

South Staffordshire Council

Air Quality Action Plan

Draft for Consultation

April 2008

Preface

This document sets out the options and proposals to tackle poor air quality within the three remaining Air Quality Management Areas declared in 2006.

Record of Change

Version	Date	Change
Consultation Draft 1	Feb 2008	Staffordshire Bias Applied
Consultation Draft 2	Mar 2008	Action Plan options added
Consultation Draft 3	April 2008	Final amendments
Consultation Draft 4	May 2008	Comments from HA incorporated

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Section 1 Executive Summary

1.1 Context of the Report

- 1.1.1 The Environment Act 1995 places a duty on all local authorities to review and assess the state of air quality in its district. Where it finds poor air quality (identified by actual or predicted levels of pollutants above nationally set air quality objectives) it must declare (an) air quality management area(s) and develop an action plan to tackle the sources of the pollution.
- 1.1.2 South Staffordshire Council found four areas where there was a likelihood of exceeding the annual mean average air quality objective for nitrogen dioxide (NO₂) following a detailed assessment of its district in 2005. Nitrogen dioxide is a pollutant caused as part of the combustion process, principally from traffic emissions.
- 1.1.3 The Council has carried out a further assessment of the sources of pollution within the air quality management areas, to assist in the production of this action plan.

1.2 Progress since the Further Assessment Report

- 1.2.1 To co-ordinate action where air quality management areas have a common boundary in different local authority districts, an AQMA Steering Group has been formed, consisting of representatives from South Staffordshire Council, Cannock Chase Council, Staffordshire County Council and the Highways Agency. This group has reviewed the information from the further review and assessment of air quality in South Staffordshire.
- 1.2.2 As a result the Council has revoked its Air Quality Management Order No 3 – Featherstone following monitoring evidence that NO₂ levels were well below the annual mean air quality objective and there was no longer any likelihood of a breach.
- 1.2.3 The Council has also declared a new Air Quality Management Area No 5 – Oak Farm following a detailed assessment of nitrogen dioxide in the area in 2007, which found levels to be above the annual mean objective.
- 1.2.4 Further monitoring within the AQMAs has been carried out and results from 2007 indicate a continuing downward trend in pollution levels in each area. The annual mean 2007 levels were below the annual mean air quality objective for nitrogen dioxide at all monitored locations within the AQMAs.

1.3 The Action Plan

- 1.3.1 The steering group has met on a number of occasions to consider what action is available to improve air quality within the AQMAs designated in 2006, with the aim of reducing and maintaining the annual mean level of nitrogen dioxide below the National Air Quality Objective.
- 1.3.2 It has been recognised that since declaration of the AQMAs improvements in air quality indicate that the properties within all of the original AQMAs are not currently affected by annual mean nitrogen dioxide levels above the air quality objective.
- 1.3.3 In these circumstances, the level of intervention has been adjusted accordingly as there is less need for radical action to improve air quality. The focus has therefore been on ensuring the maintenance of the current improvement in air quality seen over recent years. In many cases the actions are based on national measures already in place, supported by local action which will be targeted at the areas of the District that influence pollution levels within the AQMA.
- 1.3.4 The action plans have been adapted to meet the characteristics of each area, although there are similarities between the proposals in each case.
- 1.3.5 Table 1 on the next page sets out the proposed actions for improvement by row and which AQMAs they are being applied to in the columns.

1.4 The Next Steps

- 1.4.1 The report will now be subject to consultation and review by statutory consultees and other bodies. A six-week time period is being made available for comments and responses to the consultation.
- 1.4.2 Following the end of the consultation period responses will be considered, in conjunction with the other members of the steering group. Any changes to the Action Plan in light of representations will then be made, as appropriate.
- 1.4.3 Each action identified by this Plan will be reviewed in April 2009 (and each year thereafter, or until the AQMAs are revoked) setting out the progress on implementation of the plan including the latest monitoring data within the AQMAs.

Table 1 Action Plan Proposals

<u>Proposal</u>	<u>Responsibility</u>	<u>AQMA No1 Woodbank</u>	<u>AQMA No 2 Bursnips</u>	<u>AQMA No 4 Wedges Mills</u>
Support current UK policy in respect of reduction in emission from road vehicles and use of alternative fuels.	HA, SCC, SSC, DEFRA, DfT	√	√	√
Introduce hard shoulder running and active traffic management to the section of the M6 Motorway between Junction 10A and 8	HA	√	√	
Review the road hierarchy and speed limits on the road network.	SCC			√
Investigate proposals for the M54/M6 Link to reduce HGV traffic through the AQMA	SCC, HA, SSC,			√
Regulate industry within the local area to reduce the impact of their emissions affecting pollution levels in the AQMA	SSC			√
In collaboration with VOSA contribute to multi-agency traffic operations involving emission checks on vehicles using the highway.	SCC, SSC	√	√	√
Education / Publicity				
Further publicise the issues around AQMAs and the Highways Agency Driver Information Programme (DIP) to improve driver behaviour on motorways and trunk roads.	SSC, HA	√	√	
Highlight and publicise the initiative of clean technology business fleets	SSC	√	√	√
Further publicise the Staffordshire Share-a-lift scheme to reduce the number of single occupancy vehicles	SCC	√	√	√
Publicise the Smokey Diesel Hotline to identify gross polluters on the road network	SCC, SSC	√	√	√
Support for local car scrapping schemes to remove older, more polluting vehicles from local roads.	SSC			√
Support the introduction of Green Travel Plans for local businesses to help reduce the impact of traffic within the AQMA on pollution levels.	SCC			√
Make local information available on HGV routing to minimise the number of high polluting vehicles travelling through the AQMA	SCC			√

SSC – South Staffordshire Council; SCC – Staffordshire County Council; HA – Highways Agency

Section 2 Introduction

2.1 Further Review and Assessment of Air Quality

2.1.1 A further assessment of air quality was undertaken for the four Air Quality Management Areas (AQMAs) designated by the Council in 2006.

2.1.2 The results of this further assessment were presented in a report in April 2007. The report confirmed the decision to declare the following AQMAs: -

- AQMA No 1 – Woodbank
- AQMA No 2 – Bursnips
- AQMA No 4 – Wedges Mills

The work carried out has also informed the process of developing this action plan to tackle the poor air quality in the remaining areas.

With respect to AQMA No 3 – Featherstone, the findings of the further assessment did not support the declaration of the Order. The Council subsequently revoked this Order following the further assessment consultation.

2.2 Consultation

2.2.1 Following publication of the draft further assessment report a period of consultation took place, to allow key stakeholders the opportunity to comment on the findings of the assessment. With the exception of Staffordshire County Council, no responses were received during the consultation period.

2.2.2 Subsequently, in July 2007 DEFRA provided their appraisal of the report, which requested additional details in respect of source apportionment within the AQMAs. This was submitted on 31st July 2007. No further comments in respect of the submission of source apportionment data has been received from DEFRA at the time of writing this action plan.

2.3 Detailed Assessment

2.3.1 The findings of an additional detailed assessment, which was included in the further assessment report, identified a property on the A5 where monitoring confirmed an exceedence of the annual mean air quality objective for nitrogen dioxide. As a result of this assessment a new AQMA has been designated following consultation on the further assessment. The order, South Staffordshire Air Quality Management Order No 5 – Oak Farm came into force on 1st March 2008, following the publication of 2007 monitoring results for the District.

2.4 Legislative Background

- 2.4.1 Part IV of the Environment Act places a statutory duty on local authorities to periodically review and assess the air quality within their area. This involves consideration of present and likely future air quality against air quality standards and objectives. The Local Air Quality Management (LAQM) regime was first set down in the 1997 National Air Quality Strategy (NAQS) and introduced the idea of local authority 'Review and Assessment'. Government subsequently published policy and technical guidance related to the review and assessment process in 1998.
- 2.4.2 The latest Air Quality Strategy for England, Scotland, Wales and Northern Ireland (AQS) was published on 17th July 2007. The AQS set down standards, and objectives for seven pollutants were prescribed through the Air Quality (England) Regulations 2000 and the Air Quality (England) Amendment Regulations 2002. The objectives were revised in 2003 and published in an addendum to the Air Quality Strategy.
- 2.4.3 New Technical Guidance (LAQM.TG(03)) and Policy Guidance (LAQM.PG(03)) were issued on behalf of DEFRA in January 2003. This guidance sets the framework for the requirements for future years of review and assessment taking account of experiences from the previous rounds of review and assessment.
- 2.4.4 South Staffordshire Council (SSDC) has a responsibility under Section 84(2) of the Environment Act 1995 to produce an Air Quality Action Plan.

