LDF comprises a number of documents¹⁴ which will be produced over time and includes a Core Strategy. All other documents that comprise the LDF must be in conformity with the Core Strategy. The LDS milestone for the Core Strategy to be adopted is December 2011. Other Development Plan Documents will follow as outlined in the LDS.

Maidstone Local Development Framework, Core Strategy - Emerging Direction

The Core Strategy will set out the spatial strategy to sustainably manage growth. In general terms, it will set out how, where and when development will take place in Maidstone Borough over a 20 year period (2006-2026), which is the planning period of the South East Plan.

The Core Strategy will also address the need to improve air quality in the AQMA, including the town centre, key road junctions and the M20; the need to reduce greenhouse gas emissions to meet Government's targets; the need to increase the renewable energy capacity in the Borough; and adapt to climate change. Key measures being considered include sustainable construction and design standards; renewable energy targets; sustainable transport and travel initiatives, standards and infrastructure; water conservation and efficiency measures. Maidstone's Core Strategy is expected to play a key role in encouraging spatial development which leads to sustainable transport patterns in the Borough. Green and Blue Infrastructure is also expected to form a central part of the strategy, which will also have air quality benefits. The South East Plan emphasises that developments in and around urban areas, including new urban extensions should be well designed and consistent with the principles of urban renaissance and sustainable development (Policy SP3).

The Core Strategy will outline the policy framework to enable the preparation of the Town Centre Regeneration Area Action Plan to provide a policy framework and implementation plan for the revival of defined areas. This will play an important role in identifying the capacity for development and regeneration of Maidstone as a defined Principal Town and Transport Hub prior to, and balanced with, appropriate edge of town centre greenfield development.

Under the South East Plan, an indicative 90% of new housing at Maidstone should be in or adjacent to Maidstone town. Whilst the priority is to develop existing brownfield sites in

¹² <http://www.maidstone.gov.uk/PDF/Maidstone%20SA%20Scoping%20Report%20Final%20Nov%202009.pdf>

¹³ Planning Policy Statement 1 Planning and Climate Change; PPS 22 Renewable Energy; PPS 23 Planning and Pollution Control; South East Plan

¹⁴ The general content, milestones (including adoption milestones) of the local development documents are set out in the Local Development Scheme. Refer to Maidstone Local Development Scheme, September 2009.
<http://www.maidstone.gov.uk/pdf/LDS%20Combined.pdf>

Maidstone town in the first instance, the Council has found¹⁵ that not all future development in the Borough can reasonably be accommodated within the existing built up area of the Borough's towns and villages and it will be necessary to bring forward development on greenfield sites. Brownfield development in Maidstone town is expected to only accommodate 50 to 60% of new housing.

In terms of accommodating housing growth in the latter planning period of the Core Strategy, the Council's preferred approach is to create an attractive and cohesive new mixed use sustainable community to the south-east / east of Maidstone town with a strong sense of place around a range of local services and sustainable transport provision. This was based on an initial assessment¹⁶ including the fact that the majority of higher order services such as comparison shopping, leisure and cultural pursuits, further education and wider employment opportunities are located in Maidstone; the approach does not rely on unachievable and unacceptable development sites and dwelling densities; sustainable transport options (public transport, walking and cycling) can be achieved more readily, with shorter journey distances; and affordable housing provision would be concentrated where there is greatest need. Any urban extension will need to be served by sustainable transport options as routes into Maidstone and through the town centre are already congested.

The Core Strategy is also expected to reflect the spatial implications of the Maidstone Economic Development Strategy (EDS). The EDS sets a target of 10,000 additional jobs to be created within Maidstone Borough and identifies priority sectors for development, including the 'knowledge economy'. Increasing economic growth and accommodating development will place additional pressure on existing infrastructure and generate the need for new infrastructure, and consequentially impact on air quality. Sustainable provision of infrastructure, in particular transport infrastructure is recognised in the EDS and action plan as a key element in the delivery of the objectives of the EDS.

The Core Strategy is currently being prepared with further consultation scheduled during 2010 and the first half of 2011 with adoption by December 2011. The Maidstone Hub transport package is presently being formulated and the Maidstone Integrated Transport is being revised in conjunction with the preparation of the Core Strategy. Air quality will be a key consideration, particularly as it relates to transport and travel and infrastructure. The Sustainability Appraisal (SA) process will be followed to ensure all issues and potential impacts are appropriately assessed. The Maidstone SA Scoping Report, November 2009¹⁷ prepared by Scott Wilson outlines the process and range of issues to be considered.

An Air Quality SPD has been programmed for preparation in the LDS following the adoption of the Core Strategy. It will guide the management of Air Quality in the planning process and aims to maximise the benefits of the AQMA declaration.

3.7 The Sustainable Community Strategy for Maidstone Borough 2009 - 2020

The Local Government Act 2000 places a duty on local authorities to produce a community strategy which sets out the long-term vision for the economic, social and environmental well-being of a local area. The Sustainable Community Strategy replaces the Community Strategy (2003), 'Maidstone Matters', and has been drawn up by the Maidstone Local Strategic

¹⁵ The Government now promotes the use of a Strategic Housing Land Availability Assessment (SHLAA) as a key part of a robust evidence base for the LDF. The Maidstone SHLAA assessed the likely level of housing that could be provided through unimplemented planning permissions and areas of land (including previously developed and greenfield sites) that have development potential for housing. The SHLAA is not a policy making document, but is an important tool in revealing the capacity of the Borough to accommodate the necessary housing growth.

¹⁶ Previous to the SHLAA, a number of criteria were used to identify the most appropriate locations for a new sustainable community at the edge of Maidstone town and further information can be found in the Core Strategy 'Preferred Options' and in the associated Preferred Location for Development Background Document.

¹⁷ <http://www.maidstone.gov.uk/PDF/Maidstone%20SA%20Scoping%20Report%20Final%20Nov%202009.pdf>

Partnership which includes representatives from the County and parish Councils, and public, private, voluntary and community sectors. Sustainable and integrated transport and environmental excellence and climate change are both listed as key areas within the Strategy and relevant actions with potential air quality benefits are listed below.

- Sustainable and Integrated transport actions:
 - MBC and KCC to jointly develop an Integrated Maidstone Transport Strategy
 - Develop a Parking Strategy
 - Support KCC School Travel Plan Officers in working with schools to reduce the number of children being brought to school by car
 - Bid for capacity improvements and public transport priority measures through the Kent LTP
 - Enhance the MBC Park and Ride Service
 - All LSP members to develop and implement robust green travel plans with targets to reduce inessential travel
 - MBC to work jointly with other districts, KCC, the Highways Agency and the Police to alleviate the effect of Operation Stack
 - Bus and rail operators to improve information, services and infrastructure
 - Ensure new housing developments fund sustainable transport initiatives
 - Create joint MBC/KCC Transport Task Group to work with Department for Transport, Network Rail and Highways Agency, building on Maidstone's designation as a Transport Hub
 - MBC to work with KCC to take forward the programme of interventions described in the Economic Development Strategy, particularly M20 improvements, All Saints and South East Maidstone Strategic Link and improvements to rail service
 - Transport Task Group to work with Network Rail and the rail service providers to develop faster rail services between Maidstone and central London, and encourage the expansion of the Thameslink network and CTRL domestic services to serve Maidstone East and Maidstone West stations.
- Environmental Excellence and Climate Change actions:
 - Develop and implement carbon reduction action plan for Borough council properties and fleet (including refuse vehicles)
 - Utilise One to One support programme from Energy Savings Trust to develop and implement multi-agency carbon reduction/climate change plan
 - Develop Borough Air Quality Action Plan
 - Increase thermal efficiency of buildings
 - New development to be built to over and above the national requirements utilising Code of Sustainable Homes
 - Reduce traffic and congestion and develop a low emission strategy that integrates with climate change, energy reduction and air quality plans for the Borough.

