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TONBRIDGE & MALLING BOROUGH COUNCIL

ENVIRONMENT ACT 1995
LAQM DRAFT AIR QUALITY ACTION PLAN

June 2011

TONBRIDGE & MALLING BOROUGH COUNCIL

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CONTENTS

1. Introduction

1.1 Description of the Local Authority Area

The borough of Tonbridge and Malling lies in the heart of Kent and is an area of variety and historical interest. The borough is dotted with numerous picturesque villages including West Malling, East Malling, Ightham, Offham, Trottiscliffe, Aylesford and Shipbourne. The River Medway flows in a north easterly direction through Tonbridge and the Medway Gap in the North Downs.

Industry and commerce are concentrated around Tonbridge, Aylesford, Ditton, Larkfield and Snodland. Mineral extraction has been carried out in the area for many years. Paper and packaging mills, distribution, general and light industry and many small businesses make up the industrial scene. The borough is a popular area for office location and high tech development, particularly at Kings Hill business and residential community. The borough is well served with roads and there are two main railway lines to London and the Channel ports.

The main source of air pollution in the borough is road traffic emissions from major roads, notably the M20, M26, M2, A20, A21, A25, A26, A227, A228 and A229. The Council has declared six Air Quality Management Areas (AQMA)[1] in relation to road traffic emissions of nitrogen oxides (NO_2) and one area (M20 corridor) for particulates (PM_{10}). These six AQMAs are considered within this Air Quality Action Plan.

These areas include:

- Tonbridge and Malling AQMA 1: M20 AQMA (NO_2 and PM_{10})
- Tonbridge and Malling AQMA 2: Ditton AQMA (NO_2)
- Tonbridge and Malling AQMA 3: Tonbridge High Street AQMA (NO_2)
- Tonbridge and Malling AQMA 4: Wateringbury AQMA (NO_2)
- Tonbridge and Malling AQMA 5: Aylesford AQMA (NO_2)
- Tonbridge and Malling AQMA 6: Larkfield AQMA (NO_2).

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 air quality within their area, as part of a process known as Local Air Quality Management (LAQM). The air quality objectives that apply to LAQM are defined in the Air Quality Regulations 2000[2] and Air Quality (England) (Amendment) Regulations 2002[3] for seven pollutants of concern to health: benzene, 1,3-butadiene, carbon monoxide, lead, nitrogen dioxide, sulphur dioxide, particulates - PM_{10}.

This Action Plan focuses on two of those pollutants included in Air Quality Regulations for the purpose of LAQM, that have been identified as key polluting sources affecting air quality within the Council's administrative area: nitrogen dioxide (NO_2) and fine particulates (PM_{10}). The objectives set out in Regulations for these pollutants are presented in the Table 1.1.

[1] Geographic areas defined by high levels of pollution and exceedences of air quality objectives.

[2] The Air Quality (England) Regulations 2000 (Statutory Instrument 928)

[3] 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 LAQM 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
Particulates (PM_{10}) (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
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 PM_{10}, 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). 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 proposes to introduce to work towards the achievement of the air quality objectives. The principal aim of the Air Quality Action Plan is to improve air quality within the AQMAs through the implementation of air quality measures, within reasonable timeframes, in partnership with relevant stakeholders. In order to comply with the air quality objectives it may be necessary to include measures beyond the boundaries of the AQMAs, which may also benefit other areas and improve the health of the population more generally.

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 effectively.

An Air Quality Action Plan must include the following[4]:

- 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.

1.4 The Role of Relevant Authorities in Action Plan Development

This Action Plan has been developed by Tonbridge and Malling Borough Council, in partnership with other relevant bodies, particularly Kent County Council and the Highways Agency, to secure improvement measures in the six AQMAs. All relevant authorities, strategic partners and local stakeholders will be consulted on the Action Plan.

Tonbridge and Malling Borough Council (TMBC)

TMBC 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.

Kent County Council (KCC)

KCC is the relevant transport authority for roads on the local network and is working jointly with TMBC on transport measures within the borough. County Councils have a duty under section 86 (3) of the Environment Act 1995 to put forward proposed actions which they themselves can implement to work towards meeting the air quality objectives in AQMAs. KCC will include measures which will work towards improving air quality within the 3rd Local Transport Plan (LTP) for Kent.

Highways Agency

The Highways Agency is the relevant transport authority for the motorways and trunk roads in England and is working in partnership with TMBC on action plan measures for the M20

[4] 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

AQMA. An Action Plan was adopted in 2003 for the M20 AQMA, which will be superseded by this Action Plan which incorporates all AQMAs within the borough.

The Highways Agency has set out their approach to partnership working on air quality issues in the document "*The Role of the Highways Agency in Local Air Quality Management, January 2005*"[5]. This document sets out the Highways Agency's role and potential measures that can contribute to improving air quality:

S2"*Our purpose is to operate, maintain and improve the strategic trunk road network with one of our objectives being to respect the environment. We can influence our effect on air quality through:*

- *contributing to strategic planning;*
- *road improvements;*
- *integrating transport and encouraging sustainable travel;*
- *providing better information for improved operation; and*
- *working with local authorities to deliver the Air Quality Strategy*."

Annex 3 of their document outlines potential Traffic Management Measures, including speed controls, access control, information provision, segregation of traffic and junction design.

[5] http://www.highways.gov.uk/knowledge/1804.aspx

2 Overview of Air Quality in Tonbridge and Malling

2.1 Local Air Quality Management – Review and Assessment

TMBC undertook the first round of review and assessment between 1998 and 2001. The first round was a three-stage process, which assessed the sources of seven air pollutants of concern to health: benzene, 1,3 butadiene, carbon monoxide, lead, nitrogen dioxide (NO_2), fine particulates (PM_{10}) and sulphur dioxide. The first round concluded that it was necessary to declare an Air Quality Management Area (AQMA) for nitrogen dioxide (NO_2) and fine particulates (PM_{10}) along the M20 corridor at Larkfield, Ditton and Aylesford due to road traffic emissions. An Air Quality Action Plan was adopted in 2003 to improve air quality within the M20 AQMA, in partnership with the Highways Agency. This Action Plan will effectively be incorporated within this updated Action Plan which includes all AQMAs in the borough.

The second round commenced in 2003 with the Updating and Screening Assessment (USA). Similar to stage one of the first round, there was consideration of the seven pollutants of concern to health and an assessment was made as to whether Air Quality Objectives for these pollutants would be met. The second round of review and assessment (2003 – 2004) concluded that there was a risk of exceedences of the NO_2 annual mean objective at the nearest receptors to the:

- A26 Tonbridge High Street (southern end),
- A26 Tonbridge Road/Red Hill junction (Wateringbury), and
- A20 London Road/Station Road junction (Ditton).

TMBC declared three further AQMAs at these locations on 1st June 2005. Road traffic emissions have been identified as the major contributor to exceedences of the annual mean NO_2 objective in these three AQMAs. TMBC is working in partnership with Kent County Council to implement actions to improve air quality through the Local Transport Plan for Kent.

The third round of Review and Assessment, following the same stages as the second round, began with a USA. TMBC completed this in June 2006, with the conclusion that a detailed assessment was required for NO_2 due to emissions from road traffic on the A20 London Road in Larkfield, Ditton and Aylesford.

Recommendations were also made for relocation of kerbside diffusion tube sites at Castle Way, Leybourne and London Road, Aylesford to more appropriate sites near to relevant exposure. In addition, monitoring was recommended at the nearest receptors to Hadlow Road/Cannon Lane, Tonbridge and A20 Hall Road/Mills Road, Aylesford junctions, to check compliance with the NO_2 annual mean objective. The Detailed Assessment, which was informed by the additional monitoring, confirmed the need for two additional AQMAs along A20 London Road at Larkfield/Ditton and Aylesford, which were declared in 2008. The Further Assessment was completed in 2009, which recommended continuance of the two AQMAs, along London Road at Aylesford and Larkfield, although the Larkfield AQMA was predicted to be marginally below the objective and may be revoked in future should monitoring continue to show compliance with the annual mean objective.

The Annual Progress Report 2010 concluded that analysis of monitoring results indicated one site exceeded the NO_2 annual mean objective, outside an AQMA. The site, TN70, Sevenoaks Road, Borough Green, was a new site installed in 2009, following a recommendation in the Further Assessment. The diffusion tube only had 4 months of data available for 2009, but there is relevant exposure at this location. It was recommended that the Council should continue to monitor at this location, increasing the robustness of monitoring at this and other relevant sites of exposure in the vicinity to aid future LAQM work. It was recommended that

the Council progress to a Detailed Assessment if monitoring demonstrates a risk of exceedence of the annual mean objective once the full year's dataset is collated.

