Air Quality Review and Assessment

ACTION PLAN Progress report for Wycombe District Council – 2004

A report produced by Wycombe District Council

Draft report

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AUTHOR OF REPORT **Website: www.wycombe.gov.uk/environment**

STUART MAXWELL
WYCOMBE DISTRICT COUNCIL
QUEEN VICTORIA ROAD
HIGH WYCOMBE
BUCKINGHAMSHIRE
HP11 1BB
01494 421307
Stuart_Maxwell@wycombe.gov.uk

	Name	Signature	Date
Author	**Stuart Maxwell**		**December 2005**
Approved by	**Julian Smith**		**December 2005**

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Action Plan Progress Report Structure

As suggested in the Air Quality progress report guidance Wycombe District Council has decided to combine the 2004 progress report with an Action Plan Progress Report. Therefore, this document comprises two sections.

PART A. Monitoring results

PART B. Progress on the direct and indirect measures

Executive Summary

Wycombe District Council declared an Air Quality Management Area (AQMA) along the M40 in 2001. Originally extending 12 metres either side of the motorway carriageway, it was subsequently extended to its current size of 30 metres either side of the carriageway.

An Action Plan was submitted and accepted by DEFRA in September 2002 which identified areas where the Council needs to work to improve air quality or to avoid it deteriorating and failing to meet the standards set in the Government's Air Quality Strategy.

In this current year the Council reports on the progress that has been made to improve air quality in the AQMA since the Action Plan was published. This document considers the individual actions that were proposed to achieve the objectives and also reports the latest monitoring results.

The implementation of many of the actions has begun, and some have already been completed. The latest results from the continuous monitor suggest that all the objectives except that for NO_2 will be met by their relevant deadline. The NO_2 objective is still expected to be exceeded in the current AQMA and the Council decided to monitor the levels more thoroughly by installing a new continuous chemiluminescence analyser. The first set of data from this analyser show no exceedences of the objective, but diffusion tube data show that the objective is being exceeded elsewhere in the AQMA.

Diffusion tube data have also suggested that NO_2 in the West Wycombe area has exceeded the annual objective level. Wycombe District Council will undertake further monitoring in this area, with a view to carrying out a detailed review if necessary.

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PART A Monitoring data update

1 INTRODUCTION

The second round of review and assessment started in 2003 with an updating and screening assessment of the local air quality in the Wycombe District.

The document was produced by the Council and its findings did not indicate a need to undertake a detailed assessment for any of the national objectives. These objectives have not changed since the last review and assessment report deadline of May 2003. They can be accessed from the internet on the Air Quality Management website[1]

Where no additional monitoring data is available, background data and maps can be viewed within the last screening assessment document published on the Wycombe District Council website[2].

The Air Quality Officer responsible for maintaining the analysers during 2004 has now left the Council. In his absence no calibration data can be found. Therefore, the data presented in this section have been screened to remove spurious spikes but are not fully ratified.

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2 REVIEW OF INDIVIDUAL POLLUTANTS

2.1 BENZENE

Table 1: Objectives for benzene (uk air quality strategy)

Concentration	Measured as	Date to be achieved by
16.25µgm^{-3}	Running annual mean	31.12.2003
5µgm^{-3}	Annual mean	31.12.2010

The main sources of benzene emissions in the UK are petrol engined vehicles, petrol refining, distribution and the uncontrolled emissions from petrol station forecourts without vapour recovery systems.[3]

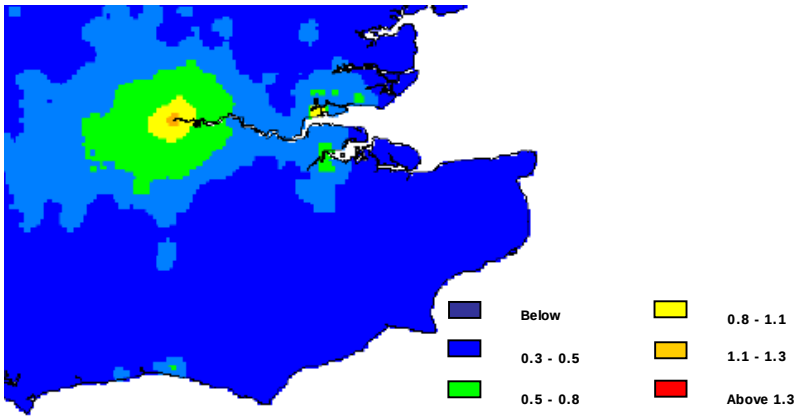
The Council has not monitored benzene since it was recognised that the pollutant would not exceed pollution level described in the Air Quality regulations.

The updating and screening assessment 2003 states that the objective for benzene is likely to be met by the relevant date. This conclusion is based on a review of local sources, historical data, and predicted background benzene concentrations for 2010 from www.airquality.co.uk/archive/laqm/tools/aq_maps_2001.pdf (see below)

[1] Home page on http://www.air-quality-management.co.uk and latest wall chart http://www.air-quality-management.co.uk/2003wallchart.pdf
[2] Home page on http://Wycombe.gov.uk and download section on http://www.wycombe.gov.uk/environment/default.asp?step=2&id=449

[3] Technical Guidance LAQM.TG(03)

Figure 1 Estimated Annual Mean Background Benzene Concentration, 2010 (µg/m^3)



Source: www.airquality.co.uk/archive/laqm/tools/aq_maps_2001.pdf

The Technical Guidance on Local Air Quality Management LAQM.TG(03) includes guidance on assessing the impact of petrol stations to neighbouring properties. It states that a study conducted by AEA Technology on benzene from petrol station in the vicinity of residential properties concluded that benzene is unlikely to influence have an on air quality from petrol stations:

- with throughput of less than 2000m^3/annum
- with distribution pumps being further than 10 m from residential property
- fitted with a canopy.

The updating and screening assessment 2003 notes that there some petrol stations in the district have distribution pumps less than 10 metres away from residential properties, and says that a further monitoring programme will be undertaken in their vicinity. It has been decided to delay this programme, pending the publication of the Government's intentions with regard to the Petrol Vapour Recovery Stage 2 Controls.

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2.2 1,3-BUTADIENE

The national air quality objective for 1,3-butadiene is 2.25 µg/m^3 to be achieved by 31st December 2003.

The main source of 1,3 butadiene is motor vehicle exhaust emissions. LAQM.TG(03) states that concentrations of 1,3 butadiene are measured at a limited number of UK national network sites. Maximum running annual mean concentrations of 1,3-butadiene measured at all urban background/centre and roadside locations are already well below the 2003 objective of 2.25 µg/m^3.

No authority adjacent to Wycombe has declared an AQMA for 1,3-butadiene therefore Wycombe rests on the assumption that no extra-district activity or traffic will significantly impact on the district's air quality.

The conclusion of the first round review and assessment has indicated that *the risk of exceedence is negligible and there is no need to undertake a second stage review and assessment*.

On the basis of the above, Wycombe District Council believes that the objective is being met and has not undertaken any further monitoring of 1,3 butadiene.

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2.3 LEAD

The national air quality objective for lead is 0.5 and 0.25 µg/m^3 to be achieved by 31st December 2003 and 31st December 2008.

No authority adjacent to Wycombe has declared an AQMA for lead therefore Wycombe rests on the assumption that no extra-district activity or traffic will significantly impact on the district's air quality.

Sales of leaded petrol in the UK have been banned since 1 January 2001. In Wycombe district, only 2 companies have been identified as significant sources of lead.

LAQM.TG(03) states that concentrations at all UK national networks background and kerbside sites are well below the objectives for 2004 and 2008.

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2.4 NITROGEN DIOXIDE

Another year of real time monitoring data is available to the Council from the monitoring stations and the network of diffusion tubes installed within the district area.