For further details, go to http://www.digitalmaidstone.co.uk/community/community_strategy.aspx

3.8 Maidstone Climate Change Strategy and Action Plan

“Climate Matters” Climate Change Strategy and Action Plan for Maidstone Borough Council was adopted in July 2005. This action plan has now been superseded by the Sustainable Community Strategy 2009, which incorporates climate change considerations. The Energy Savings Trust¹⁸ are working with MBC as part of the One-to-One support programme and

¹⁸ www.energysavingtrust.org.uk

recommendations from the EST One-to-One Report will be used to help form a Carbon Emissions Reduction Action Plan (CERAP).

In November 2008, MBC's Cabinet agreed a 3% annual carbon reduction target for the council's operations. This means the council will aim to reduce its carbon emissions from buildings and vehicles by nearly 20% by 2015 and by over 30% by 31st March 2020. Between 2005 and 2007 the council cut its estimated carbon emissions by 7% from 6,156.51 tonnes CO₂ to 5,724.41 tonnes CO₂ - a reduction of 432 tonnes. Maidstone Borough Council has signed up to an agreement with government to help reduce the carbon emissions of residents by 11% by 2011. Kent County Council also aims to reduce its carbon emissions by 20% by 2015. MBC's savings are likely to come from better monitoring of electricity and gas use in council buildings, utilising energy efficient vehicles and equipment and above all from energy conservation – reducing use and waste.

As well as acting to reduce carbon emissions from its own operations and more widely within the borough, the council is also working with KCC and other districts in Kent to make the community more resilient to climate change. This includes the development of a Local Climate Impacts Profile to provide a decision making resource that can be used to better understand how future impacts of climate change may affect service provision in Maidstone Borough and across Kent. By undertaking this project an effective and thorough decision making tool will be available across the county, which can be used to embed climate change into decision-making.

4 Consultation

Local Authorities are required to consult on their draft LAQM Action Plan. It is important for the success of the Action Plan to seek involvement from 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 by the Air Quality and Transport Steering Group, which includes relevant environmental and planning representatives from Maidstone Borough Council and the highways authorities Kent County Council and the Highways Agency.

The following is a list of statutory and non-statutory consultees to which the final draft Plan is also to be sent:

1. Department for Environment, Food and Rural Affairs
2. Highways Agency
3. Kent County Council
4. Maidstone Borough Council Councillors and Officers
5. Primary Care Trusts
6. Neighbouring local authorities
7. Local residents within and bordering the AQMA
8. Relevant local businesses, community groups and forums
9. 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 Plan will be presented to Maidstone Borough Council for endorsement and subsequently placed on the Maidstone Borough Council website at <http://www.maidstone.gov.uk>.

5 Action Plan Proposals for Maidstone Borough Council

It is essential that all relevant authorities provide the Council with the necessary information on their proposals that will help work towards the attainment of the AQS Objectives and EU Limit values, to be achieved by 2010. As the major source of pollution in the AQMA is transport related, those relevant authorities with responsibilities for transport have a very important role.

A summary of these proposals is outlined in the following pages, including the impact and timescales for these proposals. In order to inform the action planning process a simple assessment of the cost and benefit of each proposal has been undertaken. The following table gives an indication of the scoring used. A simple multiplication of the cost and impact, (score X score), gives some indication as to the cost effective score of the proposals. This methodology is commonly applied across Kent and the UK.

Table 5.1 - Scoring used to assess and prioritise proposals

Costs		Air Quality Impacts		Timescale*	
Score	Approximate cost	Score	Indicative impact		Years
7	<£100k	7	>5 µg/m ³	Short (S)	1- 2
6	£100-500k	6	2-5 µg/m ³	Medium (M)	3-5
5	£500k-1million	5	1-2 µg/m ³		
4	£1-10 million	4	0.5 - 1 µg/m ³		
3	£10-50 million	3	0.2 – 0.5 µg/m ³		
2	£50-100 million	2	0 - 0.2 µg/m ³	Long (L)	6+
1	>£100million	1	0		

* measures implemented already are denoted as “I”, otherwise denoted as ongoing - “O”

5.1 Scenario testing of potential traffic measures in the AQMA

To help quantify the impact of potential traffic measures that could be implemented to reduce pollutant levels in the AQMA, scenarios are being tested using a dispersion model. The results of the modelling will be provided in the final Action Plan.

5.2 Health Impact Assessment

While drawing up the draft Action Plan, Maidstone Borough Council is undertaking a Health Impact Assessment (HIA) of the Action Plan measures proposed. This will identify whether measures proposed can be enhanced to improve health and health distribution among the population or require alteration to minimise any negative impacts on health and well-being. The results of the HIA will be provided with the final Action Plan.

5.3 Specific Measures to be implemented in the AQMA

To work towards achievement of the AQS objectives in the AQMA, the following measures will be/are proposed to be implemented: -

TRANSPORT MEASURES

Maidstone is identified as a Transport Hub in the Regional Strategy (South East Plan). This implies that it is seen as a focus for transport movements in this part of Kent and the interchange between various modes of transport, and thus has a wider role than just the delivery of its own housing and employment targets. It emphasises the need for the transport and travel strategy that will support the LDF Core Strategy to be coordinated with the transport and development aspirations of neighbouring planning authorities, and for cooperation between the Borough, County Council, the Highways Agency (responsible for the M20), and the bus and rail operators. The eventual Hub package of measures will be developed on the principle that would look at the improvement of highway capacity on its own as a last resort. Government policy expects; that sustainable spatial planning of new development will reduce the need for travel (i.e. large new housing sites should be accompanied by employment, schools, shops etc. within easy walking and cycling distance); the management of future demand for travel downwards (by making it more difficult or expensive to travel by car); the more efficient management of existing roads (i.e. better co-ordination of traffic signals etc.); and investment in sustainable transport improvements (bus lanes, cycle routes, interchange with rail services).

To help minimise and control air pollution from road traffic, Maidstone Borough Council will continue to work with relevant partners to consider air quality issues in relation to a range of transport and travel options within the Transport Hub package.

For example, the range of options being considered in the Maidstone Hub package include:

- Reducing the need to travel through sustainable spatial planning;
- Increasing the attractiveness of the alternatives to cars, e.g. walking, cycling, bus, rail;
- Improvements to public transport, such as bus priority lanes, improved park and ride facilities and services, improved and new rail services - more efficient services;
- Demand management of traffic, e.g. changes to parking standards, traffic management systems, road layout, travel planning;
- Road schemes¹⁹ which reduce congestion and improve amenity in conjunction with other options.
- Encourage uptake of the use of low emission vehicles and strategies in both the public and private sectors.

Measure M1: Input from the Air Quality & Transport Steering Committee (AQTSC) to Transport Hub Package & any other appropriate travel scheme

The AQTSC will raise awareness of the impact on air quality of the Borough's housing and employment growth targets, and support the transport measures that would be needed to manage and reduce the potential growth in traffic that would be associated with the delivery of these targets.