Figure 2.1 – Tonbridge and Malling AQMA 1: M20 AQMA 2001

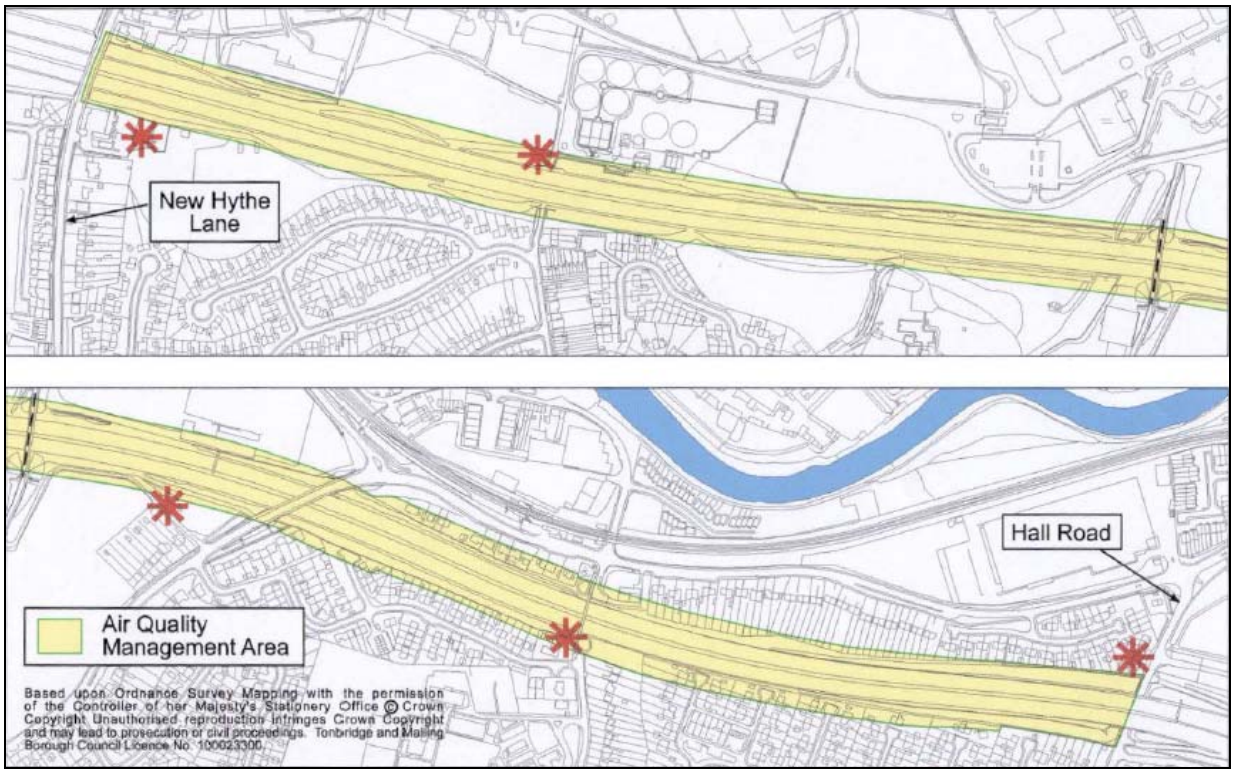


Figure 2.2 – Tonbridge and Malling AQMA 2: A20 Ditton AQMA 2005

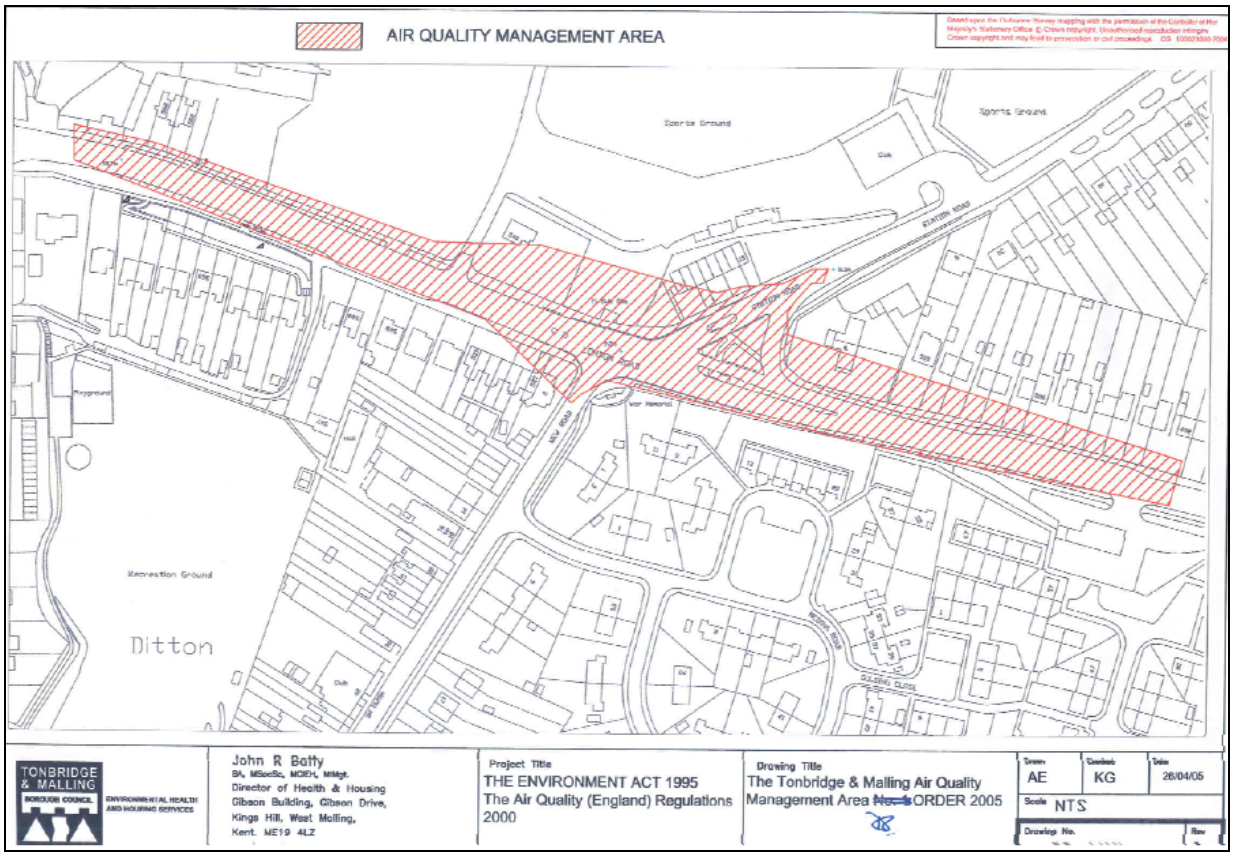


Figure 2.3 – Tonbridge and Malling AQMA 3: Tonbridge High Street AQMA 2005

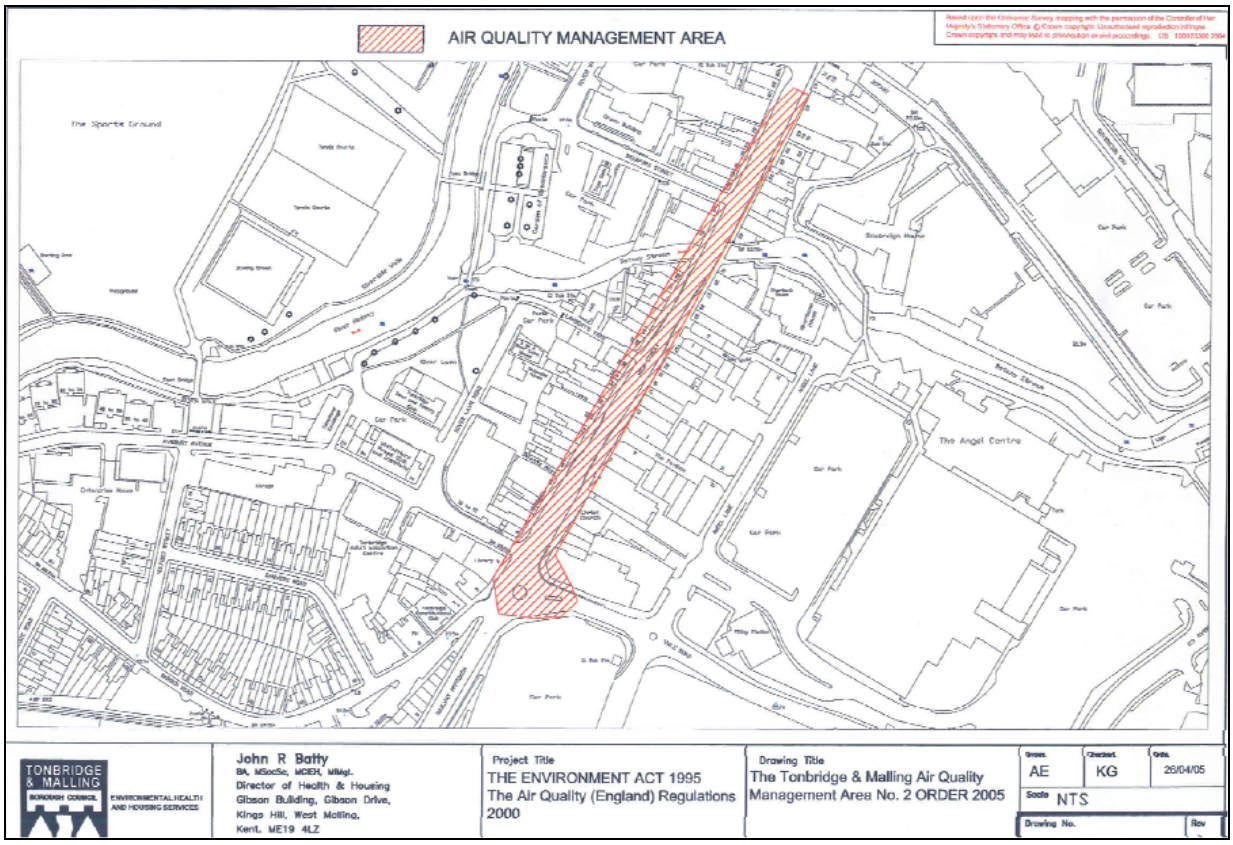


Figure 2.4 – Tonbridge and Malling AQMA 4: Wateringbury AQMA 2005

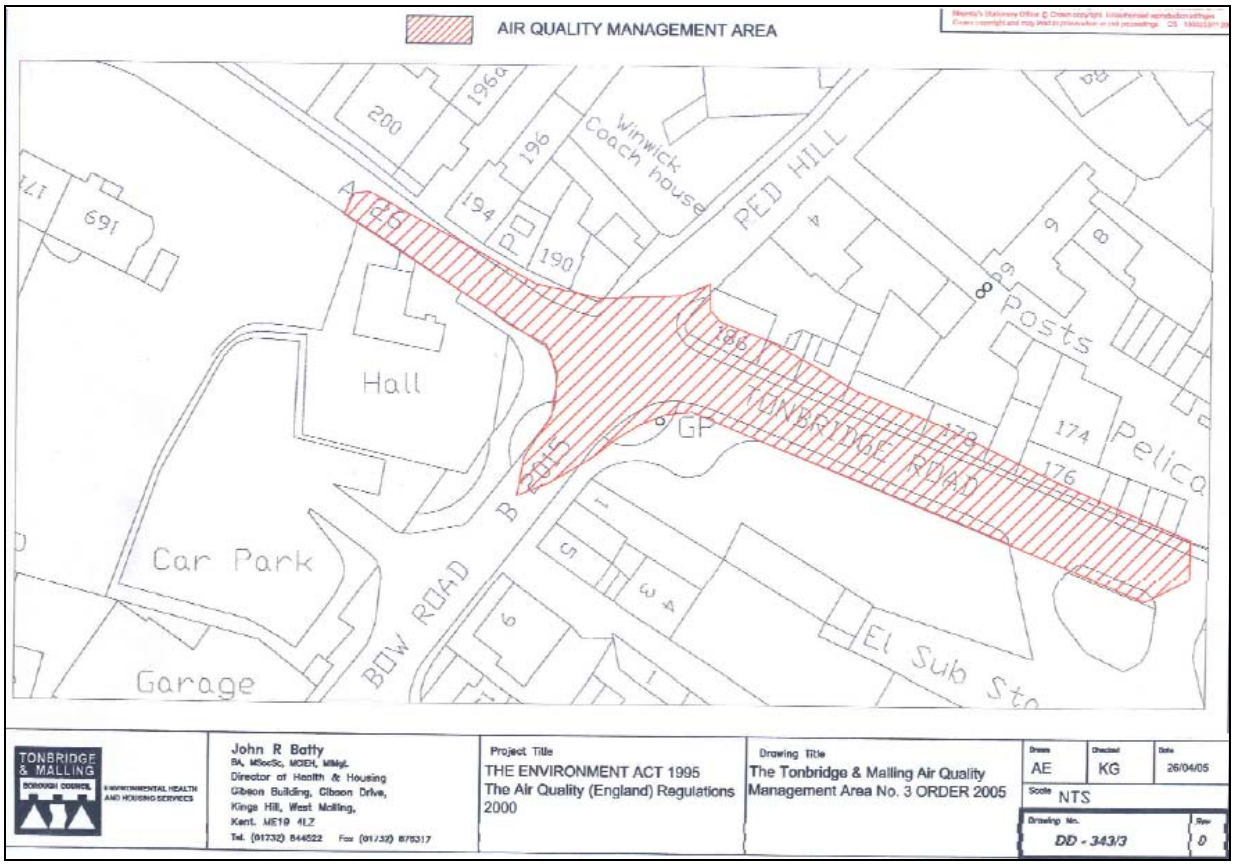


Figure 2.5 – Tonbridge and Malling AQMA 5: Aylesford AQMA 2008

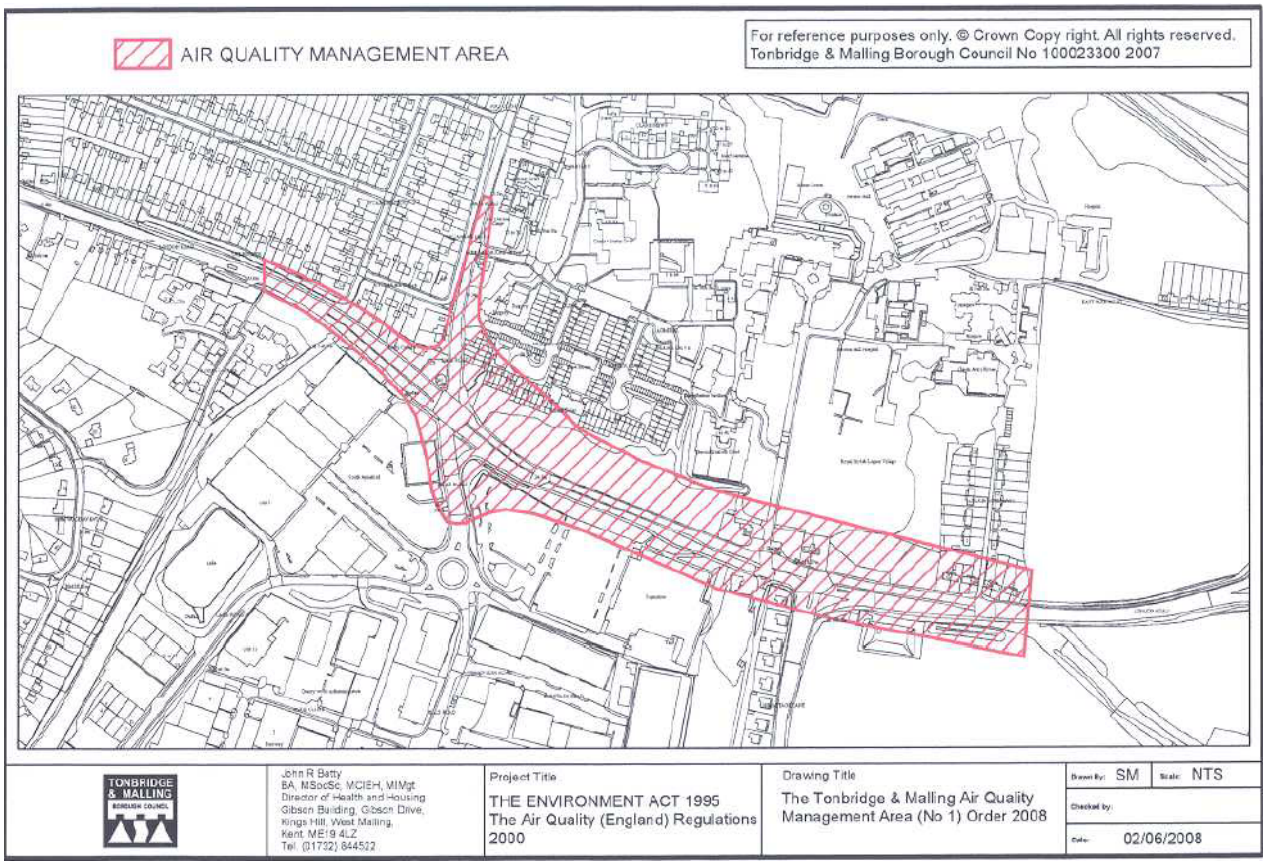
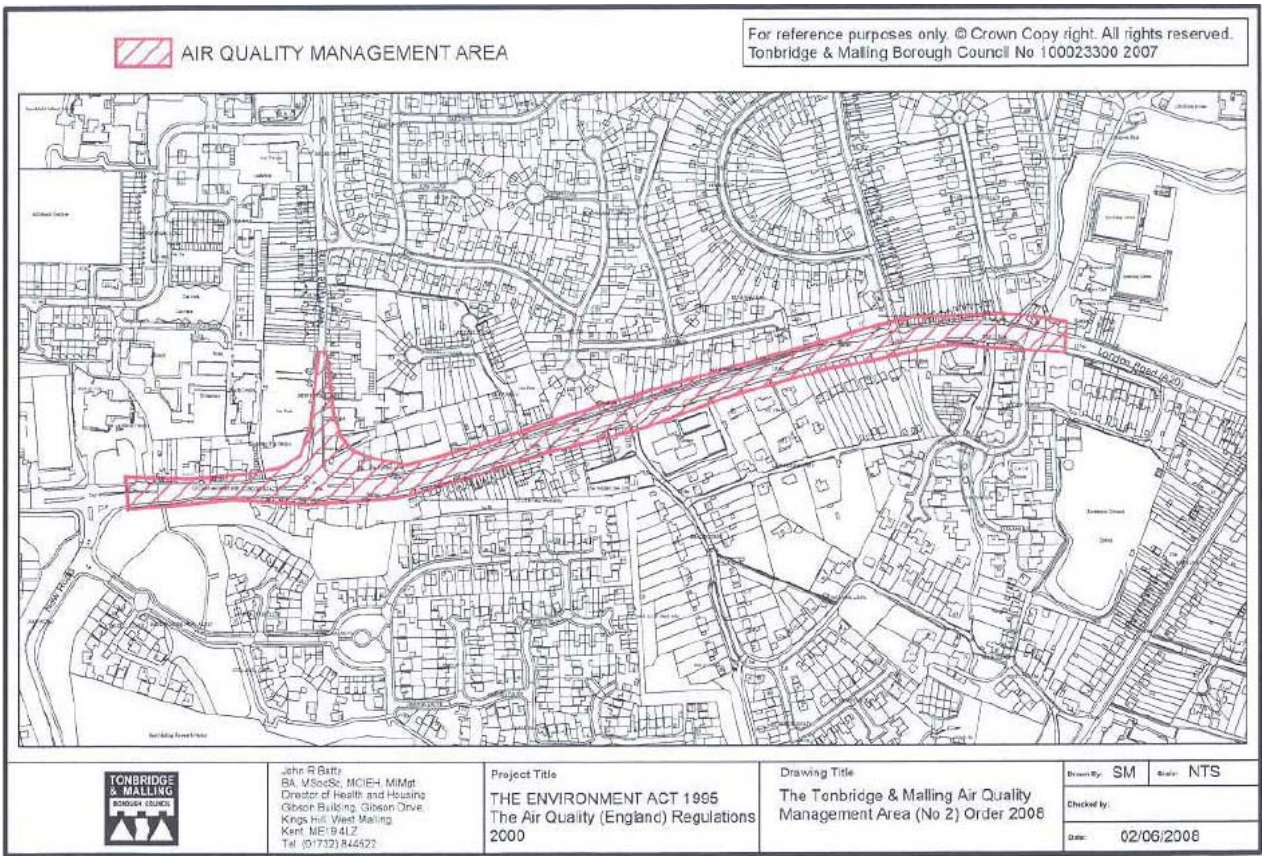


Figure 2.6 – Tonbridge and Malling AQMA 6: Larkfield AQMA 2008



2.2 Monitoring data

There is currently automatic monitoring of nitrogen dioxide (NO_2) undertaken by the Council at one location within the Tonbridge High Street AQMA. This is classified as a roadside site, although the inlet is near facade so can be considered as representative of relevant exposure. Results from the 2011 Annual Progress Report are summarised in Table 2.1. The results show exceedences of the annual mean objective for NO_2 in 2007-2010. The continuous analyser is showing a reduction in 2009 and 2010 when compared with 2007 and 2008, although the level is still a significant exceedence of the Air Quality Objective.

Table 2.1: Continuous analyser concentrations (µg/m^3) in 2007 – 2010

Location	Within AQMA?	Description	2007	2008	2009	2010
Tonbridge Roadside 2 (X=558867 Y=146171)	Yes, Tonbridge High Street AQMA (NO_2)	Annual Mean NO_2 > 40 µgm^3	50	50	47	49
		NO_2 Hourly Mean > 200 µgm^3 for more than 18 times per year	1	5	0	3
		% Data Capture	47.6*	99.8	98.5	98.9

*Data capture low, below the recommended 90%
**Exceedences of the air quality objectives are highlighted in red.

There are additionally 21 diffusion tube sites within the AQMAs, 12 of which were exceeding in 2010 – see Table 2.2 below.

The 2010 diffusion tube sites within the declared AQMAs exceeding the annual mean NO_2 objective of 40µg/m^3 were as follows:

- TN5, TN7,TN30 – M20 AQMA;
- TN33, TN42/76/77 (triplicate), TN43 – A26 Wateringbury AQMA;
- TN35,TN44, TN45, TN50 - Tonbridge High Street AQMA;
- TN57/58/59 – London Road Larkfield AQMA;
- TN60/62/63 (triplicate) – London Road Aylesford AQMA.

The highest monitored levels are within the A26 Wateringbury AQMA.

A20 AQMAs: Ditton, Larkfield and Aylesford

There were no measured exceedences in the A20 Ditton AQMA in 2010 at relevant receptor locations. Within the Larkfield AQMA, there were no exceedences in 2007-2009, but an exceedence has been recorded in 2010 (This may be due to the higher national bias adjustment factor in 2010, rather than a significant change in the location). Within the Aylesford AQMA, there is one receptor at the junction of Hall Road and London Road which continues to record measured exceedences of the annual mean NO_2 objective.

Table 2.2 - Diffusion Tube Results in Tonbridge and Malling Borough AQMAs

Site ID	Location	AQMA?	2006 (Bias factor: 0.92)	2007 (Bias factor: 0.92)	2008 (Bias factor: 0.79)	2009 (Bias factor: 0.81)	2010 (Bias factor: 0.85)
TN5	Hall Road, Aylesford	M20	54	50	44	51	46
TN7	New Hythe Lane, Larkfield (Church Farm)	M20	40	37	34	36	45
TN28	Bell Lane, Ditton	M20	-	39	34	39	38
TN29	Station Road, Aylesford	M20	-	36	30	35	37
TN30	Teapot Lane, Aylesford	M20	49	46	41	43	43
TN16	High Street, Tonbridge (Avebury Avenue)	Tonbridge High Street	37	33	33	38	36
TN35	35 High Street, Tonbridge	Tonbridge High Street	46	43	40	46	46
TN44	46a High Street, Tonbridge	Tonbridge High Street	50	43	44	49	48