Monitoring outside of the AQMA

Real time analyser

Wycombe Abbey School
Abbey Way
High Wycombe Buckinghamshire
HP11 1PE

Grid Reference: SU867925

Table 2 NO_2 objectives (UK Air Quality Strategy)

Concentration	Measured as	Compliance
200 µg/m^3	1 hour mean, 18 exceedences	31 Dec 2005
40 µg/m^3	Annual mean	31 Dec 2005

Table 3 Data obtained from Wycombe's automated monitoring station NO_2 (Jan 04-Dec 04)

Unit	Max	Average	Exceedences*	Capture
Ppb (monitor)	184	15.3	15	70 %
µg/m^3 (conversion)	351	29.3		70 %

** number of days when NO_2 concentration was above 200 µg/m^3*

Table 4 Historical data (1996-2003)

YEAR	1996	1997	1998	1999	2000	2001	2002	2003
ppb	15	18	15	12	13	14	N/A*	12
µg/m^3	29	34	29	23	25	27	N/A*	23

** data to be ratified*

Diffusion tubes

The location of each pair of tubes can be found on the air quality web pages or in the appendix:

http://www.wycombe.gov.uk/environment/default.asp?step=4&pid=3742

Table 5 NO_2 Data obtained from Wycombe's passive monitoring network (µg/m^3) 1997/2004

Location	1997	1998	1999	2000	2001	2002	*2003*	*2004**
M40 Stokenchurch	38	42	46	32	34	30	34	*35*
Oxford Rd Stokenchurch	46	40	36	29	29	24	28	*32*
Lane End Car Park	23	25	25	21	23	17	18	*18*
Hambleden	15	25	23	19	19	13	16	*16*
High St, Marlow	31	32		32	25	24	26	*25*
Globe Park, Marlow	42	44	46	32	29	29	28	*29*
Wyc Rd, Marlow (jnction with Bobmore Rd)	31	34	34	25	23	26	24	*26*
Bourne End Car Park	27	32	34	23	27	19	21	*24*
Bourne End Main Road				27	25	32	30	*36*
The Green' Wooburn Green	46	42	42	29	32	30	31	*31*
Flackwell Heath, Budgens	32	36	36	29	27	22	27	*28*
Loudwater M40 'MFI' Car Park	32	44	44	32	29	30	28	*33*
Bassetsbury Lane	21	29	29	25	21	22	22	*21*
Turnpike Road	36	44	40	31	32	29	28	*32*
West Wycombe Road	N/A	N/A	N/A	N/A	N/A	31	32	*32*
Downley, Plomer Road	29	38	36	31	29	25	27	*29*
West Wycombe Village(old)	48	48	48	40	36	41	38	*45*
Bradenham Road	48	44	40	31	34	31	32	*37*
Princes Risborough	32	42	34	27	29	25	28	*29*
Walters Ash	29	31	25	21	21	22	24	*22*
Grt Kingshill (Pipers Lane)	29	27	27	21	21	19	23	*20*
Chadwick Rd (jnction with Amersham Rd)	46	44	48	36	40	37	36	*37*
Hughenden Rd(junction with Green Hill)	44	42	38	34	32	31	29	*34*
Wycombe Abbey Girls School	27	32	32	27	29	20	23	*24*
Automatic monitor	*34*	*29*	*23*	*25*	*27*	-	-	

Hazlemere,	19	21	21	19	17	17	19	*19*
#1 (INTERNAL) Council Office WDC	27	21	23	19	17	18	17	*14*
#2 (INTERNAL) Council Office WDC	N/A	N/A	N/A	N/A	N/A	32	19	*18*
Slade Road	N/A	N/A	N/A	34	36	21	31	*33*
Bullocks Farm Road	N/A	N/A	N/A	N/A	N/A	16	19	*26*
45 High St, West Wycombe	N/A	N/A	N/A	N/A	32	31	35	*34*

** correction factor applied: 1.009.*
The correction factor was calculated using the data from the colocation study at the Stokenchurch site, with the Netcen Bias factor calculation spreadsheet.

Monitoring inside of the AQMA

Real time analyser

40 Marcourt Road
Stokenchurch
High Wycombe
Buckinghamshire
HP14 3QU

Grid Reference: SU766954

The Council has purchased a new NOx monitor in May 2003 and it has been fully operational since November 2003. Data is ratified by Netcen and a summary table for 2004 is given below.

Table 6 Wycombe Stokenchurch NO_x data – 01 January 2004 to 31 December 2004

POLLUTANT	NO	NO_2	NO_X
Number Very High	-	0	-
Number High	-	0	-
Number Moderate	-	0	-
Number Low	-	7927	-
Maximum 15-minute mean	386 µg m^{-3}	132 µg m^{-3}	705 µg m^{-3}
Maximum hourly mean	264 µg m^{-3}	120 µg m^{-3}	506 µg m^{-3}
Maximum running 8-hour mean	189 µg m^{-3}	96 µg m^{-3}	376 µg m^{-3}
Maximum running 24-hour mean	133 µg m^{-3}	89 µg m^{-3}	276 µg m^{-3}
Maximum daily mean	122 µg m^{-3}	87 µg m^{-3}	262 µg m^{-3}
Average	34 µg m^{-3}	37 µg m^{-3}	89 µg m^{-3}
Data capture	90.2 %	90.2 %	90.2 %

All mass units are at 20°C and 1013mb
NO_X mass units are NO_X as NO_2

Pollutant	Air Quality (England) Regulations 2000 and (Amendment) Regulations 2002	Exceedences	Days
Nitrogen Dioxide	Annual mean > 40 µg m^{-3}	0	-
Nitrogen Dioxide	Hourly mean > 200 µg m^{-3}	0	0

The level of data capture is very satisfactory and it is encouraging to see that NO_2 levels have met the Air Quality Objectives at this point within the AQMA.

Diffusion tubes

Table 7: Diffusion Tube data

Location	**2001**	**2002**	**2003**	***2004****
Knaves Hollow (Block Flat 1-6)	31	31	32	35
Boundary Road (nxt to 18 Lammas Way)	36	35	35	36
54 Marcourt Road	42	32	36	41
Bullocks Farm Lane (1m from M40 (elevated))	46	49	58	65

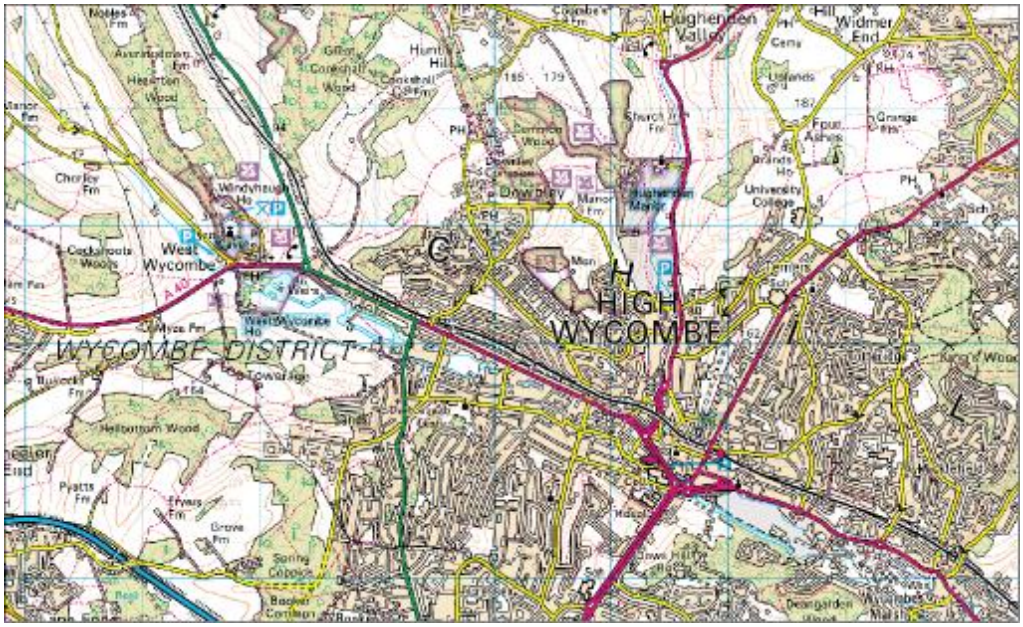
** correction factor applied: 1.009*
The correction factor was calculated using the data from the colocation study at the Stokenchurch site, with the Netcen Bias factor calculation spreadsheet.

Two sites have especially high NO_2 levels, namely, Bullocks Farm Lane and West Wycombe Village. The Bullocks Farm lane site showed a yearly average NO_2 level of 65µg m^{-3}.The site is 1m from the motorway carriageway and 42m from the nearest house. In the same area, there is a property 12m from the motorway carriageway. Using the factors on the Defra review and assessment helpdesk website, the estimated concentration at the receptor is 49µg m^{-3} .

