



Cannock Chase Council Air Quality Action Plan

*A5 Watling Street between Churchbridge and Longford and A4601
Wolverhampton Road, Churchbridge*

In fulfillment of Part IV of the Environment Act 1995
Local Air Quality Management

November 2013

Executive Summary

Cannock Chase Council is required by the Environment Act 1995 to review and assess air quality within the district. This is a phased process, whereby each round of review and assessment involves several stages. The level of work is commensurate with the risk of air quality objectives being exceeded.

During the review and assessment process, the Council found that air quality adjacent to the A5 Watling Street in Bridgtown exceeds nationally set objectives. Annual mean values nitrogen dioxide levels at the facades of domestic properties were found to be greater than the objective value of 40 µg/m³ on a frequent basis and therefore declared an area of the A5 to be an 'Air Quality Management Area' (AQMA) in 2006.

The combination of a high percentage of heavy goods vehicles on the A5, together with the close proximity of domestic properties to the road is deemed to be responsible for the exceedence. Environmental Health staff have worked with representatives from highways authorities, South Staffordshire Council, and local planners to find measures to include in an action plan. This has not been a straight forward process, as the A5 is a trunk road with a strategic purpose for national and regional and traffic, which restricts the measures that can be taken. For a significant time, de-trunking negotiations between the Highways Agency and Staffordshire County Council were being undertaken, which further added to the uncertainty of action planning. The A5 remains as a trunk road.

A number of actions have been identified, which will be pursued in order to minimise the risk of air quality exceedences. Some aim to address the specific air quality exceedence, whereas others may result in lessening emissions in the wider area. The actions are as follows:

- Investigate the potential for vehicle activated signage at Churchbridge, to encourage use of Lodge Lane in preference to the A5.
- Work with partners to encourage optimal utilisation of the M6Toll road.
- Encourage local sourcing of goods and services, to reduce vehicle miles.
- Pursue options to improve road junctions at Churchbridge and Bridgtown, to make traffic movement more efficient, and move traffic further from sensitive locations.
- Promote the smoky diesel hotline facility run by VOSA.

- Encourage businesses to develop travel plans which focus on sustainability and low emissions.
- Promote Staffordshire County Council's 'Share-a-lift' scheme, to promote car sharing for local commuters.
- Review of the road hierarchy and speed limits.
- Encourage provision of cycleways.
- Develop a design guidance document for local developers in the Churchbridge to Longford area.
- Control industrial emissions through current regulatory system.

Progress and effectiveness of measures will be reviewed annually.

Recent rounds of review and assessments have identified an exceedence of the annual mean nitrogen dioxide objective at an isolated property adjacent to the A5 east of the current AQMA between Churchbridge and Norton Canes. It will be necessary to extend the current AQMA to address this matter. Future reviews of this action plan will reflect developments in this matter.

Contents

Executive Summary	1
Contents.....	3
<i>Index of Tables.....</i>	<i>4</i>
<i>Index of Figures.....</i>	<i>4</i>
Introduction.....	5
<i>Legislation</i>	<i>5</i>
<i>Air Quality Scenario and Decision to Declare an Air Quality Management Area (AQMA)</i>	<i>6</i>
Air Quality Monitoring	10
Responsibility for delivery	11
The Action Plan	12
Monitoring of Progress.....	17
<i>Consultation</i>	<i>18</i>
What we did	19
<i>Joint working party – outcomes</i>	<i>19</i>
Subsequent Actions	20
<i>Evaluation of Options</i>	<i>20</i>
Discussion of Scoping Exercise	21
Junction Improvements.....	30
Cleaner Vehicles / Driver Behaviour.....	39
Integrated Measures & Modal Shift	42
Industrial Emissions	49
The Way Forward.....	53
Appendix	54

Index of Tables

TABLE 1: LAQM OBJECTIVES INCLUDED IN THE AIR QUALITY REGULATIONS	5
TABLE 2: AIR QUALITY MONITORING RESULTS; ANNUAL MEAN NITROGEN DIOXIDE ($\mu\text{G}/\text{M}^3$)	10
TABLE 3: SCOPING MATRIX PRODUCED FROM STEERING GROUP MEETINGS	54

Index of Figures

FIGURE 2: NITROGEN DIOXIDE MONITORING LOCATIONS IN BRIDGTOWN	7
FIGURE 3: LOCATION OF AIR QUALITY MANAGEMENT AREA	9
FIGURE 4: PREDICTED AND MONITORED TRENDS IN AIR QUALITY.....	20
FIGURE 5: SOURCE APPORTIONMENT FOR EMISSIONS	22
FIGURE 6: MAJOR TRAFFIC ROUTES.....	24
FIGURE 7: M6TOLL TRAFFIC DATA.....	26
FIGURE 8: M6TOLL JUNCTIONS	27
FIGURE 9: JUNCTION ARRANGEMENTS IN BRIDGTOWN - CURRENT	31
FIGURE 10: JUNCTION ARRANGEMENTS IN BRIDGTOWN – ‘OPTION C’	33
FIGURE 11: JUNCTION ARRANGEMENTS IN BRIDGTOWN – ‘OPTION D’	35
FIGURE 12	51

Introduction

Legislation

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. 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 which 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. The objectives are presented in Table 1.

Table 1: LAQM objectives included in the Air Quality Regulations

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	Extant
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	Extant
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

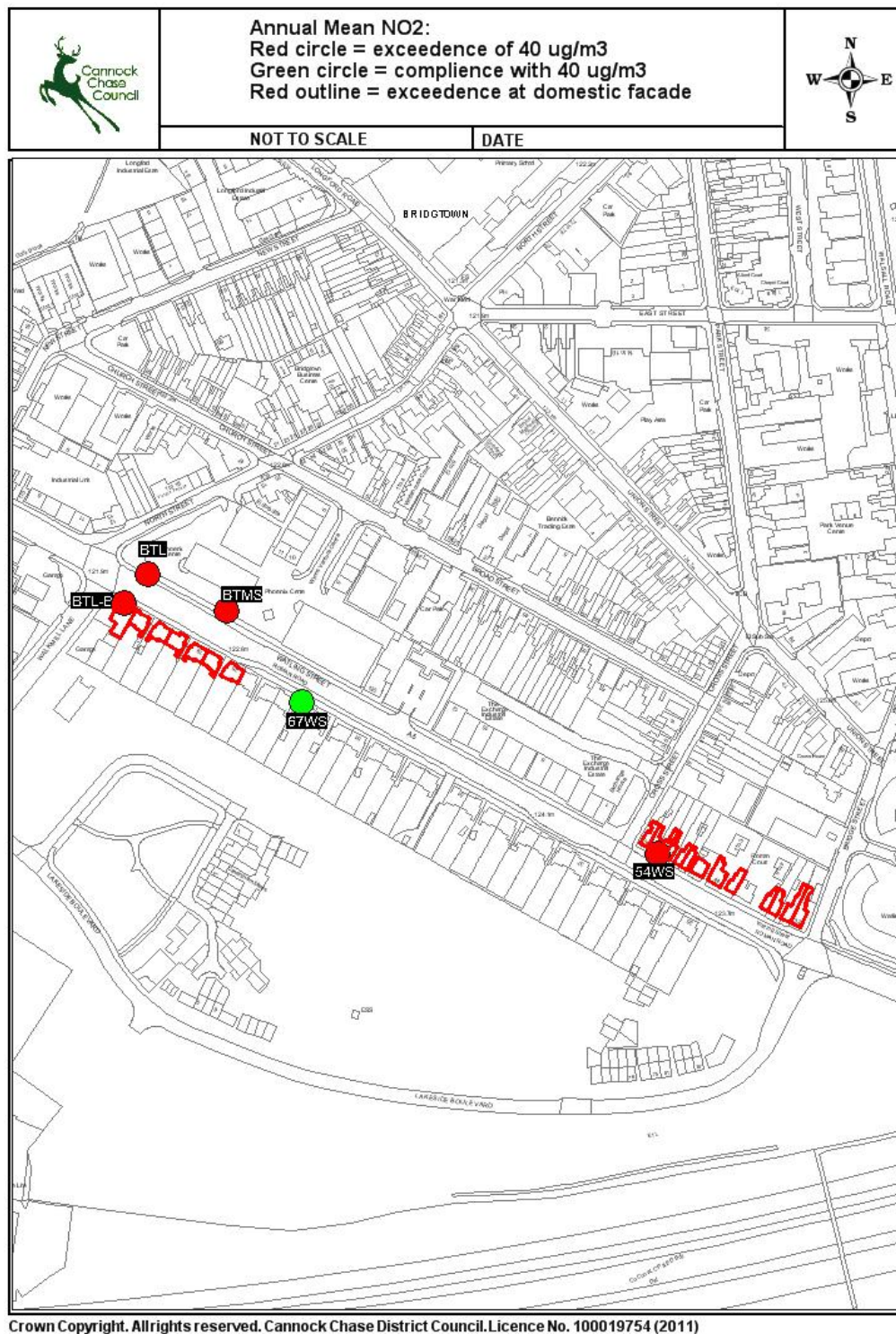
Technical Guidance (LAQM.TG(09)) and Policy Guidance (LAQM.PG(09)) were issued on behalf of DEFRA in January 2009. This guidance sets the framework for the requirements for future years of review and assessment taking account of experiences from the previous rounds of review and assessment. Cannock Chase Council (CCDC) has a responsibility under Section 84(2) of the Environment Act 1995 to produce an Air Quality Action Plan.

Air Quality Scenario and Decision to Declare an Air Quality Management Area (AQMA)

Cannock Chase Council found a single area where there was a likelihood of exceeding the annual mean average air quality objective for nitrogen dioxide (NO_2) following a detailed assessment of its district in 2006. Nitrogen dioxide is a pollutant caused as part of the combustion process, principally from traffic emissions.

The area of exceedence is a length of the A5 Watling Street in Bridgtown, where domestic properties are positioned in close proximity to idling or slow moving traffic. The frontages of such properties are mostly within 5 metres of the kerbside. Figure 1 shows the location of properties considered as experiencing exceedence of the objective, together with locations where air quality monitoring shows exceedence and non-exceedence of the objective.