2.5 South Staffordshire and Cannock Chase Joint AQMA Steering Group

- 2.5.1 The proximity of AQMAs in South Staffordshire and Cannock Chase has led to the formation of the above joint working group. The Group's aim is
- "To work together in partnership to produce and implement an action plan to tackle poor air quality within the AQMAs designated by South Staffordshire and Cannock Chase Councils".
- 2.5.2 The membership of the group includes the air quality specialists and planners from both authorities; Staffordshire County Council Highways; representatives of Midland Expressway Limited (operators of the M6 Toll in the area); and the Highways Agency, its consultants and agents.
- 2.5.3 South Staffordshire Council acknowledges and appreciates the assistance of the group in providing the necessary information to formulate this report and bring forward the proposals for inclusion in the plan.

2.6 Air Quality (England) (Amendment) Regulations 2002

2.6.1 These regulations came into force on 11th December 2002. For some pollutants, the regulations have varied the objectives upon which the review and assessment of air quality is to be undertaken. In addition, new longer-term objectives to be achieved up to 2010 have been incorporated into the regulations for certain pollutants. The new objectives have been set out below.

Table 2 – Objectives included in the Air Quality (England) (Amendment) Regulations 2002

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 µgm ⁻³	running annual mean	Extant
	5 µgm ⁻³	annual mean	31.12.2010
1,3 Butadiene	2.25 µgm ⁻³	running annual mean	Extant
Carbon monoxide	10.0 mgm ⁻³	maximum daily running 8-hour mean	Extant
Lead	0.5 µgm ⁻³	annual mean	Extant
	0.25 µgm ⁻³	annual mean	31.12.2008
Nitrogen dioxide	200 µgm ⁻³ not to be exceeded more than 18 times a year	1 hour mean	Extant
	40 µgm ⁻³	annual mean	Extant
Particles (PM ₁₀) (gravimetric)	50 µgm ⁻³ not to be exceeded more than 35 times a year	24 hour mean	Extant
	40 µgm ⁻³	annual mean	Extant
Sulphur dioxide	350 µgm ⁻³ not to be exceeded more than 24 times a year	1 hour mean	Extant
	125 µgm ⁻³ not to be exceeded more than 3 times a year	24 hour mean	Extant
	266 µgm ⁻³ not to be exceeded more than 35 times a year	15 minute mean	Extant

Related Plans and Policies

2.7 South Staffordshire Council Corporate Strategy

2.7.1 South Staffordshire Council has adopted a vision in line with that of the South Staffordshire Local Strategic Partnership

"As a well managed Council, we will strive to make South Staffordshire a safe and healthy place to live, with prosperous villages and thriving

communities, where everyone can develop their abilities to the full and pass on to future generations a better environment."

2.7.2 The second Aim of the strategy is

"To be a healthy and safe District in Which to Live Work and Visit

We will make a positive contribution towards achieving a healthier nation, being mindful of the most vulnerable, by improving air quality, and by protecting and promoting public health."

2.7.3 Both the vision and the aim reflect the importance the Council places on ensuring that all those that come to South Staffordshire are protected from the impact of poor air quality.

2.8 South Staffordshire Local Strategic Partnership.

2.8.1 South Staffordshire Local Strategic Partnership comprises a number of key agencies working within South Staffordshire from the public, private, voluntary and community sectors.

2.8.2 In 2004 the partnership was restructured in order to make partnership working within the District even more effective, and new working arrangements were developed.

2.8.3 The restructure resulted in two new theme groups in addition to the original three, with new reporting mechanisms to the LSP Executive. An Officer Steering Group was also created, who help implement decisions made by the Executive, and co-ordinate the work of the theme groups.

2.8.4 The five theme groups are:

- Lifelong Learning
- Quality of Life
- Economic Vibrancy
- Environmental Quality
- Community Safety

2.8.5 As previously mentioned South Staffordshire Council and Partnership have adopted a similar Vision. The partnership's Vision is also

"We will strive to make South Staffordshire a safe and healthy place to live, with prosperous villages and thriving communities, where everyone can develop their abilities to the full and pass on to future generations a better environment."

2.8.6 The purpose of South Staffordshire's Local Strategic Partnership is to:

"Be the 'partnership of partnerships' within South Staffordshire

providing strategic co-ordination and linking other plans and bodies at local, sub regional and regional levels

Prepare and implement a Community Strategy that provides a long term framework for action to benefit all the people of South Staffordshire

Work with Staffordshire County Council and other key partners to develop and deliver and the outcomes -the Countywide Local Area Agreement.”

2.8.7 The Core Values of the Partnership are:

Sustainability - we are looking at the long-term implications of current activities while taking into account the wellbeing of future generations as well as the current generation of residents

Engagement – we will actively involve the residents of South Staffordshire in both the development and implementation of the Community Strategy

Equality – we will provide services that are accessible and appropriate to the needs of all irrespective of disability, gender, racial or ethnic background, religion or culture

Diversity – we believe that everyone in South Staffordshire deserves to receive excellent services that reflect their individual needs and circumstances

2.9 Staffordshire County Council – Local Transport Plan

2.9.1 The Local Transport Plan (LTP) is a strategic document based around the Government's four shared priorities of accessibility, air quality, congestion and road safety together with other quality of life issues, maintenance and economic regeneration initiatives.

2.9.2 The latest Plan, covering the period between 2006 and 2011 has strengthened its links to the improvement of air quality across the County. It has as an objective:

“To work in partnership with the Staffordshire Air Quality Forum² to reduce the occurrences and severity of poor air quality resulting from road traffic emissions.”

2.9.3 Officers from the County Council have made a significant contribution to the formulation of action plan proposals set out in this document. Staffordshire County Council and South Staffordshire Council have

² The Staffordshire Air Quality Forum is a local authority founded organisation, originally comprising all of the local authorities and the County Council in Staffordshire. It was formed at the time of the commencement of the new air quality duties with the aim of providing an opportunity for co-operation, support and learning.

considered recent Government guidance³ and sought to implement the recommendations it gives.

- 2.9.4 As part of the local transport plan Staffordshire County Council must include targets to measure improvements in air quality within AQMAs. One of the outcomes of this report will be to recommend targets for inclusion in the LTP for the areas within South Staffordshire.

³ Addendum to Local Air Quality Management Guidance LAQM.PGA(05)

Section 3 Recent Air Quality Monitoring

3.1 Air Quality Monitoring

- 3.1.1 The Council carries out monitoring of nitrogen dioxide using two methods:
- An advanced chemi-luminescence analyser that provides accurate, reliable and efficient monitoring of NO, NO₂, and NO_x. This analyser is currently situated adjacent to the M6 motorway in Penkridge.
 - Passive diffusion Tubes located at various sites across the District with particular emphasis on AQMAs and other potential hot spots.

3.2 Continuous Monitoring QA/QC Procedures

- 3.2.1 The Council currently has a contract with Casella Eti for maintenance of the monitoring site. The Company also provides data management services including data rescaling and has done so since April 2006. Daily checks of the site data is made as a matter of routine, and data validation and rescaling undertaken as per the data management contract.

3.3 Results of Continuous Monitoring

- 3.3.1 Comparison of validated re-scaled data for periods in 2006 and 2007 have been made. Due to problems with data capture in January to April 2006 the comparison has been made between May and December for each year.

Year	Annual Mean NO ₂ Concentration
May to December 2006	34.7 µg m ⁻³
May to December 2007 (Annual 2007 Mean)	31.0 µg m ⁻³ (33.6 µg m ⁻³)

- 3.3.2 During 2006 there were substantial resurfacing works carried out on the section of motorway opposite the monitoring station and this would have impacted on measured levels as the speed limit was reduced to 40 mph through the road works. It is considered that the reduction and smoothing of traffic flow probably had a net benefit to AQ during the resurfacing period.

