

Report to **Lead Cabinet Member for Transport and Environment**

Date **28 July 2008**

Report By **Director of Transport and Environment**

Title of Report **Local Transport Plan 2- Air Quality Progress Report 2008**

Purpose of Report **To seek approval of the Air Quality Progress Report on the Second Local Transport Plan (LTP2) for submission to Government.**

RECOMMENDATION:

The Lead Member is recommended to approve the Second Local Transport Plan Air Quality Progress Report 2008 for submission to the Government Office of the South East and Department for Transport.

1. Financial Appraisal

1.1 The investment established in LTP2 supports the delivery of transport schemes that are included in the two Air Quality Management Areas (AQMAs) in Hastings and Lewes, and which contribute to improving local air quality. In addition, the Environment Group holds a small budget of £5,000 to monitor local air quality across East Sussex, in accordance with our statutory obligations under Part IV of the Environment Act 1995. The County Council will be responsible for the implementation of some of the measures included within respective AQMA action plans. Whilst the funding will derive from the LTP2 Integrated Transport Capital Programme, they will be subject to the annual balanced scorecard process.

2. Supporting Information

2.1 Air quality is a mandatory indicator within LTP 2. The Air Quality Progress Report for 2008, attached as Appendix 1, has been produced in accordance with the guidance issued by Government. This requires that progress on improving air quality within AQMAs is reported by July, with the report on the remaining LTP2 Mandatory targets to be reported to Government in December, because this ties up with the reporting timetable on air quality required from our District and Borough partners.

2.2 The AQMA in Hastings covers the Bexhill Road, which is the busiest road in the Bexhill and Hastings area. An AQMA was declared by Hastings Borough Council in December 2003 due to a projection that the national 24-hour PM₁₀ air quality Objective limit would be exceeded. This limit states that a daily average of 50µg/m³ should not be exceeded on more than 35 days each year. During 2007 the air quality Objective was met, which may partly be explained by a decrease of 11% in the traffic volume during 2007. However, the levels of PM₁₀ have risen and fallen significantly between 2003 and 2007, for reasons that remain unclear. In order to better understand the causes of, and possible solutions to, the exceedance of the Objective, the County Council and Borough Council have been carrying out additional air quality monitoring, notably adjacent to the waste management facilities along Freshfield Lane. The detailed studies to identify the likely sources of local particulate matter suggested that these are an important contributor to local air pollution. The results of this monitoring will be reported in 2009.

2.3 The AQMA in Lewes covers the centre of Lewes town, where narrow and congested streets restrict the dispersion of traffic-related air pollution from a relatively low number of vehicles. An AQMA was declared by Lewes District Council in June 2005 due to a prediction that the 2005 annual mean air quality Objective limit for nitrogen dioxide (NO₂) of 40ug/m³ would be exceeded.

During 2007 the County Council worked closely with Lewes District Council to develop an Air Quality Action Plan (AQAP), which Government has commented on and which includes a number of transport-related measures which the County Council is taking forward through the wider LTP 2 process. The AQAP indicates that the levels of NO₂ will reduce, but may remain above the Objective level of 40µg/m³, by the end of LTP2.

2.4 Air quality monitoring and assessment work by Lewes District Council in Newhaven indicates that it is likely that a new transport-related AQMA will need to be declared in the centre of Newhaven along the A259 gyratory system, due to a prediction that the 2005 annual mean air quality Objective for NO₂ of 40 µg/m³ will be exceeded. Responsibility for declaring an AQMA resides with the District Council. The County Council is fulfilling its statutory duty by assisting the District Council in carrying out additional air quality monitoring.

2.5 Progress against the air quality targets in LTP2 is monitored and reviewed quarterly, alongside all LTP2 targets.

3. Conclusion and Reason for Recommendation

3.1 The air quality Progress Report reflects the difficulties in achieving the air quality targets in LTP2, and shows the progress made towards the LTP2 air quality outcome targets.

RUPERT CLUBB
Director of Transport and Environment
17 July 2008

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Local Members: All

BACKGROUND DOCUMENTS

DfT Guidance on 2nd Local Transport Plan (LTP2 Progress Reports) 2008.
DEFRA LAQM.TG (05)

Report on Hastings Air Quality Action Plan (June 2008)**Context:**

The AQMA was declared in December 2003 for the A259 Bexhill Road due to a predicted exceedance of the 24-hour PM₁₀ air quality Objective, whereby a daily average of 50µg/m³ should not be exceeded on more than 35 days each year. The Bexhill Road is the only suitable route between Bexhill and Hastings and is the busiest road in the area

Current air quality:

The Bexhill Road had an annual average daily traffic (AADT) flow of approximately 29,000 vehicles in 2007, a decrease of 11% from the previous year. Figure 1 shows the significant reduction in traffic flow compared to the previous three years, and figure 2 demonstrates the reduction in the number of HGV movements on that length of road over the last two years.