Figure 1: Nitrogen Dioxide Monitoring Locations in Bridgtown

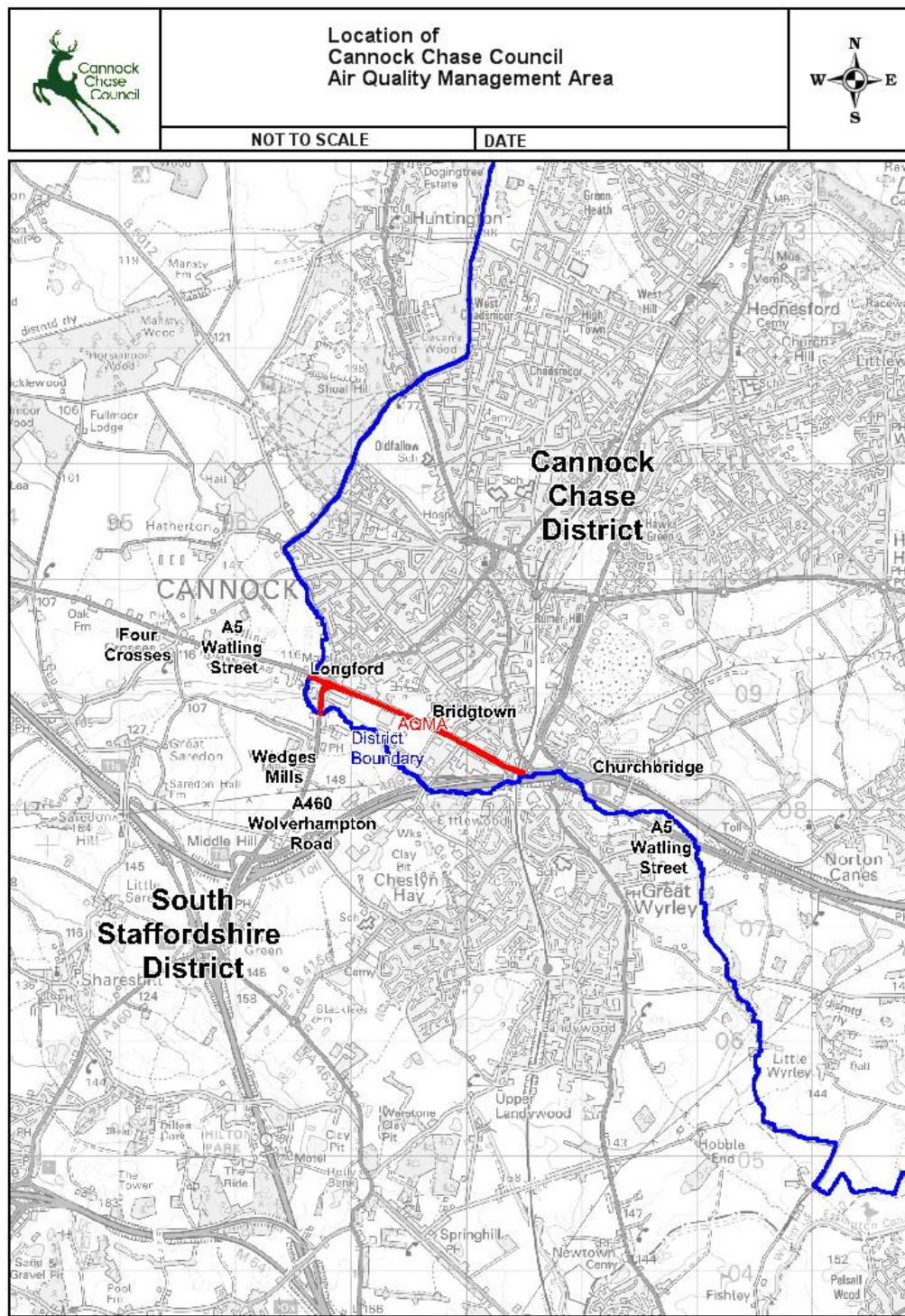


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The Council has subsequently carried out a 'Further Assessment' of the sources of pollution within the air quality management areas, to assist in the production of this action plan. This investigation and the continual rounds of review and assessments have confirmed the need for an AQMA¹. An AQMA was declared in 2006 and a plan of the boundary is shown in Figure 2. The boundary extends eastwards (to a significant junction with the A34 Walsall Road, A460 Orbital Way and junction T7 with the M6Toll motorway, "Churchbridge junction") and westwards to the district boundary on the A5 Watling Street and A460 Wolverhampton Road at Longford. This boundary extends westwards well beyond the area of exceedence to encourage an integrated approach to tackling emissions from road vehicles.

¹ http://www.cannockchasedc.gov.uk/downloads/200124/environmental_protection : Cannock Chase Council Air Quality reports

Figure 2: Location of Air Quality Management Area



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Air Quality Monitoring

Air quality monitoring has been in operation prior to and subsequent to declaring the AQMA. Details of the monitoring methodology, locations and quality control / procedures are documented in review and assessment documents accessible from the Council's website².

Table 2: Air Quality Monitoring Results; Annual Mean Nitrogen Dioxide ($\mu\text{g}/\text{m}^3$)

Site ID	Address	2007	2008	2009	2010	2011	2012
BTMS (automatic monitor)	Watling Street, Bridgtown.	39.8 (poor data capture)	49.1	46.9	44.7	36	39.0
BTL-B	Façade of 87 Watling St., Bridgtown.	37.7	38.5	45.4	46.0	40.4	40.5
BTMS	External façade of automatic monitor (BTMS), Watling St., Bridgtown.	38.0	48.8	39.6	47.4	37	38.6
67 WS	Façade of 67 Watling Street, Bridgtown.	n/a	29.3c Sep-Dec	31.7	32.6	27.2	28.1
54 WS	Façade of 58 Watling Street, Bridgtown.	n/a	35.7c Sep-Dec	45.3	44.1	32.6	34.3

Grey shade = relevant receptor

Red data = exceedence of $40 \mu\text{g}/\text{m}^3 \text{NO}_2$

Blue data = marginal values (36 to $40 \mu\text{g}/\text{m}^3$)

² http://www.cannockchasedc.gov.uk/downloads/200124/environmental_protection : Cannock Chase Council website air quality review and assessment documents

Responsibility for delivery

Cannock Chase Council has a responsibility to develop an Action Plan (AQAP) after an AQMA has been declared, and to undertake appropriate measures within its jurisdiction to help alleviate the air quality exceedence. However, in cases where exceedence is overwhelmingly due to emissions from road sources, then effective practicable action may only be implemented by the highways authority responsible for the relevant road network. Certain measures which may influence the generation of local traffic or accessing infrastructure funding may be under the influence of the district authority. In this case, emissions from the A5 Watling Street in close proximity to residential properties, often involving nationally or regionally generated traffic, are the overwhelming cause of air quality exceedence. As a trunk road, the Highways Agency³ is responsible for the road infrastructure and traffic management measures on the trunk road itself. The remaining local road network is the responsibility of the local highways authority which is Staffordshire County Council⁴.

These matters are discussed in [Subsequent Actions](#).

Cannock Chase Council's responsibility is to develop an action plan outlining actions aimed at improving air quality to a level where by the air quality objective is achieved at relevant locations. Relevant locations are those where members of the public are likely to be exposed to air pollution for the relevant averaging time. In the case of annual mean nitrogen dioxide this equates to residential properties and the air quality at domestic facades is representative of the air quality entering into properties.

Cannock Chase Council also has the responsibility to deliver appropriate actions within its control that are appropriate towards improving air quality.

For a significant time following declaration of the AQMA, the de-trunking negotiations continued to take place between the Highways Agency and Staffordshire County Council. These plans were subsequently discontinued, and the road retained its trunk road status. However, a delay progressing action plans resulted.

³ <http://www.highways.gov.uk/> : Highways Agency website

⁴ <http://www.staffordshire.gov.uk/transport/staffshighways/Homepage.aspx> : Staffordshire County Council Highways Department website

The Action Plan

The following table of actions form a plan to address the exceedence of annual mean nitrogen dioxide objective values within the AQMA. Detail of the decision process and evaluation of these options, and others that have not been included, are provided in Evaluation of Options below.

Action	Organisation	Date	Action to Date
LDV/HDV advice on routing: Provision of vehicle operated signals at Churchbridge Traffic Islands to encourage traffic to use Lodge Lane in preference to A5 at busy times: <ul style="list-style-type: none">• Highways Agency to consider / model potential benefits and to continue to work to secure funding for this option.• Potential impact on local roads, therefore liaison with Staffordshire County Council would be required.	Highways Agency.	Ongoing.	None.

M6Toll: 1. Dialogue with Midlands Expressway to explore options for encouraging HDVs onto the M6Toll in preference to the A5. 2. Attention to air quality and M6Toll issues through the A5 Liaison Group.	1. CCDC (Environmental Health, 2. Local Planning and Economic Development)	Ongoing	1. Working group started 2012. 2. CCDC local planners attend A5 Liaison Group.
Encouragement of local sourcing of products: 1. CCDC to continue membership of 'Think Local 4 Business', to encourage trade on a local level. 2. CCDC to consider support website.	CCDC.	Ongoing.	1. Ongoing. 2. Ongoing.

Junction Improvements: Walkmill Lane / A5 Watling Street / North Street. Seek funding for the 'no right turn into North Street' options: <ol style="list-style-type: none"> 1. Pinchpoint funding bid application. 2. Value Management funding bid. 3. If above applications are unsuccessful, submit a 'Capital Grant Funding' application to Defra. 	<ol style="list-style-type: none"> 1. CCDC. 2. Highways Agency. 3. Cannock Chase Council. 	<ol style="list-style-type: none"> 1. Achieved. 2. Ongoing. 3. Review in 2014. 	<ol style="list-style-type: none"> 1. Application dismissed by the Greater Birmingham Local Enterprise Partnership on the grounds of no direct links with job creation and reduction of highway capacity. July 2012. 2. Traffic signal equipment has recently been replaced and this includes the provision of MOVA to optimise the operation of the signals to reduce queuing. It is expected to contribute towards improving the air quality. The 'No right turn' scheme is part of the financial bid programme for the 2013/14 financial year. Delivery will be dependent of securing funding. 3. Not undertaken.
Junction Improvements: Seek funding for both the 'Signalised Scheme' and 'Improvement to existing traffic islands' at Churchbridge junction: <ul style="list-style-type: none"> • Pinchpoint funding bid application. 	CCDC.	Achieved.	Pinchpoint application submitted. Application not yet determined.