This will be achieved by having regular meetings of the AQTSG to oversee Local Air Quality Management issues in relation to the proposed transport hub package; The identification and

¹⁹ For example, one of the options being currently explored as part of the Maidstone Hub transport package is a South East Maidstone strategic link road that would provide an alternative route between the M20 and south east Maidstone to provide improved access to the strategic road network and to reduce traffic movements through the town and along rural lanes including through Leeds and Langley. A key issue will be cost and viability, including other proposals needed to support and complement it.

prioritisation of any transport and travel measures which may affect traffic flows in Maidstone; identification and appraisal of Section 278 works that may have an impact on the AQMA.

Measure M2: M20 Junctions 4 - 7 Controlled Motorway and Cordon Project

The M20 J4-7 has been identified as a potential site for a controlled motorway scheme by the Highways Agency²⁰. This is a busy stretch of motorway and congestion can affect journey time reliability. The introduction of a Controlled Motorway on both carriageways between these junctions will help deal with this issue. There are currently gantries displaying advisory speed restrictions. When fully operational a Controlled Motorway is designed to tackle issues of local congestion on the motorway and keep traffic moving. The system works by adjusting mandatory speed limits by using various sensors, which are able to detect the speed and flow of traffic. It works automatically and informs drivers of the reasons for the changes.

The same system has proved to be successful on the M25. It has also been used as part of the Active Traffic Management (ATM) trial used on the M42. Controlled Motorways have been shown to provide both safety and environmental benefits to road users:

- Reduction of road traffic collisions.
- More reliable journey times and improved traffic flows.
- Reduced noise and harmful vehicle emissions.

The legal process for enforcement of the variable speed limit is to be completed in 2010.

The Cordon Project, also a Highways Agency scheme, will create a managed area that incorporates the M20, M2, A229 and A249. Signage for this has already been implemented and close co-operation between KCC and the Highways Agency Control Centres is already developing.

Measure M3: Urban Traffic Management and Control (UTMC) Enhancements

A UTMC system is already operational in Maidstone town centre. This is being further developed through the LTP integrated transport programme, with additional variable message signs and automatic number plate recognition equipment being installed. An upgrade to the car park management system is complete and continual improvements are being made in order to improve the effectiveness of the UTMC. Developments of the UTMC will be continually reviewed through the AQTSC to ensure maximum air quality benefits from this measure.

Measure M4: Tackling Congestion Hotspots in Maidstone.

Maidstone has been highlighted in the LTP as one of the urban areas which suffers from serious congestion. Localised traffic congestion and poor journey time reliability is increasingly common on many local roads in the town centre. KCC are preparing a "Congestion Plan" for Maidstone, which will summarise the key issues relating to congestion and inform future traffic management work.

Measure M5: Improved Coordination of Roadworks

²⁰ <http://www.highways.gov.uk/roads/projects/18495.aspx>

A new permit system has been put in place by Kent Highway Services, in order to help co-ordinate roadworks. MBC will work with KHS at KCC to produce a strategy which will help co-ordinate these roadworks in a way which minimises traffic flow disruptions.

Measure M6: Improvements to Public Transport.

Bus Lane Priority Lanes: For example, an extension of the existing bus lane on the A274 Sutton Road and the A20 Ashford Road to create capacity for new bus routes. Similarly, potential will be considered on Investigations will include costs and impacts. This measure has the potential to improve public transport uptake and reduce traffic entering the AQMA.

Maidstone Quality Bus Partnership²¹:

A Quality Bus Partnership (QBP) was agreed with Arriva, the main bus service provider in the area, and Maidstone Borough Council in 2000. Since then, a range of improvements have been made to the buses, infrastructure and the services. It is intended to re-launch the Maidstone Quality Bus Partnership in 2010 with an emphasis on improving service reliability particularly where services are not considered to be as effective as they should be in attracting patronage.

There are 25 buses used on local bus services in Maidstone. The Maidstone Park & Ride service, paid for by Maidstone Borough Council and run by Arriva, received new buses in 2005. The 101 service, which is an express service between Medway and Maidstone, has also received new buses which are distinctly branded as the "Expressline". The service, which used to run every half an hour, now runs every 15 minutes during the week and passenger numbers have increased significantly, in part due to the reduced journey times between the two towns. Major improvements are also being made on the London Road corridor, with a programme of measures to increase the flow of buses (four new buses will be brought on line), to improve bus stops and provide better "real time" information.

In 2009 Kent County Council, in partnership with Tunbridge Wells Borough Council, Maidstone and Tunbridge Wells NHS Trust and Arriva Southern Counties, submitted a bid for Kickstart funding to the Department for Transport. If successful this will see a marked improvement in the service provided on the key inter-urban routes 6 and 7 between Maidstone and Tunbridge Wells.

Further investment in measures to support public transport services are being brought forward through the LTP. The future contribution of bus services to the delivery of the Growth Point targets is important, as provision must be made to accommodate additional services on the approaches to and within the town centre.

Rail Network Improvements

In the short term there are proposals to restore a link on the Maidstone East line to City destinations to act as a deterrent to rail heading which is currently taking place to stations outside of the Maidstone area (Staplehurst, Paddock Wood, Sevenoaks, and Swanley).

In the medium term there are proposals to add Maidstone East to the Thameslink network when this is expanded after the London Olympics. This would provide improved links to Kings Cross and north London destinations together with good links to rail services to other parts of the country.

²¹ <http://www.kent.gov.uk/transport-and-streets/public-transport/public-transport-in-kent/Maidstone-Quality-Bus-Partnership.htm>

MBC are working with Network Rail regarding their Route Utilisation Strategy for Kent aspiration to operate High Speed domestic services via the Medway Valley line to Maidstone West. Network Rail have also indicated that the possibility of providing a station on the High Speed line in the Maidstone area should be explored for the longer term and we support this.

There may also be scope for developing “Park and Rail” for more local journeys into Maidstone and West Malling on both the Maidstone East and Maidstone West lines to relieve traffic congestion on the parallel highway network (M20, A20, A26). It is hoped to bring forward some more detailed proposals on this over the next couple of years.

Park and Ride Services and Facilities:

There are currently three Park and Ride sites in the Maidstone area, operated by Arriva:

- London Road - ME16 0LP
- Sittingbourne Road - ME14 3EN
- Willington Street - ME15 8JW

Investigations will include the consideration of new and amended services and facilities to support growth, particularly in the east, south east and North of the Town. For example, the Langley Park Farm Park and Ride site has been previously identified by Maidstone Borough Council as a potential replacement for the former Park and Ride operation at Coombe Quarry.

Measure M7: Measures targeting Heavy Goods Vehicles

Possible HGV time restrictions through the AQMA will be investigated as part of the Freight Quality Partnership and review of HGV routes in the town centre e.g. large waste and recycling vehicles routes to the waste management site. Possible investigation of town centre freight transport movements, notably with respect to the largest operators to develop a freight transport strategy for the town centre.

A South East Maidstone Strategic Link could influence freight movement by providing an alternative route between the M20 and south east Maidstone (particularly the Park wood industrial estate).

Measure M8: Tackling Air Quality hotspots with hourly NO2 objective exceedences

Investigating the potential for implementing schemes which reduce peak hour flow could yield some solutions. The LDF transport strategy will be considering “Demand management” relating to peak hour road use as a pertinent issue relating to congestion and air quality.

Investigating the use of actions which specifically discourage or reduce exposure may also be helpful.

Measure M9: Redesign of Maidstone High Street and Town Centre Area Action Plan -

Maidstone Borough Council invited submissions to a two-stage, International Open Design Competition for regeneration (£4m) of the High Street in Maidstone town centre. The competition, which launched in January 2009, was organised by Maidstone Borough Council and managed by the Royal Institute of British Architects (RIBA).