TN45	10 High Street, Tonbridge	Tonbridge High Street	54	48	44	48	49
TN50	64 High Street, Tonbridge	Tonbridge High Street	48	45	44	48	44
TN46	3 Station Road, Ditton	Ditton	29	27	26	28	29
TN47	516 London Road, Ditton	Ditton	25	24	21	34	24
TN49/ TN53/ TN54	London Road, Ditton (527/529) (triplicate)	Ditton	41	37	35	35	37
TN33	Tonbridge Road/Red Hill corner, Wateringbury	Wateringbury	61	56	50	56	62
TN42/ 76/77	Tonbridge Road, Wateringbury (Opposite garage)	Wateringbury	65	61	52	60	72
TN43	Tonbridge Road/Red Hill, Wateringbury	Wateringbury	42	41	36	40	43
TN60/ 62/ 63	290 London Road, Aylesford (triplicate)	Aylesford	53	48	44	50	51
TN67	17 Mckenzie Close, Aylesford	Aylesford	-	30	31	30	30
TN68	7 Hall Road, Aylesford	Aylesford	-	36	33	36	35
TN57/ 58/ 59	743 London Road, Larkfield (Triplicate)	Larkfield	43	39	36	39	42
TN64/ 66/ 65	606 London Road, Larkfield (triplicate)	Larkfield	-	35	33	34	37
Annual Mean NO_2 Air Quality Objective			**40**				

*Exceedences of the air quality objectives are highlighted in red.

2.3 Source Apportionment and Required Reduction in Concentrations

The further assessment work carried out for the AQMAs in the Stage 4 (2002) and Further Assessments 2005 & 2009 provided the following results.

2.3.1 Stage 4 Report for M20 AQMA (2002)

The Stage 4 assessment showed that road traffic emissions on the M20 contributed 75% of the total NO_X emissions. HGVs were shown to contribute half of the traffic related emissions, despite only being 12% of the vehicle fleet.

NO_2 levels required an improvement by up to 20% to enable the Air Quality Objective to be met at all receptor locations in the M20 AQMA; the maximum modelled concentration of NO_2 in 2005 was 48µg/m^3 i.e. an 8 µg/m^3 improvement was required.

The most effective intervention for NO_2 that was modelled through impact assessment of traffic measures was optimising average speeds to 50mph. This could also achieve the PM_{10} 24 hour mean standard.

2.3.2 Further Assessment (2005) for Tonbridge High Street, A26 Wateringbury and A20 Ditton AQMAs

The results of the source apportionment indicated that road traffic emissions were the main source of NO_X concentrations in the Tonbridge High Street and Wateringbury AQMAs. Within the Ditton AQMA the modelled background concentrations were higher and the required improvement much smaller than in the other AQMAs. As such, the source contribution from the local road traffic emissions was lower than in the other AQMAs, but was still proportionately a significant contributor to the exceedence of the Objective. The higher background concentrations were attributed to the emissions contribution from the nearby M20.

The heavy-duty vehicle (HDV) class vehicles were found to be contributing disproportionately to NO_x concentrations in these three AQMAs; contributing approximately half of the NO_X from road traffic but being a relatively small proportion (3.6 – 7.9%) of the vehicle fleet. This was most notable in the Tonbridge High Street AQMA where the HDV contribution to total NO_X concentrations was >50%.

Summary of source apportionment:

- *Tonbridge High Street AQMA*: Road traffic NO_X contribution = 87% of total NO_X (51% of total NO_X due to HDV);
- *Tonbridge Road/Red Hill Junction, Wateringbury AQMA*: Road traffic NO_X contribution = 80% of total NO_X (33% of total NO_X due to HDV);
- *Station Road/London Road Junction, Ditton AQMA*: Road traffic NO_X contribution = 38% of total NO_X (16% of total NO_X emissions due to HDV). Background concentrations = 62% of total NO_X.