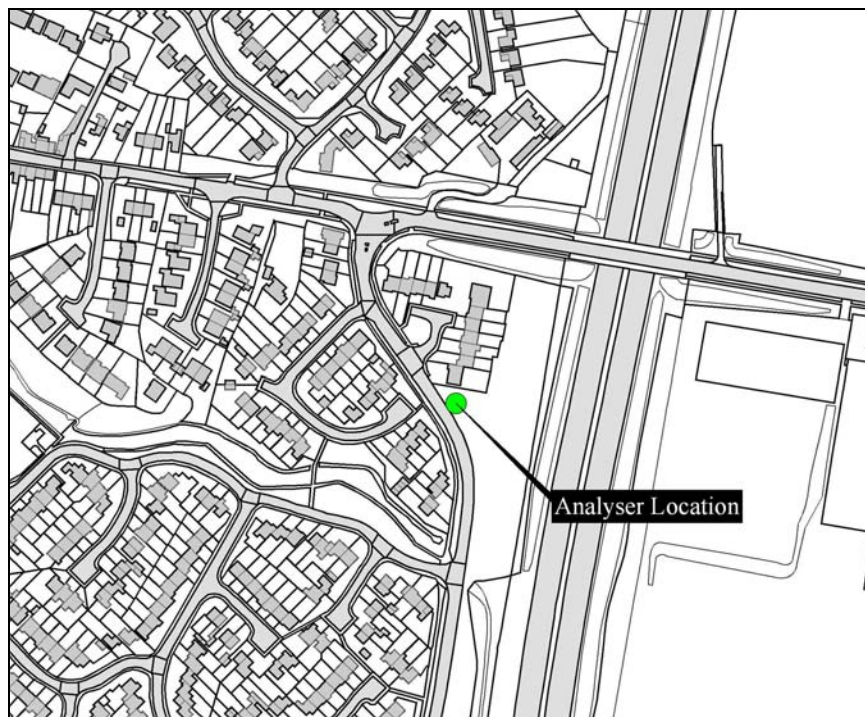


Figure 1 Continuous Monitor Location

3.4 Diffusion Tube Monitoring

- 3.4.1 Diffusion tube monitoring has to be bias corrected at the end of each calendar year. This bias correction is used to factor out any inherent differences in sampling and analysis techniques between years. It is therefore difficult to make strict comparisons with data between years until the correction is applied.
- 3.4.2 Results of monitoring for 2007 have been compared with the same period last year. These results reflect the bias corrected values following publication of the Staffordshire Scientific Services Laboratory co-location bias in March 2008 (Review and Assessment Website, Bias Correction Factor Spreadsheet V02.08). The aggregate bias correction for the Staffordshire Laboratory Services in 2007 was 0.98.
- 3.4.3 Annual results at South Staffordshire sites in 2007 were 11% lower than for the same period in 2006.
- 3.4.4 Trends for the period between 2003 and 2007 for nitrogen dioxide levels have been reviewed to see whether the recent reduction in pollution levels was continuing (see figure 1)

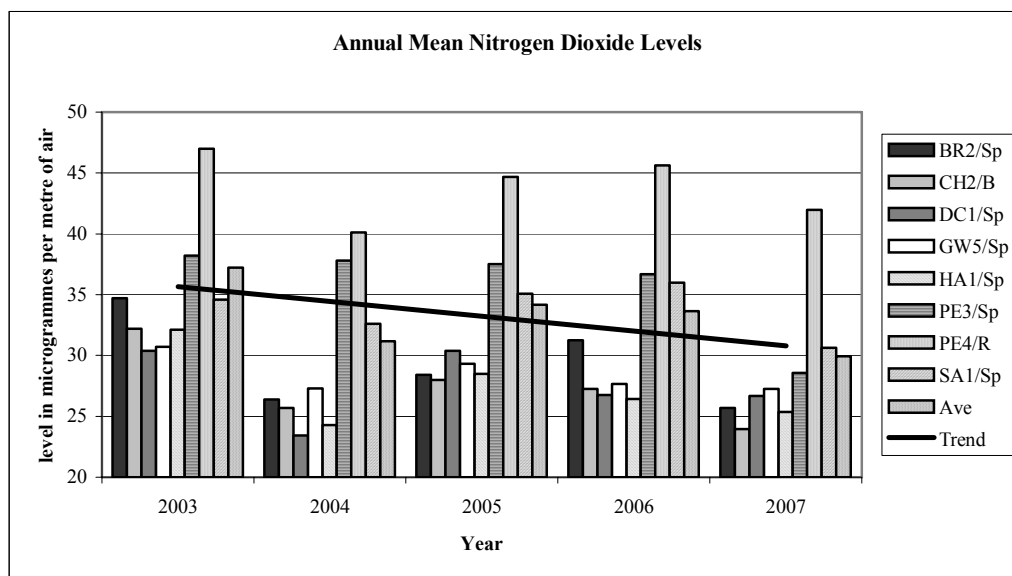


Figure 2 Trend in diffusion tube monitoring results between 2003 and 2006

- 3.4.5 At the recent International Air Pollution Standing Conference held in Birmingham in December 2007 delegates were advised that a new guidance manual on diffusion tube use is shortly to be published. Part of the presentation advised that the method currently used by Staffordshire County Council Laboratory Services (our suppliers) for preparation of the diffusion tubes would no longer be acceptable. This is due to problems with accuracy and consistency of sampling results using this method. Results of inter laboratory testing and QA/QC procedures have always indicated that the laboratory performs well in respect of its preparation and analysis of diffusion tubes. The Staffordshire Air Quality Forum has already considered action which will be implemented later this year to make sure that monitoring in the County area reflects best practice.
- 3.4.6 The 2007 locations of diffusion tubes is shown in Figure 3. At the beginning of 2008 a number of sites have been removed from the network, where recent annual mean monitoring levels indicate that levels are well below the air quality objective for nitrogen dioxide. Further information in respect of these sites will be included in the Council's Annual Progress Report (to be published in Spring 2008).

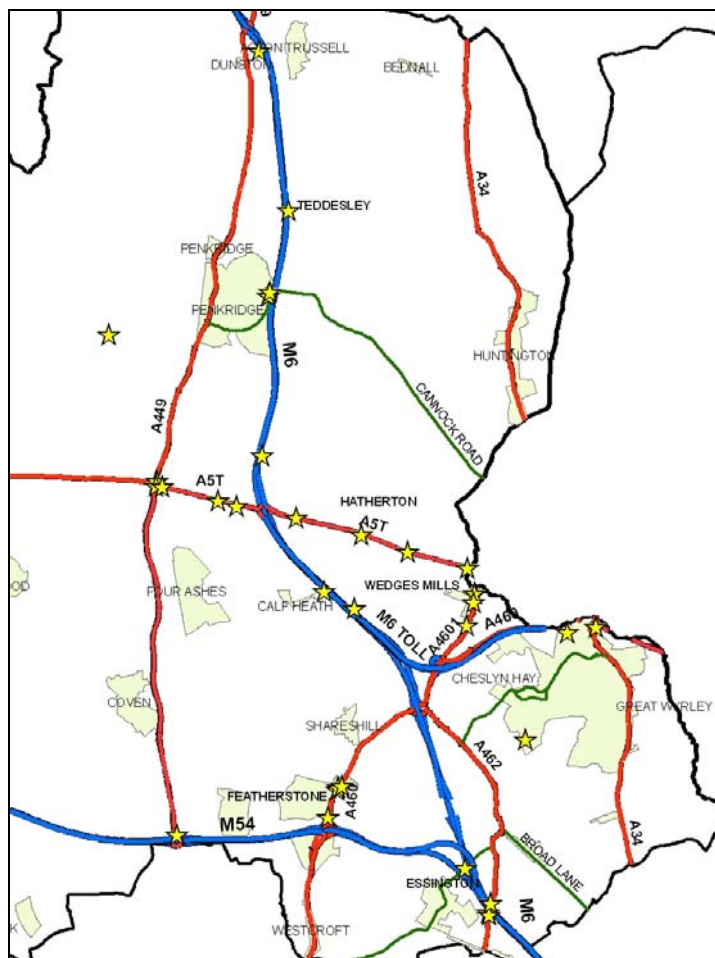


Figure 3 Diffusion Tube Monitoring Sites

3.5 **Levels within Air Quality Management Areas**

- 3.5.1 Since the original Detailed Assessment Report published in 2005, the levels of pollution in each of the remaining AQMAs has steadily improved. Results of annual monitoring of nitrogen dioxide levels for 2005, 2006 and 2007, indicate that in 2005 only two of the AQMAs had exceedences of the air quality objective. No exceedences of the air quality objective have occurred in any of the original AQMAs in 2006 or 2007.
- 3.5.2 The monitoring in AQMAs is exclusively done using diffusion tubes. The Council's diffusion tube monitoring network has been in operation since 1990. The network was originally started to support the UK National survey and comprised of 6 sites where monitoring took place. In 2007 this had expanded to 33 sites. In addition the Council also uses the automatic chemi-luminescence analyser installed when it was evident that incidences of high nitrogen dioxide levels were likely in the District. This has operated at two locations in the District since its acquisition.
- 3.5.3 To improve accuracy of the diffusion tube results we co-locate three diffusion tubes at the analyser location. The comparison of the results from these two methods of monitoring is submitted to DEFRA's

consultants to provide a co-location bias for the supplying laboratory, which is then applied to the other raw diffusion tube results across the District (see 3.4.2).

- 3.5.4 Despite this approach it is still not possible to accept as 100% accurate the re-scaled diffusion tube results. Various factors can impact on the accuracy of the re-scaled levels. These were acknowledged in a DEFRA commissioned report in 2002.⁴
- 3.5.5 The range of acceptable accuracy for the Council's diffusion tube results, once the bias adjustment has been applied is in the range of + or – 10%. This can be factored into the results to assess the probability that nitrogen dioxide levels within the AQMAs could still be above the 40 µg m⁻³ annual mean objective level.
- 3.5.6 Using this range factor with the 2007 annual mean monitored levels within the AQMAs the only area where levels may indicate an exceedance is at AQMA No 1 - Woodbank.