The Jury Panel chose the Letts Wheeler’s scheme, due to its clutter free, simple homogenous approach to the design. The main vehicular carriageway is moved to the south of the street to create two large pedestrian squares outside the Town Hall and in Lower High Street to enable events to take place and restaurants to spill on to the street.

A programme of consultation with various interested groups is being carried out to refine the design and the final design will go back to Cabinet for approval.

The High Street has been identified in the Further Assessment as one of the hotspot areas within the AQMA. Careful design of the new town centre could bring local air quality benefits in this area as there will be vehicular restrictions to access and further pedestrianised areas.

Preparation of the Town Centre Regeneration Area Action Plan will provide the policy framework for the development and regeneration of Maidstone Town centre and its role as a key transport hub.

Measure 10: MBC will seek improvements in Emissions Standards for Council Fleet and Public Service Vehicles

Emissions from the Council fleet are being measured by Maidstone Borough Council as part of the requirements of national indicators 185 (for carbon dioxide reduction from local authority operations), and indicator 194 for air quality (% reduction in NO_x and primary PM₁₀ emissions through local authority's estate and operations).

No targets have been set for emissions standards as yet, but proposals are being considered for the Council fleet e.g. for lease cars, waste collection fleet (Euro 4 for all vehicles) and Park and Ride buses.

POLICY MEASURES AND PARTNERSHIP WORKING

Measure M11: MBC will ensure local air quality is fully integrated into the LDF process and development scenarios are appropriately assessed with respect to the potential impacts on air quality.

An air quality Supplementary Planning Document (SPD) is under development which will guide the management of air quality in the planning process and aims to maximise the benefits of the AQMA declaration.

With significant development proposed in the area up to 2026, assessment of the impacts on the highways and transport networks (and resulting environmental impacts) and consideration to measures to deal with potential impacts will be crucial. Sustainable travel patterns will be a key driver to the achievement of sustainable development in the area and to minimise negative impacts on air quality.

Measure M12: MBC will seek to request contributions for developments likely to have an air quality impact on the AQMA, either through the use of S106 agreements or through a Community Infrastructure Levy (CIL).

PPS23 outlines the statutory basis for applying a combination of planning conditions and legal obligations to address the environmental impacts of proposed developments. In particular, it notes that “Section 106 Agreements can be used to improve air quality, make other environmental improvements”... “or offset the subsequent environmental impact of a proposed development.”

Another relevant adopted development plan policy which supports the use of such contributions in relation to air quality issues is NRM9 in the South East Plan. Therefore MBC will give consideration to the development of a framework for calculation of contributions in relation to air quality issues either for use in S106 agreements or through a Community Infrastructure Levy (CIL). CIL/tariff levels may be debated through the Core Strategy Independent Examination. Contributions secured, (either through S106 agreements or a CIL), would be used to fund initiatives that assist emissions reduction in support of Local Air Quality Management.

Measure M13: MBC will ensure effective co-ordination between climate change (carbon emission reduction), air quality strategies and action plan measures.

There are significant overlaps between the two areas, so joint working will maximise the benefits. There are also potential areas where carbon reduction strategies and local air quality conflict (e.g. use of some types of biofuel in the vehicle fleet and increased uptake of biomass boilers).

Coordination of two areas of work will increase the positives and reduce the negatives in both areas of work.

Measure M14: MBC will continue its active involvement and support of the Kent and Medway Air Quality Partnership.

MBC is a member of the Kent and Medway Air Quality Partnership, which was formed in 1992. The major aims and objectives of the Partnership are to:

- Facilitate a co-ordinated approach through Kent and Medway for the Local Air Quality Management obligations placed on local authorities under the Environment Act 1995.
- Compile, update, and maintain an Emissions Inventory of air pollution sources in and around Kent, to assist with the LAQM process.
- Comment on and influence the economic, planning and transport policies within the county so that air quality issues are properly considered and addressed.
- Gain an understanding of the health implications associated with poor air quality and the threat it poses to the health of Kent and Medway’s communities.
- To promote an awareness of air quality issues by working with national agencies, neighbouring authorities, and European partners 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.

The Partnership has developed a draft Air Quality and Planning Guidance in 2009. This guidance is aimed at developers, their consultants and local authorities. It provides technical advice on how to deal with planning applications that could have an impact on air quality. If the procedures in this guidance are followed, it will help to ensure consistency in the approach to dealing with air quality and planning across Kent. The Guidance is currently undergoing

consultation and is awaiting endorsement by the Kent Environmental Health Managers Group and Kent Planning Officers Group.

Measure M15: MBC will continue its active involvement and support of the Low Emissions Strategies (LES) Partnership and Low Emissions Strategy promotion.

Maidstone Borough Council is a member of the Low Emission Strategies (LES) Partnership²². The partnership comprises a Peer Group of 15 local authorities across England working together to support local implementation of LES. LES provide a package of measures to help mitigate the transport impacts of development. Their primary aim is to accelerate the uptake of low emission fuels and technologies in and around a new development, thereby complementing other design and mitigation options, such as travel planning and the provision of public transport infrastructure.

MBC will utilise these links to advance opportunities to develop trial electric or low carbon vehicles and lead by example.

MBC will actively seek funding opportunities to incentives the uptake of low carbon technologies and infrastructure. An infrastructure grant for the installation of electric vehicle charging points will be applied for in 2010 and future opportunities for sponsorship and partnership working will be also pursued in accordance with guidance on local transport plans (DfT 2009).

Measure M16: MBC will ensure effective co-ordination of local air quality

A Tonbridge & Malling Officer involved with local air quality management will attend MBC Air Quality & Transport Steering Committee meetings. T & M and MBC will develop a strategy for joint working on air quality issues, particularly with regard to the Forstal road area on our shared border in Aylesford.

Measure M17: MBC will investigate potential use of NOx reducing paving paints in the AQMA.

A review of the scientific studies carried out and of the cost to benefit comparisons will be undertaken.

5.4 General Measures to be implemented Borough-Wide

LEADING BY EXAMPLE

To ensure that the impact of Maidstone Borough Council's operations have minimum impact on air quality, Maidstone Borough Council gives a commitment to the following: -

- **Measure M18:** MBC will work in partnership with the PCT to establish Health Baselines in various parts of the AQMA plus other parts of the borough.
- **Measure M19:** MBC will work with KCC, HA and other partners to encourage the planting of tree species which benefit air quality within the borough, through the planning process, Maidstone's Green Spaces Strategy and community partnerships.
- **Measure M20:** MBC, KCC and HA will carry out regular emissions testing of its vehicle fleet to ensure that all vehicles comply with the law.

²² <http://www.lowemissionstrategies.org/>

- **Measure M21:** MBC KCC and HA will promote the uptake and use of cleaner or alternative fuels where possible.
- **Measure M22:** MBC KCC and HA will establish and implement a rolling programme for replacing older more polluting vehicles with newer cleaner vehicles, which comply with the prevailing EURO standard.
- **Measure M23:** MBC KCC and HA will improve the Council's vehicle fuel consumption efficiency by better management of their fleet activities.
- **Measure M24:** MBC KCC and HA will investigate options for better travel planning amongst their employees.
- **Measure M25:** MBC KCC and HA will assess their energy needs and make recommendations to the Council on reduction of carbon emissions.