Summary of required reduction in pollutant concentrations:

Table 2.3 – Required NO_2 Reduction in 2005 AQMAs

AQMA	NO_2 annual mean in $\mu g/m^3$ (2005)	Required improvement (to meet air quality objective) in $\mu g/m^3$	% Improvement required
Tonbridge High Street AQMA	53.3	13.3	24.9
Wateringbury AQMA	45.2	5.2	11.5
Ditton AQMA	40.9	0.9	2.3
Annual Mean Objective	**40**		

*Exceedences of the air quality objectives are highlighted in red.

2.3.3 Further Assessment (2009) for Aylesford AQMA and Larkfield AQMA

The Further Assessment results indicated that the AQS objective was likely to be met at relevant receptor locations in the Larkfield AQMA in 2008. As such, the Council should continue to monitor NO_2 within this AQMA to demonstrate continued compliance with the annual mean objective, prior to any decision to revoke the AQMA. The Aylesford AQMA continued to show predicted exceedences at relevant receptor locations at the junction of A20 London Road/Hall Road and A20 London Road/Hermitage Lane.

Summary of source apportionment:

- *Larkfield AQMA*: Road traffic NO_X contribution = 74.6% of total NO_X (37.2% of total NO_X due to HDV i.e. 50% of the road traffic contribution) Background concentrations = 25.4% of total NO_X;

- *Aylesford AQMA*: Road traffic NO_X contribution = 78.1% of total NO_X (41.2% of total NO_X emissions due to HDV i.e. >50% of the road traffic contribution). Background concentrations = 21.9% of total NO_X.

Summary of required reduction in pollutant concentrations:

There was no required improvement in NO_2 within the Larkfield AQMA, as the Air Quality Objective was predicted to be met. In the Aylesford AQMA a 3.4$\mu g/m^3$ reduction in NO_2 was required (equivalent to 8% improvement in NO_2).

3 Existing Policies and Strategies

There are a number of relevant existing policies and strategies, at the regional and local level, that can be linked 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 AQMAs as well as across the wider Tonbridge and Malling Borough area.

3.1 Regional Strategy: The South East Plan

The South East Plan provides direction for the Borough's Local Development Framework. On the 27th May 2010, the Secretary of State wrote a letter to local authorities informing them that Regional Strategies were to be abolished. On the 6th July 2010, Regional Strategies (including the South East Plan) were revoked with immediate effect. However, in November 2010, the revocation of Regional Strategies was subject to legal challenge and found to be unlawful. As a result, a letter was sent to Chief Planning Officers to inform them Regional Strategies (including the South East Plan) will still form part of their ongoing development plan. It is important to note that the Government's intention to abolish the Regional Strategy remains as announced on the 27th May 2010. This intention will be given statutory effect in due course.

The South East Plan, currently part of the Development Plan for the borough, sets out policies which are 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'.

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.

The Regional Transport Strategy (RTS), which ensures transport projects in the region complement and support sustainable development, forms part of the South East Plan.

Transport policies are included with respect to charging schemes, parking, travel plans and advice and rail freight, which - as road traffic has been identified as a major source of pollutants in the AQMAs - 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 m_2 and1:100m_2
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 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 transport 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. At the time of submission in March 2006, there were three declared AQMAs in Tonbridge & Malling in relation to the local road network: A26 Wateringbury AQMA, Tonbridge High Street AQMA and A20 Ditton AQMA.

The Local Transport Plan for Kent 2006-11[6] 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 "KCC will work with partners to seek a reduction in traffic pollution on the local road network".

Kent County Council has been working with the districts on air quality issues in the County since 1992 through the Kent and Medway Air Quality Partnership; in particular, assisting in relation to the AQMAs declared on the local road network due to road traffic emissions. Chapter 7 of the LTP sets out the strategy for improving air quality and chapter 9 sets out a number of proposals to address the air quality shared priority. In Tonbridge & Malling, proposals include: investment provided through the Integrated Transport programme which will deliver a range of measures including traffic management, additional provision for cyclists, and a bus lane in Tonbridge town centre [AQMA]. Similarly, investment on the A20 London Road, Ditton [AQMA] will include improved pedestrian footways and crossings, new cycle routes and better bus priority measures and information to increase the reliability of local services and increase modal shift towards public transport. The A20 improvement measures would also work towards improving air quality in the A20 Aylesford and Larkfield AQMAs.

3.3 Growth without Gridlock: A Transport Delivery Plan for Kent (2010)[7]

In December 2010, KCC launched its transport delivery plan for the county outlining priorities for the next 20-30 years. The need for a transport delivery plan for Kent was identified in KCC's framework for regeneration "Unlocking Kent's Potential: opportunities and challenges" which outlines how economic growth and regeneration can be delivered in a sustainable way. Growth without Gridlock sets out what infrastructure is needed to deliver an integrated transport network to support future regeneration.

For the borough of Tonbridge and Malling, there is support in the delivery plan for the following proposals:

- A21 Dualling - Tonbridge to Pembury
- Coordinated implementation of transport requirements arising from developments in the Medway Valley, including new bus services supported by bus priority measures focussed on the A20 corridor
- Construction of a bypass at Borough Green
- Construction of the London Road-Hadlow Road link in Tonbridge
- Urban Traffic Management and Control system for Tonbridge
- Implement Action Plan to deal with AQMAs

[6] http://www.kent.gov.uk/static/local-transport-plan/index.html

[7] http://www.kent.gov.uk/news_and_events/news_archive/growth_without_gridlock.aspx

- Work with Network Rail and the Train Operating Companies in the area to enhance opportunities for transport interchange at stations and improve services, particularly to the City of London, with particular focus on the service specification for the next Integrated Kent Franchise period beyond 2014
- A228 Corridor Improvements – including at Kent Street, Snodland bypass and at Colts Hill, in neighbouring Tunbridge Wells Borough, to relieve the A26 corridor.

The transport proposals for Tonbridge should help work towards improving air quality issues in Tonbridge High Street AQMA and the A20 corridor bus priority proposals should help work towards improving air quality issues in the three A20 AQMAs.

3.4 Local Transport Plan for Kent (2011 onwards)

The Local Transport Plan for Kent 2011-2016 (LTP3) was published in April 2011, following consultation.

The DfT Guidance on local transport plans emphasises the links between climate change and air quality stating 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".

The main national objectives within the LTP which will help towards improving air quality are:

- **Contribute to better safety, security and health** – reduce social and economic costs of transport on public health, including air quality impacts.
- **Climate Change** – deliver quantified reductions in greenhouse gas emissions consistent with the Climate Change Act and EU targets.

In Tonbridge and Malling, the draft LTP3 Implementation Plan includes a number of measures, which could assist in improving air quality in the AQMAs:

- Bus priority measures along the A20 Corridor
- Develop Quality Bus Partnership (QBP) for Tonbridge and Malling
- UTMC scheme for Tonbridge Town Centre
- Tonbridge High Street traffic management and pedestrian improvements
- Secure funding for implementation of the Medway Valley Sustainable Transport Strategy and Tonbridge Area Action Plan Transport Strategy
- Adoption of Tonbridge and Malling Cycling Strategy and Cycle Network improvements, including A20 Cycle Route

It should be noted that funding for measures proposed in the implementation plan is not secured and there is a significant risk to delivery of schemes in the current economic climate.

In 2011, the Government has announced, as part of the Local Transport White Paper[8], the creation of a Local Sustainable Transport Fund ("the Fund") to provide funding for sustainable transport schemes. The fund guidance states that bidding proposals that bring about improvements to air quality and increased compliance with air quality standards will be more favourably considered (see paragraph 26)[9]. This provides an opportunity for transport authorities such as KCC to apply for funding for schemes that can help bring about air quality improvements.

[8] Local Transport White Paper: http://www.dft.gov.uk/pgr/regional/sustainabletransport/
[9] Fund guidance: http://www.dft.gov.uk/pgr/regional/transportfund/

3.5 Kent Environment Strategy (2010 - 2013)

The Kent Environment Strategy is a Kent Partnership three year strategy which sets out the main themes and priorities for the County over a 10-20 year period and develops a number of actions and targets under these key priority areas. The three main themes are:

- **Living 'well' within our environmental limits** – leading Kent towards consuming resources more efficiently, eliminating waste and maximising the opportunities from the green economy.

- **Rising to the climate change challenge** – working towards a low carbon Kent prepared for and resilient to the impacts of climate change.

- **Valuing our natural, historic and living environment** – optimising the real economic and social benefits of high environmental quality while protecting and enhancing the unique natural and built-in character of Kent.

There are two priorities aimed at carbon reduction which, in particular, could additionally bring about air quality improvements.

- EF Priority 2 - New developments and infrastructure in Kent are cost effective, low carbon and resource efficient.

- CC Priority 5 - Reduce future carbon emissions.

KCC will work with relevant partners, including Tonbridge and Malling Borough Council, to take forward actions under these priority areas.

3.6 Transportation Strategy for the Borough

There are two local transport strategies that have been developed to inform the long term transport priorities for the borough, alongside the County-wide Local Transport Plan and Strategy, and provide support for future development proposals. These include the Medway Valley Sustainable Transport Strategy and the Tonbridge Area Action Plan Transport Strategy.

The Medway Valley Sustainable Transport Strategy aims to:

- Encourage sustainable commuting by promoting better integration of bus and rail services and interchange arrangements at local railway stations;
- Improve access and facilities at railway stations for all users;
- Reduce the need to travel by the planning of mixed developments with local employment and facilities;
- Maximise the effective use of the A228 and A20 corridors, by promoting bus priority and cycle lanes;
- Encourage walking and cycling;
- A partnership approach to future transport investment.

With respect to air quality, proposals for bus priority measures and cycle lane improvements on the A20 corridor may help reduce emissions within the A20 AQMAs.

The Tonbridge Area Action Plan Transport Strategy supports the proposals for the regeneration of Tonbridge within the Tonbridge Central Area Action Plan (see section 3.7.3). Proposals include pedestrian prioritisation, improvements to quality of bus services, junction improvements and urban traffic management (UTMC). Measures within the Strategy may help

reduce emissions within the Tonbridge High Street AQMA at the southern end of the High Street.

3.7 Tonbridge and Malling Local Development Framework

The Planning and Compulsory Purchase Act 2004 introduced a new planning system which requires the Borough Council to produce a Local Development Framework (LDF), which comprises a series of Local Development Documents that, together, set out the planning policies for the Borough. Those which form part of the statutory Development Plan, known as Development Plan Documents (DPDs), that have been adopted by Council are referred to below. The Development Plan comprises the LDF and Regional Strategy (South East Plan), as well as the Minerals and Waste Development Framework being prepared by Kent County Council.

3.7.1 Core Strategy

The Core Strategy DPD was adopted by the Council on 25th September 2007. The Core Strategy includes a policy which considers the protection of air quality: Policy CP1. Subsection 3 of this policy, which specifically refers to air quality, has been considered in more detail in the Managing Development and the Environment DPD Policy SQ4.

POLICY CP1
1. All proposals for new development must result in a high quality sustainable environment.
2. Provision will be made for housing, employment and other development to meet the needs of existing and future residents of the Borough in line with the evolving housing requirements of the South East Plan and local studies aimed at informing the need for, and form of, development required.
3. The need for development will be balanced against the need to protect and enhance the natural and built environment. In selecting locations for development and determining planning applications the quality of the natural and historic environment, the countryside, residential amenity and land, air and water quality will be preserved and, wherever possible, enhanced. [Shortened]

The Core Strategy also includes a policy CP2 in relation to sustainable transport, which will help reduce the impacts of traffic emissions from new development proposals. For example, ensuring new development is well located relative to public transport, cycle and pedestrian routes and with good access to local service centres; requirements for travel plans to be implemented; and providing for any necessary enhancements to existing transport infrastructure.

In relation to the Tonbridge High Street AQMA, there is additionally a policy which specifically addresses the need to improve air quality in this area, Policy CP23. This will be facilitated through the implementation of the Area Action Plan for the Tonbridge Central Area, which is described in more detail in section 3.7.3.