Figure 1

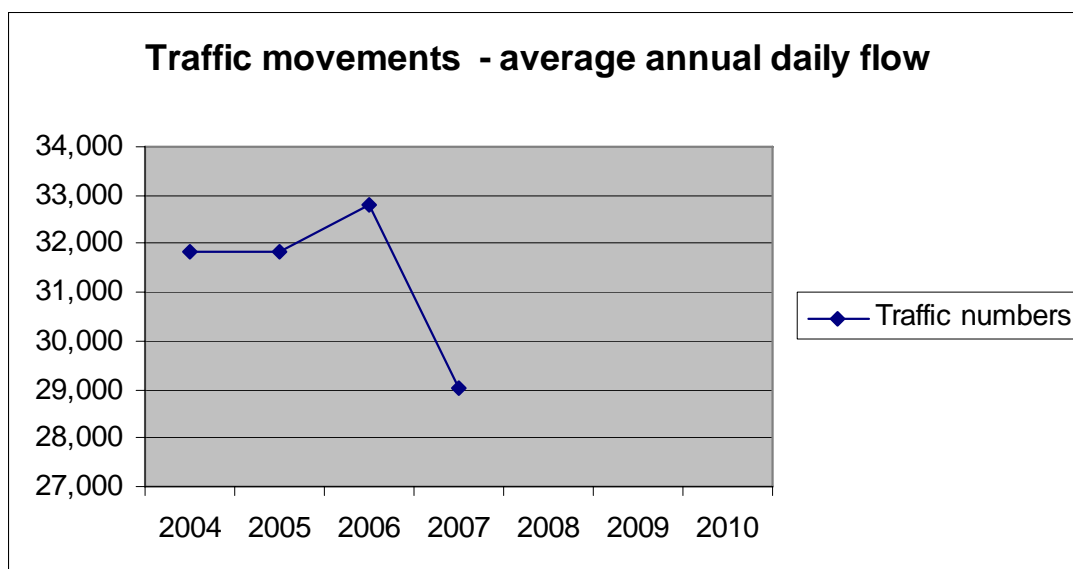


Figure 2

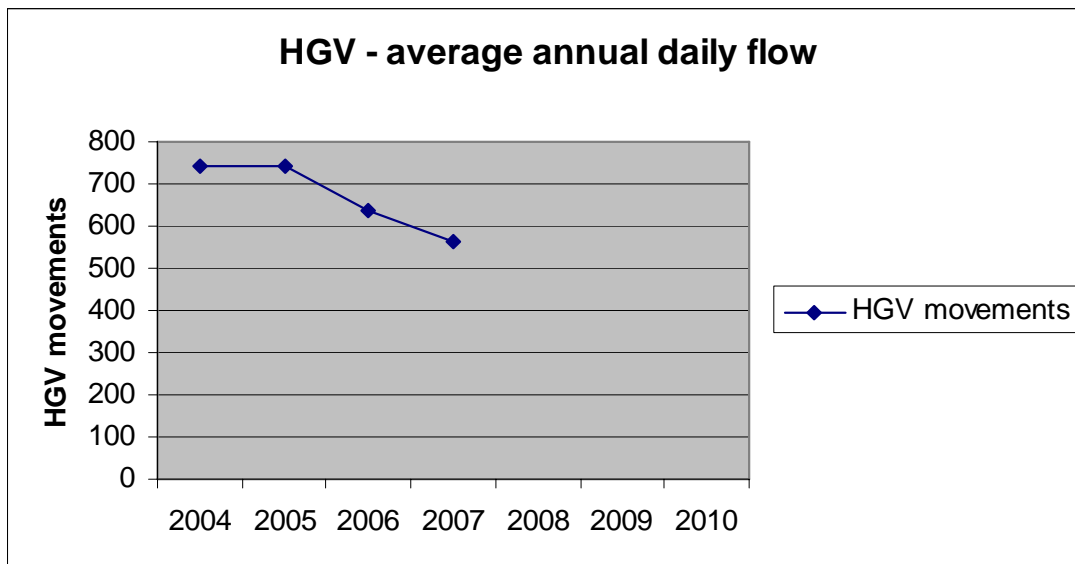


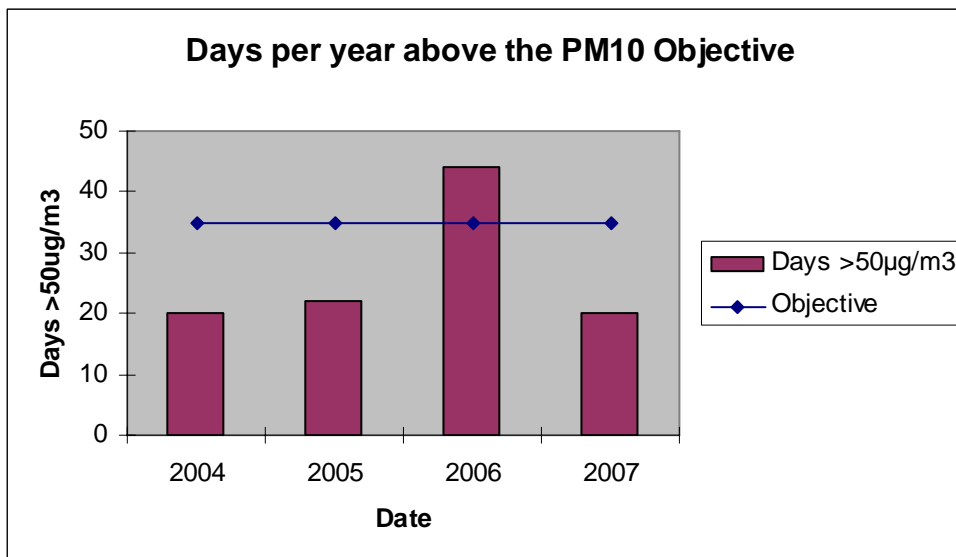
Table 1 and figure 3 indicate that the 24-hour PM₁₀ Objective, which requires that a daily average of 50µg/m³ should not be exceeded on more than 35 days each year, was only exceeded in 2007 on 20 occasions. The data is based on ratified monitoring results from a continuous monitoring station located at the roadside of the A259 Bexhill Road.

Table 1

Results	2001	2002	2003	2004	2005	2006	2007
Annual data capture (%)	49	81	95	95	97	93	95
Days >50µg/m ³	48	52	62	20	22	44	20
Annual mean	33	36	38	30	30	35	31

(Note: the 2001 figure has been extrapolated to the full year).

Figure 3



However, it remains unclear as to why the level of particulates increased significantly during 2006 and reduced during 2007. As explained in LTP2, there continues to be considerable uncertainty surrounding the measurement of material emission rates and the mechanisms by which the process of re-suspension of PM₁₀ operates. In order to reduce this uncertainty the County Council secured developer contributions through a Section 106 agreement to install a continuous monitoring station along Freshfield Lane to help determine the relative contribution to existing PM₁₀ levels from the local waste management facilities, as these are thought to be a significant component of local PM₁₀.

Table 1 - **Current status of the AQAP measures:**

No.	Measure	Lead organisation	Air quality impact	Timescale	Cost	Non-air quality impact	Ranking	Progress with measure
1	Update the wider transport strategy for Hastings from early 2006	ESCC / HBC	Medium	short	£	Increase social inclusion; improve accessibility, encourage regeneration and improve road safety	1	ESCC is working with HBC and RDC on updating Hastings and Bexhill LATS as an integral part of its LTP and the LDF frameworks for Hastings and Rother. A draft strategy has been produced which will be the over-arching transport strategy for the area. This is being augmented by modelling work to test various development scenarios and the LATS measures on transport demand across the area. This will be followed by "part 2" which will identify a programme of specific schemes that fall within the Integrated Transport element of the LTP.
2	Provision of a bus lane and bus priority measures between Glyne Gap and the junction of Filsham Rd	ESCC	Low	Short/medium	£	Increased social inclusion and accessibility	2	Bus Lane priority measures are being developed as part of the BHLR package of complementary measures. Implementation of the bus lane will follow implementation of the Link Road and will therefore not be before 2012

3	Implementation of 'travel choice' measures (i.e. workplace travel plans, school travel plans, targeted public transport information) to manage demand and reduce the need to travel by private car	ESCC	low	short	£	Possible small reduction in accidents and improved physical fitness	3	Continued marketing of the TravelChoice brand aims to increase awareness of alternative forms of transport and in particular to reduce the incidence of single occupancy vehicles. A programme of events will take place under the east Sussex Streets Ahead banner in Autumn 2008.
4	Continuation of the Quality Bus Partnership and implementation of the QBP Action Plan	ESCC / bus operators	low	short	£	Increased social inclusion	4	Final QBP Action Plan for 2007 - 2010 published by HBC/ESCC/Stagecoach in March 2008. Routes using the A259 (98/99/710/711) identified as priority routes for initial focus of Punctuality Improvement Partnership although some elements between Glyne Gap and Filsham Road will be dependent on locking in the benefits generated by transfer of traffic to the Bexhill to Hastings Link Road.
5	Provision of funding for schools that implement school travel plans	ESCC	low	short	£	Improve road safety (possible small reduction in accidents)	5	24 schools in Bexhill/Hastings areas received DfT/DCSF STP capital grants in 2007/08, worth a total of £163,245. 10 schools in Bexhill/Hastings areas received DfT/DCSF Walking Bus revenue grants in 2007, worth a total of £9500.