Maidstone Borough Council has become one of eight councils in Kent, East and West Sussex and Surrey to become part of the EST's one to one support programme. The one-to-one support programme aims to help local authorities reduce area-wide carbon emissions and demonstrate local leadership in addressing climate change. The programme works on a seven stage process that takes place over two years to develop, implement and review a climate change action plan. In the second year the council will be able to bid for up to £25,000 towards implementing its plans.

Maidstone Borough Council staff have access to free park and ride tickets, subsidised bus tickets and a car sharing scheme. These schemes will be assessed and promoted through the MBC travel plan which will be reported against through KCC iTrace.

EDUCATION AND COMMUNITY INITIATIVES

To ensure that members of the public have access to information about air quality and can make informed choices, Maidstone Borough Council gives a commitment to the following: -

- **Measure M26:** MBC to promote and support localised energy generation in both private households and public buildings.
- **Measure M27:** MBC will implement initiatives to educate communities on air pollution issues and ways to minimise impacts on air quality.
- **Measure M28:** MBC will provide the public with relevant information thus enabling commuters to make informed choices about their transport options.
- **Measure M29:** MBC will continue to work in partnership with KCC to increase uptake and implementation of School Travel Plans, Workplace Travel Plans and Residential Travel Plans , particularly where likely to impact on the AQMA..

A Travel Plan is a general term for a package of tailored measures to encourage the use of sustainable methods of transport and reduce the reliance on the private car, particularly single occupancy travel. They can be for one or a group of organisations and involve the development of a set of mechanisms, initiatives and targets that together can reduce the environmental and health impacts of travel. Using alternative fuels and home working can also be included. Travel Plans are also being developed for schools, workplaces and residential developments and area-wide, including mixed use developments.

A School Travel Plan is a set of measures to help cut the number of car journeys people make to school, encourage more journeys by public transport, and increase walking and cycling. There are a number of schools within and the AQMA, where implementation of School Travel Plans will be of particular significance. The DfT and Kent Local Transport Plan target is for all Kent schools to have travel plans by 2010.

A Workplace Travel Plan should be tailored to the needs of individual businesses. It considers journeys from home to work, but can also include business journeys, travel by visitors, deliveries, contractors and company cars. Large organisations may benefit from a whole range of new ideas and changes, while small businesses may only need to make one or two very simple changes to make a big difference. 'New Ways 2 Work' is a KCC led initiative to encourage everyone from small businesses to major corporations to look more closely at the impact which commuting and business travel has on their staff, productivity and corporate image. This promotes simple steps that organisations can take, such as setting up a car sharing scheme, or asking for KCC help to set up a comprehensive Workplace Travel Plan.

Measure 28 seeks to support KCC travel plan officers through the planning process to raise the standard of workplace and residential travel plans, ensuring the Travel plans are implemented, monitored and reviewed over time to reduce single occupancy car journeys and encourage other modes of transport

- **Measure M30:** MBC will continue working partnerships with KCC, Sustrans and the Maidstone Cycling Forum to ensure that walking and cycling initiatives are promoted and supported in Maidstone. An updated cycle strategy for the town is to be developed.
- **Measure M31:** MBC will encourage their employees to consider the use of bicycles in their daily duties by providing cycle usage mileage.
- **Measure M32:** MBC will continue to work with KCC and transport providers to support and promote increased uptake of public transport modes.

Schemes such as the Kent Freedom Pass which provides unlimited all-year round use of local bus services in Kent, for one payment of just £50 to school children in the academic years 7-11 have proved very successful. KCC first introduced the scheme in June 2007 in three pilot areas intended to run until 2009. However, due to its success all remaining districts are now included (Maidstone as from June 2008). Since its introduction it has proven very successful, encouraging children away from car travel and on to Kent's bus network. By the end of the first year, pass holders had made more than 1 million bus journeys and the 10,000th pass was issued in October 2008. There are now more than 17,000 passes in circulation.

SECURING AIR QUALITY BENEFITS THROUGH STATUTORY FUNCTIONS

To ensure that air pollution is controlled by legislation and targeted enforcement, Maidstone Borough Council will continue the following: -

- **Measure M33:** All relevant air quality issues will be highlighted within planning applications and mitigation measures considered where possible.
- **Measure M34:** MBC and Environment Agency (EA) will permit and regularly inspect industrial premises under the Environmental Permit regulatory regime.
- **Measure M35:** MBC and EA will enforce Environmental Permitting Regulations and/or statutory nuisance legislation to control smoke, dust, fumes or gas emissions from commercial and domestic premises which are causing a nuisance or are prejudicial to health.
- **Measure M36:** MBC and EA will enforce relevant legislation to reduce the burning of commercial and domestic waste and ensure regulated incinerator facilities are fully compliant.

- **Measure M37:** MBC will promote composting in a bid to reduce pollution from domestic bonfires.

AIR QUALITY MONITORING

To ensure that there is adequate air pollution monitoring data with which to manage air quality across the borough: -

- **Measure M38:** MBC will continue to monitor a range of air pollutants throughout Maidstone and make the monitoring information freely available to the public in an easily understood form.
- **Measure M39:** MBC will ensure that all air quality monitoring data reported to the public is both accurate and precise by implementing quality control measures.
- **Measure M40:** MBC will establish additional monitoring sites across the borough in locations where poor air quality is suspected.

Monitoring data is made available through the Kent & Medway Air Quality Monitoring Network
- <http://www.kentair.org.uk/>

Table 5.1- Measures to be Implemented AQMA

Measure	Actions	Lead Authority	Timescale	Status	Impact	Cost	Cost Effective Score	Targets/ Indicators
Measure M1: Input from the Air Quality & Transport Steering Committee (AQTSC) to Transport Hub Package & any other travel schemes within the Borough.	a) Regular meetings of the AQTSG to oversee Local Air Quality Management issues.	KCC Transportation & Development + MBC	LT	Potential schemes identified. Funding required.	5	3	15	- - Annual traffic counts that KCC carry out at the inner and outer cordons around the Maidstone town - Response to Integrated Transport Strategy and LDF consultation. - Identify status of any road infrastructure schemes identified in the Integrated Transport Strategy and LDF. - Identification of funding sources for air quality assessments of any identified schemes.
	b) Identification and prioritisation of any transport and travel measures which may affect traffic flows in Maidstone. c) Section 278 Works	KCC County Works Improvements Team + MBC	2010	Ongoing	2	7	14	
Measure M2: M20 Junctions 4 - 7 Controlled Motorway and Network Performance Monitoring.	- Highways Agency to seek ministerial approval - Investigate ways to monitor effect - KHS to coordinate any information emerging from the controlled motorway system with the KCC Urban Traffic Management Scheme & Control System	HA + KCC & KHS Transportation & Development	2010	Await legal process for enforcement of the variable speed limit	3	4	12	- Ministerial approval of Controlled Motorway. - Implementation of traffic management measures by target year. -Identify funding for monitoring.