POLICY CP23
The policy for Tonbridge Town Centre is to provide for a sustainable development pattern of retail, employment, housing and leisure uses, and a range of other services to regenerate and enhance the vitality and viability of the Town Centre by:
(a) maximising the use of the waterfront with appropriate mixed-use developments and the provision of environmental enhancements and public spaces;
(b) enhancing traffic management and accessibility for all;
(c) improving conditions for pedestrians, cyclists and public transport in the High Street;
(d) enhancing the transport interchange at Tonbridge Station;
(e) ensuring an appropriate level of accessible and safe car parking provision;
(f) enhancing the public realm, including protecting and enhancing important open spaces and the creation of new ones, reducing the potential for anti-social behaviour and the fear of crime and making design statements at the gateways to the town centre;
(g) improving air quality in the Air Quality Management Area at the southern end of the High Street.

3.7.2 Development Land Allocations Development Plan Document

The Development Land Allocations DPD was adopted by the Council in April 2008.

With respect to development at Preston Hall and Royal British Legion Village, Aylesford, Policy H3 sets out requirements in terms of addressing potential traffic impacts and air quality issues. This development is adjacent to two AQMAs – the Aylesford (A20) AQMA and M20 AQMA.

"**Policy H3:**
….d) consideration of traffic impact on the A20/Hermitage Lane and A20/Hall Road junctions, the Coldharbour roundabout and junction 5 on the M20 with provision for any necessary mitigation measures including junction improvements (subject to the preservation of the Lodge), the possible provision of a secondary point of access onto Hall Road and a contribution towards the A20 multimodal improvement scheme;…….
i) consideration of the potential impact of air quality close to the A20 and M20 on the design and layout of development."

Consideration to the potential impact of air quality on the design and layout of development in the other A20 AQMAs (Ditton AQMA and Larkfield AQMA) are also required under Policy H4. For larger schemes, such as the TA Centre, a contribution to the A20 multi-modal improvements is also required to help mitigate traffic impacts.

3.7.3 Tonbridge Central Area Action Plan

The Tonbridge Central Area Action Plan (TCAAP) adopted by Council in April 2008 sets out the framework to deliver regeneration of the central area of Tonbridge, building on the Tonbridge Town Centre Master Plan and supporting Transport Strategy. The TCAAP has particular relevance to securing air quality improvements in the Tonbridge High Street AQMA.

The TCAAP states that "improvement of the Town Centre for pedestrians is at the heart of the Council's regeneration vision. In addition improvements to public transport facilities will be sought in order to encourage more people to use buses and trains for their journeys. The adopted Kent County Council Transport Strategy for Tonbridge, which is integral to the Central Area Master Plan and to the AAP, identifies a comprehensive range of measures aimed at bringing about improvements, including:

• Realignment/design of junctions
• Deterrent measures in the High Street
• Variable Message Signing for car parks
• Consolidated signing strategy of North/South Route
• London Road/Hadlow Road Link
• Improved bus provision
• Enhanced rail-bus interchange
• Travel Planning
• Permeable walk and cycle routes
• Improvements to air quality."

Measures within the TCAAP will be considered with respect to action plan measures for the Tonbridge High Street AQMA.

3.7.4 Managing Development and the Environment Development Plan Document

Managing Development and the Environment DPD was adopted by the Council on 20th April 2010. This includes a specific policy in relation to local air quality, Policy SQ4 (see below). The DPD also states that "*an Air Quality Assessment will be required for proposals that have the potential to cause significant levels of air pollution or odour or which may affect a designated Air Quality Management Area or lead to the need to declare an Air Quality Management Area*."

Policy SQ4
Development will only be permitted where all of the following criteria are met:
(a) the proposed use does not result in a significant deterioration of the air quality of the area, either individually or cumulatively with other proposals or existing uses in the vicinity;
(b) proposals would not result in the circumstances that would lead to the creation of a new Air Quality Management Area;
(c) proximity to existing potentially air polluting uses will not have a harmful effect on the proposed use; and
(d) there is no impact on the air quality of internationally, nationally and locally designated sites of nature conservation interest or appropriate mitigation is proposed to alleviate any such impact.

3.8 Tonbridge & Malling Local Strategic Partnership Sustainable Community Strategy (2009 – 2012)

The Local Strategic Partnership (LSP), which includes local residents, partner agencies and other organisations, has drawn up a 'vision' of how the area should be in 20 or so years and set out the key priorities for the borough to achieve this. There are six priority areas identified within the Sustainable Community Strategy, two of which are of particular relevance to air quality issues in the borough:

- **Protecting and enhancing the environment**
  - Ensuring new development is of a good quality with positive impacts on the environment
- **A place with good local transport**
  - Tackling traffic congestion
  - Promoting better local bus services for all users

3.9 Tonbridge and Malling Climate Change Strategy (2008 – 2011)

The Tonbridge and Malling Climate Change Strategy sets out what the Borough Council intends to do to assist with addressing climate change issues and covers both the contribution that key services can make to this and the Council's leadership role within the community to encourage individuals and businesses to adopt a more sustainable way of life.

The Strategy incorporates the following themes:

- Housing and Energy Conservation
- Transportation and Air Quality
- Sustainable Development
- Waste Minimisation and Recycling
- Community and Business Engagement
- Sustainable TMBC
- Adapting to Climate Change

Actions are proposed under each theme which are taken forward through an Implementation Plan by the Climate Change Steering Group and reported through annual progress reports. Actions within the climate change strategy aimed at reducing greenhouse gas emissions can additionally help secure air quality benefits. For example:

- Reducing carbon emissions from the local authority's operations;
- Improving the energy efficiency of all housing sectors;
- Working with schools to promote travel plans and walking buses;
- Working with KCC to promote car share clubs and sustainable travel options to local businesses;
- Engaging with community groups to promote sustainability and climate change issues.

The Climate Change Strategy is a three year strategy up to 2011. Future plans involve continuation of the Climate Change Steering Group to take forward actions in relation to climate change and working with KCC and other delivery partners on the climate change action plan within the county-wide Environment Strategy.

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 Steering Group, which includes relevant environmental, planning and transport representatives from Tonbridge and Malling 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. Environment Agency
3. Highways Agency
4. Kent County Council
5. Tonbridge and Malling Borough Council Councillors and Officers
6. Primary Care Trusts
7. Neighbouring local authorities
8. Local residents within and bordering the AQMAs
9. Relevant local businesses, community groups and forums
10. 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 Council for endorsement and subsequently placed on the Tonbridge and Malling Borough Council website at http://www.tmbc.gov.uk.

5 Action Plan Proposals for Tonbridge and Malling 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 Air Quality Objectives. In particular, as the major source of pollution in the AQMAs is transport related, those relevant authorities with responsibilities for transport - KCC and the Highways Agency - have a very important role.

A summary of these proposals is outlined in the following pages, including the impact and timescales for these proposals. The proposals have been set out in terms of their likely influence on air quality, focusing on specific measures that target pollutant emissions in the AQMA hotspots first (notably with respect to transport measures) and then moving onto the more general borough-wide measures to improve air quality.

In order to inform the action planning process a simple qualitative 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		
5	£500k-1million	5	1-2 µg/m^3	Medium (M)	3-5
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		
1	>£100million	1	0	Long (L)	6+

To help quantify the impact of potential traffic measures that could be implemented to reduce pollutant levels in the AQMA, scenarios will be tested, where information is available. The results of the impact assessment will be provided in the final Action Plan.

5.1 Specific Measures to be implemented in the AQMAs

To work towards achievement of the Air Quality Objectives in the AQMAs, the following measures are proposed to be implemented:

5.1.1 AQMA 1: M20 AQMA (NO_2 and PM_{10})

AQMA-SPECIFIC TRANSPORT MEASURES –M20 AQMA

In 2010, the M20 Junctions 4 - 7 became a Controlled Motorway System. This stretch of the M20, which incorporates part of the M20 AQMA (Junctions 3-5), is a busy stretch of motorway with over 100,000 vehicles and congestion can affect journey time reliability. The introduction of the Controlled Motorway on both carriageways between junctions 4 – 7 has been introduced to help deal with this issue. The legal process for enforcement of the variable speed limit has now been completed.

Drivers will see nineteen gantries over the 6 mile (9.5km) stretch of road displaying variable speed restrictions; in particular these restrictions operate at peak hours to manage traffic flows. 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. The Highways Agency have investigated the influence of speed on emissions[10] and the lowest emission rates were found to occur at 60-65 km/hr for NOx and 65-80 km/hr for PM_{10}. Emissions increase with speed, but the increase with speed is greater for some pollutants, such as PM_{10}, than for others, such as NOx where the speed curve is relatively flat. High emissions also occur at very low speeds when congestion and queuing occurs. At low and high speeds, speed changes can have a more significant effect on emissions. Increasing speed from an hourly average of 5 km/hr to 10 km/hr could decrease emissions by 27% for NOx and 33% for PM_{10}. Reducing the speed from 110 km/hr to 100 km/hr could decrease emissions by 6% for NOx and 14% for PM_{10}. Reducing congestion is therefore important to improving air quality.

The success of the Controlled Motorway System on the M20 AQMA will be monitored in terms of air quality improvements. There is currently monitoring at a number of sites within the M20 AQMA, but this will be reviewed in 2011 to ensure sufficient coverage on both sides at worst case receptor locations. It is too early to measure the success of the introduction of this system in achieving the Air Quality Objectives, but it will be reviewed through the Council's annual progress reports.

Measure 1: Monitoring implementation of the M20 Controlled Motorway System to assess potential improvements to traffic emissions in the M20 AQMA.

5.1.2 AQMA 2, 5 & 6: Ditton, Aylesford, Larkfield A20 AQMAs (NO_2)

Of these three AQMAs, the Larkfield AQMA and Aylesford AQMA measured exceedences of air quality objectives at relevant receptor locations in 2010. The Larkfield AQMA had previously not shown any exceedences for three years and is a marginal AQMA. The Ditton AQMA has shown no exceedences in 4 years. The three A20 AQMAs (Ditton, Aylesford and Larkfield) have been considered together as they have been declared due to road traffic emissions from the A20 and are clearly linked in terms of action plan measures.

[10] http://www.highways.gov.uk/knowledge/1801.aspx#31

AQMA-SPECIFIC TRANSPORT MEASURES – A20 AQMAs

The key local transport Strategy for delivery of improvement measures along the A20 is the Medway Valley Sustainable Transport Strategy. This Strategy has largely been developed in support of development proposals along the A228 and A20 corridors and as such is dependant, in terms of funding and implementation timescales, on development coming forward. The main strategy for the A20 is the achievement of 10% modal shift through improvements to public transport, cycling and walking facilities. There are proposals for bus priority measures along the A20 and cycle lane improvements. With respect to bus services, measures are also proposed to improve facilities such as bus stops, passenger information and overall quality and capacity of the service. In 2011, KCC is proposing to establish a Quality Bus Partnership (QBP) for the borough, which will be a useful vehicle to drive forward these improvement measures. Opportunities for improving the bus fleet emissions through new stock could also be achieved if funding can be secured. The overall strategy for the A20 through required physical improvements and improvements to bus services is expected to cost approximately £9 million (£2-3 million on physical improvements and £6 million on bus services).

The draft LTP3 Implementation Plan for Tonbridge and Malling includes the following proposals for the A20 (subject to funding and priority):

- Bus priority measures along A20 Corridor
    - Year 1 2011-12. Cost estimate £50,000.
    - Year 2 2012-13. Cost estimate £150,000.
    - Year 3 2013-14. Cost estimate £200,000.
- A20 Cycle Route (Phases 2&3) (Year 3 2013-14. Cost estimate: £200,000.)
- Developer contributions to fund measures identified in the Medway Valley Transport Strategy (Years 1 – 5).

A number of junction improvements have already been undertaken in recent years in the Aylesford AQMA to increase capacity. There are physical constraints at the London Road/Hall Road junction which means that any future junction improvements through development are likely to be restricted to realignment of lanes. Traffic management enhancement through urban traffic management and control (UTMC) is likely to have a greater impact on improving traffic flow and congestion issues at this junction to help address the air quality issues.

In addition to the above proposed transport measures, a feasibility study is to be undertaken by KCC to investigate the potential opening of Bellingham Way in Aylesford to relieve traffic on the M20/A20 in this area. This would effectively be an extension to the road to enable linking of New Hythe and Aylesford where there is new development.