Smoky Diesel Hotline: Publicise the VOSA service on the CCDC website.	CCDC.	Achieved & ongoing.	Completed: http://www.cannockchasedc.gov.uk/info/200124/environmental_protection/785/air_pollution
Local Transport Plans: 1. Improve public transport to the West Midlands. 2. Support A5(T) Churchbridge Improvements. 3. Encourage sustainable transport.	Staffordshire County Council.	No time timetable provided for specific measures. Ongoing.	Ongoing.
Travel Plans for Businesses within AQMA: 1. Survey medium and large sized businesses within the vicinity of the AQMA. 2. Encourage businesses without a green transport plan to develop one. 3. Provide SCC with a list of business willing to develop a	1, 2 & 3: CCDC. 4: Staffordshire County Council.	1, 2, & 3: Within 12 months of implementation of the action plan.	Not yet commenced.

<p>green transport plan, so that they can assist in the process.</p> <p>4. Follow up work by SCC.</p>			
<p>Staffordshire's Share a Lift Scheme:</p> <p>1. SCC to continue to manage the scheme.</p> <p>2. CCDC to help identify businesses that are willing to participate in the scheme.</p>	<p>1. Staffordshire County Council.</p> <p>2. CCDC.</p>	<p>Ongoing.</p> <p>Review progress after 12 months.</p>	<p>1. Ongoing.</p> <p>2. Not yet commenced.</p>
<p>Review of Road Hierarchy and Speed Limits:</p> <p>1. Consideration being given to the matter and funding potential being sought.</p> <p>2. Countywide review of 20 mph zones and speed limits.</p>	<p>1. Highways Agency.</p> <p>2. Staffordshire County Council.</p>	<p>1. End of 2013.</p> <p>2. End of 2013.</p>	<p>1. This has been considered but no review of the speed limit is proposed at present.</p> <p>2. Not known.</p>
<p>Improved Local Cycle Facilities:</p> <p>Addressed mainly via opportunities that arise through the planning system.</p>	<p>1. CCDC</p> <p>2. Highways Agency</p>	<p>Ongoing.</p>	<ul style="list-style-type: none"> • A developer funded cycleway facility has been installed next to Lakeside Boulevard in Bridgtown. • A cycleway link is now present, linking Churchbridge traffic islands with Kingswood Lakeside. • Future aspirations include linking Bridgtown with Cannock town centre.

Design Guidance for the A5 between Churchbridge and Longford Island: Develop & publish guidance.	Cannock Chase Council (Planning Dept)	Provisionally end of 2013.	Cannock Chase Council are currently a design guidance document as part of the 'Design Supplementary Planning Document'. Although not yet complete, this can be used as 'emerging guidance' for developments that may occur in the interim period.
Control emissions from industrial premises within the AQMA: Continue regulating industry.	CCDC	Ongoing.	Ongoing.

Monitoring of Progress

Progress will be monitored and reported annually.

- Actions listed above will be tracked to determine whether they have been achieved by the listed date, or whether it is on track to do so.
- Air quality monitoring data within the AQMA will be assessed to determine trends that may develop and indications of compliance with the annual mean air quality objective for NO₂.
- Available traffic data for Watling Street will be analysed for indications of reduced HGV activity.

Consultation

Schedule 11 of the 1995 Act requires local authorities to consult during various stages of the LAQM process, and statutory guidance is provided by Defra. After declaration of the AQMA and publishing the subsequent 'Further Assessment', local residents, businesses and statutory consultees were notified of the decision and comments were invited. Notification consisted of a covering letter, plan of the AQMA and a user friendly advisory leaflet with a 'frequently asked questions' format. The response from local residents and businesses was low, and consisted of several residents detailing respiratory conditions they attributed to poor air quality. No technical suggestions were forthcoming.

Information on local air quality is available via LAQM reports provided on the Council's website

Applicable consultees are:

- the Secretary of State;
- the Environment Agency;
- The Highways Agency;
- Neighbouring local authorities;
- Staffordshire County Council (if applicable to English local authorities);
- Other public authorities as appropriate (parish and town councils)
- Bodies representing local business interests and other organisations as appropriate.
- Local Residents

Consultation will involved written notification of the consultation exercise and an electronic copy available via the Council's website. The consultation period lasted for eight weeks up to 31st December 2012

Paper copies will be made available upon request.

What we did

Joint working party – outcomes

Statutory guidance recommends that steering groups are established in order to develop a coordinated approach to developing action plans, and joint working with neighbouring authorities can prevent beneficial measures in one authority's area from having a detrimental effect on another. For these reasons, a joint working group was set up involving the following organisations to help scope options for AQAPs in the authority areas concerned:

- Cannock Chase Council Environmental Health Dept
- South Staffordshire Council Environmental Health Dept
- Staffordshire County Council Highways Dept
- The Highways Agency
- Cannock Chase Council Planning Policy Dept

This group met on a number of occasions following Cannock Chase Council's AQMA declaration, particularly considering the scoping options for AQAPs in close proximity. These are Cannock Chase Council AQAP covering A5 Watling Street (Bridgtown and Longford) and the A460 Wolverhampton Road (Longford) and South Staffordshire AQAPs covering the A5 Watling Street (Four Crosses) and A460 Wolverhampton Road (Wedges Mills).

The process involved the consideration of as many options for improving air quality as possible, and jointly deciding whether the options were feasible, would produce a beneficial outcome, were cost proportionate and were legally legitimate.

A table showing the scoping matrix is provided in Table 3.

Steering Group members' expertise indicate that these options are severely restricted. In particular, the trunk road status of Watling Street means that it provides a strategic transport role, and the most effective measures, such as diverting heavy goods vehicles, is simply not allowed by law.

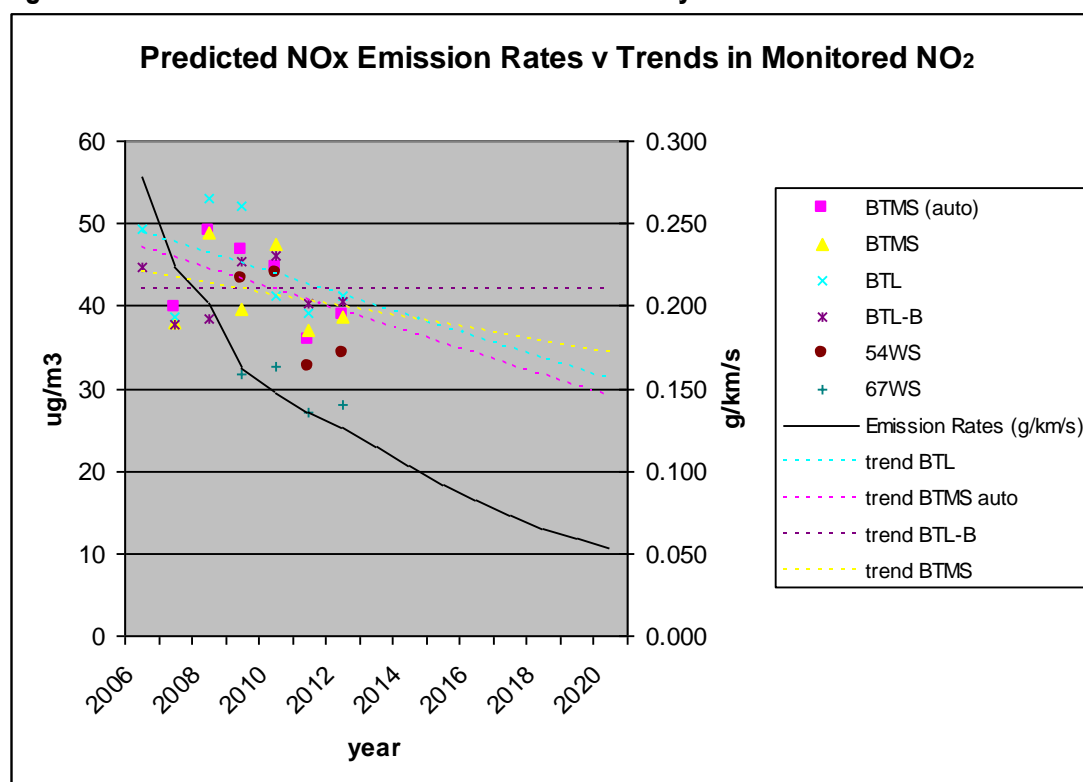
Upon completion of the scoping matrix it was no longer necessary for the Steering Group to meet and working relationships formed allowed useful dialogue with these organisations individually and via the Staffordshire Air Quality Forum; a working group consisting of Staffordshire local authorities.

Subsequent Actions

Evaluation of Options

As exceedences of the objective are marginally above the objective value of $40 \mu\text{g}/\text{m}^3$, it might be expected that improvements in engine technology, due to the introduction of Euro standards for emissions⁵, would offset increases in vehicle numbers. Figure 3 shows how emissions of NO_x for the A5 between Bridgtown and Longford are likely to reduce over the years 2006 to 2020⁶. A 'do nothing' action under such circumstances would be expected to result in compliance with the objective value within the forthcoming years. However, monitoring data within the AQMA until recent years has not shown such a definite pattern. Since 2011, levels of NO_2 have approximated to the annual mean objective; providing hopeful indications that the objective may be achieved in the near future. Data is erratic (reflecting annual variations in factors such as weather, road works, and anomalies with the atmospheric chemistry of NO_x and NO_2 at busy junctions) and it is too early to confirm such a trend.

Figure 3: Predicted and Monitored Trends in Air Quality



⁵ <http://www.dft.gov.uk/publications/road-vehicle-emission-factors-2009> : Dft information on Euro standards.

⁶ The years 2006 to 2010 are based on Dft traffic count data. Years 2011 to 2020 extrapolated data using 2010 base year and national traffic growth projections.

Consequently, it is far from certain that a 'do nothing' approach will deliver a satisfactory outcome. The Steering Group has therefore explored all the potential options available to address poor air quality.

Discussion of Scoping Exercise

Not all of the options derived from the scoping matrix have proved appropriate for inclusion in the completed action plan. For convenience a coloured sub-heading is provided for each of the options to indicating whether the action has been included in the action plan.