Measure M3: Urban Traffic Management and Control (UTMC) Enhancements.	Collection and analysis of data.	KCC & KHS Transportation & Development Jacobs Technical Director Traffic Systems	2010+	Improvements to equipment (2 year programme ends March 2010)	3	5	15	- 10% reduction in congestion on baseline 2005/6. - Annual review of situation.
Measure M4: Tackling Congestion Hotspots in Maidstone.	MBC to work with the KCC Network Management Team to identify congestion hotspots in Maidstone, using various data such as journey time, NI 167, ANPR; plus grade these hotspots against a congestion priority ranking system	KCC Network Management Team + KHS (Transportation & Development Manager) + MBC	2010+	Review & investigation ongoing	4	5	20	- Review and update the 2006 KCC congestion hotspots report. - Establish annual periodic review of congestion hotspots from 2011 onwards. - Congestion performance indicator NI 167. - Reduction of journey times into Maidstone. - Annually report any other action taken.
Measure M5: Improved Co-ordination of Roadworks.	Strategy to be developed to improve co-ordination of road works in relation to Maidstone Air Quality hotspots. Ensure air quality is one of the relevant triggers for permit considerations and conditions.	KHS (Transportation & Development Manager) + Jacobs (Traffic systems Technical Director) + KCC Network Performance Team (Network Management Manager & Roadworks Manager) + MBC	2010+	Permit scheme commenced 25 th January 2010	2	7	14	- Periodic review of new permit scheme as outlined in the KCC document entitled "Measuring the Success of the Kent Permit Scheme (2010). - Implementation & review of co-ordination strategy.
Measure M6: Improvements to Public Transport	1) Maidstone Quality Bus Partnership: Lobby for fleet emissions improvements within Partnership agreement	KCC (Transportation & Development Manager) + MBC) + Arriva Bus Company	2010	Funding & approval required	4	5	20	- To decrease age of fleets and to increase percentage of EU 4 & 5's within fleets plus increase proportion of low emission vehicles in use.
	2) Bus Lanes	KCC (Transportation & Development Manager) MBC	LT	Approval required & funding through development	2	6	12	- Implementation of scheme through LDF core strategy. - Passenger numbers. Improvements to public transport schemes update report to be submitted to AQTSG annually (April)

	3) Park and Ride		LT	Approval required & funding through development	4	4	16	- Implementation of scheme through LDF core strategy. - Passenger numbers.
	4) Rail Network Improvements	KCC (Transportation & Development Manager) + MBC + South Eastern + Network Rail	2010	Ongoing improvements	3	4	12	- Feasibility study J8 M20 Maidstone Parkway. - Implementation of schemes. - Passenger numbers. - Research potential for Park & Rail scheme
Measure M7: Optimisation of the types and distributions of HGVs in Maidstone town, particularly with respect to air quality, congestion and business-needs issues.	Identify funding sources for freight/HGV distribution study. - Identify sources of information. - Develop & implement a Freight strategy.	KCC Network Performance Team + MBC	2011/12	Funding required plus ongoing investigation re relevant sources of information	4	7	28	- Identify funding sources. - Preparation of Freight/HGV distribution study. - Develop & implement a Freight/HGV strategy.
Measure M8: Tackling hotspots with hourly NO ₂ objective exceedences.	- Investigate the potential for implementing schemes which reduce peak hour flow of traffic. - Investigate the use of actions which specifically discourage/reduce exposure where hourly exceedences.	MBC KHS (Transportation & Development Manager)	2010+		2	7	14	- Investigation report regarding schemes to reduce peak hour flow of traffic. - Investigation report regarding schemes to discourage /reduce exposure at road sites where members of the public may be exposed to levels of pollution in breach of the hourly NO ₂ Objective. - Demand Management to be a consideration in the LDF transport strategy.
Measure M9: Town Centre Regeneration Action Plan.	Maidstone High Street redesign & improvement measures.	MBC	2010/11	High Street works start Autumn 2010; phasing subject to funding	3	3	9	- Implementation of High Street improvement scheme. - Adoption/implementation Area Action Plan.

Measure M10: MBC & KCC will seek improvements in Emissions Standards for KCC & MBC Council Fleets and Public Service Vehicles.	Development of Green Procurement Strategy.	MBC + KCC Operations (Street Scene Manager) + MBC + KCC (Climate Change Officer)	2010	Currently in development but not approved by cabinet yet	3	6	18	- Approval of Strategy by MBC cabinet. - Average age fleet and Euro category/Fuel type. (Target to be set)
Measure M11: MBC will ensure local air quality is fully integrated into the LDF process and development scenarios are appropriately assessed with respect to potential impacts on air quality.	An air quality Supplementary Planning Document (SPD) is being developed and may be implemented following LDF adoption.	MBC	2013	Await LDF adoption 2011 and subsequent final draft of SPD	4	7	28	- Adoption of Air Quality SPD or similar guidance.
Measure M12: MBC will request contributions for developments likely to have an air quality impact on the AQMA. either through the use of S106 agreements or through a Community Infrastructure Levy (CIL).	- Framework to be developed for calculation of contributions in relation to air quality issues either for use in S106 agreements or in a CIL. - CIL/tariff levels may be debated through the core strategy Inquiry.	MBC	2010+	Ongoing	3	7	21	- Contributions secured, (either through S106 agreements or a CIL), to be used to fund initiatives that assist Local Air Quality Management.
Measure M13: MBC will ensure effective co-ordination between climate change and air quality strategies and action plan measures.	Strategy to be developed to improve co-ordination between climate change and air quality strategies and action plan measures.	MBC	2010+	Ongoing	3	7	21	- Implementation of co-ordination strategy - Reciprocal attendance of air quality and climate change working groups/steering committees
Measure M14: MBC will continue its active involvement and support of the Kent and Medway Air Quality Partnership.	- Attend quarterly meetings of partnership and share information. -Continue annual payment of fee to support membership and running of the Kent and Medway Air Quality Network. - MBC will continue to work together the Kent and Medway Air Quality Partnership on promotional activities to raise the profile of air quality in Kent and Maidstone.	MBC	2010+	Ongoing	2	7	14	- Membership of the Partnership and Network continued. - Number of Partnership events MBC involved with which raise the profile of air quality in Maidstone

Measure M15: MBC will continue its active involvement and support of the Low Emissions Strategies (LES) Partnership.	Attend meetings; participate in relevant workshops and questionnaires/surveys.	MBC	2010+	Ongoing	3	7	21	- Membership of the Partnership continued. - Application of LES.
Measure M16: MBC will ensure effective co-ordination of local air quality management with Tonbridge & Malling Borough Council.	- T&M BC attendance of MBC Air Quality & Transport Steering Group; - Development of strategy for joint working, particularly in relation to air quality improvements along Forstal Road, Aylesford.	MBC + T&M BC Environmental Protection Team	2010/11		2	7	14	- Organisation of MBC+T&MBC meetings to discuss potential actions and targets. -Development of Strategy for joint working in relation to Local Air Quality Management. - Preparation/Implementation of joint strategy for AQ improvements along Forstal Road, Aylesford.
Measure M17: MBC will investigate potential use of NO _x reducing paving and paints in the AQMA.	Survey of current studies and evidence	MBC	2010/11		2	7	14	- Review carried out of studies undertaken by other local authorities and any other supporting evidence; - Identify potential funding sources - Implementation of improvement schemes.