⁴ Compilation of Diffusion Tube Collocation Studies Carried out by Local Authorities, November 2002, Air Quality Consultants

Section 4 Action Plan Scoping

4.1 South Staffordshire and Cannock Chase Joint AQMA Steering Group

4.1.1 The Joint Steering group has met on a number of occasions between 2006 and 2008 to formulate options to tackle poor air quality within the AQMAs in each District.

4.1.2 An early decision was made to split the approach into two parts, reflecting the different types of road affected. These were

- Motorway
- Non-motorway

4.1.3 Initially the group set out all possible actions and initiatives that may be available, irrespective of cost or timescale considerations. This information was then circulated to members of the Steering Group for further review.

4.1.4 In subsequent meetings further assessment of the following considerations in respect of the actions was made: -

- Lead Authority
- Cost
- Timescale
- Air Quality Impact
- Other Impacts
- Other considerations.

4.2 Scale of Improvement Required

4.2.1 Taking into account the monitoring data within the AQMAs as set out in Paragraph 3.5 and Section 5, it is evident that since the Council made the Orders to declare the AQMAs, nitrogen dioxide levels have improved in all areas. The improvement achieved is at the extent where only AQMA No 1 Woodbank is currently considered to be at risk of exceedance based on current monitored levels (and only then when uncertainty factors are applied – see paragraph 3.5.6).

4.2.2 This improvement can best be explained by the contribution of UK National Air Quality (and associated) Policies aimed at reducing nitrogen dioxide (and other air quality strategy pollutant) levels.⁵

⁵ The Air Quality Strategy for England, Wales, Scotland and Northern Ireland, July 2007.

- 4.2.3 On the basis of the findings of monitoring data and discussions within the Steering Group it was agreed that, even without any specific action planning or intervention at a local level, national measures would deliver the necessary improvements to nitrogen dioxide levels within the coming year (providing the current trend in monitored levels continues).
- 4.2.4 The results of monitoring reported in Section 3 give confidence to this position, with the trend in nitrogen dioxide levels for the average of a number of sites where results are available between 2003 and 2007 showing a reduction of 20% in that period.
- 4.2.5 Despite this conclusion, it was accepted that where additional measures could be identified, they would be proposed for inclusion in an action plan to support better air quality specifically within the AQMAs and generally across the District.

4.3 Scoping Matrix

- 4.3.1 To assist in the identification of actions that can be implemented to improve air quality in the Council's AQMAs a scoping matrix was produced to assess all proposals brought forward by the group members.
- 4.3.2 The actions and initiatives and comments relating to these approaches are set out in (Appendix B). The abbreviations in the Cost column refer to

L	Low Cost
M	Medium Cost
H	High Cost

- 4.3.3 For Timescale the abbreviations stand for

S	Short Timescale
M	Medium Timescale
L	Long Timescale

- 4.3.4 For air quality benefit the abbreviations stand for

MI	Minor Improvement
ME	Medium Improvement
MA	Major Improvement

- 4.3.5 A rating system was devised to rank the approaches that had been identified. This was further modified to confirm whether the actions were deliverable, i.e. it was within the capability, budgets and necessary timescale of the respective organisations represented on the steering group to deliver.
- 4.3.6 Significant discussions took place on these themes during the scoping (and formulation of action plan) meetings. It was clearly evident from the monitoring information then available (the latest annual mean data available at that time were the 2006 levels) that exceedences in the

three remaining South Staffordshire AQMAs were marginal (see tables in Section 5). This was considered to be relevant to the amount of intervention required in respect of the action plan. The expected improvement in levels of nitrogen dioxide through policies set out in the National Air Quality Strategy is expected to deliver around a 3-4% reduction in monitored levels each year. This trend continues to be reflected in the annual mean levels found across the Council's monitoring network.

4.4 Motorway Locations

- 4.4.1 In respect of the motorway sites, any significant action to tackle air pollution by changing the characteristics of traffic movement would require substantial cost and could not be delivered within a reasonable timescale. It was also pointed out that air quality was only one of many considerations the Highways Agency had to take into account when putting forward road proposals for inclusion in their programmes.
- 4.4.2 Previous proposals for widening of the motorway adjacent to AQMA No 1 Woodbank were noted but, since first being publicised, the Government had stepped back from these proposals and there is nothing currently in the road building programme. The HA are currently undertaking a study to identify options for providing additional capacity on this very busy inter-urban section of the M6 extending from the M6 Toll Junction (J11A) in the South to the A556 Junction (J19) in the North.
- 4.4.3 On 4th March 2008, the Transport Secretary announced proposals to introduce hard shoulder running by implementing active traffic management (ATM) across a number of sections of the motorway network.
- 4.4.4 Further information has now been provided and one of the sections of motorway included in the proposals is the section of the M6 from Junction 10a to Junction 8. Early indications suggest that work will start in April 2009 and the scheme will be operational from 2011. AQMA No 2 – Bursnips is located at Junction 10a, where the M6 and M54 meet. The introduction of hard shoulder running from this junction down towards the West Midlands should ease traffic flow, with a possible improvement in air quality resulting. The current configuration of carriageways, hard shoulder and slip roads at this location is such that any changes would not bring vehicles closer to the properties within the AQMA. This is due to the constraints caused by the supports for over-bridges at the junction.
- 4.4.5 The Council is currently enquiring whether there is any research in respect of the M42 trial of ATM which provides evidence of the changes in dispersion of air pollution following that scheme's introduction.

4.5 Non-Motorway Locations

- 4.5.1 Discussion in the steering group was dominated by the AQMA in Cannock Chase Council's area on the A5 between Churchbridge and Longford Island. The western end of this AQMA has a common boundary with the Council's AQMA No 4 - Wedges Mills.
- 4.5.2 It was apparent through the experiences of the bodies represented on the group that the A5 continues to be used as a strategic route for traffic in the area. It was expected that, following the opening of the M6 Toll in 2003 and the construction of a new road from Middle Hill to Churchbridge, taking traffic away from Wedges Mills, flows on the former A4601 through the AQMA would fall significantly. Despite these predictions, pollution levels were still above the air quality objectives when the Council undertook its last detailed assessment, necessitating the declaration of the AQMA.
- 4.5.3 Many of the actions identified for the A5 AQMA can also be applied to Wedges Mills.
- 4.5.4 The Steering group had its latest meeting on 14th March 2008. The following section sets out the latest actions proposed for inclusion in the action plan.

Section 5 Action Plan

Action Plan Scoping Results

- 5.1.1 As a result of the scoping work, the steering group met again to confirm actions that were reasonable, deliverable, cost effective, commensurate with the amount of improvement needed and would result in, or support the aim of improving air quality within the affected areas.
- 5.1.2 The group also reviewed the current state of air quality in the AQMAs from recent monitoring work, to assess the degree of improvement required to achieve compliance with the air quality objectives.
- 5.1.3 Due to the different characteristics of the three remaining AQMAs in the District, different actions need to be set out for each scenario. For the two AQMAs affected principally by motorway sources a similar approach is possible. The final area at Wedges Mills is a non-motorway site.

5.2 Improvement Required

- 5.2.1 As advised in Section 4 annual average monitoring results (for 2006 and 2007) since making of the Air Quality Management Orders in 2006 have been below the air quality objective for nitrogen dioxide at all relevant locations in each of the original areas.
- 5.2.2 The overall trend for monitoring results during the last 5 years has shown a downward trend in pollution levels.