Green = included in action plan

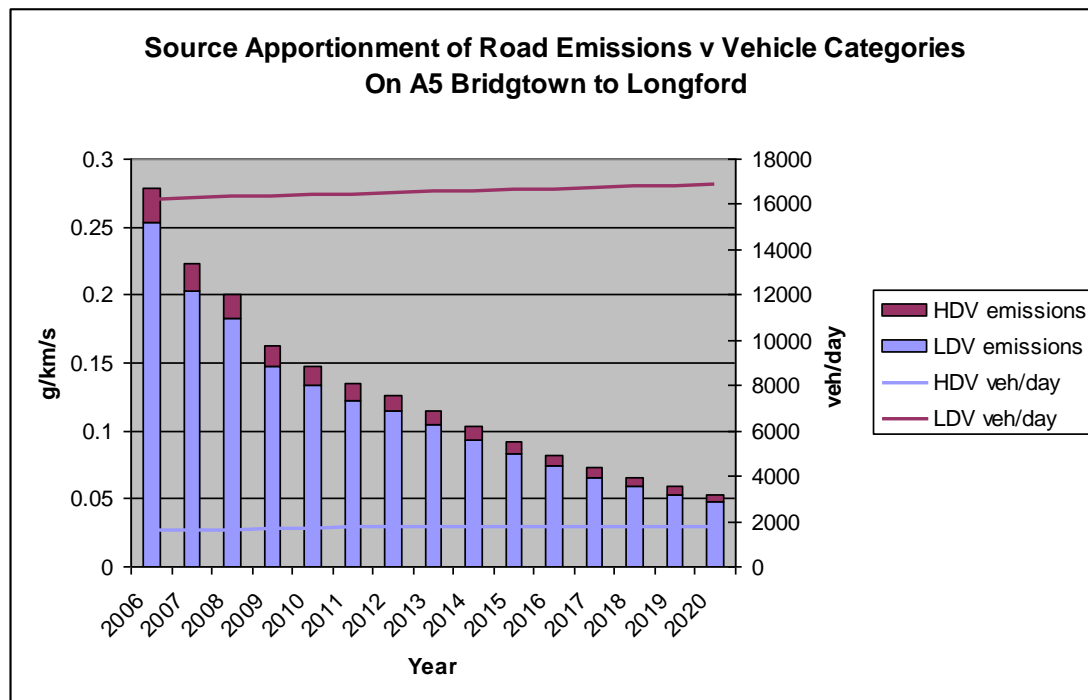
Red = not included in action plan

A cost / benefit summary is provided for each option. Generally, the costs for options have not been calculated and are based on an assumed estimate. 'Low' equates to measures already existing or within the usual budget for district councils (<£10,000), 'medium' equates to measures within the usual budget for county council projects (<£100,000) and 'high' equates to measures likely to cost more than £100,000.

Reducing Heavy Duty Vehicles (HDV) numbers on the A5

Analysis of the sources of emissions indicate that largest proportion originate from heavy duty vehicles, although the proportion of such vehicles is only 9% of the vehicle movement on the A5 Watling Street. This is presented in Figure 4, where predicted emissions between 2006 and 2020 are shown together with the predicted numbers of HDVs and LDVs. A reduction in HDV numbers would deliver the greatest reduction in local NO_x emissions in comparison to smaller vehicles.

Figure 4: Source Apportionment for Emissions



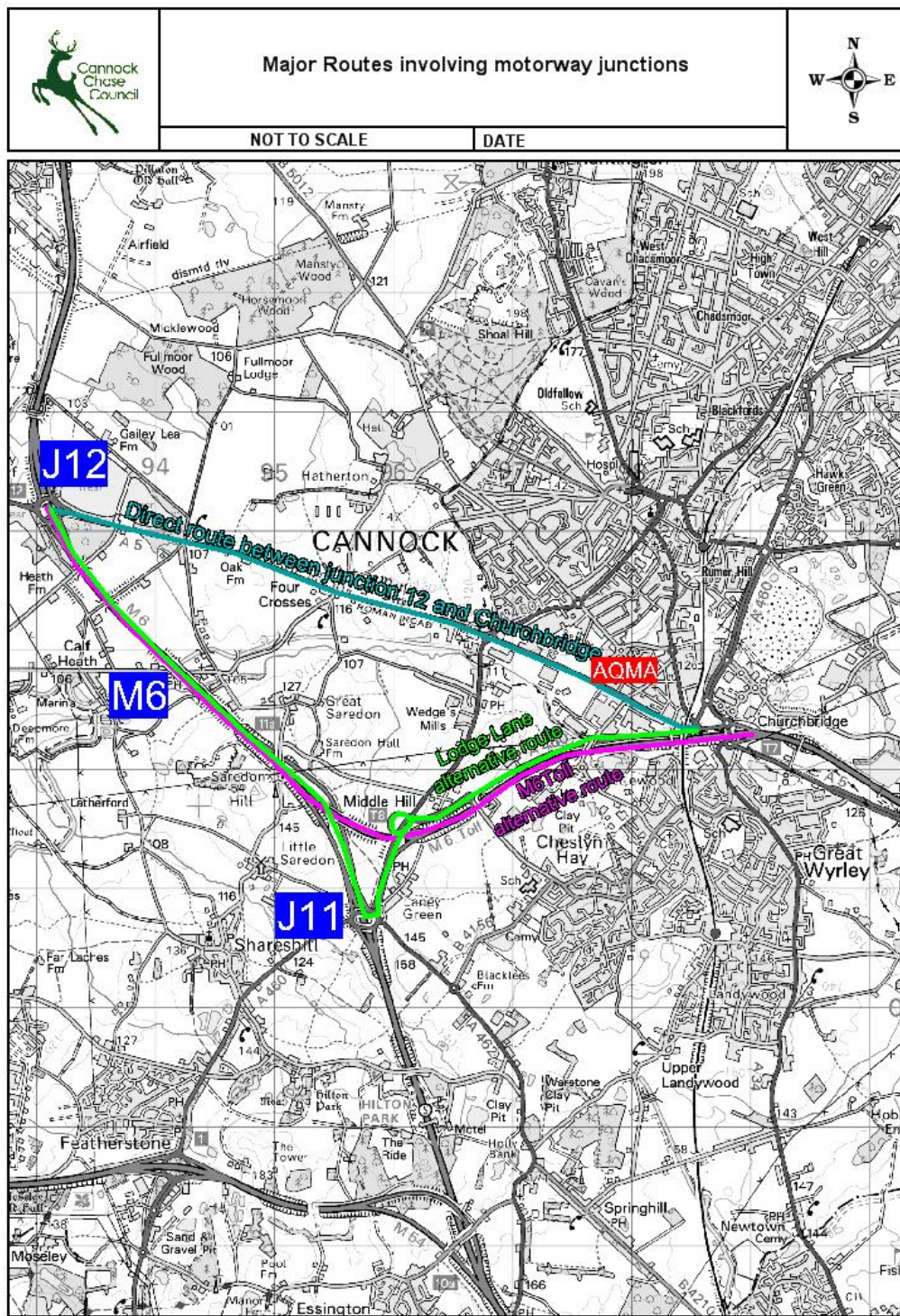
Various means of encouraging or compelling a reduction HDV numbers were considered.

LDV/HDV advice on routing

Included

Non-local traffic on the A5 includes a significant proportion travelling to or from the M6 or places to the west of the M6. Such traffic can feasibly use Lodge Lane, which runs parallel to the M6Toll.

Figure 5: Major Traffic Routes



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The Lodge Lane route presents a lower risk of air quality exceedences because there are no domestic properties in close proximity.

The A5 and A460 form part of the primary route network, there is little that can be done to compel HDVs from using these routes, and there is no strategy or signage to achieve such an objective. However, there is potential for vehicle operated signals at Churchbridge Traffic Islands, to direct west bound traffic along Lodge Lane during busy traffic periods. The Highways Agency are considering/modelling this option. However, funding for this work has yet to be secured.

Cost:	£ Not quantified	Low
Benefit:	Not quantified or modelled yet. Potentially it will reduce congestion on the A5 at peak congestion, thereby reducing 1-hour averaged nitrogen dioxide levels more than annual mean values.	High/medium

M6Toll

Included

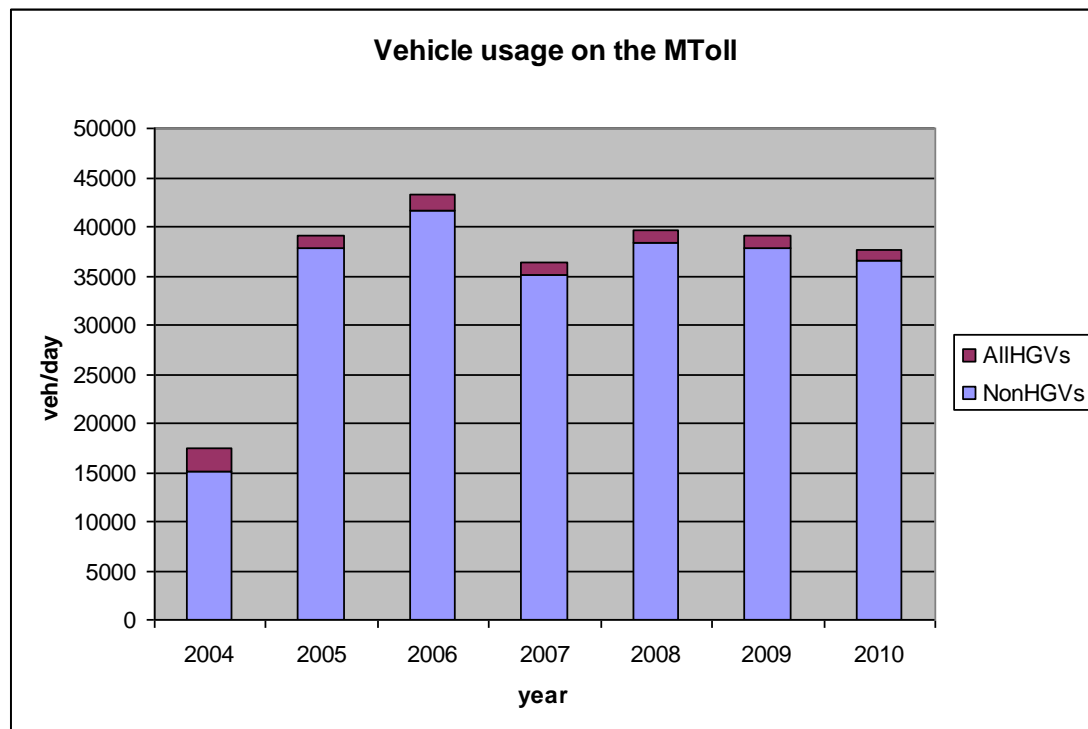
The M6Toll⁷ became operative in 2004 as a toll motorway linking the M6 motorway west of Cannock to the M42 near Coleshill, Warwickshire. It is operated by Midland Expressway Ltd ('MEL'). The total length is approximately 20 miles and runs parallel to the A5 Watling Street for approximately 12 miles and has the potential to accommodate a significant number of vehicles travelling to or from locations outside of the region. However the M6Toll is a commercial enterprise and management decisions are outside of the influence of the local authority, including toll charges, incentives to encourage HDVs onto the road and full access provision at Churchbridge.