It seems clear that within the AQMA, there are quite considerable variations in NO_2 levels. Topography appears to be a factor here with levels at Stokenchurch, for example, where it is comparatively flat and the environment generally quite rural, apparently not exceeding the 2005 objective.

Of more concern, because of the number of potential receptors, is the NO_2 level in West Wycombe village which is a traffic bottle neck. The village is owned by the National Trust and has a population of approximately 1500. It lies some four kilometers to the west of High Wycombe town centre. The road and pavements in the village are narrow, and high buildings on either side create a canyon effect. At one location within the village, the average annual NO_2 concentration for 2004 was 45µg m^{-3}. Data is currently available to October 2005 and the year to date average for 2005 is 46µg m^{-3} (uncorrected). In view of these results, Wycombe District Council has decided to carry out a detailed assessment of NO_2 levels in the West Wycombe area. To this end the Council has commissioned Netcen to undertake a modeling exercise in order to determine the extent of the problem and the boundaries of the problem area, with a view to declaring a new AQMA.

Figure 2: Map Showing Location of West Wycombe Village



Further monitoring

The Council had proposed, in partnership with the County Council, to monitor a traffic calming project, to be carried out along Boundary Road between the Station Road

roundabout to the West and Knaves Beech Way Roundabout to the East. Originally scheduled to start in 2003, the project suffered from numerous delays, and has now been abandoned owing to a lack of funding. NO_2 tube data show high levels in this area, which is in or close to the AQMA.

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2.5 PARTICULATE MATTER PM_{10}

Monitoring outside of the AQMA

Real time monitor

Wycombe Abbey School
Abbey Way
High Wycombe Buckinghamshire
HP11 1PE

Grid Reference: SU867925

Table 8 PM_{10} objectives (UK Air Quality Strategy)

Concentration	Measured as	Compliance
50 µg/m^3	24 hour mean, 35 exceedences	31 Dec 2004
40 µg/m^3	Annual mean	31 Dec 2004

Table 9 Data obtained from Wycombe's automated monitoring station PM_{10} (Jan 04 – Dec 04)

Minimum (24 hour average)	Maximum (24 hour average)	Yearly Average	Exceedences	% Data Capture
0 µg/m^3	37.4 µg/m^3	13.7 µg/m^3	0	63

The major source of PM_{10} pollution is road traffic. Other potential sources were considered and discounted in the 2003 updating and screening assessment. Stage 3 of the Air Quality Review and Assessment reported that there was unlikely to be an exceedence of the 2004 objective in most areas. However an exceedence was considered possible (probability between 20 and 50 %) at three different locations along the M40. It was concluded that this probability was too low to necessitate the declaration of an AQMA.

The level of data capture is below that expected, however, based on the data that is available it can be assumed that the PM_{10} objective has been met.

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2.6 SULPHUR DIOXIDE

Table 10 SO_2 objectives (UK Air Quality Strategy)

Concentration	Measured as	Compliance
350 µg/m^3	1 hour mean, 24 exceedences	31 Dec 2004
125 µg/m^3	24 hour mean, 3 exceedences	31 Dec 2004
266 µg/m^3	15 minute, 35 exceedences	31 Dec 2005

Table 11 Data obtained from Wycombe's automated monitoring station SO_2 (Jan 04-Dec 04)

Unit	Max (hourly average)	Average	Exceedences*	Capture
ppb (monitor)	19	1	0	39 %
µg/m^3 (conversion)	50	2.7		39 %

** number of days where SO_2 concentration was above any of the three objectives.*

Historically SO_2 has originated from power stations and vehicle emissions. The introduction of flue gas desulpurisation has resulted in far lower ambient SO_2 levels in recent years, with the widespread use of low sulphur vehicle fuels providing further benefits.

The updating and screening assessment confirmed that the objective for this pollutant would be met by the relevant date. Additional data have confirmed this and no further monitoring has been carried out.

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2.6 CARBON MONOXIDE

Table 12 CO objectives (UK Air Quality Strategy)

Concentration	Measured as	Compliance
10 mg/m^3	Maximum daily running 8 hour mean	31 Dec 2005

Table 13 Data obtained from Wycombe's automated monitoring station CO (Jan 04-Dec 04)

Minimum	Maximum	Number of exceedences	% Data Capture
0 mg/m^3	0.74 mg/m^3	0	81.7

The analyzer appears to have performed well in 2004, but, owing to the absence of calibration data, the instrument data cannot be fully ratified. However, the data have been screened and show even the maximum CO levels to be well below the objective level.

The main source of carbon monoxide in the United Kingdom is road transport. Annual emissions have been declining and are expected to continue to do so, with a further 42% reduction predicted between 2000 and 2005. LAQM.TG(03) states that national scale studies suggest there is little likelihood of the objective for carbon monoxide being exceeded by 2003, and the Air Quality Archive (www.airquality.co.uk) shows that there were no exceedences of the objective at any site in the south east in 2004.

In view of the provisional and historical data available to the Council it is estimated that the objective for CO will be met by the relevant date.

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New local developments

Two new major projects have received planning approval since the last Updating and Screening Assessment and they will affect the town centre and the Handy Cross motorway junction roundabout, which is situated in the AQMA. They are very likely to create major changes in the traffic flow for the area surrounding them and the Council has been involved in each of the Environmental Impact Assessments (EIA) for air quality.

The project involving the town centre redevelopment, does not affect the AQMA and although there have been discussions related to various air quality issues the Council has not pursued them. DMRB modelling on the basis of actual and predicted traffic flows, has shown that it is unlikely to expose any more members of the public to pollution levels above those mentioned in the UK Air Quality Strategy, and that the predicted rise in traffic NO_2 is not likely to go above those levels.

The Local Plan states that:

1) PROPOSED DEVELOPMENT WHICH BY ITS NATURE, LOCATION OR GENERATION OF ROAD VEHICLE TRAFFIC, WOULD BE LIKELY TO CAUSE A MEASURABLE DETERIOATION IN LOCAL AIR QUALITY, AS ESTABLISHED BY THE COUNCIL'S REVIEW, WILL NOT BE PERMITTED.

2) PLANNING PERMISSION WILL NOT BE GRANTED FOR ANY FORM OF DEVELOPMENT THAT WOULD HAVE A SIMILARLY ADVERSE IMPACT ON THE AMINITY OF NEARBY OR PREVIOUSLY AUTHORISED LAND USE, BY VIRTUE OF SMELL OR OTHER FORM SOF ATMOSPHERIC POLLUTION.

3) IN AN AQMA, WHICH HAS BEEN DECLARED AS A RESULT OF PERIODIC OR OTHER SURVEYS OF ROAD TRAFFIC, INDUSTRIAL OR OTHER FORMS OF POLLUTION WHICH WOULD BE LIKELY TO CAUSE AN INCREASE IN SUCH POLLUTION WILL NOT BE PERMITTED.

The Town Centre Development is outside of the AQMA and the EIA has established that vehicle traffic is unlikely to affect the local air quality so to exceed the National Objectives. Further to these facts and in accordance with the local plan the Council has found that the development is acceptable and unlikely to have adverse effects on the local air quality.

The second development will involve the Handy Cross (M40, J4) roundabout which is situated in the AQMA. The Council has been in discussion with the Highways Agency (in control of the land overlapping the project area) to propose that monitoring be taking place to assess the effect that the project will have on the local area. The nature of the project is to reduce rush hour congestion levels in and around the area and it is therefore assumed local air quality can only improve. However the Council felt that it was necessary to carry out some monitoring so the improvement can be properly quantified. This was agreed and a programme of passive diffusion tube monitoring has been set up and started at the end of 2004. Results will be reported in the 2005 annual report. The locations of the monitoring sites are shown in the Action Plan section of this document.

Currently the improvements to Handy Cross are scheduled to start late in 2005 and to be completed by the end of 2006. As this development is going ahead with a view to reducing congestion and therefore improving the local air quality, and is located in the currently declared AQMA, the Council does not propose to progress to a detailed assessment.