Air Quality Management Area No 1 - Woodbank

5.3 Monitoring results in 2007

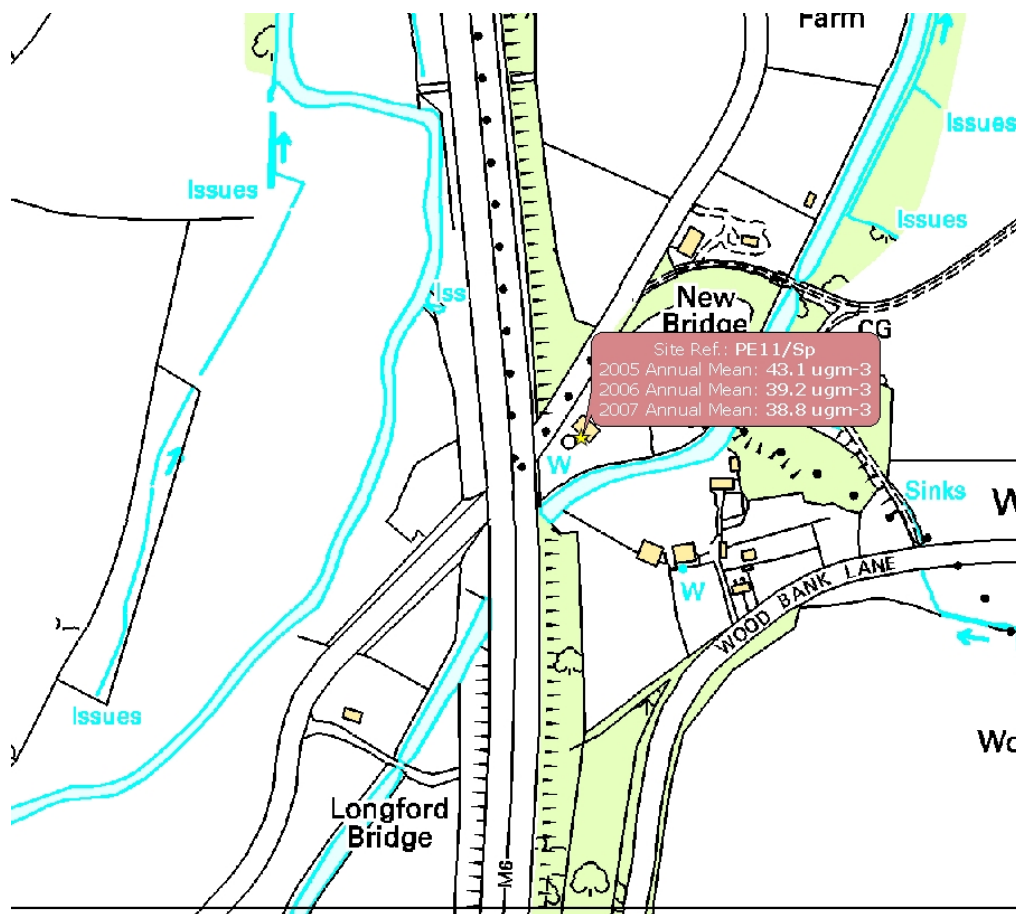


Figure 4 Map of Monitoring Results - Woodbank

- 5.3.1 A diffusion tube was sited on the façade of the property within the AQMA in January 2005, as recommended in the detailed assessment report. The following table has set out the corrected results for monitoring at this site between 2005 and 2007.

Table 3 Monitored NO₂ levels in AQMA No1

Location			2005 Corrected Annual Mean ($\mu\text{g m}^{-3}$)	2006 Corrected Annual Mean ($\mu\text{g m}^{-3}$)	2007 Corrected Annual Mean ($\mu\text{g m}^{-3}$)
Easting	Northing	Site			
393519	315327	PE11/Sp	43.1	39.2	38.8
Percentage change (year to year)				-9%	-1%

5.4 Predicted Levels in Future Years

- 5.4.1 Further consideration of future annual mean NO₂ levels has been undertaken by applying the year adjustment factor to the levels in 2005, 2006 or 2007 producing the highest predicted levels until 2010.

Table 4 - Future year predictions for NO₂ in AQMA No1 from monitoring results (in µg m⁻³)

Location	Based on		2008	2009	2010
PE11/Sp	2007		37.8	36.7	35.7
		Reduction year to year ⁶	4.0%	4.1%	4.1%

5.5 Impact on Occupiers in relevant locations

- 5.5.1 A single property lies within the AQMA. Monitored levels at Woodbank House have been below the annual air quality objective for nitrogen dioxide for the last two years. These results, however, may be partly influenced by re-surfacing works on the carriageway between Junction 12 and 13, which took place in both years. Traffic was limited to 40 mph through the road works and observation suggests that this resulted in smoothing of traffic flows. The contra-flow also necessitated hard shoulder running which, on occasion, would have reduced the distance from source to the AQMA property (but at other times meant that the south bound carriageway was being re-laid and therefore not in use). These factors have been taken into account in the deliberation of the working group reviewing possible actions.

5.6 Recommended Actions

- 5.6.1 This area is the only remaining area where, taking into account the uncertainty in diffusion tube monitoring results (of + or - 10% of reported level) there is a possibility of current (2007) monitored levels being above the air quality objective. The site reflects the wider trend, across the District, of reducing nitrogen dioxide levels during the last three years.
- 5.6.2 The Highways Agency have recently announced plans to introduce hard shoulder running and active traffic management to the M6 south of this area starting at junction 10a. This should be operational by 2011. No other proposals that might improve air quality in this area are currently within their road construction programme.
- 5.6.3 Despite the above points it is felt that the progress in air quality since declaration was significant and that actions to support this improvement were sufficient to achieve the desired improvement in air quality within a reasonable timescale.

⁶ As suggested by the year adjustment factors in the LAQM tools in Government Guidance

5.6.4 The options identified in the scoping stage were further reviewed by the working group and those to be included in the action plan are set out below: -

	<u>Proposal</u>	<u>Responsibility</u>
Action 1	Support current UK policy in respect of reduction in emission from road vehicles and use of alternative fuels.	HA, SCC, SSC, DEFRA and DfT
Action 2	Introduce hard shoulder running and active traffic management to the section of the M6 Motorway between Junction 10A and 8	HA
Action 3	Education / Publicity	
Action 3a	Further publicise the issues around AQMAs and the Highways Agency Driver Information Programme (DIP) to improve driver behaviour on motorways and trunk roads.	SSC, HA
Action 3b	Highlight and publicise the initiative of clean technology business fleets	SSC
Action 3c	Further publicise the Staffordshire Share-a-lift scheme to reduce the number of single occupancy vehicles	SCC, SSC
Action 3d	Publicise the Smokey Diesel Hotline to identify gross polluters on the road network	SCC, SSC
Action 3e	In collaboration with VOSA contribute to multi-agency traffic operations involving emission checks on vehicles using the highway.	SCC, SSC

Air Quality Management Area No 2 - Bursnips

5.7 Monitoring results in 2007

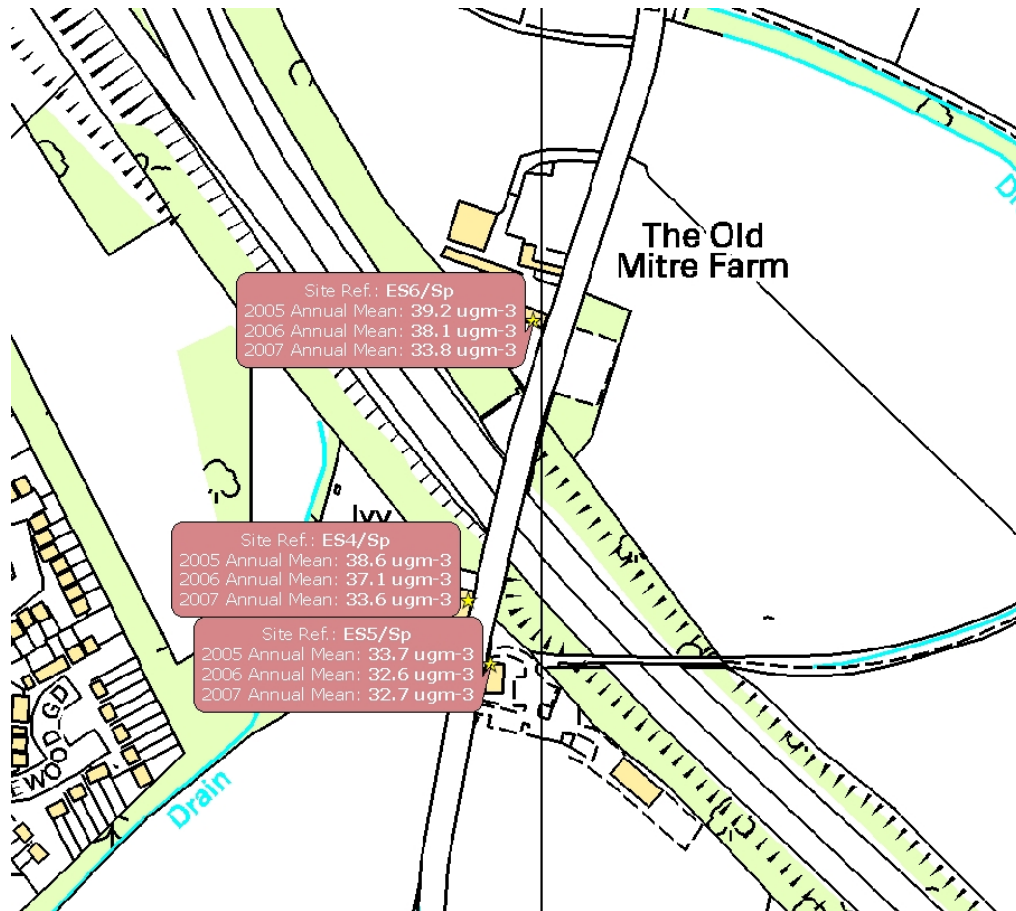


Figure 5 Map of Monitoring Results - Bursnips

5.7.1 Diffusion tubes were sited on the façade of all properties in the AQMA in January 2005, as recommended in the detailed assessment report. The following table has set out the corrected results for monitoring at these sites between 2005 and 2007.