Traffic count statistics show that HDV usage of the M6Toll has consistently ranged around 3 to 4 % between 2005 and 2010, which is low in comparison to the A5. Data⁸ is presented in Figure 6. Interviews with drivers using the A5 in the AQMA suggest that toll charges for larger vehicles is a discouragement for HDV use of the M6Toll.

⁷ <http://www.m6toll.co.uk/>

⁸ <http://www.dft.gov.uk/traffic-counts/area.php?region=West+Midlands&la=Staffordshire> : DfT transport statistics website.

Figure 6: M6Toll Traffic Data

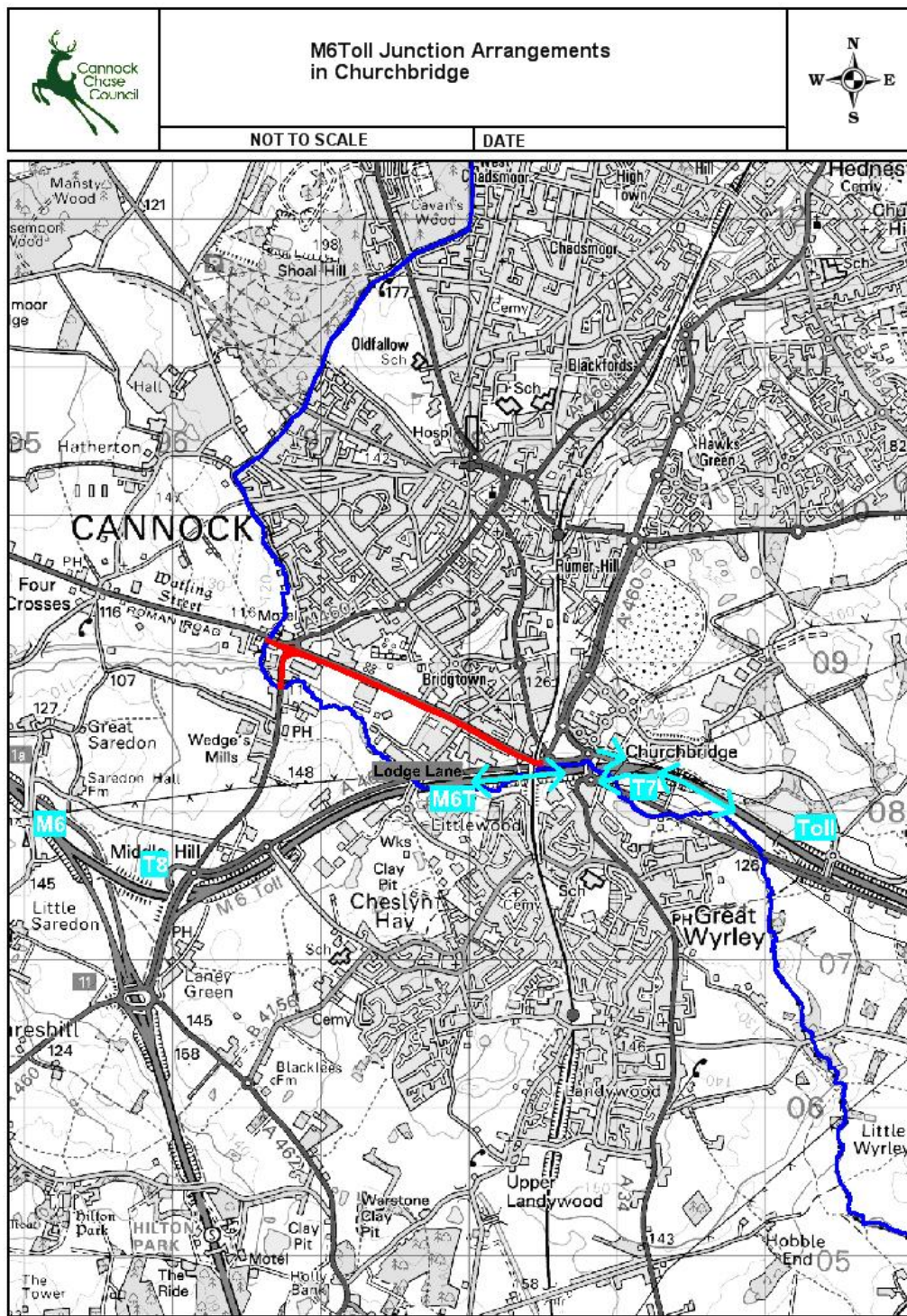


Taken from <http://www.dft.gov.uk/traffic-counts/area.php?region=West+Midlands&la=Staffordshire>

The current junction arrangement for the M6 Toll at Churchbridge does not accommodate eastbound traffic to exit or westbound traffic to enter onto the road. The result of this is no direct motorway link between Churchbridge and the M6. Currently, all traffic making this link has to use the Lodge Lane or the A5 through the AQMA. Full junction provision would offer an alternative. However, this would be an expensive and technically complex option, requiring the involvement of MEL. The commercial incentive for MEL is not obvious because the link between junction T7 and T8 / M6 is without a toll plaza, making the link effectively free for users. See Figure 7 for illustration.

Continued liaison with Midland Expressway Ltd. to explore options is considered as an appropriate action at this stage. Furthermore, the A5 Liaison Group, consisting of local planners from Midlands authorities along the A5, has developed an A5 Strategy, in which air quality matters and use of the M6 Toll are considered.

Figure 7: M6Toll Junctions



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Cost:	£ No costings are available for full T7 junction expansion for the M6Toll at Churchbridge. Costings for other options are the commercial consideration of Midlands Expressway Ltd.,	High
Benefit:	Benefits are not quantifiable, and would be dependant on charging policy for HDVs utilising the M6/T8 to T7 length of the M6Toll, vehicle signage and commercial deals with individual businesses.	Potentially High

Co-operation between hauliers

Not Included

Logistical arrangements for utilising empty vehicles to carry loads is not a practicable solution for all commercial vehicle movements. Survey interviews with drivers using the A5 corridor within the AQMA has confirmed that there are usually sound practical reasons for vehicles having empty loads. However, the logistics industry has become well established and commercial pressure now drives hauliers to integrate journeys more efficiently. As such, the public sector is not equipped to improve upon a service already provided by the private sector, especially at a local level.

Cost:	£ Not quantified for public sector provision.	
Benefit:	No improvement on current arrangements	Medium/low

Encouragement of local sourcing of products

Included

Cannock Chase Council recognises that buying local has multiple potential benefits amongst which could be improved air quality. It means more successful businesses through opportunities such as reducing transport and logistical costs, building stronger relationships

between suppliers and helping to stimulate competition and drive up quality. Benefits for the local area are maintaining and creating more jobs for local people, reducing environmental pollution through a lowering of the carbon footprint and other emissions, and reducing waste by cutting down on the need for packaging.

In April 2012 a report to portfolio leaders for Economic Development and Planning was submitted, which informed the Cabinet of a proposal to establish 'Think Local 4 Business' (TL4B) as a company limited by shares and recommended an 'in principle agreement' to join an incorporated Think Local 4 Business subject to certain conditions.

One of the aims of TL4B is to encourage inter-trading amongst the local business community and encourage the public sector and larger commercial organisations to recognise the benefits of using local suppliers.

Pivotal to TL4B is a new interactive website (<http://www.thinklocal4business.co.uk/>), the bulk of which is free of charge to the business community.

Cost:	£3000 one off payment to towards the purchasing of local business databases and contact details. £1000 annual payment towards marketing and promotion.	low
Benefit:	Not quantified	low

Junction Improvements

Walkmill Lane / A5 Watling Street / North Street

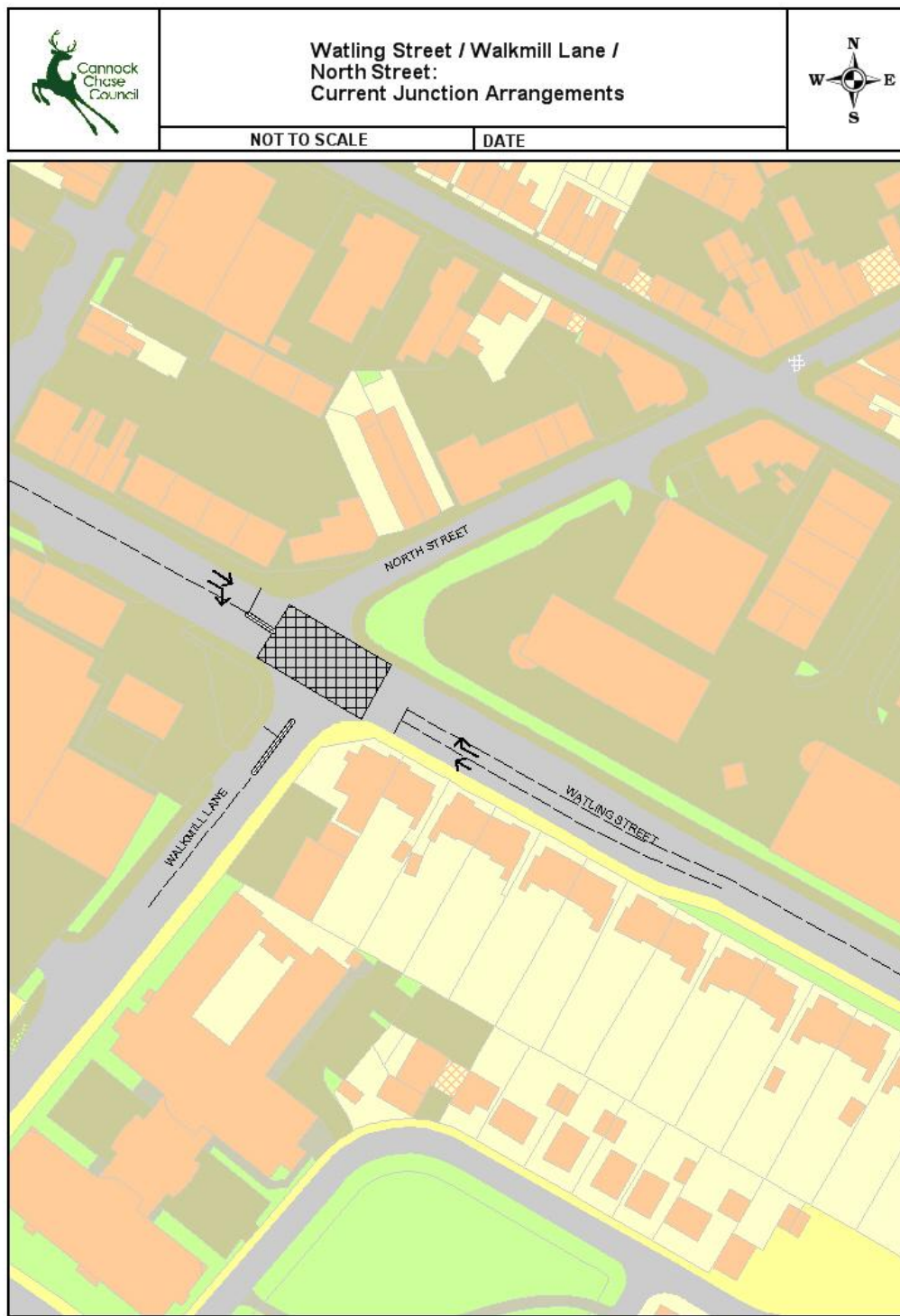
Included

The current junction of Watling Street with Walkmill Lane and North Street is presented in Figure 8. This arrangement causes eastbound traffic and traffic entering Walkmill Lane to use the lane in closest proximity to residential premises on the southern side of Watling Street. This forms the large majority of the traffic. Furthermore, queuing traffic idles within 5 metres of domestic frontages. Therefore, pollution levels at sensitive receptors are enhanced.