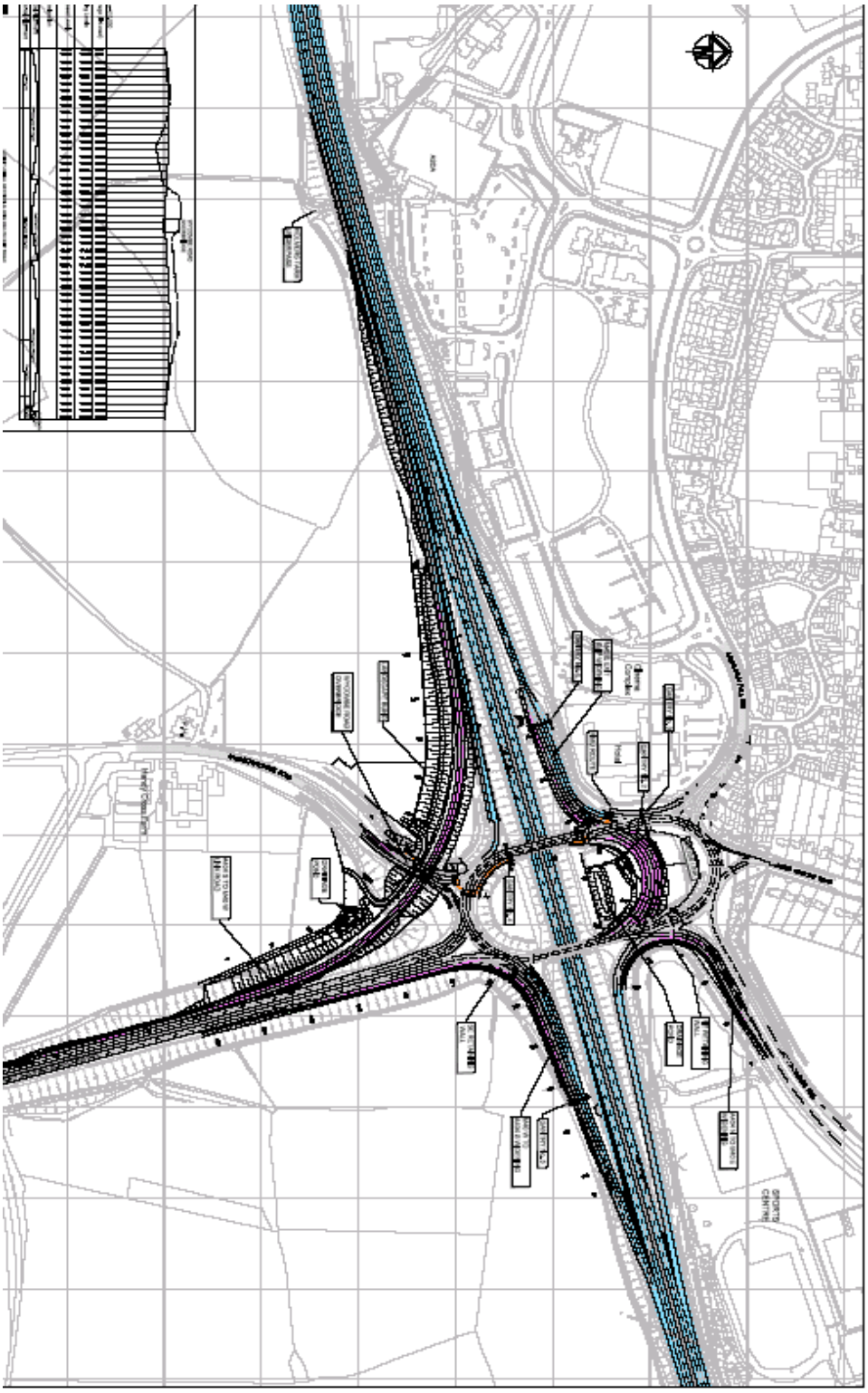
The town centre redevelopment EIA has demonstrated that it is unlikely that there will be an adverse effect on the local air quality from increased traffic and therefore the Council does not propose to progress to a detailed assessment.

These two developments are unlikely to affect the area immediately but the Council will continue to report their progress as per its progress report obligation.

There are no further projects or developments likely to affect the Wycombe District area.

FIGURE 3 Arial photograph showing the Handy Cross Junction at Present

Figure 4: Proposed New Layout of Handy Cross Junction



PART B PROGRESS ON THE DIRECT AND INDIRECT MEASURES

1 INTRODUCTION

39 actions have been proposed in the Action Plan to tackle the air pollution problem in the district area. This section of the document reviews progress against these actions in 2004.

Of these, 8 actions have been proposed which if implemented would directly impact on pollution levels in the district's AQMA. These actions involve external authority bodies that have control over the land within the AQMA. They have been prioritised according to their feasibility and cost effectiveness but the Council cannot be directly involved in implementing them.

The Council, having no direct control over these actions, will not individually report on their update. They generally relate to what is theoretically possible to abate air pollution on the motorway and they involve traffic and speed reduction, installation of a crawler lane as well as removing the population exposed to the pollution.

The Handy Cross project is one of these actions and the Council is actively involved in its development

2 ACTION PLANNING

ACTION 1: - In those instances where pollution and/or traffic issues have been identified, the Council intends to investigate how these issues can be tackled in partnership with local communities. In the course of time action plans will be prepared to tackle these issues where necessary.

Since 2002 a number of schemes and action plans have been proposed and completed that would directly and indirectly impact on Wycombe's air quality. These plans were prepared by various departments of the council and their outcomes and progress will be discussed later in this document.

3 AIR QUALITY AND HEALTH

ACTION 2: - We will collate health information and begin mapping this on to our GIS system. We will then compare the relevant information to that of air quality hotspots and the AQMA and consider any links. To be completed by August 2004

The Council has contacted the Health authorities of the Wycombe area to discuss the possibility of implementing this. As consultees for the action plan, Wycombe PCT recognised that although the exercise could potentially be implemented there would be important difficulties as the information collated would not be represented in a consistent form and could potentially be misread. However, the Council will still look at the possibility of implementing this in the future.

4 ACTIONS INVOLVING EXTERNAL REGULATORY AUTHORITIES

Action A1: - We will press for, and co-operate with Government/Bucks County Council, over implementation of improvements at Handy Cross.

Action A2: - We will work with the Highways Agency, neighbouring authorities and Bucks County Council in order to try and consider schemes in more detail and take note of findings from MMSs that reference air quality across the District and within the AQMA.

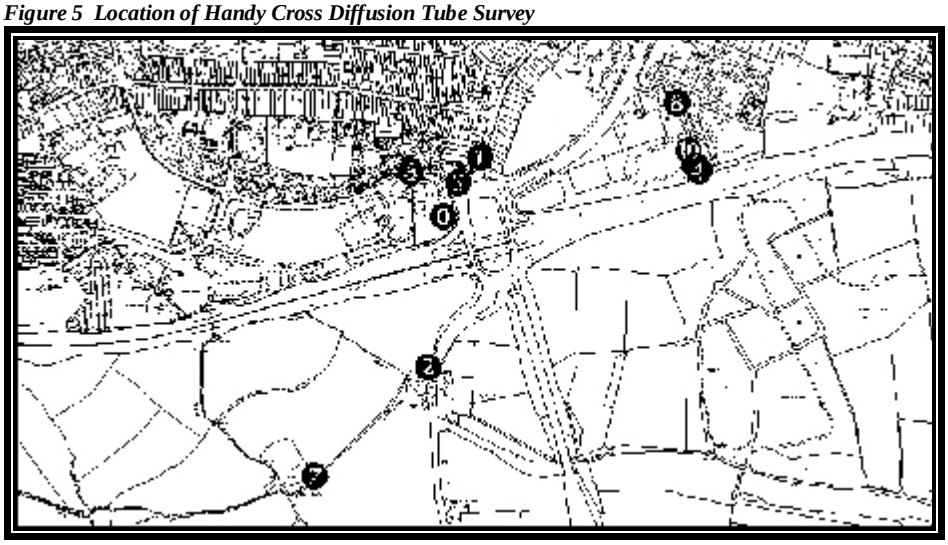
Action A3: - Following the small expansion of the current AQMA as recommended in Stage 4 we will meet with the Highways Agency again to discuss the possibilities of actions 1 & 6 and will be in a better position to consider option 3.