Table 5 - Monitored NO₂ levels in AQMA No 2

Location			2005 Corrected Annual Mean ($\mu\text{g m}^{-3}$)	2006 Corrected Annual Mean ($\mu\text{g m}^{-3}$)	2007 Corrected Annual Mean ($\mu\text{g m}^{-3}$)
Easting	Northing	Site			
396957	303269	ES4/Sp	38.6	37.1	33.5
Percentage change (year to year)				-4%	-10%
396969	303230	ES5/Sp	33.7	32.6	32.7
Percentage change (year to year)				-3%	0%
396994	303433	ES6/Sp	39.2	38.1	33.7
Percentage change (year to year)				-3%	-12%

5.8 Predicted Levels in Future Years

- 5.8.1 Further consideration of future annual mean NO₂ levels has been undertaken by applying the year adjustment factor to the levels in 2005, 2006 or 2007 producing the highest predicted levels until 2010.

Table 6 - Future year predictions in AQMA No2 from monitoring results (in $\mu\text{g m}^{-3}$)

Location	Based on	2007	2008	2009	2010
ES4/Sp	2007	33.5	32.6	31.7	30.8
ES5/Sp	2007	32.7	31.8	30.9	30.1
ES6/Sp	2007	33.7	32.8	31.8	31.0

5.9 Recommended Actions

- 5.9.1 The options identified in the scoping stage were further reviewed by the working group and those to be included in the action plan are set out below: -

	<u>Proposal</u>	<u>Responsibility</u>
Action 1	Support current UK policy in respect of reduction in emission from road vehicles and use of alternative fuels.	HA, SCC, SSC, DEFRA and DfT
Action 2	Introduce hard shoulder running and active traffic management to the section of the M6 Motorway between Junction 10A and 8	HA

Action 3	Education / Publicity	
Action 3a	Further publicise the issues around AQMAs and the Highways Agency Driver Information Programme (DIP) to improve driver behaviour on motorways and trunk roads.	SSC, HA
Action 3b	Highlight and publicise the initiative of clean technology business fleets	SSC
Action 3c	Further publicise the Staffordshire Share-a-lift scheme to reduce the number of single occupancy vehicles	SCC, SSC
Action 3d	Publicise the Smokey Diesel Hotline to identify gross polluters on the road network	SCC, SSC
Action 3e	In collaboration with VOSA contribute to multi-agency traffic operations involving emission checks on vehicles using the highway.	SCC, SSC

Air Quality Management Area No 4 – Wedges Mills

5.10 Monitoring results in 2007



Figure 6 Map of Monitoring Results - Wedges Mills

5.10.1 As recommended in the detailed assessment, additional diffusion tubes were sited on the façade of the properties where the greatest likelihood of breach had been established in January 2005. The following table has set out the corrected results for monitoring at these sites between 2005 and 2007.

Table 7 - Monitored NO₂ levels in AQMA No 2

Location			2005 Corrected Annual Mean ($\mu\text{g m}^{-3}$)	2006 Corrected Annual Mean ($\mu\text{g m}^{-3}$)	2007 Corrected Annual Mean ($\mu\text{g m}^{-3}$)
Easting	Northing	Site			
396716	308742	SA2/R	36.4	33.2	32.7
Percentage change (year to year)				-9%	-2%
396700	308598	SA3/R	41.4	37.9	36.1
Percentage change (year to year)				-8%	-5%
396590	308195	SA4/Sp	29.9	27.8	27.8
Percentage change (year to year)				-7%	-0%
396726	308738	CH1/R	35.2	35.3	29.7
Percentage change (year to year)				0%	-16%

5.11 Predicted Levels in Future Years

5.11.1 Further consideration of future annual mean NO₂ levels has been undertaken by applying the year adjustment factor to the monitored levels in 2005 or 2006 producing the highest predicted levels until 2010.

Table 8 - Future year predictions in AQMA No2 from monitoring results (in $\mu\text{g m}^{-3}$)

Location	Based on	2007	2008	2009	2010
SA2/R	2007	32.7	31.8	30.9	30.1
SA3/R	2007	36.1	35.1	34.1	33.2
SA4/Sp	2007	27.8	27.1	26.3	25.6
CH1/R	2006	34.2	33.0	31.7	30.6

5.12 Recommended Actions

5.12.1 The options identified in the scoping stage were further reviewed by the working group and those to be included in the action plan are set out below: -

	<u>Proposal</u>	<u>Responsibility</u>
Action 1	Support current UK policy in respect of reduction in emission from road vehicles and use of alternative fuels.	SCC, SSC, DEFRA and DfT
Action 2	Review the road hierarchy and	SCC

	speed limits on the road network.	
Action 3	Support proposals for the M54/M6 Link to reduce HGV traffic through the AQMA	SCC, HA, SSC,
Action 4	Regulate industry within the local area to reduce the impact of their emissions affecting pollution levels in the AQMA	SSC
Action 5	Education / Publicity	
Action 5a	Support for local car scrapping schemes to remove older, more polluting vehicles from local roads.	SSC
Action 5b	Support the introduction of Green Travel Plans for local businesses to help reduce the impact of traffic within the AQMA on pollution levels.	SCC
Action 5c	Highlight and publicise the initiative of clean technology business fleets	SSC
Action 5d	Make local information available on HGV routing to minimise the number of high polluting vehicles travelling through the AQMA	SCC
Action 5e	Further publicise the Staffordshire Share-a-lift scheme to reduce the number of single occupancy vehicles	SCC
Action 5f	Publicise the Smokey Diesel Hotline to identify gross polluters on the road network	SCC, SSC
Action 6	In collaboration with VOSA contribute to multi-agency traffic operations involving emission checks on vehicles using the highway.	SCC, SSC

Section 6 Conclusions and Recommendations

Conclusions of the Action Planning Process

6.1 South Staffordshire AQMA No 1 to No 4

- 6.1.1 Four AQMAs were declared in 2006, where annual mean nitrogen dioxide levels were above the UK National Air Quality Strategy objective.
- 6.1.2 The Council published a further assessment report on air quality within these areas in 2007. As a result of this work the order for AQMA No 3 – Featherstone was revoked, when further evidence indicated that nitrogen dioxide levels had improved sufficiently to be confident that the air quality objective was unlikely to be exceeded at present, or in the future.
- 6.1.3 South Staffordshire and Cannock Chase Councils established a joint steering group and invited other key stakeholders to join including Staffordshire County Council and the Highways Agency, to develop proposals for inclusion in this action plan. This steering group has met on several occasions to develop this action plan.
- 6.1.4 South Staffordshire Council has continued to monitor pollution levels at properties within the remaining AQMAs. The latest monitoring continues to indicate a downward trend in pollution levels in the AQMAs. Current levels are below the annual mean air quality objective for nitrogen dioxide within all of the original AQMAs. There is strong confidence from the analysis of recent NO₂ pollution trends that this will remain the case.
- 6.1.5 Despite the conclusion in relation to current and future air quality levels the steering group is recommending a number of actions to support this continuing improvement.

Recommendations

6.2 Action Plan

- 6.2.1 It is recommended that the Council support and Implement with its partners the proposals for actions outlined in Section 5 of this document to further enhance air quality within the AQMAs and the District.
- 6.2.2 In addition, an annual progress report will be published in April 2009 setting out the progress on implementation of the plan including the latest monitoring data within the AQMAs.

Appendix A Abbreviations

AADT	Annual Average Daily Traffic (Flow)
AQEG	Air Quality Expert Group
AQMA	Air Quality Management Area
AUN	Automatic Urban Network
BNRR	Birmingham Northern Relief Road
BS	British Standard
CERC	Cambridge Environmental Research Centre
DEFRA	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges
EPAQS	Expert Panel on Air Quality Standards
EU	European Union
GIS	Geographical interface system
HDV	Heavy Duty Vehicles
LAQM	Local Air Quality Management
LDV	Light Duty Vehicles
mgm ⁻³	Milligrammes per cubic metre
NETCen	National Environmental Technology Centre
NO	Nitric Oxide
NO ₂	Nitrogen Dioxide
NO _x	Oxides of Nitrogen
QA/QC	Quality Assurance / Quality Control
µgm ⁻³	Microgrammes per cubic metre