6	Construction of the Bexhill/Hastings Link Road	ESCC	High	Long	££££	Increased accessibility and regeneration	6	It is intended that the planning application for the Bexhill/Hastings Link Road go before the Planning Committee in October 2008. Construction is planned for 2010 for completion in 2012.
7	Upgrading the current SCOOT traffic signal management system and further bus priority on the A259 east of the Filsham Rd junction.	ESCC	low	Short/medium	££	Increased social inclusion and accessibility	7	The upgrading of the A259 SCOOT traffic management will be considered following implementation of the BHLR.
8	Provision of cycle facilities between Bexhill/Hastings	ESCC	low	Short/medium	££	improved physical fitness	8	£380k funding from the Big Lottery Fund / Sustrans for development of the Hastings to Bexhill Cycle Route. The scheme is for a 2km traffic free path linking Bexhill and Hastings and providing an alternative to the A259. Conditions of funding to be agreed in June 08 and will be paid in arrears over the next five years as and when works are completed.
9	Provision of bus services serving local schools and colleges	ESCC	low	short	££	Improve accessibility	9	ESCC is continuing to revenue fund a network of school and college bus services in the Hastings area. The continuation of the services to Bexhill 6 th Form College have recently been secured for the 2008/09 academic year.

10	Extension of the real time passenger information systems into Hastings	ESCC	low	short	£££	Increased social inclusion and accessibility	10	<p>The introduction of a real time passenger information system in Hastings is one of the recommendations of the Peter Brett Associates report on the Hastings Quality Bus Partnership and the separate Hastings BC Environment Overview and Scrutiny Committee review of bus services in the town.</p> <p>Before any capital outlay on the introduction of real time passenger information schemes, a revenue funding stream, potentially from parking surpluses, needs to be identified to enable the ongoing maintenance of the scheme.</p> <p>ESCC, HBC and Stagecoach are currently investigating appropriate systems and scheme costs.</p>
11	Monitor levels of re-suspended matter	HBC	Nil	Ongoing	£	n/a	n/a	<p>A new continuous monitoring station for PM10 and NOx was installed along Freshfield Lane in March 2008 which will help establish the relative contribution of re-suspended particulate matter from the site traffic and operations of the local waste facilities. The landfill operation is due to close temporarily during 2008 which will give an opportunity to compare PM10 concentrations.</p>

									There's 3 months of unratified data from the new monitoring station, therefore it's too early to use this data (12 exceedances between 21 st March – 23 rd June, with a 73% data capture rate).
12	Maintain monitor	PM ₁₀	HBC	Nil	Ongoing	£	n/a	n/a	On-going (this relates to the PM10 monitor on the A259).
13	Install monitor	NOx	HBC	Nil	Ongoing	£	n/a	n/a	Installed during 2006-7, adjacent to the existing PM10 monitor on the A259, in order to enable an evaluation of the PM10/NOx ratio to assist in identifying whether the primary local source is tailpipe emissions.
14	Assess dust control measures		HBC	Nil	Short	£	n/a	n/a	Hastings BC has made strong representations to the EA for improved control measures at the landfill, however the EA have not yet replied.
15	Enhanced road cleaning of Freshfields and the A259		HBC	Not known	Short	£	n/a	Not known	Hastings BC began implementing improved road sweeping from October 2006.
16	Improved dust control at Bulverhythe depot		HBC	Not Known	Short	£	n/a	Not known	HGV movements have stopped from the site as the contractor, Veolia, has moved out and Hastings BC is using the site for office accommodation.

17	Improved dust control at the Household Waste recycling site and Pebsham landfill	Environment Agency	Not Known	Short	£	n/a	Not known	See 14. above. The landfill is due to close temporarily during 2008, which will enable the relative contribution of the site to local PM10 to be measured. However, when the site will close and how long for are currently unknown due to issues with the closure plan and planning application.
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Air quality impact	Time scale	Costs
High = > than 1 $\mu\text{g}/\text{m}^3$	short = less than 2 years	££££ = over £1 million
Moderate = 0.5 – 0.9 $\mu\text{g}/\text{m}^3$	medium = 2 to 5 years	£££ = 500k to £1m
Low = < 0.5 $\mu\text{g}/\text{m}^3$	long = over 5 years	££ = £100k to £500k
		£ = 0 to £100k

Mandatory indicator - LTP8:

Target: Maintain PM₁₀ levels below the national air quality objective (i.e of 50µg/m³ not to be exceeded more than 35 times a year).

Figure 4 and table 3 show the predicted modelled levels of PM₁₀ within the AQMA during the period covered by LTP2, and the actual monitored levels of PM₁₀ to date.

Figure 4:

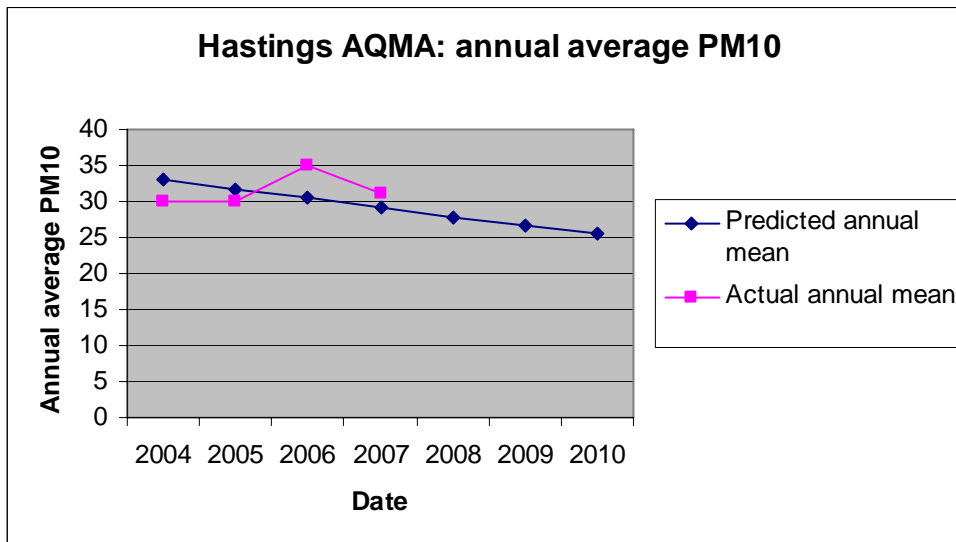


Table 3:

	2004	2005	2006	2007	2008	2009	2010
Predicted annual mean	33	31.8	30.5	29.2	27.8	26.6	25.6
Actual annual mean	30	30	35	31			

NB:

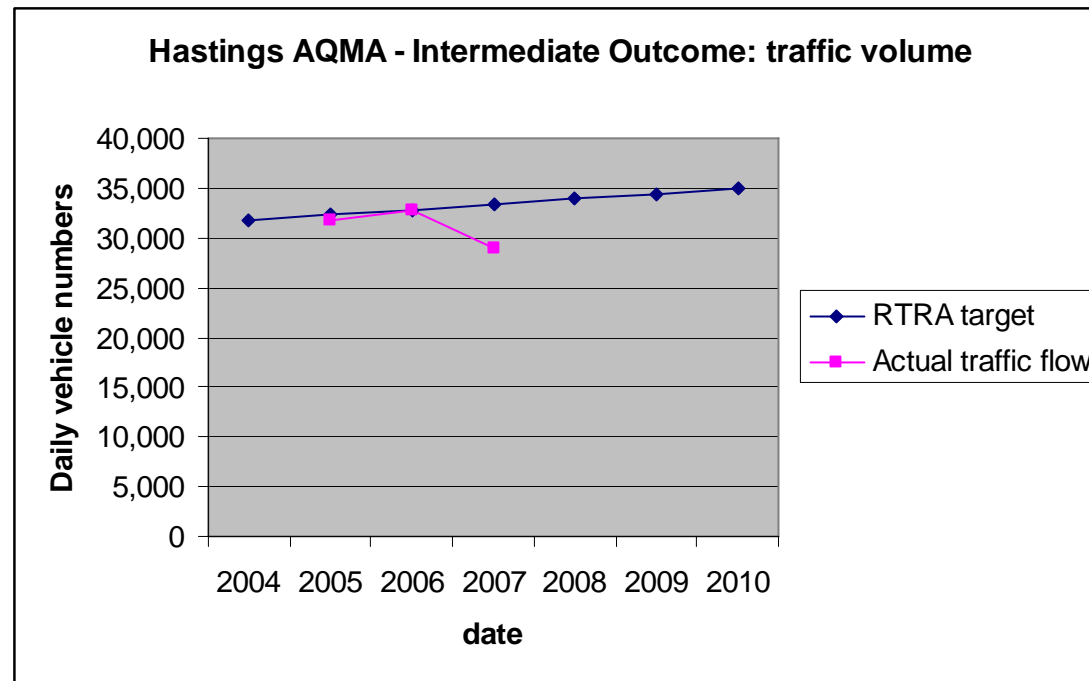
- no annual milestones were set for this indicator because the annual assessment of pollutant concentrations could be affected more by meteorology than by the short term effects of AQAP measures.
- the modelling has looked at traffic-induced pollution. There is no specific component that has been modelled for 're-suspension' because, as stated in LTP2, there are no models to allow an estimate of the possible effect of the AQAP measures to reduce a-typical re-suspended material.

As advised by DEFRA's guidance in LAQM.PGA(05), annual progress has been measured against the intermediate outcome of traffic volume. The target traffic volumes during LTP2, and the actual levels to date, are compared in table 4 and figure 5. These clearly indicate that the target has been met and exceeded.

Table 4:

Year	Target (RTRA targets)	Target (with action plan measures)	% reduction on RTRA targets	Actual traffic flow figure	% difference from target with action plan measures
2004 (baseline)	31,814	31,814	-	31,850	
2005	32,323	32,291	0.1%	31,850	
2006	32,840	32,775	0.1%	32,780	-0.015%
2007	33,365	33,266	0.1%	29,040	+13%
2008	33,898	33,764	0.1%		
2009	34,440	34,270	0.1%		
2010	34,991	34,784	0.1%		

Figure 5:



Conclusion:

Monitoring of PM₁₀ along the Bexhill Road in Hastings has shown that the air quality Objective has been met three out of the last four years, and monitoring of traffic volumes shows a considerable decrease of 11% from 2006 to 2007. However, it's still too early to discern the long-term trend for PM₁₀ or to determine the relative contribution of the AQAP measures to improving local air quality because of the continuing uncertainty surrounding the measurement of material emission rates and the mechanisms by which the process of re-suspension of PM₁₀ operates. Therefore, ESCC and HBC will continue to deliver the actions in the AQAP and assess the data from the expanded air quality monitoring network, and will continue to report on progress against the air quality Objectives in future LTP Progress Reports.

Report on Lewes Air Quality Action Plan (June 2008)

Context:

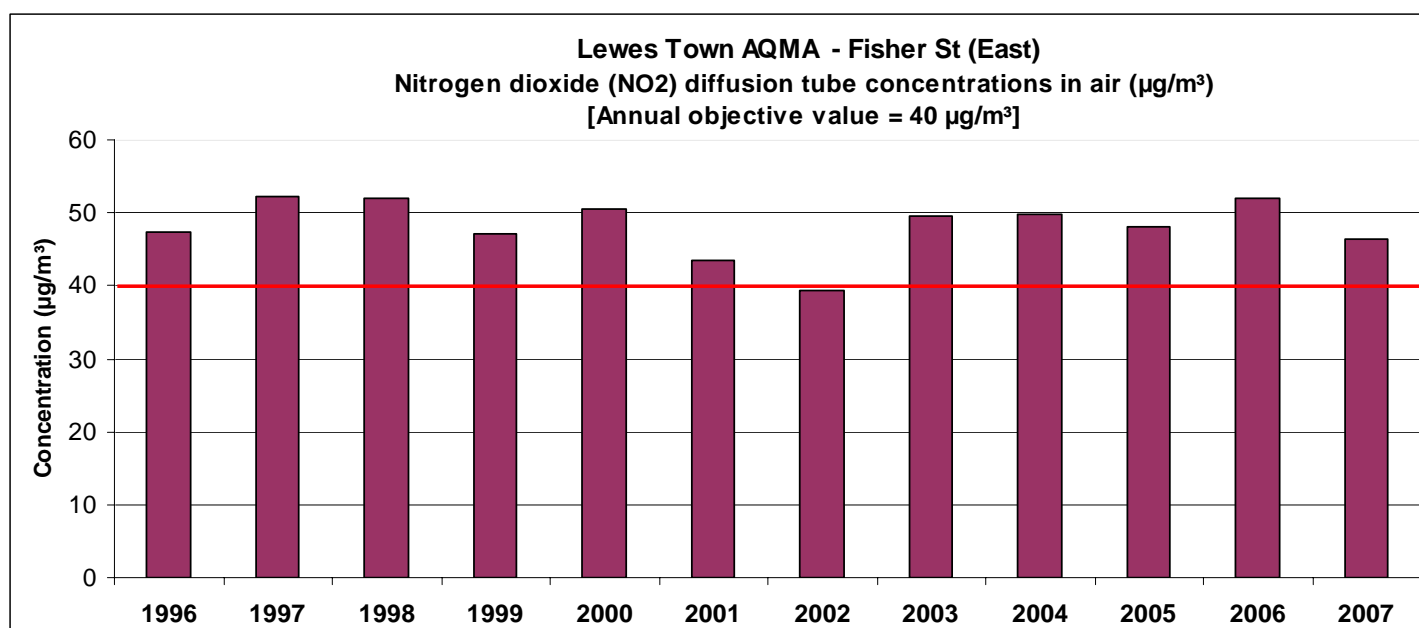
The AQMA was designated in June 2005, focusing on the traffic system in the centre of Lewes that incorporates Fisher Street, Station Street, High Street, West Street and Market Street. Fisher Street is a short, one-way street in the centre of the historic town of Lewes. It's a classic urban canyon, which prohibits the dispersion of air pollution. The volume of traffic using the street is relatively low – in the region of 8,000 vehicles per day. However, much of the traffic has to climb a steep hill and wait at traffic lights, whilst during the rush hour the centre of Lewes suffers from congestion.