Action A4: - We will actively support the larger National and South East schemes that may improve air quality along the motorway network and promote a modal shift to other forms of transport.

The Council has been involved at a very early stage with the Highways Agency on the Handy Cross project. We have been consulted on the air quality issues contained in the Environmental Statement submitted in the Summer of 2003 and we were actively involved with the Agency's consultants on the modelling proposal that will look at the projected pollution level on and around the project area.

The Highways Agency has agreed to fund a diffusion tube survey of the area. Ten locations around the junction were chosen as monitoring sites and the scheme got underway in late 2004. The first data will be published in the 2005 annual report. The location of the monitoring sites are shown in the Figure below.

Figure 5 Location of Handy Cross Diffusion Tube Survey



The Council was consulted on the proposition by the Highways Agency to install AQMA signs and more specifically on the content and siting of these signs.

The Council has participated in the new Bucks Freight Quality Partnership launched in February 2004. The partnership will look at reducing the impact of freight transport across the Buckinghamshire area.

5 THE CORPORATE ENVIRONMENTAL ADVISORY CENTRE AND GREENER FUELS

ACTION 3: - The Council and CEAC (Corporate Environmental Advisory Centre) will develop partnerships with business and major fleet operators to encourage the accelerated use of cleaner vehicle technologies and cleaner fuels, and promote improved maintenance and considerate and economical driving.

This action was on hold pending the results of the survey to be undertaken as action 4.

ACTION 4: - We will commission CEAC to survey companies in the District to investigate their existing use of alternative fuels and their attitude towards using these fuels in the future.

ACTION 5: - The Council will introduce a policy of replacing its own fleet with 'greener' types of vehicle (such as those with particulate traps) or LPG if suitable.

ACTION 6: - The Council will seek to improve the availability of cleaner fuels by encouraging new service stations to stock alternative fuels with reference to the results of the survey.

The Council has commissioned the CEAC to carry out the survey and a postgraduate student will have be responsible, under CEAC supervision, for producing a database of Wycombe companies. We will use this data base to look at the possibility of creating a partnership of businesses and look at ways of promoting the reduction of car use and the shift from petrol to greener alternatives. Following the survey we will look at the possibility of encouraging more service stations to distribute LPG.

The survey was undertaken in 2004 and its conclusions were as follows:-

''This survey of businesses in the Wycombe area was undertaken by Wycombe District Council (WDC), in partnership with the Wycombe based Corporate Environmental Advisory Centre (CEAC) as part of the Council's implementation of its Air Quality Action Plan. The survey results have enabled WDC to understand the nature and structure of vehicle fleets in the area, these being primarily small fleets (50%: 1-5 vehicles only), comprised of cars and light vehicles. Businesses in the area are primarily from the service sector and plan to reduce the size of their fleet in the future. These findings are positive, in terms of the impact of future vehicle fleets on air quality.

Business users are aware, to some extent of more economic and sustainable alternatives to conventional vehicles and fuels, the use of LPG for example has been established. Opinions of alternative fuels however, have yet to be formed by many Wycombe businesses. There is also little awareness of the Government assistance available for businesses wishing to invest in alternative fuels. The Local Authority has a duty to promote these alternatives to conventional vehicles.''

There are over 1200 refuelling stations currently offering LPG for sale in the UK. Buckinghamshire has nine LPG refuelling stations. Planning permission was granted to ASDA stores at the beginning of 2004 to open a new LPG delivery facility and is due to be operational in the course of 2005.

No greener fuels other than LPG is available to Wycombe District residents at present.

The Council has renewed its lease contract for two of its vehicles to continue to run on LPG and the Contracts Manager has been informed of the decisions of the Treasury regarding tax incentive for greener fuels and pollution control devices for the years to come. A decision to upgrade the Council's fleet will be made by the end of April 2005.

ACTION 7: - The Council will support the County Council with its aim to achieve traffic reduction by improving the infrastructure needed to encourage sustainable travel and reduce unnecessary car use.

The Council has contributed to the Buckinghamshire's local transport plan annual progress report for 2002-2003[3].
More specific targets are reported later in this document.

6 CLEANER, BETTER DRIVING

ACTION 8: - We will produce and distribute leaflets and advice to individual drivers on how emissions can be reduced through better driving practices and choice of vehicle/ fuels. We will be utilising the new Environment Centre (WDC stakeholder) to help achieve this. We will achieve this by August 2003.

Information is readily available at the Environment Centre[4] and leaflets can be picked up by visitors on driving practises or choice of fuel.

7 WYCOMBE'S LOCAL PLAN TO 2011

ACTION 9: - We have made proposals for more specific policies on air quality for our Local Plan and we will adopt these policies following inspection. To be completed by Oct 2002

ACTION 10: - Within the emerging Local Plan, Transport policies target a number of areas such as public transport, travel plans and accessibility for example. This will also contribute to improving air quality. We will adopt these policies following inspection. To be completed by Oct 2002

Wycombe's Local Plan to 2011 was adopted in January 2004 and new specific policies on air quality were included.

Policy G14[5]

(1) Proposed development which, by its nature, location, extend or generation of road vehicle traffic would be likely to cause measurable deterioration in local air quality, as established by the Council's periodic reviews, will not be permitted.

(2) Planning permission will not be granted for any form of development that would have a similar adverse impact on

[3] Buckinghamshire County Council (2003). Local Transport Plan, annual progress report for 2002-2003, Aylesbury
[4] The Environment Centre, Bassetsbury Lane, High Wycombe, Buckinghamshire, HP11 1QX

[5] Wycombe District Council (2004). *Wycombe District Local Plan to 2011*. High Wycombe

the amenity of nearby or previously authorised land uses, by virtue of smell or other forms of atmospheric pollution.

(3) In an Air Quality Management Area (AQMA) which has been designated as a result of periodic or other surveys of road traffic, industrial or other forms of pollution which would be likely to cause an increase in such pollution will not be permitted.

A number of schemes and initiatives have been implemented and although principally aimed at reducing car travel have an positive impact on local air quality.
The new CressExpress programme[6] launched in January 2004 provides an alternative mode of transport for commuters wanting to reach the Cressex area from the train station without taking their car.

8 AIR QUALITY AND PLANNING WITHIN WYCOMBE DISTRICT COUNCIL

ACTION 11: - We will continue to work with the planning directorate with regard to new developments and ensure that air quality is taken into account when located in or close to the AQMA.

ACTION 12: - We will add the exact location of the AQMA to the 'site constraints database' used by the Planning Department to ensure that any developments in or close to the AQMA are flagged up for further consideration by August 2003.

The exact location of the AQMA has been added to Wycombe's GIS system and has been part of the planning constraints database since early 2003. The Land Charges department also issue this information.

ACTION COMPLETE

ACTION 13: - The Council will look for evidence that developers have taken appropriate steps to minimise any increases in air pollution. This will include an assessment of the air quality implications where applicable.

The Environmental Services division is consulted on all developments that are proposed within the district area and likely to have an environmental impact. When the planning department is satisfied with the comments made by control of pollution officers a consensus decision is made in accordance with the local plan.

The Wycombe District Local Plan January 2004 Policy G13.1.b states that planning permission will not be granted for **"developments which would be at an unacceptable risk from existing or potential sources of pollution."**

Planning Policy Statement 23 section 1G.1 "The impact on ambient air quality is likely to be particularly important:

– **where the development is proposed inside, or adjacent to, an air quality management area (AQMA) designated under Part IV of the Environment Act 1995"**

On all occasions when a planning proposal had limit boundaries within or adjacent to the AQMA the air quality officer was consulted. On most occasions no more contacts were made with the Council by the developers when it was understood that we would oppose any development

[6] http://www.cressexpress.co.uk

likely to increase the number of cars with the AQMA or expose more residents to the risk of elevated pollution levels.

To date only one major development has required a thorough EIA and remediation measures were included in the report to tackle air pollution problems arising from the construction phase. The proposed development will be located outside of our AQMA and therefore no formal objections have been made on air quality grounds. The project is named Project Phoenix and developments reports are available from the Wycombe web pages.

9 TRAVEL PLANNING

ACTION 14: - We will encourage businesses through promotion and existing local travel groups to implement Travel Plans, and promote more sustainable travel to their staff. We will also ensure that new development meeting criteria set out in PPN 05/02 will implement effective Travel Plans.