Appendix B – Scoping Matrix

Table 9 - Scoping Options for Non - Motorway Situations

Action	Option	Description	Lead Organisation	Cost	Score	Timessale	Score	AO Impact	Score	Other Impacts/comments	Rank/Scoping Decision
Option 1c	Reduction in HGV Content on road	Satellite Navigation adjustment for HDVs/LDVs	DEFRA, DFT	?	3	?	3	ME	4	Can redirect traffic away from AQMA areas. Rough tool, can cause knock on effects for other areas. Can it be designed to differentiate between HDVs and LDVs?	10
Scoping Comments	Regional freight strategy supports increase in truck stops (guides available). HA unable to support less use by HDVs. HA no influence over M6Toll pricing policy to encourage more HDVs to use toll road.										Not taken Forward
Option 11	Reduction in Toll Charges to encourage use of the M6 Toll	Encourage more traffic to by-pass AQMA	MEL	H	1	S	3	MA	6	Commercial. Dependant on commercial organisation without statutory obligation. Could be reversed at any time. Research into the benefits of smooth flow compared stop start along elevated section of M6. Involve Freight People. Not feasible without support of MEL	10
Scoping Comments	No possibility of influencing MEL on pricing policy. To be drawn to the attention of national policy makers for consideration										Not taken Forward
Option 22	Encouraging co-operation between hauliers to reduce number of journeys with empty containers		HA, SCC, FREIGHT HAULIERS	L - M	1.5	M	2	MA	6	Reduced NO2 emissions, less congestion, company efficiencies for hauliers. Resistance due to commercial rivalry. Needs to be emphasised to Manufacturing/ Distribution Companies running their own fleets. Needs further analysis of current trends	9.5

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Scoping Comments	Not a local issue. To be drawn to the attention of national policy makers for consideration										Not taken Forward
Option 17	Modal shift	Measures to encourage change are linked to other options	Rail & Bus Companies, HA, SCC	H	1	M/L	1.5	MA	6	NEEDS NATIONAL AND REGIONAL CO-ORDINATION.	8.5
Scoping Comments	More specific measures covered in other options. Not a local issue. To be drawn to the attention of national policy makers for consideration										Not taken Forward
Option 19	Encouragement of local sourcing of products	Reduction in HGV's, increase in smaller less polluting vehicles, shorter journeys	DTI, DEFRA (MAFF), DCLG, Retailers, District (Economic Development)	L	3	S, M, L	2	MI	2	Regional, national measures needed. Good for local economy. Reduced co2 emissions. Improved air quality, noise, road safety and congestion elsewhere too. Could increase number of short trips.	7
Scoping Comments	Outside groups control. To be drawn to the attention of national policy makers for consideration										Not taken Forward
Option 21	LDF/Development Control – requirement to provide Carbon emission impact report.	Addresses impact of new buildings (Carbon emissions). Use of renewable energy to reduce emissions.	LPA, Developers	L	3	M-L	1.5	-	0	Focused on climate change, but has synergies with aq and affects ambient levels	4.5
Scoping Comments	Can be considered in respect of new development. Limited influence on existing situation and more development only likely to lead to increase in vehicles										Not taken Forward
Option 7	Full access junction to M6 Toll at Churchbridge	Encourage more traffic to by-pass AQMA	HA, MEL	H	1	L	1	ME	4	Engineering Feasibility. Cost to MEL of extra traffic on initial section of M6Toll	6
Scoping Comments	No control over MEL										Not taken Forward
Option 15	Driver Education	National Measure	DEFRA with Local support (Green Travel	L	3	S	3	MI	2	Does not capture through traffic. Likely to improve air quality, advance fleet driving courses, Link to Green travel Plans	8

Scoping Comments	Educational material, available on HA website. Need to consider opportunities to make the information more accessible to drivers. To be combined with other options										For inclusion in Action Plan	
Option 20	Alternative fuels	Encouraging vehicle owners and operators to use alternative, less polluting fuels	Fleet Operators, Bus Operators, Fuel Companies & Government	L	3	L	1	MI	2		More of a sustainability issue. Pros & cons of sourcing resources.	6
Scoping Comments	National measures - outside local control										Not taken Forward	
Option 1a	Reduction in HGV Content on road	Weight restrictions	SCC, HA	L	3	S	3	MA	6		Causes displacement of traffic & pollution. Reduce noise impact on local residents. Reduce wear and tear on roads. For A4601 possible but may have knock on effect for A5 Bridgtown (lorries accessing truck stop from the South). Not possible for A5 due to businesses in area. Width Restrictions? With regard to the A460 Wedges Mills, a weight restriction may be difficult to enforce and would require considerable consultation.	12
Scoping Comments	Further information required on current usage for Wedges Mills – Requires support of Staffordshire Police.										Not taken Forward	
Option 1b	Reduction in HGV Content on road	signage of alternative routes	SCC, HA	L	3	S	3	MA	6		Causes displacement of traffic & pollution. Reduce noise impact on local residents. Reduce wear and tear on roads. Unlikely to be effective without first part of option. Those with local knowledge will ignore these signs. Needs to consider strategic signage (e.g. in Town Centre)	12

Scoping Comments	Should be possible										For inclusion in Action Plan
Option 4a	Compulsory Purchase Order	To remove receptors	DISTRICT	H	1	M	2	MA	6	Social cost to residents. Legal implications. Cheaper where only a few properties are involved.	9
Scoping Comments	Unlikely approach - seen as setting a precedent for other areas. Given current state of pollution in area to radical an option.										Not taken Forward
Option 16	National Measures (Cleaner fuel/engine technology)	Already being implemented – identified to provide a 3% improvement year on year to 2010	DEFRA, DfT	L	3	S-L	2	ME	4	Out of local control. Possibly undermined by increased congestion if traffic levels not tackled. Possible that this will achieve desired improvement for some AQMAs.	9
Scoping Comments	These are ongoing and delivering predicted year on year improvements for most areas. This is the baseline for improvement and can be added to by any other cost effective options										For inclusion in Action Plan
Option 25	School Travel Plans	To ensure all schools within 1 mile of the AQMA continue to receive support to help reduce the impact of their travel activities.	SCC	L	3	S	3	-	0	Road safety, especially near schools. Reduced CO2 emissions. Less congestion. Health benefits for children. Perceived significant reduction in congestion and travel times during school breaks	6
Scoping Comments	No schools along A5 - unlikely to benefit										Not taken Forward
Option 28	Stationary Engine Powers	Reduction in emissions	District	L	3	S	3	MI	2	Noise, Wear and tear on vehicle, Enforcement issues. Observation indicates vehicles move regular short (<10 m) distance in congestion, negating possibility of using this power	9
Scoping Comments	Not considered viable as vehicles are not waiting for any appreciable length of time.										Not taken Forward

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Option 33	Low Emission Zones	Restriction on vehicles with high emissions in certain areas	SCC/HA	H	1	H	2	MA	6	Reduction in congestion, reduced CO2 emissions. Impractical for such small areas. Cannot address journeys originating within areas.	9
Scoping Comments	Seen as very expensive, not appropriate for strategic through route										Not taken Forward
Option 24	Congestion Charging	Encourage more traffic to by-pass AQMA	SCC / HA	H	1	M - L	1.5	MA	6	Road safety, revenue raising, politically unpopular, displacing traffic onto other routes. Causes detrimental impact in other areas as vehicles try to avoid charges.	8.5
Scoping Comments	Consensus accepted not practical or appropriate for isolated AQMAs										Not taken Forward
Option 14	Vehicle Testing of Emissions (inc illegal vehicles on the road)	Ensure that vehicles in AQMA are complying with emissions standards	VOSA/Police /SCC/LAs	L	3	S	3	MI	2	NOT A DISSINSENTIVE WHEN NOT IN PLACE. Quick Hit	8
Scoping Comments	Considered beneficial in terms of identifying gross emitters and if well publicised of education value.										For inclusion in Action Plan
Option 26	Staffordshire's Share a Lift Scheme	Driver Education	SCC	L	3	S	3	MI	2	Road safety, Conflicts with flexi-working (staff travel at different times), Financial saving for staff, Reduced CO2 emissions, Less congestion. Administration of the scheme, costs.	8
Scoping Comments	Already in place. Good PR										For inclusion in Action Plan
Option 34	Smoky Diesel Hotline	Reporting polluting vehicles	District, DoT	L	3	S	3	MI	2	Perception that nothing is done after reporting. Need to discuss with DoT and quantify impact of hotline	8
Scoping Comments	Needs to be advertised better. No feedback ever received from MOT. TO be queried										For inclusion in Action Plan

Option 32	Review of Road Hierarchy and Speed Limits	County Council review underway	SCC / HA	L	3	S - M	2. 5	MI	2	Ongoing work – Road Hierarchy review has commenced. The Speed Limit Policy is now completed and is moving into the review stage which will be completed by 2011.	7.5
Scoping Comments	Ongoing work - Speed assessment almost complete, road hierarchy started.										For inclusion in Action Plan
Option 12	LDV/HDV advice on routing	Encourage more traffic to by-pass AQMA	SCC / HA	L	3	M	2	MI	2	DISPLACEMENT. NOT ENFORCEABLE. Link to option 1a SCC undertaking review of road classification. Can feed into advice Freight Map	7
Scoping Comments	To review signage for appropriateness.										For inclusion in Action Plan
Option 13	Incentives for clean technology business fleets (See alternative Fuels)	Reduction in emissions	DEFRA, SCC, DISTRICT	L	3	M	2	Im pro ve ment?	2	POTENTIALLY LOW TAKE UP. THROUGH TRAFFIC NOT INCLUDED. May not improve traffic using the through routes. Unlikely to have significant impact	7
Scoping Comments	Businesses should be doing this. To be encouraged, can use publicity to highlight issues. Possible "pat on the Back"										For inclusion in Action Plan
Option 10	Travel Plans for Businesses within AQMAs	Encourage reduction in reliance on vehicles	SCC, DISTRICT	L / M	2. 5	M	2	MI	2	Reduced CO2 Emissions Staffordshire County Council willing to approach businesses within the area. No contact made at present.	6.5
Scoping Comments	Already in hand. SCC approaching businesses in the area										For inclusion in Action Plan
Option 6	Lodge Lane link to Walkmill Lane	Encourage more traffic to by-pass AQMA	SCC	H	1	L	1	ME	4	Engineering Feasibility. Contribution from Local businesses?	6
Scoping Comments	Unlikely approach - cost/viability issues										Not taken Forward