The Highways Agency reviewed options for junction alterations⁹ to move all or part of the traffic further away from the frontages of properties, as listed below. Potential air quality benefits were evaluated.

⁹ 'A5 Bridgtown Air Quality Management Study', Highways Agency

Figure 8: Junction Arrangements in Bridgtown - Current



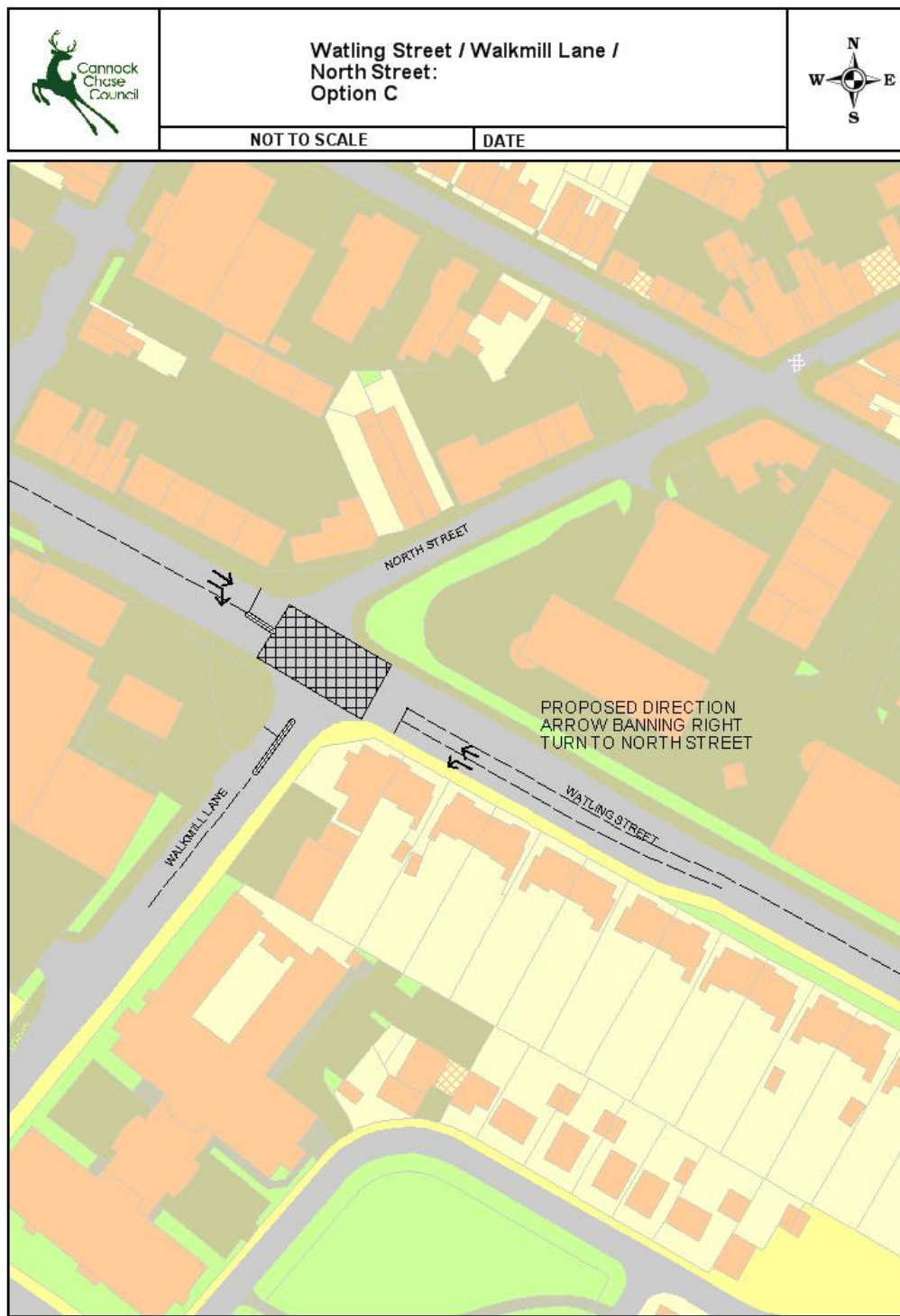
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Scenarios Evaluated:

At the time of study, the years 2010 were future year scenarios.

- **Base year** - 2007 - the latest year with a full twelve months of monitoring when the study commenced;
- Future years **option A** - 2010 and 2012 without the access road or development;
- Future years **option B** - 2010 and 2012 with the development and access road (but no change to junction priority from existing situation);
- Future years **option C** - 2010 and 2012 with the development and access road - Ban the right turn into North Street. On the westbound approach to Walkmill Lane, amended carriageway lane assignment so that the nearside lane is a dedicated left turn into Walkmill Lane and the offside lane is straight ahead. Vehicles that need to turn right into North Street would instead use the access road through the Lakeside Park development and access North Street via Walkmill Lane (proposed by HA and Cannock Chase);

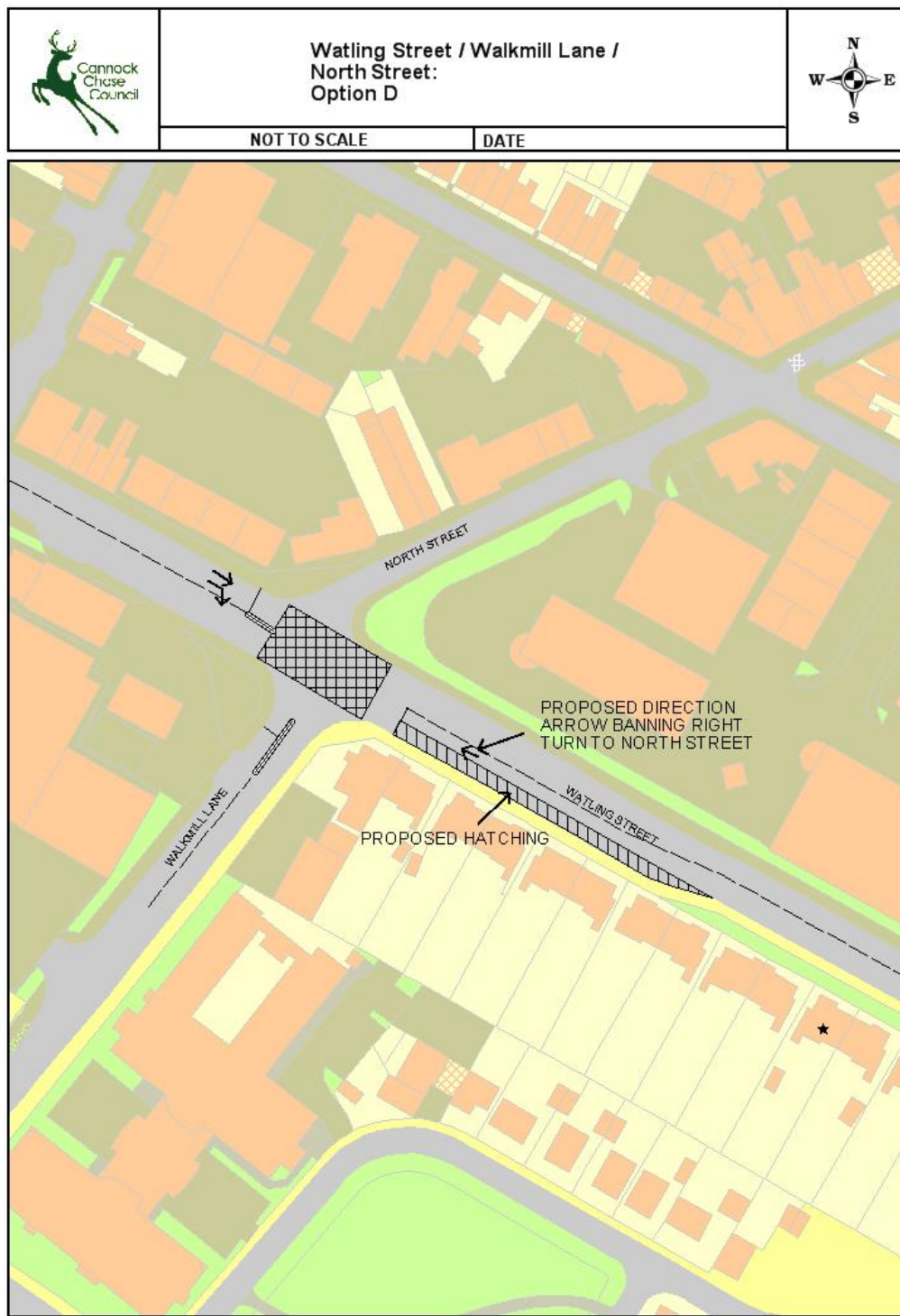
Figure 9: Junction Arrangements in Bridgtown – ‘Option C’



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- Future years **option D** - 2010 and 2012 with the development and access road - Ban the right turn into North Street and amended lane assignment on the westbound approach to Walkmill Lane to one lane only, to cater for vehicles turning left into Walkmill Lane and straight ahead. The nearside lane would be hatched. This would increase the distance between vehicles and residential properties on the south side of the A5 at the junction. Vehicles that need to turn right into North Street would instead use the access road through the Lakeside development and access North Street via Walkmill Lane (proposed by HA and Cannock Chase);

Figure 10: Junction Arrangements in Bridgtown – ‘Option D’



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And

- Future years **option E** - 2010 and 2012 with the development and access road - No change to junction priority from existing situation. Introduction of carriageway hatching to increase sideways clearance from the residential properties on the north and south

side of the A5 between the Bridge Street and North Street junctions, subject to available carriageway widths. A lane width of 3.65 metres was assumed (proposed by Cannock Chase).