Measure 2: Identification and prioritisation of transport measures which may improve traffic emissions in the A20 AQMAs.

AQMA-SPECIFIC NON-TRANSPORT MEASURES – A20 AQMAs

Within the Aylesford AQMA there is one residential property close to the junction of London Road/Hall Road which is in exceedence of the annual mean NO_2 objective. The close proximity of this sensitive receptor to the adjacent road network (emission source) means that creating an effective barrier between the source and the receptor is not feasible.

Other considerations that could be explored could be receptor based solutions. For example, as a short-term intervention measure, prior to delivery of the necessary air quality improvements from the implementation of transport measures (to tackle the emission source)

as listed above, consideration could be made to the voluntary provision of a ventilation system to be installed within the existing residential property in the AQMA which is currently subjected to exceedence of the annual mean NO_2 air quality objective. Another example could be investigation by the Council of the potential for purchase. This could, for instance, be undertaken through a voluntary agreement with the residents or through purchase of the property as it becomes available on the market place. It is however noted that, despite the potential benefits of removing exposure to pollution, this option does not tackle the pollution source, so this would only be considered if the traffic management measures are found, following investigation, not to be satisfactory to reduce the emissions to an acceptable level.

Measure 3: Investigate provision of receptor based abatement systems and solutions within the Aylesford AQMA.

5.1.3 AQMA 3: Tonbridge High Street AQMA (NO_2)

The AQMA along Tonbridge High Street has been declared at its southern end. This section is quite closed in by the buildings lining both sides of the High Street and suffers from poor air dispersion (street canyon effects)[11] leading to elevated pollutant concentrations which exceed the air quality annual mean NO_2 objective. There are also residential properties within this stretch of the High Street representing relevant exposure.

AQMA-SPECIFIC TRANSPORT MEASURES – TONBRIDGE HIGH STREET AQMA

A number of transport measures have been proposed as part of the Tonbridge Central Area Action Plan (See Section 3.7.3) which could improve air quality within the Tonbridge High Street AQMA. These include: Realignment/design of junctions, pedestrianisation measures in the High Street, improved signage, London Road/Hadlow Road Link, improved bus provision and enhanced rail-bus interchange, travel plans for new development, and improved walking and cycle routes. The proposals are largely dependent on development coming forward to deliver improvements and therefore funding/timescales are linked with large-scale development proposals in the Masterplan. The development of a Quality Bus Partnership for Tonbridge & Malling in 2011 will help deliver the improved bus provision. The impacts of measures proposed within the Tonbridge Central Area Action Plan were modelled using ADMS Roads dispersion modelling. This indicated the implementation of measures would be sufficient to improve air quality to enable air quality objectives to be met in the AQMA.

The Draft Tonbridge & Malling Cycling Strategy (March 2009)[12] should assist with targeting improvements to cycle routes and facilities around Tonbridge High Street. A number of improvements have been identified and recommended for the Tonbridge Area, including:

- Create a link from the centre of Tonbridge and the railway station to the areas in the south and a link from the station to existing routes to the town centre;
- Create a route from the centre of Tonbridge to the north east housing area.

In addition, the report recommends taking forward measures in the Central Tonbridge Area Action Plan to reduce traffic on the High Street, so that it can be made more cycle-friendly.

The draft LTP3 Implementation Plan for Tonbridge and Malling includes the following proposals for Tonbridge (subject to funding and priority), which may bring about improvements within the High Street AQMA:

[11] A street canyon is defined as a relatively narrow street with buildings on both sides, where the height of the buildings is generally greater than the width of the road.

[12] https://shareweb.kent.gov.uk/Documents/roads-and-transport/road-policies/1.%20T%20and%20M%20cycling%20strategy%20intro%20Mar%2009.pdf

- Review of Tonbridge Area Action Plan Transport Strategy (Year 1).
- Developer contributions to fund measures identified in the Tonbridge Area Action Plan Transport Strategy (Years 2- 5).
- Develop UTMC Scheme for Tonbridge Town Centre (Year 2 2012-2013)
- UTMC System for Tonbridge
    - Year 3 2013-2014; Cost estimate £100,000
    - Year 4 2014-2015; Cost estimate £300,000
- High Street/Vale Road Junction (Year 5 2015-2016; Cost estimate £200,000)
- High Street/Bordyke Junction (Year 5 2015-2016; Cost estimate £200,000)
- Tonbridge High Street traffic management and pedestrianisation improvements (Year 5 2015-2016; Cost estimate £350,000).

Funding issues represents a significant risk to delivery of the proposals in the LTP3 implementation plan and (in the short-medium term) proposals within the Tonbridge Area Action Plan Transport Strategy. Wider schemes for funding the implementation of school travel plans, which could also assist in facilitating modal shift in Tonbridge, have also had their funding cut and therefore their future is uncertain.

Measure 4: Implementation of measures within the Tonbridge Area Action Plan Transport Strategy to secure improvements in air quality in the Tonbridge High Street AQMA.

In addition to the above schemes, more short-term improvement measures to reduce traffic emissions in the High Street will be investigated. For example, enhanced parking enforcement in the area could reduce current issues of illegal parking and idling of engines.

Measure 5: TMBC will review current parking enforcement in the Tonbridge High Street AQMA and enhance where appropriate.

5.1.4 AQMA 4: Wateringbury AQMA (NO_2)

The measured concentrations of nitrogen dioxide within the A26 Wateringbury AQMA at the Red Hill/Tonbridge Road junction are the highest of the six AQMAs in the borough despite its rural village setting and low background pollutant concentrations. There is significant congestion and queuing at this junction at peak times.

This AQMA presents considerable difficulties in terms of delivering Action Plan measures to improve air quality. Options are limited due to strategic nature of the A26 corridor, the traffic demand relative to the capacity on this stretch of the A26, the physical constraints of the junction and the close proximity of residential receptors to the junction. The AQMA is within the Wateringbury Conservation Area incorporating listed buildings along the Tonbridge Road. The A26 is a main strategic route between Tunbridge Wells, Tonbridge and Maidstone and the number of alternative routes nearby is limited by the opportunities for access via crossings over the Medway. As a main route, measures aimed at rerouting traffic from the A26 would potentially divert traffic via minor routes through similarly sensitive locations. Due to the physical constraints of the junction options are limited to improve capacity; with improvement measures being restricted to potential realignment of lanes to enable right turning and potentially ease queuing.

There are no options identified for Wateringbury AQMA within the draft LTP3 implementation plan. However, KCC have identified a funding proposal which could support traffic management issues in this area (Cost estimate: £100,000).

KCC are updating a map for lorry drivers to direct them to principal commercial areas in the County. This update could be used as an opportunity to consider the alternatives to the Wateringbury route and investigate the potential for advisory signage.

There is a need to have a greater understanding of the traffic utilising this junction to find out where vehicle movements are going to/ from and to help develop targeted transport measures to alleviate the congestion and air quality issues. A transport study investigating this issue could help inform this process, if funding can be secured.

There is also a need for additional air quality monitoring in Wateringbury to reassess the extent of the AQMA boundary, in the light of continued high pollutant levels in this AQMA. Funding will be sought for continuous monitoring to provide more accurate and detailed information in this AQMA and help inform the Air Quality Action Plan measures.

Measure 6: Identification of transport measures which may improve traffic emissions in the Wateringbury AQMA.

PLANNING MEASURES WITHIN AQMAs

In addition to consideration to transport measures to address the current air quality situation, consideration also needs to be made to future development in the area, which could further exacerbate the air quality issues. Of particular importance is the type and size of development, as those which result in significant traffic increases (especially heavy goods vehicles, which contribute disproportionately to air quality issues) could worsen air quality if not properly controlled. Also of importance are those sensitive uses that should not be allowed in locations where exceedence occurs or could be anticipated in the future. Planning policies are in place within the Council's Development Plan Documents to enable transport and air quality impacts of development proposals to be addressed appropriately. There is therefore a need to ensure close working between environmental health and planning departments so that air quality is highlighted at the earliest stage of any proposals likely to impact on the AQMAs. Adoption and adherence to the Kent and Medway Air Quality and Development Control Guidance will assist with this process.

The Kent and Medway Air Quality and Development Control Guidance is currently being finalised following consultation. TMBC will seek to adopt this guidance as a material consideration in planning decisions. This will help guide the management of air quality in the planning process and maximise the benefits of the AQMA declaration through consideration to measures to deal with potential impacts and assist the achievement of sustainable development in the area. This may include air quality assessments of impacts and contributions for developments likely to have an air quality impact on the AQMAs.

The use of Planning Obligations pursuant to S106 of the Town and Country Planning Act 1990 in relation to air quality is clearly stated in Planning Policy Guidance 23 Annex 1: Pollution Control, Air and Water Quality (p15): Planning Obligations:

"*Where it is not appropriate to use planning conditions to address the impact of a proposed development, it may be appropriate to enter into a planning obligation under Section 106 of the Town and Country Planning Act 1990*."

Measures which it might be possible to consider for Section 106 Agreements include:

"*the purchase, installation, operation and maintenance of air quality monitoring equipment or provision of other assistance or support to enable authorities to implement any necessary monitoring or other actions in pursuit of an Air Quality Action Plan*. "

Measure 7: Seek to adopt the Kent and Medway Air Quality and Development Control Guidance as a material consideration in planning decisions.

Measure 8: Ensure development likely to have an air quality impact on the AQMAs is appropriately assessed consideration is made to mitigation as necessary and contributions are sought either through the use of S106 agreements or through a Community Infrastructure Levy should this prove possible.

MONITORING WITHIN AQMAs

TMBC currently monitor air quality within all AQMAs at relevant locations of public exposure[13]. This information is invaluable in the assessment of air quality within these areas. Monitoring is an essential requirement for monitoring of the Action Plan and to enable future revocation of AQMAs, once measures are implemented that will bring pollutant concentrations to levels below the air quality objectives.

In addition to air quality monitoring, it is also important to assess changes in traffic flows in the AQMAs as this is the identified main source of pollution. Measures within the Action Plan are largely focused on transport and therefore to enable monitoring of the success of these measures traffic count data is required within each AQMA. TMBC will liaise with the relevant highways authorities to ensure that the AQMAs are adequately covered with respect to ongoing traffic data availability.

Measure 9: Ensure continuance of adequate air quality and traffic monitoring within the AQMAs to monitor progress of the Action Plan measures.

PARTNERSHIP WORKING TO IMPROVE AIR QUALITY IN AQMAs

The Air Quality Steering Group for the Action Plan has brought together relevant environmental, planning and transport representatives from Tonbridge and Malling Borough Council and the highways authorities Kent County Council and the Highways Agency. This Action Plan will set out the measures proposed to improve air quality in the AQMAs and actions for the relevant organisations to take forward within particular timeframes. It will be essential for continued partnership working by the Steering Group members to enable the Action Plan to achieve its goal of working towards achieving the air quality objectives in the AQMAs.

TMBC are working with Maidstone Borough Council on joint strategies to improve air quality on shared borders and where similar air quality issues (AQMAs) arise. For example, traffic emissions along the A20 and M20 corridors affect both boroughs.

TMBC is also a member of the Kent and Medway Air Quality Partnership, which was formed in 1992 to facilitate a co-ordinated approach within Kent and Medway for the Local Air Quality Management obligations placed on local authorities under the Environment Act 1995. The Kent and Medway Air Quality Partnership enables joint working between district authorities, Kent County Council, the Environment Agency, the Highways Agency, health authority and academic representatives to improve air quality in the County and help raise awareness of air quality issues.

Measure 10: TMBC will continue its active involvement and support for the Council's Action Plan Steering Group, the Kent and Medway Air Quality Partnership and joint working with neighbouring boroughs on shared air quality issues.

[13] Monitoring data is available through the Kent & Medway Air Quality Monitoring Network - http://www.kentair.org.uk/

5.2 General Measures to be implemented Borough-Wide

BOROUGH-WIDE TRANSPORT MEASURES

Funding will be provided through the Local Sustainable Transport Fund for sustainable transport initiatives in Kent to encourage greater uptake of alternative modes of transport to the car. This will provide resources within the Borough by taking forward the County-wide initiatives, such as school and workplace travel planning, smart ticketing, freedom passes, New Ways to Work scheme and the rural accessibility advice service.[14]

Incentive schemes, such as Kent Freedom Pass[15], introduced in Tonbridge town from June 2007 and extended to the remainder of Tonbridge and Malling in June 2009, have had great success in making travel easier and more affordable for young people in the borough and encouraging greater use of sustainable transport.