The Further Assessment confirmed that the designation of the AQMA was necessary and that 65% of NO_x emissions are from local road transport. A draft AQAP, developed by ESCC and LDC, was submitted by Lewes DC to DEFRA in late 2007.

Current air quality

Figure 1, which is based on bias-adjusted diffusion tube data, indicates that the air quality Objective for NO₂ is still being exceeded in Fisher Street in the centre of Lewes town.

Figure 1.



The AQAP:

The aims, objectives, targets and methodology used to prepare the AQAP are set out within the AQAP (see: www.lewes.gov.uk/environment/11874.asp), which was approved in principle by DEFRA in May 2008, with comments for Lewes DC to action.

The draft AQAP includes a package of transport measures that will contribute towards reducing NO_x levels.

The AQAP has:

- selected measures for implementation based on cost-effective analysis considering wider social, environmental and economic impacts;
- estimated, where possible, the potential air quality improvements that may result from the actions, through modelling with DMRB or dispersion modelling (Breeze);
- identified the responsibilities for each action and an expected timetable showing when each measure will be implemented.

The draft AQAP will be revised by Lewes DC and the final version submitted to DEFRA later in 2008. The AQAP actions will be monitored and reported by Lewes DC in accordance with the air quality review and assessment process, as detailed in DEFRA guidance LAQM.PRG(03), and by the County Council as part of future LTP2 progress reports.

Table 1 - Current status of the AQAP measures (draft published Sept 07):

No.	Measure	Lead organisation (partners)	Air Quality Impact	Timescale	Cost	Non air quality impact	Ranking	Update
M1	<p>White Hill / Fisher Street / West street scheme (LTP) Change of priority at Commercial Square to improve flow in Fisher Street; review traffic signals at Station St; greater priority to pedestrians. Two phases: (a) Experimental change in junction priority (b) Formalise priority working including other works in the area</p>	ESCC	high	short	£	Improve congestion; encourage walking	A(9)	Safety issues prohibit a change in priority at Commercial Square. Priority to be influenced by slowing vehicles from White Hill instead. Preliminary design should be complete by Sept 08 with construction planned between 2010 and 2012.
M2	<p>Beddingham Crossing (LTP) Rebuilding the Southerham and Beddingham roundabouts on the A27 outside Lewes and a new railway bridge to avoid queuing at Beddingham rail crossing.</p>	Highways Agency	low	short	0	Improve congestion; reduce emissions; improve journey time reliability		Implementation in progress and due for completion summer 2008
M3	<p>Lewes Town Centre 20mph zone Provision of 20mph area in addition to the existing 20mph Zone. Will include</p>	ESCC	low	short	£	Improve safety; encourage walking; encourage cycling; improve	B(7)	Scheme delayed. External resource being sought to progress this scheme. Implementation planned for 2008/09.

	majority of the AQMA.					congestion		
M4	<p>Phoenix roundabout and Eastgate bus priority (LTP)</p> <p>Introduce a roundabout at the Phoenix Causeway and two-way traffic for Eastgate Street; create a bus priority lane and introduce pedestrian and cycle friendly features.</p>	ESCC	?	long?	S106 funding?	Could be offset by increased traffic generated by Phoenix development	TBA	This scheme has been put on hold due to ongoing development proposals in the area. The developer has been provided with the ESCC objectives and has been requested to include these in any Transport Assessment for the area.
M5	<p>The Living Cliffe (LTP)</p> <p>Creation of pedestrian zone in Cliffe High Street with restricted vehicular access.</p> <p>Introduction of 20mph zone to vehicles allowed to enter the zone (e.g. for deliveries)</p>	ESCC	low	short	££	Improve safety; encourage walking and cycling; reduced impact of car outside the AQMA	B(6)	<p>'The Living Cliffe' scheme will reduce the dominance of motor vehicles in Cliffe High Street and provide an attractive, pedestrian-friendly area that can accommodate loading and cycling. The scheme includes significantly widened footways and a narrow carriageway, with features and regulations to reinforce the idea that Cliffe High Street is primarily a place for pedestrians. We estimate that access restrictions will reduce the volume of traffic by up to 70%.</p> <p>The first stage of construction was</p>

									undertaken in Summer 2007. The second stage of construction is programmed for Summer 2008.
M6	Offham Road Pedestrian Priority Scheme (LTP) Improvement to pedestrian facilities and vehicle speed management.	ESCC	low	medium	££	Improve safety; encourage walking and cycling; reduced impact of car	B(5)	Detailed design planned for 2008/09 with construction between 2010 and 2012.	
M7	Ringmer –Lewes cycleway (LTP) Introduction of off-road cycleway on the Lewes-Ringmer road link – heavily used by commuters from Ringmer to the Town Centre. Scheme split into two phases (east and west): (a) Phase 1 : East (b) Phase 2: West	ESCC	low	short	£££	Encourage cycling		The design of the scheme is under review due to the excessive cost of the initial route identified for the western section of the cycleway. The impact of the A27 Beddingham road works on traffic at Earwig Corner needs to be understood as this will inform the design of the western section of the cycleway.	
M8	Lewes Railway Station Forecourt Scheme (LTP) Improved facilities for pedestrian, buses and taxis	ESCC	low	short	£	Sustainable travel; accessibility	B(5)	This scheme is on hold awaiting the outcome of discussions on the funding of remedial work necessary on the railway bridge.	
M9	Target local freight distribution a) Work with local business & freight	LDC (local businesses and freight)	low	short	£	Engagement of non statutory stakeholders; use of no mandatory	B(7)	Limited resources at Lewes DC have meant that it's not been possible to progress this yet. A new member of	

	<p>operators to collate relevant data (i.e. delivery times, parking issues)</p> <p>b) Encourage deliveries outside congested periods</p> <p>c) Provide eco-driving training</p> <p>d) Investigate production of local "delivery maps"</p> <p>e) Increase or reallocate loading bays</p>					agreements		staff, with responsibility for air quality, will be starting at LDC in July 2008.
M10	<p>Better coordination of building and road works in the Lewes town area (LTP+)</p> <p>Enhance existing LTP scheme to include building works and haulage route management</p>	ESCC	low	short	£	Improve congestion; improved communication between authorities	B(7)	Coordination of activities on the Network is raised at the quarterly HAUC meetings ensuring information around works is cascaded to works promoters allowing the opportunity of joint working, for example Station Street Lewes which was closed temporarily under the Road Traffic Regulations Act 1984 on a Sunday, 28th January 08 allowing Southern Water and Southern Gas Networks to carry out combined urgent works thus minimising the impact on the network and the public.
M11	Target long-distance freight management & heavy traffic through	ESCC (freight)	low	short	£		B(7)	The County's Freight Strategy is to be updated in 2008/09, dependent on