Summary of Outcome

The results indicate that for nitrogen dioxide:

- Comparison of Option B with Option A indicates that the Lakeside Park development would result in an increase of $<0.5 \mu\text{g}/\text{m}^3$ in concentrations at all receptors within the model area;
- Option C would result in a reduction of up to $1.5 \mu\text{g}/\text{m}^3$ in concentrations at residential properties on the south side of the A5, east of the Walkmill Lane junction. There is an increase in concentrations of up to $1.3 \mu\text{g}/\text{m}^3$ on the on the north side of the A5 at the junction, but there are no residential properties present in this location;
- Option D would result in the greatest reduction in concentrations (up to $1.7 \mu\text{g}/\text{m}^3$) at residential properties on the south side of the A5 east of the Walkmill Lane junction. There is an increase in concentrations of up to $1.4 \mu\text{g}/\text{m}^3$ on the on the north side of the A5 at the junction, but there are no residential properties present in this location;
- Option E would have a negligible change compared to Option B (change of $<\pm 0.5 \mu\text{g}/\text{m}^3$).

The Highways Agency report found that on this basis the feasibility of Option C or Option D should be investigated, on the basis that these would derive the maximum benefit.

Costs were calculated to be £167,000. The scheme proposing a right turn ban into North Street together with improved pedestrian facilities was considered by the 'Value Management' process (the Agency's assessment process used to prioritise schemes) in 2010. Safety schemes which propose to reduce cluster areas (Killed or Seriously Injured (KSI)) tend to score well and are prioritised for delivery. As such, the A5 scheme proposing a right turn ban into North Street did not receive funding on this occasion.

The scheme was reviewed as part of the programme for 2012/13; taking the scheme to Value Management and confirming its validity. It was unsuccessful for that financial period, but will be

reconsidered for the 2013/14 programme. In parallel, the scheme has been submitted as part of the Pinch Point Programme (PPP) proposals from the LEP, but was turned down for funding. The Highways Agency have provided supporting evidence to promote this scheme.

However, recently potential funding has been identified through the '[Pinch Point Programme](#)'

Cost:	£167,000	High
Benefit:	1.5 to 1.7 µg/m ³ at domestic premises on the south side of Watling Street	High

Improvements at Churchbridge junction

Included

In 2010, a study¹⁰ report was undertaken by the Highways Agency in response to the emerging Cannock Chase Local Development Framework (LDF), and in particular the key document within it, the Core Strategy Development Plan Document (DPD). The Study was a technical assessment of the additional traffic that may be generated by further planned development within Cannock and critically how any detrimental impact upon the Strategic Road Network (SRN) could be allayed through identifiable and tested mitigation measures.

The A5 suffers from congestion, and has a complex series of road junctions at Churchbridge, to the immediate south of the Cannock urban area, which the Highways Agency has identified as a point on the network as vulnerable to further development pressures. The AQMA feeds directly into the junction, and is therefore directly affected by the capacity of the junction to accommodate eastbound traffic on Watling Street.

A number of improvement options have been considered, including signalisation, traffic island and lane alterations. A scheme has been submitted for Pinchpoint funding, which involves the following measures:

¹⁰ http://www.cannockchasedc.gov.uk/info/200074/planning/542/planning_policy/10 : A5 study: The Potential Impact of Development (2010)

- Modifications to the Western A5/A34/A460 Lodge Lane Roundabout with approach widening on four entries to the junction,
- Modifications to the Eastern A5/A460/M6 Toll on-slip Roundabout with a free flow NB approach,
- Modifications to the Southern A5/A34/M6 Toll off-slip Roundabout with NB approach widening.

The scheme is intended to reduce congestion and improve travel times. Information on potential air quality benefits are not available.

The overall cost estimate of the Churchbridge Scheme is £2.04 million. This is based on the following breakdown:

Cost:	£2.04 million	High
Benefit:	Not quantified	Air quality benefits likely to be medium. Plus wider benefits.

Pinch Point Programme

The Highways Agency has developed an assessment framework to prioritise road improvement schemes for funding under the Pinch Point Programme (PPP), an initiative that was announced as part of the Chancellor's Autumn Statement. The Government has made available over £200 million to the Agency to focus on delivering improvements to the Strategic Road Network in England that relieve congestion and help stimulate growth in the local economy.

Schemes must be fully deliverable within a three year duration period of the programme.

Cannock Chase Council has submitted two applications for junction improvements to the Local Enterprise Partnership (LEP), relating to the junction (a) A5 Watling Street with Walkmill Lane and North Street, and (b) the series of junctions at Churchbridge. Both of these are in direct proximity to the AQMA in Bridgtown, which would have an anticipated improvement in air quality.

The former (a) was rejected at an early stage.

The Churchbridge junction proposal (b) is still under consideration at the time of writing. The LEP is required to respond to the Highways Agency by 30 April 2012 so that, if successful, the scheme development process and prioritisation can take place from May to July 2012.

Cleaner Vehicles / Driver Behaviour

Educational Measures

Not included

The Highways Agency's Driver Information Programme¹¹ was initially proposed (option 15). However, on investigation, the material did not address the necessary issues and has now been archived to a publicly unavailable website. As such, this option is no longer to be taken forward.

¹¹ <http://www.highways.gov.uk/knowledge/11522.aspx>: Highways Agency Driver Information Programme.

Cost:	£ Not evaluated.	
Benefit:	Minimal. Material not appropriate.	low

Alternative Fuels and other national measures

Not Included: National measure

Incentives to shift towards alternative fuels and ultra-low emission vehicles are the subject of national measures. An overview of the subject can be viewed at

<http://www.dft.gov.uk/topics/sustainable>.

Cost:	£ Not applicable	Not applicable
Benefit:	Incremental improvements over time, as demonstrated in	Very High

Vehicle Testing

Not included

Cannock Chase Council's Environmental Protection Section frequently take part in multi-agency operations with Staffordshire police and the Vehicle and Operator Services Agency (VOSA). These operations are targeted at commercial vehicles to establish compliance with various items of legislation. VOSA are able to determine overall road worthiness and visual inspections of exhaust emissions can be made. Unfortunately, the facility for VOSA to perform emissions tests during such exercises is no longer available, which means that NO_x emissions are not measured.

Cost:	£ Not applicable	low
Benefit:	Not quantified	low

Smoky Diesel Hotline

Included

Cannock Chase Council publicise the Smoky Vehicle Reporting scheme¹², run by VOSA, on the Council's website¹³. This allows members of the public to report vehicles that emit excessive exhaust smoke. The following information is required from the complainant:

- The vehicle registration number (displayed on the number plate)
- The type of vehicle (be as specific as possible)
- The date, time and place where you saw the vehicle, and if possible,
- The name of the vehicles operator (the company or owner)

Cost:	£ Nil	low
Benefit:	Not targeted at nitrogen dioxide, but contributes towards generally cleaner air. Benefits not quantified.	low

¹² <http://www.dft.gov.uk/vosa/contactus/sharingintelligence/sharingintelligence.htm> . VOSA's Smoky Vehicle Reporting Scheme.

¹³ http://www.cannockchasedc.gov.uk/info/200124/environmental_protection/785/air_pollution . Publicity for the 'Smoky Vehicle Reporting' scheme on Cannock Chase Council's website.

Integrated Measures & Modal Shift

Local Transport Plans

Included

Staffordshire's third LTP¹⁴ was published in April 2011 and is split into two documents:

The Strategy Plan sets out the objectives and policies for managing local transport, infrastructure and highways in the county. It covers all modes of transport (including walking, cycling, public transport, car based travel, rail and freight), the management and maintenance of the local highway network and the relationship between transport and wider strategic issues such as the economy, community safety, the environment and social inclusion. Specific objectives relevant to air quality are:

- reducing road transport emissions and their effects on the highway network
- improving health and quality of life
- respecting the environment.

The Implementation Plan, which covers the period from April 2011 to March 2015, sets out the County Council's plans for transport delivery.

The District Integrated Transport Strategy¹⁵ identifies air quality issues on the A5 Watling Street as a challenge. Amongst the identified key strategic issues, those that may have a beneficial effect on air quality in the AQMA are:

- Improving public transport links to the West Midlands
- Support A5(T) Churchbridge improvement proposals (see above)

¹⁴

<http://www.staffordshire.gov.uk/transport/transportplanning/localtransportplan/localtransportplan2011strategyplan.aspx> . Staffordshire County Council Local Transport Plan 2011 Strategy Plan.

¹⁵

<http://www.staffordshire.gov.uk/transport/transportplanning/localtransportplan/draftcannockchasedistricttransportstrategy2011.pdf> Cannock Chase Integrated Transport Strategy

- Encourage sustainable travel

Cost:	£ N/A	low
Benefit:	No specific measures to address air quality in the AQMA. But overall measures aimed at minimising ambient air quality.	low

Travel Plans for Businesses within AQMAs

Included

Cannock Chase Council's current planning policy in respect of the green travel plans and provision of cycling facilities are laid out in the Local Development Framework supplementary planning document 'Parking Standards, Travel Plans & Developer Contributions for Sustainable Transport' at new developments¹⁶.

http://www.cannockchasedc.gov.uk/site/scripts/download_info.php?downloadID=123&fileID=1047 . This follows government guidance requiring automatic submission of green travel plans for larger developments. Travel plans are required to be submitted as part of planning applications and section 106 agreements, where a development is likely to have significant transport implications (particularly with respect to pollution, congestion or the character of the area), or generate a significant amount of car travel.

The document addresses provision of car parks, cycling and motorcycling facilities in a manner which discourages unlimited increase in car usage and encourages use of sustainable alternatives.

Staffordshire County Council are able to assist companies to develop green travel plans to accommodate initiatives such as installing cycle storage facilities and to set up a plan to promote cycling, and have offered to approach business on the request of Cannock Chase Council.