Table 5.2 - Measures to be Implemented Borough-wide

Measure	Actions	Lead Authority	Timescale	Status	Impact	Cost	Cost Effective Score	Targets/Indicators
Measure 18: MBC will work in partnership with the PCT to establish Health Baselines in various parts of the AQMA plus other parts of the borough	- PCT attendance of MBC Air Quality & Transport Steering Group. - Undertake Health Baseline study to a) Identify conditions that may be exacerbated by poor air quality b) Review & report on data.	MBC + PCT	2010+	Funding Required	1	7	7	- Identify suitable contact with PCT for Steering Group role. - Identify funding source for Health Baseline study. - Progress with establishing Health Baseline.
Measure M19: MBC will work with KCC, HA and other partners to encourage the planting of tree species which benefit air quality	Strategy to be developed to improve co-ordination of tree-planting programmes with respect to air quality benefits	MBC + KCC + HA	2010/11		2	7	14	- Preparation/Implementation of co-ordination strategy.

within the borough, through the planning process, Maidstone's Green Spaces Strategy and community								
Measure M20: MBC KCC and HA will carry out regular emissions testing of their vehicle fleets to ensure that all vehicles comply with required emissions standards.	Establish which groups are responsible for organising this and what the time schedules involved are	MBC + KCC + HA	2010	Ongoing improvements	2	7	14	- %Failure rate in each financial year.
Measure M21: MBC, KCC and HA will promote the uptake and use of cleaner or alternative fuels where possible.	- Establish contact points - Determine strategy/advise note and annually review content	MBC + KCC + HA	2010	Ongoing improvements	2	7	14	- List of any promotion campaigns planned/implemented. - Number/Proportion of cleaner vehicles within fleets or clean fuels infrastructure in each financial year.
Measure M22: MBC KCC and HA will establish and implement a rolling programme for replacing older more polluting vehicles with newer cleaner vehicles, which comply with the prevailing EURO standard.	Development of Green Procurement Strategy (MBC) Identification of KCC and HA green procurement policies Identification of fleet composition for MBC,LCC and HA	MBC + KCC + HA	2010	Ongoing improvements	2	7	14	- Number/proportion of new/improved vehicles within fleets in each financial year.
Measure M23: MBC KCC and HA will improve their vehicle fuel consumption efficiency by better management of fleet activities and consider their activities in relation to	- Develop fleet management plan to improve fuel efficiency; - Investigate fleet activities in relation to pollution hotspots e.g. waste management fleet routes.	MBC + KCC + HA	2010+	Ongoing improvements	2	7	14	- Implementation of smarter driver programme. - Preparation/ Implementation of Fleet management plan. - Progress against targets for NI185.

hotspots.								
Measure M24: MBC and KCC will investigate options for better travel planning amongst their employees.	<ul style="list-style-type: none"> - Review of MBC Travel Plan in order to bring up to date - iTrace software license to be procured for MBC staff. - iTrace training for MBC staff to use iTrace to be implemented. - Review of KCC Travel Plan. 	MBC + KCC	2010+	Ongoing improvements	2	7	14	<ul style="list-style-type: none"> - a MBC Travel Plan Co-ordinator will be appointed and a Travel Plan developed, implemented, promoted and monitored in liaison with KHS Travel Planning team. - Full implementation of iTrace. - Implementation of KCC Travel Plan & review of progress with targets.
Measure M25: MBC and KCC will both be assessing their energy needs and make recommendations on reduction of carbon emissions.	MBC to take forward recommendations from the EST One to One report to help form a Carbon Emissions Reduction Action Plan (CERAP).	MBC + KCC	2010	Ongoing improvements	2	7	14	<ul style="list-style-type: none"> - Implementation of CERAP. - Progress against targets for NI186. - Progress against some targets for NI185.
Measure M26: MBC and KCC to promote and support localised energy generation in both private households and public buildings.	MBC to include measures which promote and support localised energy generation in both private households and public buildings in the Carbon reduction Action plan (CERAP).	MBC + KCC	2010	Base level setting	2	7	14	<ul style="list-style-type: none"> -Implementation within CERAP and reported annually. - Number of promotional events and opportunities demonstrated annually.
Measure M27: MBC will implement initiatives to educate communities on air pollution issues and ways to minimise impacts on air quality.	<ul style="list-style-type: none"> -Develop AQ education plan/strategy -Put plan into action 	MBC	2010	Ongoing improvements	2	7	14	<ul style="list-style-type: none"> - Initiatives identified; - Initiatives implemented

<p>Measure M28: MBC will provide the public with relevant air quality information thus enabling the public to make informed choices about their transport options.</p>	<p>-- Up to date air quality information for the Maidstone Borough will continue to be available to the public through both Maidstone Councils digital website and the Kent and Medway Air Quality Network.</p>	<p>MBC</p>	<p>2011</p>	<p>Funding required for Air Alert (AQ Grant applied for 2010)</p>	<p>2</p>	<p>7</p>	<p>14</p>	<ul style="list-style-type: none"> - Investigate funding sources. - Consider Air Alert or similar service. -Continued membership of KAMAQN.
<p>Measure 29: MBC will continue to work in partnership with KCC to increase uptake and implementation of School Travel Plans, Workplace Travel Plans and Residential Travel Plans, particularly where likely to impact on the AQMA.</p>	<p>1) MBC to ensure all relevant commercial planning applications have travel plan conditions or section 106 agreements applied in accordance with current best practice (DfT delivering Travel Plans through the Planning Process (April 2009) and KCC Guidance on transport Assessment and Travel Plans (Oct 2008)).</p> <p>2) MBC & KCC to produce Travel Plan Strategy which:</p> <p>a) Details procedure for tracking & possible requirement for enforcement of planning conditions requiring travel plans.</p> <p>b) Details procedure for tracking & possible requirement for enforcement of Travel plans implemented through section 106 agreements.</p> <p>c) Details procedure for Travel Plan Information storage at KCC and MBC.</p>	<p>MBC + KCC + KHS Sustainable Transport – Travel Planning Team</p>	<p>2010+</p>	<p>Ongoing Improvements</p>	<p>2</p>	<p>7</p>	<p>14</p>	<ul style="list-style-type: none"> -Number of new travel plans. - Number of active Travel plans within AQMA - Report on Travel plans travel survey results which will impact on the AQMA. - Promotion of Travel Plan initiatives e.g. Sustrans' TravelSmart. - Implement & regularly review Travel Plan Strategy -Develop Business Case for Travel Co-ordinator & identify potential funding streams.

	<p>3) KCC to monitor travel Plan uptake across the Borough</p> <p>4) MBC & KCC Investigate use of Maidstone Borough Travel Planning Coordinator.</p>							
<p>Measure 30: MBC will continue working partnerships with KCC, Sustrans and the Maidstone Cycling Forum to ensure that walking and cycling initiatives are promoted and supported in Maidstone.</p>	<ul style="list-style-type: none"> - An updated Cycling Strategy for Maidstone is being developed. - Appropriate MBC plus KCC staff to attend Maidstone Cycling Forum meetings. - Identify walking & cycling schemes (such as Park & Cycle). - Identify walking & cycling promotional opportunities around Maidstone Borough. 	<p>MBC + KCC (Mobility Manager & Cycling Transport Planner)</p>	2010	Ongoing improvements	2	7	14	<ul style="list-style-type: none"> - Implementation new/revised cycling strategies. - To produce a report/list of schemes to advance through the Maidstone Cycling Forum. - Number of walking &/or cycling initiatives in operation. - Establish the use of cycle monitoring counts at key points on cycle routes.
<p>Measure M31: MBC and KCC will encourage their employees to consider the use of bicycles in their daily duties by providing incentives, such as cycle usage mileage.</p>	<ul style="list-style-type: none"> - Continue to investigate and develop the use of various incentive schemes. - Develop new/revised MBC & KCC cycling strategies. - MBC to investigate use of annual survey on how/what modes of transport employees use to travel to work. 	<p>MBC + KCC (Climate Change Officer & Mobility Manager)</p>	2010+	Ongoing improvements	2	7	14	<ul style="list-style-type: none"> - % MBC employees walking/cycling to work. - Incorporate new/revised cycling measures within MBC Travel Plan in line with the new MBC Cycling Strategy to be developed.
<p>Measure M32: MBC will continue to work with KCC and transport providers to support and promote increased uptake of public transport modes.</p>	<p>Promote schemes such as the Kent Freedom Pass and Smart and integrated ticketing.</p>	<p>MBC + KCC Sustainable Transport Team</p>	2010	Ongoing improvements	2	7	14	<ul style="list-style-type: none"> - % Uptake schemes. - Passenger numbers.
<p>Measure M33: MBC Environmental Health will comment upon planning applications to ensure that all relevant air quality issues are highlighted and mitigation measures are considered wherever possible.</p>	<p>The Pollution Team will continue to work with Planning Development Control as Statutory Consultees</p>	<p>MBC</p>	2010+	Ongoing improvements	3	7	21	<ul style="list-style-type: none"> - Total number of planning applications consultations responded to in each financial year - Total number of planning applications with air quality conditions/ assessments.