	<p>town (LTP+) a) Intensification of existing LTP programmes b) Review signage on weight restrictions at access road links</p>							other work commitments.
M12	<p>Reduce emissions from idling vehicles a) Install “cut engine cut pollution” signs (i.e. schools, taxi & bus terminals) b) Raise awareness through eco-driving campaign c) investigate enforcing legislation (issue fines)</p>	LDC (HA, local businesses and community)	low	short	£	awareness	B(7)	Limited resources at Lewes DC have meant that it’s not been possible to progress this yet. A new member of staff, with responsibility for air quality, will be starting at LDC in July 2008
M13	<p>Vehicle Emission Testing in central Lewes to measure vehicles emissions at pollution hotspots, supermarkets, car parks a) Carry out VOSA roadside emission testing (RET) b) Use of remote sensing technology</p>	LDC	low	short	£	awareness	B(7)	Limited resources at Lewes DC have meant that it’s not been possible to progress this yet. A new member of staff, with responsibility for air quality, will be starting at LDC in July 2008
M14	<p>Lewes Parking Management (LTP+) Intensification of existing/planned LTP programmes a) extension of parking controlled area b) re-allocation of</p>	ESCC	moderate	short	£	Reduced traffic and congestion at peak times; reduced recirculation of traffic; reduced emissions; modal shift; sustainable	A(8)	Following the review of the parking scheme, there will be a small extension to the controlled parking area but well away from the AQMA. There are to be no increases to parking charges.

	<p>parking/loading spaces</p> <p>c) higher charges for long stay parking</p> <p>d) higher charges for residents second parking permits</p> <p>e) discounted permits for low-emission vehicles</p> <p>f) introduce car spaces for low-emission vehicles, car-clubs and car share</p> <p>g) maintain/increase provision of two-wheelers parking</p>					travel behaviour		Discounted permits for low emission vehicles were introduced in September 07.
M15	<p>Review of Lewes car parking system (LTP+)</p> <p>a) Reallocation of existing car parks to create a network of “park & walk” sites outside the AQMA</p> <p>b) Dedicated Short (3) and long stay car parks outside AQMA</p> <p>c) Installation of signage (i.e. with directions to car-parks) at access points to town</p>	LDC	high	medium	££	Reduction of veh/km and congestion	A(7)	LDC is investigating new signage in order to guide users to the most appropriate car park (ie. short / medium/long stay).
M16	<p>Partnership work with bus & train operators (LTP+)</p> <p>a) Reduce emissions: calculate emissions from existing bus fleet,</p>	ESCC and LDC	moderate	short	££	Improve accessibility; improve awareness	B(7)	The lack of revenue funding for bus services remains a key barrier, to the extent that there has been some doubt over the affordability of the existing level of

	<p>route/fleet management (i.e. only cleaner vehicles through AQMA), eco-driving training</p> <p>b) Increase bus and train patronage: through supporting marketing campaign, extend use of subsidised/discounted fares, improve bus connection to key area, bus stop facilities, bus information</p>						<p>supported bus provision in Lewes. The current network of supported services has been re-rendered and officers will be recommending the continuation of existing level of bus frequency. The decision will be made in July. The new service would include newer, lower emission vehicles.</p> <p>The commercial bus routes in the area are those provided by Brighton & Hove Buses (routes 28 and 29) and Countryliner (route 127). The Brighton & Hove Buses are mostly less than one year old. ESCC has recently undertaken highways work which would allow more modern low floor bus to operate on the Countryliner route. However, no budget provision has been identified for these activities. The provision of free concessionary fares has had the positive effect of increasing passenger numbers.</p> <p>Complaints have been received from bus users over the lack of shelters for</p>
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								the new bus stops in East Street and outside Waitrose. The lack of progress in improving bus stop facilities is due to uncertainty over the bus station's future.
M17	<p>Lewes Town Travel Plans (LTP+)</p> <p>a) Review existing County & District Travel Plans</p> <p>b) Accelerate implementation of workplace travel plans</p> <p>c) Accelerating implementation/review of local school travel plans (including colleges)</p> <p>d) Link to other actions (i.e. school monitoring projects, cycling and car-sharing promotion)</p> <p>e) Target shorter journeys – investigate personal travel planning marketing</p>	LDC and ESCC	HIGH	short	£	Authorities to lead by example; change travel behaviour; education; awareness	A(9)	<p>LDC has adopted a travel plan. ESCC's travel plan is under review</p> <p>Seven out of the eight schools in Lewes now have Approved STPs</p> <p>All Lewes Primary schools carry out cycle training annually. Three schools took part in Walk to School Week (Spring 2008). Two Primary schools operate Walking Bus schemes.</p>
M18	<p>Car-sharing (LTP+)</p> <p>Support LTP car-sharing & "travel-choice" campaign in Lewes town (i.e. through travel plans and ad-hoc events).</p>	ESCC	low	short	£		B(7)	<p>Through continued marketing of the TravelChoice brand there are now in excess of 900 registered users of the car share database, 13 separate groups and 31% matched journeys.</p>

M19	<p>Car clubs</p> <p>a) Support existing club in Lewes town (i.e. marketing)</p> <p>b) Accelerate introduction of new clubs</p> <p>c) Provide parking locations for car parks (Require car-clubs for large new developments – M21)</p>	LDC (local community and developers)	low	short	£	Change travel behaviour	B(7)	<p>ESCC supports the introduction of car clubs and will seek to accommodate requirements if and when a car club is formed.</p> <p>LDC has commissioned a report on car clubs which will be available in July, working in partnership with Transition Town Lewes.</p>
M20	<p>Walking and cycling (LTP+)</p> <p>a) Accelerate implementation of LTP actions within Lewes town (i.e. improvement to existing cycle routes, identify new ones, improve signage and facilities)</p> <p>b) Promoting walking and cycling as a healthy and more preferable option to car for local journeys</p> <p>c) Promotion through travel plans, one-off events, “TravelChoice” campaign</p>	ESCC and LDC (local community)	low	short	£	Improve accessibility	B(7)	<p>LDC has set up the Air Quality Working Group with local community groups and ESCC participation, to identify and lead on implementing improvements in pedestrian signage, cycle maps and raising awareness of air quality issues.</p>
M21	<p>Better control of impact of new developments</p> <p>a) Facilitate funding from S106 agreement</p> <p>b) Conditions to require reduced parking allocation completion of</p>	LDC	Depending on scale of application from low to high	short	£	climate change	A(8)	<p>LDC is in the process of developing their Local Development Framework (LDF). This is being accomplished in stages starting with the Phoenix quarter major development.</p>