ACTION 15: - We will encourage appropriate businesses, through promotion and existing local travel groups, to implement measures within the Instant Travel Plan.

ACTION 16: - The Council will continue to provide advice, encouragement and support to businesses in the development of travel plans through the Cressex-Link travel group which meets quarterly.

ACTION 17: - We will continue to extend the 'travel group' approach to other business parks in the district.

During 2004, the Cressex link scheme and a number of other travel schemes were all amalgamated into the Wycombe-Link scheme. At the year end, the scheme had some 30 members, including local businesses and major employers such as the police and local hospital etc.

Wycombe District Council will continue to promote Wycombe Link to local businesses. 20 local businesses are involved in producing green travel plans, and there is a target to increase this to 30 in 2005/6

ACTION 18: - The Council will continue working with the County and local schools to provide encouragement and support to increasing the uptake of Safer Routes to Schools Schemes

In 2001/2 there were no schools in the Wycombe area with completed school travel plans. Bucks County Council have made head way with this over 2002/3 and currently have 9 schools with completed active school travel plans with many more working towards this.

The Council has worked in partnership with South Bucks, Aylesbury Vale and the Chiltern District to introduce air quality signs designed to raise awareness with parent drivers and encourage them to switch off their engine while waiting for their children outside of school gates. The scheme has seen the first sign up at Burford School, in Little Marlow, and has been well received.

County Council have a PSA target to cut car use on the home to school run by 30% by 2008 and the short term target was 42% by the end of 2003. The reduction achieved in 2004 was 35%.

ACTION 19: - The Council will continue to give its support to the Bucks Carshare scheme.

The Bucks Carshare programme continues to expand and now has over 1100 registered members.

ACTION 20: - The Council will continue to support the Cressex Link scheme.

The Cressex Link Scheme has been amalgamated into other similar schemes, see above.

ACTION 21: - The Council will continue to support the Wheels 2002 Project.

Renamed *Wheels*, the project is very much in place and provides full reimbursement of tickets for anyone travelling to the District Councils sports centres by bus or train.

ACTION 22: - The Council will work with the County Council to encourage meeting the PSA targets for bus reliability, and encourage further QBP.

The Council has not been actively involved with the County's bus quality targets.

10 ALTERNATIVE FUELS

ACTION 23: - The Council will promote the uptake of LPG by offering a reduction of 25% in Private Hire and Hackney Carriage vehicle licence fees upon the conversion to LPG fuel.

The proposal to offer a 25% reduction in the licence fee upon conversion to LPG has not been approved.

The Council currently licence 426 private hire vehicles and 50 Hackney Carriages the latter of which are exclusively running on diesel for obvious financial reasons.
Diesel conversion is not currently approved by the LPG Association and the Powershift programme and therefore no grant is available at present for such conversions.
There are also 11 TX II London cabs which are also not approved for LPG conversion.

Following the Council's decision on numeric deregulation, taxi licences will be issued without any limitation on their numbers. However, this is dependant on more rank space being made available. The type of vehicle to which licences will be issued will need to be specified. At present, any new vehicles licenced would have to meet the Public Carriage Office Metropolitan Conditions of Fitness. The two vehicles currently meeting this standard are the LTi TXII and the metrocab.

The new LTi's TX II model and Metrocab have not been approved for LPG conversion by the Powershift programme and can therefore not receive any grant towards the cost of conversion. The Council cannot therefore pursue Action 23 for newly issued licenses.

11 WALKING AND CYCLING

ACTION 24:- The Council will positively feed into the development of the Southern Buckinghamshire Pilot Walking Project.

ACTION 25: - The Council will positively feed into the development of proposed cycle routes and work with the County Council to expand the network.

The Simply Walk project has continued to grow successfully, in terms of number of walks, trained walk leaders, and weekly walkers.

By the end of December 2004, Simply Walk had 9 walks in the Wycombe Area and 8 in the South Bucks / Chilterns area, including walks set up in conjunction with local mental health service and learning disability teams.

The total number of people walking each week averaged approximately 225, and the number or trained walk leaders had risen to 83.

The initial 2 year funding is due to end in 2005, but further funding has secured, and Simply Walk is now organized in partnership with Wycombe District, Chiltern District and South Bucks District Councils, together with the joint Primary Care Trusts of Wycombe and Chiltern/South Bucks.

Along with the existing "East-West" cycle route a newly completed route is running across the Cressex area and a new proposal, "The Cressex Link" is expected to be operational by the end of April 2005 with a dedicated pedestrian and cycle path.

The planning department has aims to gather extra funding under s106 agreements to put to the County Council to provide for another cycle route but no definite plans have yet been finalised.

12 POLLUTION MONITORING AND CONTROL

ACTION 26: WDC will begin to roll out the "Cut your Engine" project by January 2003. Specific attention will be given to schools close to the AQMA and those that have the worst problem.

The final design of the sign was produced in mid-2003.

Burford School in Little Marlow has been approached and has since installed the sign at the front of the entrance gates.

The project is funded by County Council who will provide the signs free of charge to any school with a current school travel plan and puts forward a bid along with an assessment on what the sign will achieve.

ACTION 27: We will expand our promotion of the reporting of smoky vehicles with the introduction of new vehicle emission watch leaflets with freepost envelopes.

The Council provide advice to members of the public who enquire about smoky vehicles. We have not yet put in place a leaflet or a procedure to formally report smoky vehicles although the details are specified on our website within the air quality pages.

ACTION 28: We will expand our monitoring network to incorporate a new continuous monitoring site for Nitrogen Dioxide, to be installed close or within the AQMA by August 2003.

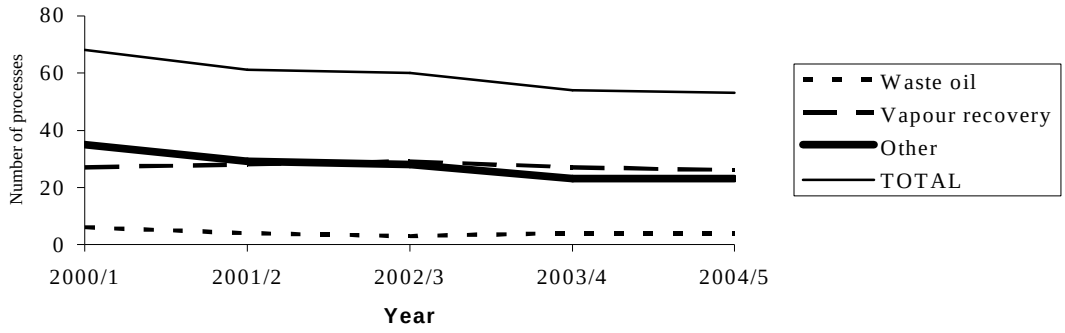
The stage IV report concluded that the AQMA should be expanded and the Council has installed a new analyser to monitor real time pollution level at an AQMA location.
The new analyser was installed in May 2003 and has been fully operational since November 2003. The data is managed and ratified by Netcen. 2004 data are given in Part A of this document.

ACTION COMPLETE

ACTION 29:- We will continue to provide comprehensive control over Part B processes

Wycombe currently licenses 54 Part B premises but the trend has been that fewer and fewer processes have been operating in the district area.

Figure 6: Authorised Processes in Wycombe District

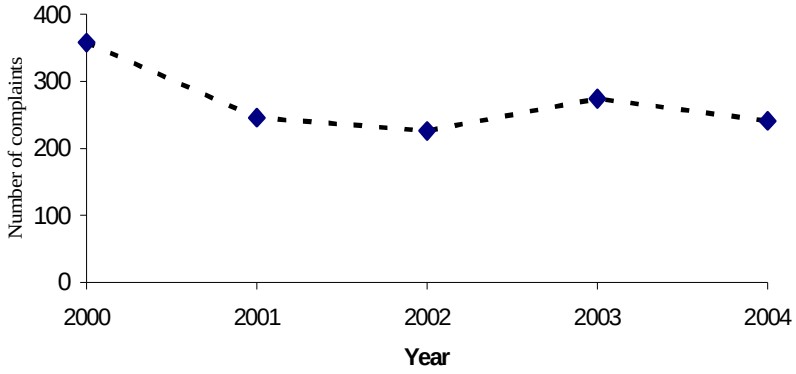


ACTION 30: - The Council will continue to investigate complaints about nuisance, monitor air quality and relate this to the air quality strategy.