Support is also provided by KCC through schemes such as 'New Ways 2 Work'[16] which encourages everyone, including individuals and businesses, to look at how commuting and business travel impacts on the environment and promotes simple steps that can be taken to reduce the negative impacts of travel and transport. These include setting up a car sharing scheme, or contacting KCC about assistance with a travel plan.

Public Transport Improvements

Bus Services:

A Quality Bus Partnership (QBP) for Tonbridge and Malling has been proposed to help deliver enhancements to bus services in the Borough. Kent County Council is currently looking at the options for setting this up in the area with local bus operators (main operator Arriva) and this initiative could start as early as 2011. The scheme for Tonbridge and Malling will build on the success of similar schemes in other parts of the County, such as Maidstone, Canterbury and Ashford. A QBP enables partnership working with bus operators and targeted funding of measures to secure improved bus reliability and reduced journey times on key corridors and increase bus patronage. This can help achieve modal shift and air quality benefits.

Rail Services:

Planned improvements are also proposed for Tonbridge Station and West Malling Station (Draft LTP3 Implementation Plan).

Cycling Measures:

TMBC will continue to work in partnership with KCC to implement improvements to the Borough's local cycle route network through implementation of recommended improvement measures in the draft Tonbridge and Malling Cycling Strategy.

KCC and TMBC have also been working with Transport Direct on the delivery of electronic route planning for cyclists. This will be accessible via the Council's website.

[14] Further information is provided on Kent County Council's website http://www.kent.gov.uk/roads_and_transport/getting_around.aspx
[15] http://www.kent.gov.uk/roads_and_transport/getting_around/travel_by_bus/kent_freedom_pass.aspx
[16] http://www.kent.gov.uk/roads_and_transport/getting_around/travel_plans/new_ways_2_work.aspx

Measure 11: TMBC will continue to work with KCC and other partners to support and promote sustainable transport initiatives and encourage the uptake of alternative modes of travel to the car.

PLANNING MEASURES

Planning policies are in place within the Managing Development and the Environment DPD (see section 3.7.4) requiring air quality to be taken into account in development proposals and ensure appropriate assessments are undertaken. The adoption and adherence to the Kent and Medway Air Quality and Development Control Guidance will provide the necessary support to help ensure air quality issues are adequately considered.

Measure 12: TMBC will assess planning applications to ensure all relevant air quality issues are highlighted and mitigation measures considered where appropriate.

CLIMATE CHANGE ACTION PLAN MEASURES

TMBC has an adopted Climate Change Strategy (see section 3.9) which it has been implementing since 2008 and reporting progress annually. The Strategy 2008-2011 was due to be updated this year, however the decision has been taken not to proceed with the review as Kent County Council (KCC) are developing a Kent wide Climate Change Adaptation Plan through the Climate Change Network, which if supported by the districts will lead to the partnership working with KCC.. The draft Adaptation Plan does contain a number of actions pertinent to the districts. Tonbridge & Malling B.C are proposing to link in with the KCC initiative.
There are significant overlaps between climate change and air quality, so joint working will maximise the benefits. There are potential areas where carbon reduction strategies for mitigating climate change and local air quality conflict (e.g. use of certain types of fuels in the vehicle fleet and uptake of biomass energy sources in urban areas). These two areas therefore need to be coordinated to ensure such conflicts can be appropriately assessed.

Measure 13: TMBC will ensure effective coordination between climate change and local air quality action plans.

LEADING BY EXAMPLE

To reduce the impact on air quality of their own operations, TMBC and KCC propose the following measures:

Council Travel Plan and Fleet Management

Measure 14: TMBC and KCC will investigate options for better travel planning amongst their employees.

Measure 15: TMBC and KCC will continue to work with partners to actively support and promote the Kent wide car share scheme, to encourage greater uptake.

Measure 16: TMBC and KCC will improve the Council's vehicle fuel consumption efficiency through better management of their fleet activities and through driver training.

Measure 17: TMBC and KCC 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 18: TMBC and KCC will promote the uptake and use of cleaner or alternative fuels where possible.

Carbon Management

TMBC does not currently have a Carbon Management Plan, but the Council has been making significant steps to reduce the energy use of its buildings with both carbon and costs savings. Energy efficiency measures have been undertaken in the Borough's Leisure Centres to reduce carbon emissions, following recommendations from the Carbon Trust. An independent energy consultant has now been employed to audit the Tonbridge and West Hill Council offices and make recommendations. This is expected to include recommendations for boiler replacement (likely 2012), smart metering and renewable/low carbon energy technologies, which will be considered in terms of costs and feasibility. Roof mounted photovoltaic panels are an option under consideration for the Kings Hill office. The Council's building repairs expenditure plan budget is partly being used to take forward carbon reduction initiatives and enable future cost savings, such as installing passive infrared (PIR) based motion detectors in meeting rooms and light-emitting diode (LED) light sources in corridors. There are already energy efficiency measures in place in the building design, for example, dense thermal block external insulation at the Gateway extension, Tonbridge Castle and passive ventilation systems at the Kings Hill offices.

Other initiatives such as installing multi functional display (MFD) units to replace local printers and use of Voice over Internet Protocol (VOIP) for greater home working are also being considered.

TMBC also have energy champions in each department who are responsible for ensuring green housekeeping is maintained and encouraging others in the Council to adopt more energy efficient approaches.

Measure 19: TMBC and KCC will assess their Council's contribution to carbon emissions through energy use transport and waste and take forward recommendations where feasible to reduce emissions.

Green Procurement Policy

TMBC has developed a green procurement policy which will aim to reduce the environmental impacts of the Council's procurement.

Measure 20: TMBC will implement the Council's green procurement policy and ensure all Council procurement takes into account wider sustainability objectives.

EDUCATION AND COMMUNITY INITIATIVES

TMBC works with a number of partners to help deliver education and community initiatives which will have benefits for climate change and reducing background air quality concentrations. This includes engaging community groups who wish to make their areas low carbon e.g. Hadlow Carbon Community and Transition Town Tonbridge and working with schools (with Groundwork and CEN) to undertake recycling and energy awareness workshops. A league table for schools in relation to carbon reduction is also being developed.

TMBC have an adopted planning policy CC1 in place to secure improvements in energy efficiency and promote uptake of renewable/low carbon energy in new development. The Council also support households in the borough through funding of Warm Front Assistance and energy efficiency measures.

Measure 21: TMBC will work with relevant partners to encourage the planting of tree species which benefit air quality within the borough through the planning process implementation of the Green Infrastructure Plan and community partnerships.

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Measure 22: TMBC will promote and support low carbon and renewable energy generation in private households, community initiatives and public buildings.

Measure 23: TMBC will implement initiatives to educate communities on air pollution issues and ways to minimise impacts on air quality.

Measure 24: TMBC will provide the public with relevant information on air quality to enable the public to make informed choices about their transport options.

Measure 25: TMBC 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 AQMAs.

SECURING AIR QUALITY BENEFITS THROUGH STATUTORY FUNCTIONS

Measure 26: TMBC will permit and regularly inspect industrial premises under the Environmental Permitting regulatory regime.

Measure 27: TMBC will enforce 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 28: TMBC will enforce relevant legislation to reduce the burning of commercial and domestic waste.

Measure 29: TMBC will promote composting to help reduce pollution from domestic bonfires.

AIR QUALITY MONITORING

Monitoring data for the borough is available through the Kent & Medway Air Quality Monitoring Network.[17]

Measure 30: TMBC will continue to monitor air quality throughout the borough and ensure information is freely available to the public in an easily understood form.

Measure 31: TMBC will ensure that all air quality monitoring data reported to the public is accurate by continuing to implement quality control measures.

Measure 32: TMBC will continue to assess air quality across the borough and establish additional monitoring sites in locations where necessary if new areas of potential poor air quality are identified.

[17] http://www.kentair.org.uk

Table 5.1- Direct Measures to be Implemented in AQMAs

Measure	Actions	Lead Authority	Timescale	Status	Impact	Cost	Cost Effective Score	Targets/ Indicators
Measure 1: Monitoring implementation of the M20 Controlled Motorway System to assess potential improvements to traffic emissions in the M20 AQMA.	- Investigate best method to monitor impact of scheme -Identify funding for continued and expanded monitoring programme. -Review and implement appropriate monitoring programme -Review and assess traffic data and air quality monitoring data -Regular meetings with Highways Agency (HA) and KCC to discuss air quality issues in AQMA -Identify further opportunities to improve air quality in the M20 AQMA	HA, KCC, TMBC	2010 onwards	Ongoing. Funding required for monitoring.	3	6	18	▪ Number of meetings with HA and KCC (Target=2/year) ▪ Air quality improvements (Target=air quality objectives met) ▪ Implementation of additional schemes
Measure 2: Identification and prioritisation of transport measures which may improve traffic emissions in the A20 AQMAs.	-Regular meetings with KCC to discuss air quality issues in AQMAs and prioritisation of transport measures to improve air quality -Secure approval and funding for transport schemes Schemes identified: -Bus priority measures - Bus emissions improvements through Bus Quality Partnership -Cycling improvements	KCC, TMBC	2011 onwards	Potential schemes identified. Funding and approval required.	3	4	12	▪ Number of meetings with KCC (Target=2/year) ▪ Annual traffic flows from KCC counts in AQMAs (Target=10% reduction through modal shift) ▪ Air quality improvements (Target=air quality objectives met) ▪ Implementation of schemes
Measure 3: Investigate provision of receptor based abatement systems and solutions within the Aylesford AQMA.	-Investigate feasibility of receptor based intervention -See appropriate funding and approval	TMBC	2011/12	Funding and approval required.	7	6	42	▪ Implementation of receptor based schemes
Measure 4: Implementation of measures within the Tonbridge Area Action Plan Transport Strategy to secure improvements in air quality in the Tonbridge High Street AQMA.	-Regular meetings with KCC to discuss air quality issues in AQMAs and prioritisation of transport measures to improve air quality -Investigate targeted parking enforcement in the High Street -Secure approval and funding for transport schemes Schemes identified: -UTMC -Pedestrianisation improvements -Bus emissions improvements through Bus Quality Partnership -Junction improvements	KCC, TMBC	2011 onwards	Potential schemes identified. Funding and approval required.	6	4	24	▪ Number of meetings with KCC (Target=2/year) ▪ Annual traffic flows from KCC counts in AQMAs (Target=reduction in flows, especially HDVs) ▪ Air quality improvements (Target=air quality objectives met) ▪ Implementation of schemes