	Sustainability Checklist; travel plans for large developments and inclusion of pedestrian & sustainable transport facilities such as car-club dedicated car spaces and bus lanes							A number of workshops have been held with local stakeholders to agree a "Vision" for the area. This will be used to inform the developer on aspects that should be considered when preparing their formal application. ESCC has input its requirements into the discussions to ensure that any transport proposals are in line with ESCC's aspirations for the town centre. In addition, ESCC is producing guidance on travel plans.
M22	Greater planning controls within or near the AQMA for new developments or applications a) Stricter conditions limiting permitted uses and changes of use for new applications b) Request detailed air quality assessment for developments affecting AQMA. c) Investigate production of guidance notes on air quality for new developments	LDC	low	short	£	Raised awareness	B(7)	Limited resources at Lewes DC have meant that it's not been possible to progress this yet. A new member of staff, with responsibility for air quality, will be starting at LDC in July 2008.
M23	Intensify promotion of national schemes on	LDC	low	short	£	Reduced background	B(7)	LDC have carried out a number of actions,

	<p>domestic heating and energy efficiency. Increase promotion of scheme aimed to improve insulation, replace/service boilers, encourage energy efficiency in the Town Centre</p>					pollution		<p>including: - setting up the Ouse Valley Energy Services Company in 2007 to distribute grants for domestic renewable energy; - planning a series of energy fairs in 2008 across the District.</p>
M25	<p>Continue investing in new technologies and pilot projects through the LDC Waste & Recycling a) Electric vehicles for recycling fleet b) NOx reducing additive for HGV diesels c) Eco-driving training d) Route management (GPRS) e) Monitoring of fuel use & efficiency</p>	LDC	low	short	£	Raised awareness;	B(7)	<p>Limited resources at Lewes DC have meant that it's not been possible to progress this yet. A new member of staff, with responsibility for air quality, will be starting at LDC in July 2008.</p>
M26	<p>Investigate use of innovative NO2 absorbing/reducing technologies a) NO2 absorbing paint/slabs b) Bio-fuels NOx reducing additives</p>	LDC	?	medium	££		C(4)	<p>LDC's Air Quality Working Group is investigating these opportunities, including identifying barriers (eg. Conservation Area status limiting the application of NO2 absorbing paint).</p>
M27	<p>Raising awareness & engagement of non-statutory stakeholders a) Organise one-off events, talks, workshops</p>	LDC and ESCC (local community and business)	Informative: potentially significant cumulative impact	short	£	Raised awareness	A	<p>A countywide programme of awareness and activities is being developed under the East Sussex Streets Ahead brand to run</p>

	<p>and targeted campaigns on public transport marketing and eco-driving, involving the local community</p> <p>b) web-sites improvements to provide better information & allow feedback/participation from members of the public</p> <p>c) Pilot LDC internal pop-up messaging providing air quality/sustainable transport information</p>							<p>between 8 September and 10 October 2008. The programme will further promote the TravelChoice brand and support the work of partner organisations including public transport operators, schools, employers, health care agencies and voluntary groups. In particular it will makes links to national and European activities including In Town Without My Car, European Mobility Week, Urban Design Week and Walk to School Week.</p>
M28	<p>Strengthen partnership work with ESCC (LTP), LDC Sustainability(Climat Change), Planning & Communities (LDF & LSP), Sussex Air (emissions inventory, air-alert)</p> <p>a) Intensify links to existing strategies</p> <p>b) Accelerate implementation of those schemes which may improve local air quality.</p> <p>c) Joint participation to events, campaigns, grants applications, data</p>	<p>LDC (ESCC, Sussex Air, PCT)</p>	<p>Informative: potentially significant cumulative impact</p>	short	£	<p>Climate change; improved social inclusion; improved communication and partnership working</p>	A	<p>Limited resources at Lewes DC have meant that it's not been possible to progress this yet. A new member of staff, with responsibility for air quality, will be starting at LDC in July 2008. In the meantime the Air Quality Working Group provides a practical forum for partnership working (see above for examples of what the Group is working on).</p>

collation surveys d) Plan monitoring programme (i.e. traffic) to assess action plan effectiveness								
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Air quality impact	Time scale	Costs
High = > than 1 $\mu\text{g}/\text{m}^3$	short = less than 2 years	££££ = over £1 million
Moderate = 0.5 – 0.9 $\mu\text{g}/\text{m}^3$	medium = 2 to 5 years	£££ = 500k to £1m
Low = < 0.5 $\mu\text{g}/\text{m}^3$	long = over 5 years	££ = £100k to £500k
		£ = 0 to £100k

Public consultation

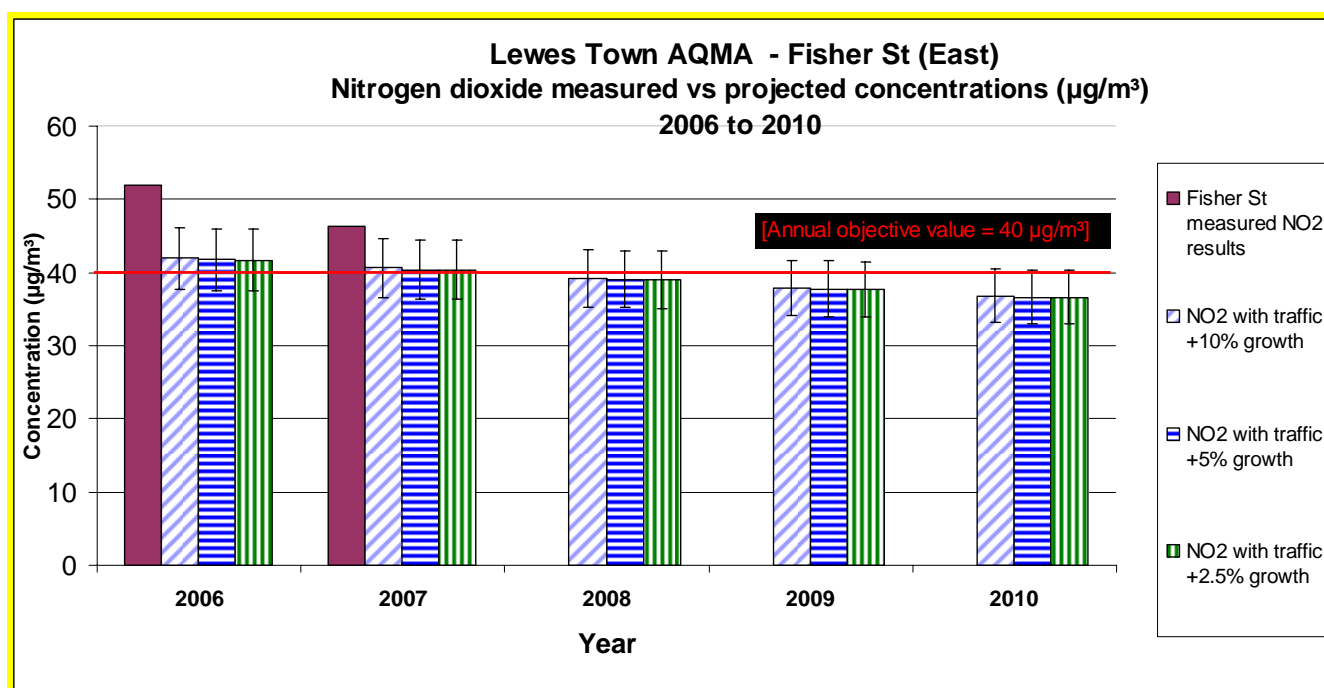
Throughout the development of the AQAP, Lewes District Council and the County Council have consulted widely with those organisations and members of the public with an input into the process, in particular local residents. Details of the consultation carried out are included in Section 7 of the AQAP. Since the adoption of the AQAP Lewes DC has set up an Air Quality Working Group, which includes ESCC, to enable community participation in delivering appropriate parts of the AQAP (eg. setting up car clubs, improving signage for pedestrians).