The Council continues to investigate smoke or any statutory nuisance complaints and the trend showing the evolution of the number of cases investigated is shown below.

The Council has not actively linked complaints with the Strategy. The nature of the complaints does not relate strongly enough with serious global air quality issues. However, the subjects of complaints are advised of air quality consequences whenever it is considered relevant.

Figure 7: Air Quality Complaints Handled by WDC



ACTION 31: Improved information and advice to residents and companies in the area about problems caused by bonfires, and enforcement action for persistent offenders who break the Clean Air Act and Environmental Protection Act. We will also encourage residents to compost waste rather than burning it on bonfires.

The Council has produced a leaflet explaining what can be done to tackle air pollution and avoid creating statutory nuisances. This leaflet is distributed to all households and companies that are the subject of nuisance complaints. We also use NSCA leaflets that further explain air quality legislation.

A two bin domestic waste collection system is being phased in with residents being asked to separate green waste for composting from other domestic waste, as well as separating out other recyclable materials. Phase 1of the scheme was introduced in July 2004, and phases 2 and 3 will be introduced in June and September 2005

ACTION 32: - We will continue to ensure that only authorised fuels are used in the smoke control area.

Complaints fall into several categories and the Council continues to take appropriate action to control domestic premises and companies that give little regard to the environment. Additionally the Council enforces both the Environmental Protection Act 1990 and the Clean Air Act 1993. The Council also take action to enforce the Smoke Control orders in place in the Wycombe District area. The exact location of each smoke control area is on the GIS system.

13 ENERGY EFFICIENCY AND SUSTAINABLE DEVELOPMENT

ACTION 33: - The Council already has a policy in its Local Plan to allow the development of renewable energy projects. It will work with TV Energy to encourage 1 renewable energy project in the district by March 2003.

TV Energy has conducted a survey of 10 public buildings in the Wycombe District. These results are still being considered by those bodies responsible for the identified buildings which include schools and village halls. The Council is continuing to investigate the opportunities for installation of renewable energy technology in forthcoming major development within the district on their own land. It is unlikely that building work on these projects will start before 2007.

A wind turbine has been installed at Carrington School, Flackwell Heath, together with solar heating for their swimming pool. Consideration is being given to the installation of a wind turbine at John Hampden School. Wycombe District Council has commissioned TV energy to conduct a

feasibility study for the use of renewable energy in the Cressex Gateway Project. It is unlikely this will be developed before 2008.

ACTION 34: - The Council will continue to monitor the efficiency of its housing stock and council buildings using the standard assessment procedure (SAP) and try to improve the rating wherever possible.

The results of the continuing promotion of energy efficiency within the private sector housing stock indicates an 2% increase in SAP ratings over the last year from an average of 53 to 54. The Council's own housing stock has increased its SAP rating average by 2%.

The % improvement in the energy efficiency (SAP rating) of the housing stock for 2004/5 is:

- 6% for owner occupied property
- 3.7% for local authority owned
- 0% for private rented
- 1% for housing association property

ACTION 35: - The Council will develop an Affordable Warmth Strategy and begin implementation by Sept 2004 to increase energy efficiency in households on low incomes and so reduce CO_2 emissions.

The Affordable Warmth Strategy has now been approved, with an annual action plan to be updated each year.

ACTION 36: We will introduce an Environmental Appraisal as part of our procurement procedure and begin implementation of it by December 2002.

An Environmental Procurement Procedure has been included in the Council's Contract Standing Orders and requires environmental appraisal of contracts with a value of over £50,000.

Wycombe District Council now has eight business units registered for ISO14001, and all business units are required to use ISO14001 environmental procurement procedure, as it is now and integral part of contract standing orders.

ACTION 37: - We will apply for Grant funding for an energy efficiency project in association with the new Environment Centre. Target date December 2003.

An application was been made for funding through the Public Service Agreement for an energy efficiency project within the county, but the application was not taken forward. Funding has been received for a fuel poverty coordinator for the county, who will assist in the implementation of the affordable warmth strategy, including introducing a target for energy efficiency measures in residential accommodation.

ACTION 38: - In association with TVENERGY we will produce a 'sustainable design guide', promoting high levels of energy efficiency. Target date January 2003.

TV Energy has produced a "Sustainable Design Guide". However, this will not be introduced, pending the introduction of the Local Development Framework for the Council, until 2007.

Wycombe District Council is now considering the development of a supplementary planning document, which will incorporate some aspects of the Sustainable Development Guide, and should come into force by 2007.

ACTION 39:
To achieve accreditation in ISO14001 in 4 business units by March 2003 and full accreditation in EMAS by March 2005.

3 Business Units have achieved registration in ISO 14001 by the target date. A further 5 Business Units are to apply for registration by September 2004, with the whole Council expected to achieve registration by the end of 2005.

Wycombe District Council has now achieved ISO14001 in 8 Business Units and is on target to achieve it in all business units by December 2005.

APPENDICES

1. Monitoring results quality assurance and control

The Council uses CASELLA CREAIR laboratory for the diffusion tube analysis. The following statement has been given on their QA/QC procedure.

The Quality System

Casella CRE Air has a defined quality system, which forms part of the UKAS accreditation that the laboratory holds. All accredited methods are fully documented. UKAS assessors visit on an annual basis and review all aspects of the analysis from sample handling to analysis and reporting.

As a condition of accreditation the laboratory is required to participate in any suitable external proficiency schemes in operation. Casella CRE Air participates in the WASP scheme organised by the Health and Safety Laboratory.

Any result from such a scheme that falls outside the relevant limits is immediately investigated and steps taken to rectify the situation. All external proficiency scheme results are also assessed by the Quality Manager at Casella.

The Quality Manager also carries out internal audits.

AQC and Calibration

Calibration
The instrument is calibrated daily, using a series of calibration standards to ensure a satisfactory linear response is obtained. A standard check is analysed after every fifty samples to ensure that the calibration is still valid.

Quality Control
A series of ten quality control check solutions are analysed before any samples in order to check system stability and performance.
A quality control check is run after every ten samples and is assessed against warning and action limits defined in the method. Quality control solutions are prepared from standards supplied by a different vendor to that of the calibration standards.
Any samples with associated AQC exceeding the action limit or two consecutive warning limits is repeated. If this is not possible the results are internally assessed and reported to Wycombe District Council as an AQC failure.
An external quality control check solution prepared by NETCEN is analysed once per month in order to check our internal QC, results of this check are reported back to NETCEN.

Blank
The travelling blank is analysed at the same time as the samples, any blank exceeding the currently prescribed maximum is investigated and reported to the client.

Reviews (AQC)
The quality policy demands annual reviews of AQC data, the limits may be revised after such a review.

Quality Control limits as at 01/01/04
Nitrogen dioxide as nitrite in solution (µg/m1)
Warning 96 - 106 % at the 0.5µg/m1 level
Action 94 - 108 % at the 0.5µg/rnl level

Blank 0.11 µg/m1

Proficiency schemes
As part of the Quality System and under ISO 17025 the laboratory is required to take part in any suitable external proficiency schemes available.

For NO2 diffusion tubes there are two schemes operating in the UK at present, these are now administered by the Health and Safety Laboratory under the WASP scheme.

One scheme consists of a spiked tube sent out monthly which is analysed as a normal sample and reported back to WASP, this is designed to assess the extraction and analysis process.

The second scheme consists of three tubes and a blank prepared in the laboratory and sent to WASP for exposure in the field alongside a continuous monitor on a monthly basis, these are then sent back to the laboratory for analysis. This scheme is designed to assess the overall performance of the tubes in the field. This scheme has taken over from the annual field comparison exercises organised by NETCEN.

The previous annual field trials have produced acceptable results

Tube preparation and analysis
The NO2 tubes are prepared and analysed in a separate, designated part of the laboratory within the main laboratory building, ambient nitrogen dioxide concentrations within the laboratory are monitored routinely. Tubes are prepared by spiking with 10% TEA in water.
Blanks from each batch of tubes prepared in the laboratory are retained for verification.

Incoming samples are stored in a fridge used solely for this purpose.
Calibration standards, QC solutions and other reagents are stored in a separate fridge.