Table 5.1 (Continued) – Direct Measures to be Implemented in AQMAs

Measure	Actions	Lead Authority	Timescale	Status	Impact	Cost	Cost Effective Score	Targets/ Indicators
Measure 5: TMBC will review current parking enforcement in the Tonbridge High Street AQMA and enhance, where appropriate.	-Review of current parking enforcement -Implementation of actions arising from review	TMBC	2011 onwards		2	7	14	▪ Review of parking completed and findings implemented ▪ Air quality improvements (Target=air quality objectives met)
Measure 6: Identification of transport measures which may improve traffic emissions in the Wateringbury AQMA.	-Secure funding for transport study and air quality monitoring in the AQMA -Regular meetings with KCC to discuss air quality issues in AQMAs and prioritisation of transport measures to improve air quality. Potential schemes include junction improvements and review of lorry signage/routes.	KCC, TMBC	2011 onwards	Funding and approval required.	2	6	12	▪ Number of meetings with KCC (Target=2/year) ▪ Annual traffic flows from KCC counts in AQMAs (Target=reduction in flows, especially HDVs) ▪ Air quality improvements (Target=air quality objectives met) ▪ Funding secured for transport study and monitoring ▪ Transport schemes implemented
Measure 7: Seek to adopt the Kent and Medway Air Quality and Development Control Guidance as a material consideration in planning decisions.	-Seek approval for adoption of Guidance -Provide necessary information/ training to planners to ensure successful adoption as a material planning consideration in planning decisions.	TMBC	2011/12	Awaiting finalisation of draft Guidance	3	7	21	• Adoption of Guidance • Planning applications with air quality assessment requirements and/or air quality conditions
Measure 8: Ensure development likely to have an air quality impact on the AQMAs is appropriately assessed consideration is made to mitigation as necessary and contributions are sought either through the use of S106 agreements or through a Community Infrastructure Levy, should this prove possible.	- Develop and implement procedure for calculation of contributions in relation to air quality issues either for use in S106 agreements or through a Community Infrastructure Levy, should this prove possible.	TMBC	2011/12	Under considerati on	3	7	21	• Procedure in place to ensure consistent approach to funding of measures • Contributions secured, to be used to fund initiatives to improve air quality.
Measure 9: Ensure continuance of adequate air quality and traffic monitoring within the AQMAs to monitor progress of the Action Plan measures.	- Review existing information requirements and any shortfalls - Identify funding sources for ongoing monitoring requirements	TMBC, KCC	2011 onwards	Ongoing. Funding required for monitoring.	1	7	7	• Information and funding secured (Target=full funding secured on annual basis).
Measure 10: TMBC will continue its active involvement and support for the Council's Action Plan Steering Group, the Kent and Medway Air Quality Partnership and joint working with neighbouring boroughs on shared air quality issues.	- Membership and support of the Steering Group and Partnership continued. -Attendance of quarterly Partnership meetings -Arrange regular meetings with neighbouring boroughs to enable joint working on shared air quality issues	TMBC	2011 onwards	ongoing	2	7	14	▪ Number of meetings with Steering Group (Target=2/year) ▪ Number of meetings/events with Partnership (Target=4/year) ▪ Number of meetings with neighbouring boroughs (Target=2/year)

Table 5.2 - Measures to be Implemented Borough-wide

Measure	Actions	Lead Authority	Timescale	Status	Impact	Cost	Cost Effective Score	Targets/Indicators
Measure 11: TMBC will continue to work with KCC and other partners to support and promote sustainable transport initiatives and encourage the uptake of alternative modes of travel to the car.	-Secure continued funding for sustainable transport initiatives. Schemes include: -Travel plans (workplace and schools) - Freedom passes and smart ticketing -New Ways to Work scheme -Cycleway and pedestrian improvements -Rural accessibility advice service	KCC, TMBC	2011 onwards	Schemes identified. Ongoing funding required.	3	6	18	• Implementation of sustainable transport initiatives borough-wide • Uptake of sustainable transport initiatives • %modal shift/bus patronage figures
Measure 12: TMBC will assess planning applications to ensure all relevant air quality issues are highlighted and mitigation measures considered where appropriate.	-Review protocol for receipt of planning applications	TMBC	2011 onwards	Ongoing	3	7	21	▪ Total number of planning applications consultations responded to in each financial year ▪ Total number of planning applications with air quality conditions/ assessments.
Measure 13: TMBC will ensure effective coordination between climate change and local air quality action plans.	Strategy to be developed to improve co-ordination between climate change and air quality strategies and action plan measures.	TMBC	2011	Ongoing	2	7	14	▪ Implementation of co-ordination strategy ▪ Reciprocal attendance of air quality and climate change steering groups
Measure 14: TMBC and KCC will investigate options for better travel planning amongst their employees.	-Review of TMBC/KCC Travel Plan options and uptake. -Review current dissemination of information to staff. -Identify opportunities for improvement.	TMBC	2011/12		2	7	14	▪ Completion of review ▪ Implementation of actions within Travel Plan ▪ Uptake of travel plan measures ▪ Reduction in business mileage
Measure 15: TMBC and KCC will continue to work with partners to actively support and promote the Kent wide car share scheme, to encourage greater uptake.	-Review current dissemination of information to staff.	TMBC	2011 onwards	Ongoing	2	7	14	▪ Uptake of Kent Journeyshare
Measure 16: TMBC and KCC will improve the Council's vehicle fuel consumption efficiency through better management of their fleet activities and driver training.	-Develop green fleet management plan -Develop driver training programme	TMBC	2011/12		2	7	14	▪ Implementation of smarter driver programme. ▪ Development/ implementation of fleet management plan.
Measure 17: TMBC and KCC will establish and implement a rolling programme for replacing older more polluting vehicles with newer cleaner vehicles which comply with the prevailing EURO standard.	-Develop green fleet management plan	TMBC	2011/12		2	7	14	▪ Number/proportion of new/improved vehicles within fleet

Table 5.2 (Continued) - Measures to be Implemented Borough-wide

Measure	Actions	Lead Authority	Timescale	Status	Impact	Cost	Cost Effective Score	Targets/Indicators
Measure 18: TMBC and KCC will promote the uptake and use of cleaner or alternative fuels where possible.	-TMBC will liaise with KCC to ensure a co-ordinated approach to promotion of uptake and use of cleaner or alternative fuels.	TMBC/ KCC	2011 onwards		2	7	14	▪ List of any promotion campaigns planned/implemented. ▪ Number/Proportion of cleaner vehicles within fleets or clean fuels infrastructure
Measure 19: TMBC and KCC will assess their Council's contribution to carbon emissions through energy use, transport and waste and take forward recommendations where feasible to reduce emissions.	-Work towards development and implementation of a Carbon Management Plan. -Ensure appropriate information and training of officers and members to increase awareness of their role in carbon reduction.	TMBC/ KCC	2011 onwards	Ongoing	2	7	14	▪ Progress against targets for NI186 and NI185.
Measure 20: TMBC will implement the Council's green procurement policy and ensure all Council procurement takes into account wider sustainability objectives.	-Review current implementation of green procurement policy and put forward suggested improvements, where necessary	TMBC	2011 onwards	Ongoing	2	7	14	▪ Number of opportunities identified annually where procurement has clearly been influenced by policy.
Measure 21: TMBC will work with relevant partners to encourage the planting of tree species which benefit air quality within the borough through the planning process implementation of the Green Infrastructure Plan and community partnerships.	-Collate relevant information on tree species and air quality benefits; -Liaise with relevant partners to ensure appropriate dissemination of information; -Identify opportunities to encourage the planting of such tree species.	TMBC	2011 onwards		2	7	14	▪ Number of opportunities identified annually.
Measure 22: TMBC will promote and support low carbon and renewable energy generation in private households, community initiatives and public buildings.	-Review current initiatives within TMBC and identify any further opportunities for promotion and support. -develop quantifiable baseline statistics.	TMBC	2011 onwards	Ongoing	2	7	14	▪ Number of promotional events and opportunities demonstrated annually.
Measure 23: TMBC will implement initiatives to educate communities on air pollution issues and ways to minimise impacts on air quality.	-Review current education initiatives to ensure air pollution issues are incorporated.	TMBC	2011 onwards		2	7	14	▪ Initiatives identified ▪ Initiatives implemented.
Measure 24: TMBC will provide the public with relevant information on air quality to enable the public to make informed choices about their transport options.	- Investigate funding sources for information provision e.g. Air Alert or similar service. -Review information on air quality on T&MBC website and ensure appropriate links to sustainable transport initiatives -Liaise with highways authorities to ensure links between transport and air quality are clearly made in available literature.	TMBC	2011 onwards	Ongoing funding required.	2	7	14	▪ Implementation of scheme e.g. Air Alert or similar service. ▪ Continued membership of Kent and Medway Air Quality Monitoring Network.

Table 5.2 (Continued) - Measures to be Implemented Borough-wide

Measure	Actions	Lead Authority	Timescale	Status	Impact	Cost	Cost Effective Score	Targets/Indicators
Measure 25: TMBC 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 AQMAs.	-Identify key business and schools within or in the vicinity of AQMAs to target support for implementing travel plan measures.	KCC/ TMBC	2011 onwards	Ongoing	3	7	21	▪ Number of new travel plans. ▪ Number of active Travel plans within AQMAs.
Measure 26: TMBC will permit and regularly inspect industrial premises under the Environmental Permitting regulatory regime.	-Identify those processes which have relevant emissions in relation to LAQM and are likely to impact on AQMAs, to enable targeted support.	TMBC	2011 onwards	Ongoing	2	7	14	▪ Number of inspections carried out (Target=100%). ▪ Number of enforcement actions taken (Target=0).
Measure 27: TMBC will enforce 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.	-Review current information provision on smoke and dust control.	TMBC	2011 onwards	Ongoing	2	7	14	▪ Number of statutory nuisance complaints (Target=0).
Measure 28: TMBC will enforce relevant legislation to reduce the burning of commercial and domestic waste.	-Review current information provision on burning of waste.	TMBC	2011 onwards	Ongoing	2	7	14	▪ Number of smoke complaints (Target=0)
Measure 29: TMBC will promote composting to help reduce pollution from domestic bonfires.	-Review current promotional activities and identify any additional measures to increase uptake -Ensure domestic bonfire guidance is freely available to the public in an easily understood form.	TMBC	2011 onwards	Ongoing	2	7	14	▪ % uptake composting bins. ▪ Number of bonfire complaints (Target=0).
Measure 30: TMBC will continue to monitor air quality throughout the borough and ensure information is freely available to the public in an easily understood form.	-Review information on T&MBC website -Liaise with data managers of the Kent and Medway Air Quality Monitoring Network to ensure data is updated and clearly displayed.	TMBC	2011 onwards	Ongoing. Funding required on annual basis.	1	7	7	▪ Funding secured for continued monitoring and data management through the Kent and Medway Air Quality Monitoring Network (Target=100%).
Measure 31: TMBC will ensure that all air quality monitoring data reported to the public is accurate by continuing to implement quality assurance and control (QA/QC) measures.	-Review QA/QC procedures at least once a year. -Review training needs annually or where new staff join to ensure good QA/QC.	TMBC	2011 onwards	Ongoing	1	7	7	▪ QA/QC measures and training programme in place.
Measure 32: TMBC will continue to assess air quality across the borough and establish additional monitoring sites in locations where necessary if new areas of potential poor air quality are identified.	-Assess air quality through Review and Assessment process. -Establish new sites where identified.	TMBC	2011 onwards	Ongoing	1	7	7	▪ Poor air quality sites identified monitored and addressed through the Review & Assessment process. ▪ Additional monitoring sites established as and when required.

6. Implementation and Monitoring

Tonbridge and Malling Borough Council will work jointly on the action plan measures with the relevant partners including Kent County Council, the Highways Agency, 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 Steering Group will take positive action in managing air quality in the Borough of Tonbridge and Malling 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 TMBCs 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 NO_2 at relevant locations within the AQMAs. 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 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
AQAP	Air Quality Action Plan
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
$\mu g/m^3$	Micrograms per cubic metre
NAQS	National Air Quality Strategy
NO	Nitric Oxides
NO_2	Nitrogen Dioxide
NO_x	Oxides of Nitrogen
PCT	Primary Care Trust
PM_{10}	Particles of up to 10 µm diameter
QBP	Quality Bus Partnership
TMBC	Tonbridge and Malling Borough Council
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)

DEFRA (2010) Air Pollution: Action in a Changing Climate

DEFRA (2010) Low Emissions Strategies: using the planning system to reduce transport emissions

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

Highways Agency (2005) The Role of the Highways Agency in Local Air Quality Management

Kent County Council (2006) 2nd Local Transport Plan 2006– 2011

Kent County Council (2010) Consultation Draft 3rd Local Transport Plan 2011– 2016

Kent County Council (2010) Growth without Gridlock

Kent County Council (2010) Kent Environment Strategy

South East England Partnership Board (2009) South East Plan

Tonbridge and Malling Borough Council (2007) Core Strategy DPD

Tonbridge and Malling Borough Council (2010) Managing Development and the Environment DPD

Tonbridge and Malling Borough Council Sustainable Community Strategy for Tonbridge and Malling Borough

Tonbridge and Malling Borough Council (2008) Climate Change Strategy

Tonbridge and Malling Borough Council (2002) LAQM Stage 4 Assessment

Tonbridge and Malling Borough Council (2003) Air Quality Action Plan

Tonbridge and Malling Borough Council (2005) LAQM Further Assessment

Tonbridge and Malling Borough Council (2009) LAQM Further Assessment

Tonbridge and Malling Borough Council (2010) LAQM Air Quality Annual Progress Report

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?		
Principal 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

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