Option 27	Improve local cycle facilities	Providing alternative to use of car for local trips	SCC	M	2	M	2	MI	2	Improved health, Road safety, Less CO2 emissions. Difficulty in identifying routes which provide safe separation of bikes from other vehicles.	6
Scoping Comments	See Option 1c above. Part of Green travel plans for inclusion with other actions										For inclusion in Action Plan
Option 29	Control emissions from Industrial premises within the AQMA	Reduction in emissions that contribute to AQ problems	District, EA	L	3	M	3	-	0	Already in place through IPPC. Economic impact on industry (more business sent abroad?). Permitted sites not considered to be contributing significant impacts on NO2 levels in AQMAs Unsure of how this will impact on AQMA as local improvements may not focus on the A5/A460	6
Scoping Comments	Already being done. Not seen as major impact on current AQ. Nearest permitted sites some distance south										For inclusion in Action Plan
Option 35	Car Scrapping Scheme	Offer financial incentive to dispose of old vehicles wisely	District	L	3	S	3	-	0	Removes old cars from the road. less abandoned vehicles. Raising awareness of scheme may encourage people to change to less polluting vehicles	6
Scoping Comments	Of limited impact - but already in place										For inclusion in Action Plan
Option 30	Variable Message Signs	Encourage more traffic to by-pass AQMA	SCC / HA, Districts	M - H	1.5	M	2	MI	2	Help to reduce congestion during heavy periods. Maintain public awareness of AQ issues. Technological link to AQ monitors. Issue with identifying alternative routes, more likely to be effective if it can be linked to delay in travel times.	5.5

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Scoping Comments	For inclusion under driver education. Issues on cost, seen as reactive, consider mobile units. For acute congestion episodes only, and then prime reason is to redirect to keep other parts of the network moving. Expensive, Mobile units more appropriate so they can be multi-functional. Any decisions could be re-visited when/if de-trunking takes place										For further consideration.
Option 9	Make Lodge Lane Dual Carriageway	Encourage more traffic to by-pass AQMA	SCC	VH	0	L	1	ME	4	CPO requirements, Bridge widening. Land use may make this impossible.	5
Scoping Comments	Prohibitively expensive										Not taken Forward
Option 4b	Compulsory Purchase Order	To remove Truckstops	SSDC	H	1	M	2	MI	2	Identify alternative site for truck stop	5
Scoping Comments	Not viable										Not taken Forward
Option 8	M6/M54 Link	Encourage more traffic to by-pass AQMA	HA / central govt	VH	0	L	1	MI	2	Takes traffic away from roads in AQMA Regional, increased overall traffic, improved speed	3
Scoping Comments	ongoing scheme - MEL to contribute so subject to 278 agreement - timescale not confirmed										For inclusion in Action Plan
Option 23	NO2 Eating paintwork and slabs	Has the effect of reducing NO2 levels close to the pavement.	HA, SCC	M		S - M		-		LIMITED USES	0
Scoping Comments	Not a proven technology but if it works could be useful										For further consideration.
New Option 1	Freight Rail terminal Mid Cannock	Modal shift to rail	HA, SCC	M		S - M		-		Could encourage more traffic in the area delivering to terminal	0
Scoping Comments	Issues with gauge of rail line, issues with height of bridges to get containers under.										Not taken Forward

Table 10 - Scoping Options for Motorway Situations

ACTION	Option	Description	Lead Organisation	Cost	Score	Timescale	Score	AQ Impact	Score	Other Impacts/comments	RANK /Scoping Decision
Option 1	Motorway Speed Strategy	ATM*	HA	H	1	M	2	ME	4	Linked with congestion control – has worked for M42 pilot study – is there evidence as to the level of improvement in air quality?	7
Scoping Comments	Proposals have been made for ATM from J10a to J8 of the M6, for completion by 2011. This may benefit flows on the M6 north of this area										For Inclusion in Action Plan
Option 5	M6 Road Widening / parallel expressway	Smoothing flow of traffic through AQMA	HA	H	1	L	1	MA	6	Proposed for area from J11a to J18 – decision still to be made and will not be influenced by this plan.	8
Scoping Comments	This option is not in the current Major schemes programme										Not taken Forward
Option 6	Congestion Charging	Encourage more traffic to by-pass AQMA	HA	H	1	L	1	ME	4	See Option 5 – a national measure still in the early stages of feasibility.	6
Scoping Comments	Responsibility for congestion charging currently with LAs. Staffordshire not in favour of this approach. Would impact on local roads										Not taken Forward
Option 8	Ramp Metering	Ensure no interference with flow of traffic	HA	M	2	L	2	MI	2	Likely to have knock on effect for local traffic network – sheer volume of traffic likely to minimise impact.	6
Scoping Comments	A scheme is currently planned for some junctions in HA area 11 but not in areas affecting AQMAs. Not likely in short or medium term. Not available for junctions with short slip roads, e.g. J13.										Not taken Forward

Option 13	Close Junctions and slip roads	Ensure no interference with flow of traffic	HA	M	2	M	2	MI	2	This has been proposed for the M6 expressway option for existing motorway. Would ease traffic flows where congestion is caused by new traffic joining. Not an option for M54/M6 junction.	6
Scoping Comments	Similar issues to ramp metering. HA advised no proposals and unlikely to take place.										Not taken Forward
Option 2	Landscaping	Trees to act as barrier to emissions	HA	M	2	L	1	MI	2		5
Scoping Comments	Unproven approach to AQ improvements, would need to be substantial barrier. Safety issues. Discussion took place on using acoustic barriers and titanium oxide (see new option)										Not taken Forward
Option 7	M1 Widening	Encourage more traffic to by-pass AQMA	HA	H	1	L	1	MI	2	Similar to above proposals – distances involved likely to have only a minor effect (if any)	4
Scoping Comments	In major schemes programme M1 J21a - 30. Also crawler lanes to start J29. Nothing likely for completion before 2011 (see above)										Not taken Forward
Option 4	Compulsory Purchase Order	To remove receptors	HA	M	2	S	3	MA	6	Politically sensitive – can this be justified where there is no actual requirement to achieve the AQ objective	11
Scoping Comments	Unlikely approach - seen as setting a precedent for other areas.										Not taken Forward
Option 11	National Measures (Cleaner fuel/engine technology)	The national AQ reduction measures are delivering improvements year on year where other local factors don't have a major impact.	HA	L	3	M	2	MI	2	National measures are providing a predicted year on year improvement in air quality. Where current levels are only just above AQ objectives may be best option.	7

Scoping Comments	These are ongoing and delivering predicted year on year improvements for most areas. This is the baseline for improvement and can be added to by any other cost effective options										For inclusion in Action Plan
Option 12	Improved Signage Information		HA	M	2	M	2	MI	2		6
Scoping Comments	Recently revised due to complaints. Current national debate on signs and the impact on safety if they are removed (at least in urban areas).										Not taken Forward
Option 14	Distance Chevrons		HA	L	3	M	2	-	0	Unlikely to have any demonstrable benefit due to traffic levels.	5
Scoping Comments	Feasibility study undertaken between J14 and 15. Considered that the level of traffic flow is too high for them to be effective further south.										Not taken Forward
New Option 1	Acoustic Barriers	Use of barriers to reduce pollution, in conjunction with treatment with titanium oxide to further reduce NO2	HA	M	2	S	3	MI	1	Can benefit locations close to road. Effect minimised if emissions have the opportunity to drop back to ground	6
Scoping Comments	HA has been assessing benefit of this approach. Still unsure as to the benefits of the titanium oxide treatment. Concerns over maintenance of structures. Paradox with use of barriers for noise concerns for existing locations, where HA do not advocate their use.										Not to be taken forward
New Option 2	Driver Information Programmes (DIPs)	Provided by HA on various issues, including motorway driving	HA	L	3	S	3	MI	2		8
Scoping Comments	Educational material, available on HA website. Need to consider opportunities to make the information more accessible to drivers.										For inclusion in Action Plan