Measure M34: MBC and Environment Agency (EA) will permit and regularly inspect industrial premises under the Environmental Permit regulatory regime.	MBC & EA will continue to monitor and carry out their statutory duties where and as appropriate.	MBC + EA	2010+	Ongoing improvements	2	7	14	- Number of inspections carried out in each financial year. - Number of enforcement actions taken
Measure M35: MBC and EA will enforce Environmental Permitting Regulations and/or statutory nuisance legislation to control smoke, dust, fumes or gas emissions from commercial and domestic premises which are causing a nuisance or are prejudicial to health.	MBC& EA will continue to monitor and enforce statutory nuisance legislation in this area.	MBC + EA	2010+	Ongoing improvements	2	7	14	- Number of relevant nuisance complaints in each financial year
Measure M36: MBC and EA will enforce relevant legislation to reduce the burning of commercial and domestic waste and ensure regulated incinerator facilities are fully compliant.	MBC will continue to monitor and enforce legislation in this area.	MBC + EA	2010+	Ongoing improvements	2	7	14	- % reduction in number of bonfire complaints. - % compliance of EA relevant regulated facilities in the Borough.
Measure M37: MBC will promote composting in a bid to reduce pollution from domestic bonfires.	Reintroduce discount/promotion campaign for compost bins	MBC	2010+	Ongoing improvements	2	7	14	- % uptake composting bins. - Number bonfire complaints.
Measure M38: MBC will continue to monitor a range of air pollutants throughout Maidstone and make the monitoring information freely available to the public in an easily understood form.	Continued support for Kent & Medway Air Quality Monitoring (K&MAQN) Network	MBC	2010	Ongoing improvements	1	7	7	- Continued membership of the K&MAQN Network continued.

Measure M39: MBC will ensure that all air quality monitoring data reported to the public is both accurate and precise by implementing quality control measures.	<ul style="list-style-type: none"> - Regular fortnightly calibrations and filter changing of continuous monitoring equipment in MBC's air quality stations - Annual audit of air quality stations' equipment - Appropriate use and care of NO2 diffusion tubes regularly deployed around the borough 	MBC	2010	Ongoing improvements	1	7	7	- QA/QC measures and training adopted.
Measure M40: MBC will establish additional monitoring sites across the borough in locations where poor air quality is suspected.	MBC will continue to carry out and report on their statutory duties under the Review & Assessment process for LAQM	MBC	2010	Ongoing improvements	1	7	7	<ul style="list-style-type: none"> - Poor air quality sites identified monitored and dealt with as through the process of Review & Assessment. - Additional monitoring sites established as and when required.

6. Implementation and Monitoring

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

The Air Quality and Transport Steering Group has been set up to take positive action in managing air quality in the Borough of Maidstone and ensure integration with County and National perspectives. This will be achieved through partnership working between internal departments and external organisations that have a mutual interest in air quality issues. The group will assist in the fulfilment of MBCs statutory functions in relation to air quality, develop action plans, support educational promotions for residents, business operators and visitors to the Borough and co-ordinate policy documents to ensure air quality within the Borough is effectively managed for future generations.

The implementation and effectiveness of the Action Plan will be carefully monitored through air quality monitoring of NO₂ and PM₁₀ at relevant locations within the AQMA. In addition, traffic flow changes on the key roads will also be assessed through the review and assessment process and as a result of the uptake of action plan measures. Targets and indicators have been set for measures to monitor progress with implementation.

The Air Quality and Transport Steering Group will ensure regular review of the action plan proposals to evaluate progress and this will be reported annually as part of the LAQM Action Plan Progress Report.

7. Glossary of Terms

Abbreviation	Full Name
AQMA	Air Quality Management Area
AQS	Air Quality Strategy
DEFRA	Department for Environment, Food and Rural Affairs
DFT	Department for Transport
HDV	Heavy-Duty Vehicles
HGV	Heavy-Goods Vehicles
KCC	Kent County Council
LAQM	Local Air Quality Management
LDD	Local Development Documents
LDF	Local Development Framework
LEZ	Low Emission Zone
LGV	Light-Goods Vehicles
LSP	Local Strategic Partnership
LTP	Local Transport Plan
MBC	Maidstone Borough Council
NAQS	National Air Quality Strategy
NO	Nitric Oxides
NO ₂	Nitrogen Dioxide
NO _x	Oxides of Nitrogen
PM ₁₀	Particles of up to 10 µm diameter
µg/m ³	Micrograms per cubic metre
UTMC	Urban Traffic Management and Control
VMS	Variable Message Signage

8. References

DEFRA (2007) Air Quality Standards (England) Regulations 2007, the Stationery Office

Defra in partnership with the Scottish Executive, Welsh Assembly Government and Department of the Environment Northern Ireland (2007) The Air Quality Strategy for England, Scotland, Wales and Northern Ireland, The Stationery Office

DEFRA (2009) Policy Guidance LAQM.PG(09)

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

EPUK (Formerly NSCA) (2000) Air Quality Action Plans

EPUK (Formerly NSCA) (2001) Air Quality: Planning for Action

Kent County Council (2006) Local Transport Plan 2006– 2011

Kent County Council (2003) Kent Environment Strategy

Maidstone Borough Council (2000) Maidstone Borough-Wide Local Plan

Maidstone Borough Council (2009) Sustainable Community Strategy for Maidstone Borough 2009 - 2020

Maidstone Borough Council (2009) LAQM Further Assessment

Appendix 1 DEFRA Action Planning Requirements Compliance Checklist

WORK AREA	CONSIDERED/INCLUDED	LOCATION IN ACTION PLAN/ COMMENTS
Adherence to Guidelines and Consideration of Policies		
Statutory Consultees consulted?		
Consulted with other Local Authorities and internal departments?		
Statement of Pollutant causing AQMA?		
Principle sources of pollutants identified?		
Have other local authorities' plans and policies been considered?		
Options timetable included?		
Have options been costed?		
Have the impacts been assessed?		
Checklist of Measures		
Have options been considered?		
How many options considered?		
Transport impacts assessed?		
Have air quality impacts been assessed modelled or measured?		
Have socio-economic impacts been assessed?		
Have other environmental impacts been assessed?		
Have costs been considered?		
Appropriateness and Proportionality		
Do measures seem appropriate to the problem?		
Have the measures been assessed?		
Are the measures likely to succeed?		
Have wider impacts been assessed?		
Was the costing method appropriate?		
Is it likely that the AQMA objective will be met?		
Do the chosen options comply with Government Policies?		
Implementation		
Are measures realistic?		
Have responsibilities been assigned to the relevant party?		
Does the assigned party have the necessary powers?		
Is the financing secure and identify who pays?		

Appendix 2 Consultation Outcome