Tubes are extracted and analysed in this isolated area, the equipment used is dedicated to this analysis and is not used for general samples.

Data is checked by the analyst as it is generated, QC data is plotted immediately after it is obtained. All raw data and data transfer is checked by a supervisor, data entry into the Laboratory Information Management System (LIMS) is also checked and the final reports are checked before signing.

TUBE NUMBER	GRID REF: SU-NE	Tube Count	2004 Nitrogen Dioxide ug/m3	JAN 2004 07/01/2004 03/02/2004	FEB 2004 03/02/2004 02/03/2004	MARCH 2004 02/03/2004 30/03/2004	APRIL 2004 30/03/2004 04/05/2004	MAY 2004 04/05/2004 01/06/2004	JUNE 2004 01/06/2004 29/06/2004	JULY 2004 29/06/2004 03/08/2004	AUGUST 2004 03/08/2004 31/08/2004	SEP 2004 31/08/2004 29/09/2004	OCT 2004 10/10/2004 03/11/2004	NOV 2004 03/11/2004 05/12/2004	DEC 2004 05/12/2004 07/01/2004	AVERAGE YEAR 2004	Standard deviation	Data count	CORRECTED YEAR 2004
1&2	753-963	x2	M40 Stokenchurch	33	36	32	36	46	30	29	26	32	33	60	33	35	9	12	33
3&4	759-964	x2	Oxford Rd Stokenchurch	34	27	23	31	23	25	27	30	28	39	53	48	32	10	12	30
5&6	807-918	x2	Lane End Carpark	21	20	18	20	17	11	13	13	11	21	32	25	18	6	12	17
7&8	783-864	x2	Hambleden	20	19	13	17	15	9	12	14	13	18	26	24	16	5	12	15
9&10	851-863	x2	High St, Marlow	28	30	22	26	26	19	22	19	21	26	30	35	25	5	12	23
11&12	862-867	x2	Globe Park, Marlow	35	32	32	28	28	15	22	26	26	32	39	41	29	7	12	27
13&14	854-876	x2	Wyc Rd, Marlow(jnction with Bobmore Rd)	32	30	23	27	21	15	19	16	23	28	43	37	26	8	12	24
15	895-875	x1	Bourne End CarPark	31	27	20	27	21	15	15	19	11	28	36	33	24	8	12	22
16	895-875	x1	Bourne End Main Road	41	42	28	38	35	23	26	32	32	36	49	48	36	8	12	33
17&18	914-885	x2	The Green' Wooburn Green	41	36	27	31	31	20	24	24	27	32	40	41	31	7	12	29
19&20	895-898	x2	Flackwell Heath, Budgens	30	34	29	26	29	15	20	19	28	29	39	40	28	8	12	26
21&22	906-902	x2	Loudwater M40 'MFI' Carpark	38	37	37	32	36	24	27	28	28	32	40	44	33	6	12	31
23&24	883-919	x2	Bassetsbury Lane	28	24	18	20	19	13	17	19	17	23	32	26	21	5	12	20
25&26	845-916	x2	Turnpike Road	34	38	27	32	31	18	26	25	29	35	55	39	32	9	12	30
27&28	853-938	x2	West Wycombe Road	48	32	27	35	33	22	28	26	28	33	40	38	32	7	12	30
29&30	848-945	x2	Downley,Plomer Road	35	35	21	28	21	20	21	25	29	35	41	41	29	8	12	27
31&32	830-946	x2	West Wycombe Village(old)	45	47	34	37	47	41	40	45	47	44	69	41	45	9	12	41
33&34	829-962	x2	Bradenham Road	41	42	27	32	41	27	25	37	31	41	56	48	37	9	12	34
35&36	809-034	x2	Princes Risborough	32	33	22	27	29	19	20	24	24	30	50	37	29	9	12	26
37&38	835-983	x2	Walters Ash	21	24	25	21	25	14	15	15	21	24	31	30	22	6	12	20
39&40	876-976	x2	Grt Kingshill (Pipers Lane)	22	25	21	19	19	12	17	14	17	14	35	28	20	7	12	19
41&42	877-946	x2	Chadwick Rd (jnction with Amersham Rd)	38	40	35	41	34	25	27	29	32	43	63	39	37	10	12	34
43&44	866-943	x2	Hughenden Rd(jnction with Green Hill)	35	37	26	34	33	23	24	26	29	40	47	50	34	9	12	31
45&46&46a	867-925	x2	Wycombe Abbey Girls School	29	28	18	22	21	17	17	17	19	25	35	38	24	7	12	22
47		x1	Hazlemere,	23	24	17	19	15	10	18	11	17	22	30	28	19	6	12	18
48	86749-92788	x1	(INTERNAL) Council Office WDC	21	20	18	13	17	4			15	13	14	9	14	5	10	13
49	76149-95964	x1	Slade Road		<1	24	35	26	30			35	14	57	41	33	13	8	30
50	80714-92354	x1	Bullocks Farm Road	27	30	22	23	27		18	17	21	23	42	35	26	7	11	24
52	86749-92788	x1	(INTERNAL) Council Office WDC	19	18	17	18	20	17	20	17	15	8	20	25	18	4	12	16

AQMA				JAN 2004	FEB 2004	MARCH 2004	APRIL 2004	MAY 2004	JUIN 2004	JULY 2004	AUGUST 2004	SEP 2004	OCT 2004	NOV 2004	DEC 2004	AVERAGE YEAR 2004	Standard deveation	Data count	Corrected YEAR 2003
AQMA	Detailed Grid																		
A	90784-90217	x2	Knaves Hollow (Block Flat 1-6)			32	29	30	31	35	38	32	37	46	40	35	5	10	#DIV/0!
B	90251-90273	x2	Boundary Road(nxt to 18 Lammas Way)			40	40	34	33	35	44	34	14	41	47	36	9	10	#DIV/0!
C	76535-95546	x2	54 Marcourt Road			31	40	33	36	34	48	36	45	56	51	41	9	10	#DIV/0!
D	80687-92432	x2	Bullocks Farm Lane (1m from M40 (elevated))			54	59	not returned	contaminated	38	73	69	77	74	72	65	13	8	#DIV/0!
E	83005-94671	x2	Number 45 High St. (West Wyc Village)			29	38	35	31	31	31	28	26	48	43	34	7	10	#DIV/0!

Co-location study - New automatic monitor

60/61/62	476604-195437	x3	40 Marcourt Road	N/A/	N/A	27	33	36	40	35	45	37	43	53	44	39			
																36			

Traffic calming - Boundary Road				JAN 2004	FEB 2004	MARCH 2004	APRIL 2004	MAY 2004	JUIN 2004	JULY 2004	AUGUST 2004	SEP 2004	OCT 2004	NOV 2004	DEC 2004	AVERAGE YEAR 2004	Standard deveation	Data count	CORRECTED YEAR 2003
Direction: Knaves Beech Way -> Station Road																			
	Detailed Grid																		
Boro1	90784-90217	x2	Oposite bus stop			32	42	48	46	40	55	37	48	78	64	49	14	10	#DIV/0!
Boro2	90251-90273	x2	Corner of Snakely Close			33	42	42	42	34	50	38	45	57	44	43	7	10	#DIV/0!
Boro3	76535-95546	x2	Station Road Roundabout			not returned	29	25	24	23	27	13	14	6	12	19	8	9	#DIV/0!

KEY:
- discrepency between high and low value higher than 11 ug/m3: only high value recorded
- no results available
- value recorded but out of range

Example for below: - 10ppb from 21/1/02 to 18/2/02 (98% Capture)
Example for below: - 12ppb from 18/2/02 to 18/3/02 (98% Capture)
(Read each column downwards)

		DATE FROM:	21/01/2002	18/02/2002	18/03/2002	22/04/2002	AVERAGE YEAR	AVERAGE YEAR
		DATE TO:	18/02/2002	18/03/2002	22/04/2002	27/05/2002		
ABBEY URBAN BACKGROUND	MONTHLY AVERAGE (ug/m3)		10	12	16	11	23	23
	DATA CAPTURE: (%)		98%	98%	98%	97%	90	90

SUMMARY AQMA

2. Monitoring network map, Wycombe district

Formatted: Bullets and Numbering