Mandatory indicator – LTP8

Target: Work towards achieving the annual mean air quality Objective limit for NO₂ of 40µg/m³ by 2010.

Figure 2 shows the predicted modelled levels of NO₂ within the AQMA during the period covered by LTP2, based on the air quality impact of predicted traffic volumes through Lewes, and the actual monitored levels of NO₂ to date, using bias-adjusted data. 2006 has been taken as the baseline year..

Figure 2.



NB:

- no annual milestones were set for this indicator because the annual assessment of pollutant concentrations could be affected more by meteorology than by the short term effects of AQAP measures.
- the modelling has looked at traffic-induced pollution. There is no specific component that has been modelled for 're-suspension' because, as stated in LTP2, there are no models to allow an estimate of the possible effect of the AQAP measures to reduce atypical re-suspended material.

As advised by DEFRA's guidance in LAQM.PGA(05), annual progress will be measured against other, intermediate, outcomes.

Intermediate outcome – traffic volume:

This outcome has been selected because:

- a key objective of the transport measures in the Lewes AQAP is to manage the growth in traffic volume;
- changes in the number of vehicles within the AQMA will directly affect local air quality;
- it supports the overarching objectives of LTP2, set out in 2.3;
- it is easily understood;
- it can be monitored to assess progress on an annual basis.

The target reflects local traffic forecasting, and is based on what could be achieved through spending the 100% planning guideline figure.

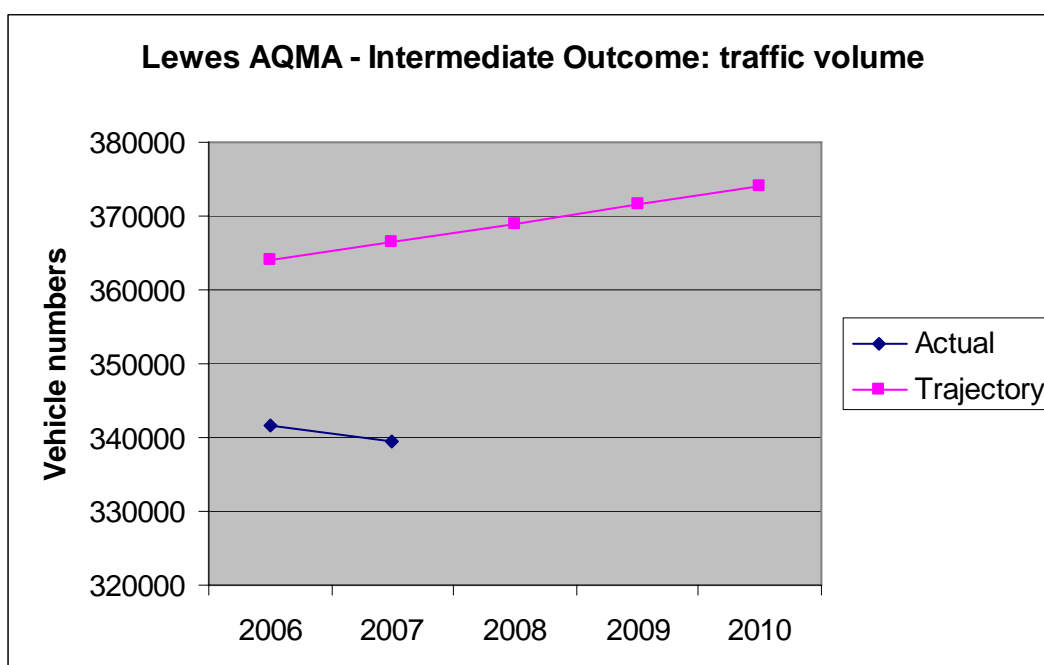
Trajectory:

Table 3 and figure 3 show the target traffic volumes through Lewes town during the period of LTP2, taking 2006 as the baseline year, and the actual traffic volumes to date. This clearly illustrates that the target is being met and exceeded.

Table 3.

Year	RTRA target	Actual traffic flow figure	% difference from target
2006	363,935	341,650	
2007	366,480	339,390	7.39%
2008	369,025		
2009	371,570		
2010	374,115		

Figure 3.



Monitoring and reporting:

Progress on the mandatory indicator will be reported via the air quality review and assessment process carried out by Lewes District Council, based on the existing extensive local monitoring network, and modelling. The intermediate outcome will be monitored by annual manual vehicle counts by the County Council. Progress on both indicators, and on

the implementation of the AQAP transport measures, will be reported through future LTP2 progress reports. Significant deviation from the targets will be addressed by reviewing the possible causes of the deviation and, if necessary, justifying modified targets that remain realistic and challenging.

Risks:

The following points need consideration:

- Yearly pollution levels are highly dependent on meteorology;
- NO₂ pollution is determined by looking at NO_x emissions derived from local sources and background influences, however a large number of different activities contribute to NO_x emissions;
- The relationship between NO₂ and NO_x is non-linear and determined by photochemistry that is highly location dependent;
- Recent studies show an increase in primary NO_x emissions from road transport, including new vehicles and those fitted with diesel particulate filters. It is likely that modelling may be underestimating this component of NO₂ pollution and levels will not decrease as much as expected by 2010;
- Diesel vehicles produce more NO_x than petrol vehicles, and there is evidence of a significant increase in diesel vehicles, which the modelling does not take into account;
- Results from the existing monitoring network across Lewes do not show a significant reduction in NO₂ over the last few years;
- A number of new developments, including the Phoenix Quarter, are being proposed and may have a significant impact on the AQMA.

Conclusion:

Monitoring of NO₂ in Lewes town has shown that the air quality Objective continues to be exceeded, although monitoring of traffic volumes shows a considerable decrease of over 7% from 2006 to 2007.

It's not possible to calculate the impact on air quality from the majority of actions within the AQAP and it's still too early to discern the long-term trend for NO₂. Therefore, ESCC and LBC will continue to deliver the actions in the AQAP and assess the data from the expanded air quality monitoring network, and will continue to report on progress against the air quality Objectives in future LTP Progress Reports.

Possible new AQMAs

Air quality monitoring and assessment work by Lewes District Council in Newhaven indicates that it is likely that a new transport-related AQMA will need to be declared in the centre of Newhaven along the A259 gyratory system, due to a predicted exceedance of the 2005 annual mean air quality Objective for NO₂ of 40 µg/m³. The County Council is currently assisting the District Council in carrying out additional air quality monitoring.