Cost:	£ Not evaluated	Medium/low
Benefit:	Not evaluated. However, the proximity of a number of large businesses in the area creates a significant opportunity for low emission travel in the locality.	medium

¹⁶ http://www.cannockchasedc.gov.uk/site/scripts/download_info.php?downloadID=123&fileID=1047. 'Parking Standards, Travel Plans & Developer Contributions for Sustainable Transport' on CCDC website.

Improve local cycle facilities

Included

As discussed earlier, the main sources of emissions leading to exceedence of the air quality objective are heavier, non-local vehicles. In itself, cycling is unlikely to have much impact in improving air quality in localised areas of exceedence. However, sustainable modes of transport are to be encouraged in reducing ambient emissions of pollution and as a local, sustainable form of transport cycling has a potential to make an impact in the district. Other social, environmental and health benefits are also to be gained.

No specific projects have been identified, but ongoing improvement of cycle facilities could be gained via other actions in this action plan. These are:

[Signalised Scheme at Churchbridge junction](#)

[Local Transport Plans](#)

[Travel Plans for Businesses within AQMAs](#)

[Design Guidance for the A5 between Churchbridge and Longford Island](#)

Cost:	£ Not evaluated.	medium
Benefit:	Benefit to wider sustainability, health & social issue more than local air quality.	low

Staffordshire's Share a Lift Scheme

Included

Staffordshire County Council run a scheme which is designed to put users in touch with others travelling a similar journey to work¹⁷. It requires employers to register with the scheme so that their employees can take advantage of the scheme.

It allows people to find a potential sharing partner who travels a similar route to work. Registration and searching is done by users and matches are then filtered by a selection of personal criteria chosen by the user so that they are matched with like minded people.

Cost:	£ Funding already secured. Not evaluated for local air quality purposes	low
Benefit:	Not evaluated. Likely to result in a small reduction in private vehicles. Benefit for wider sustainability and social agenda more than local air quality.	low

¹⁷ <http://share-a-lift.co.uk/x.jsp?ano=121> . Staffordshire County Council's 'share-a-lift' scheme.

Review of Road Hierarchy and Speed Limits

Included

Speed limits are able to influence road traffic emissions in two respects. Firstly, the rate of emissions is directly related to the speed of traffic, and in that respect there is an optimal speed for traffic in terms of minimising emissions. Secondly, the speed limit will dictate the patterns of traffic collectively, and may cause traffic congestion and safety issues if the optimal speed for optimal emissions is permitted. The current speed limit for the A5 in Bridgtown is 40 mph, which would appear to be sensible and typical of roads of this type. Changes are likely to have minimal impact on air quality. However, a review of speed limits has been considered as an action.

The Highways Agency is considering/model this option. However, they are yet to secure funding for this work.

Staffordshire County Council is responsible for local roads in the vicinity. Within the Integrated Transport Policy for Cannock Chase District is a countywide initiative to review 20 mph zones and speed limits.¹⁸

Cost:	£ Not evaluated.	low
Benefit:	Unlikely to be very beneficial, as A5 speed limits are probably already appropriate.	low

Design Guidance for the A5 between Churchbridge and Longford Island

Included

Cannock Chase Council recognises that the A5 between Churchbridge and Longford is significant to the economic prosperity of the district. For many, it is the entrance into the district and therefore creates the first or only impression. Furthermore, it presents the environment in which several large national businesses are located.

¹⁸

<http://www.staffordshire.gov.uk/transport/transportplanning/localtransportplan/draftcannockchasedistricttransportstrategy2011.pdf> . Cannock Chase District Integrated Transport Policy 2011 – 2026, Staffordshire County Council

The current environment could benefit from being less cluttered, greener, more attractive townscape/corridor for the benefit of the local economy and improving the impression of the District to passers-by. The Council's Planning Department are currently developing a design guidance document for local developers, in order to address these issues. The Environmental Health Department have been consulted on air quality issues. This presents an opportunity to encourage softer measures that will encourage sustainable transport and landscape features that may help to improve general ambient airborne pollution. Such measures are unlikely to directly address the air quality exceedance issue, but provide wider benefits.

Ideas put forward by Environmental Health include:

- Increased vegetation in the landscape. Parts of the area are characterised by large, stark open frontages of business and large roof spaces. Novel technologies such as green roofs, together with enhancing natural features such as water courses and tree planting could provide a sink for airborne pollutants, especially particulate matter and VOCs, whilst also providing many other environmental and visual benefits.
- Integrated provision of cycleways and pedestrian facilities, would improve the opportunities for workers to commute to work sustainably. Pathways adjacent to the A5 are reasonably generous in width and may possibly accommodate combined pathways and cycleways. Pedestrian use is poor, probably due to the large distances between domestic areas and places of work, and a sense of partition caused by the A5 itself. Cycling rates are low, probably due to the hostile road environment. Anecdotal information suggests that cyclists using the A5 tend to be commuters to the existing large business operations and there is a potential for growth in this area.

Low pedestrian and cycling levels prevents the area from appearing lively and welcoming, which in turn is potentially detrimental to the economic prosperity of the locality.

Cost:	£ Not evaluated.	Design guidance: low Design implications for developers: medium/low
Benefit:	Likely to have an impact on wider ambient pollution levels rather than specifically local to the exceedance localities.	low

Industrial Emissions

Control emissions from Industrial premises within the AQMA

Cannock Chase Council is required to regulate certain types of industries to reduce pollution and in particular improve air quality. The laws include The Pollution Prevention & Control Act 1999 and Environmental Permitting (England and Wales Regulations) 2010 which together govern Integrated Pollution Prevention and Control and Local Authority Pollution Prevention and Control.

Our role in the regime is to issue permits which set controls and emission standards to minimise pollution from certain industrial activities. The Activities which require a permit can be found in Part 2 of Schedule 1 of the Environmental Permitting (England and Wales) Regulations 2010. Once a Permit has been issued we routinely inspect the activity, those with a higher pollution potential are inspected more frequently.

Currently there are 40 permitted processes in the district, of which 32 are regulated by Cannock Chase Council. The geographical relationship with the AQMA is as follows. Those:

Within 50 metres:

- 1 x vehicle refinishing process.
- 1 x waste oil burners
- 1 x service stations

50 to 500 metres:

- 1 x di isocyanate process

500 to 5000 metres:

- 2 x vehicle refinishing
- 12 x service stations
- 2 x dry cleaning
- 1 x timber process
- 1 x mineral industry process
- 1 x A1 non-ferrous metals process with NO_x emission limit
- 1 x A2 non-ferrous metals process with NO_x emission limit
- 1 x A2 non-ferrous metals process
- 3 x waste processes with nitrogen oxides limit

> 5000 metres:

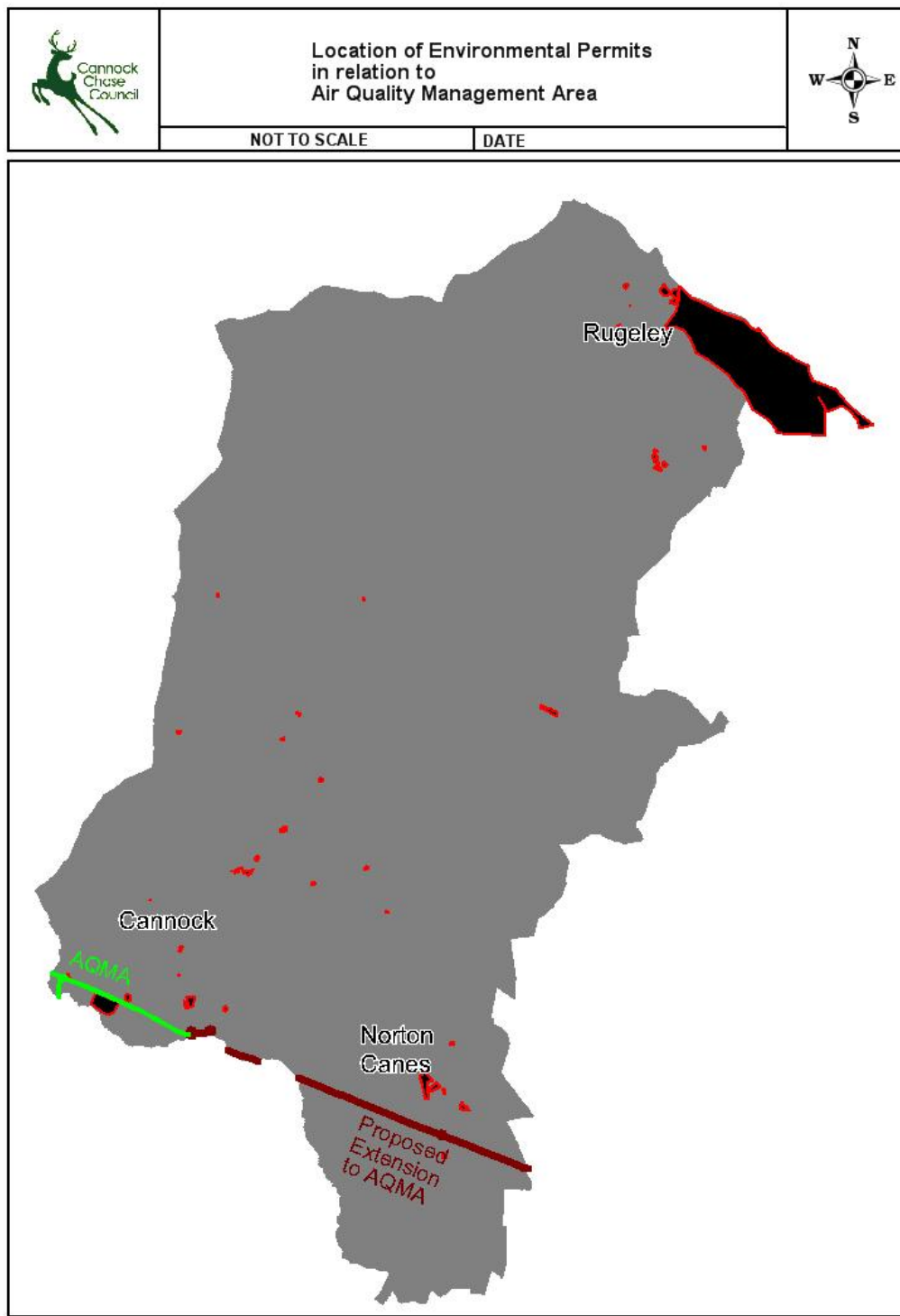
- 4 x service stations
- 1 x animal by-products

- 1 x mobile screening process
- 1 x timber process
- 2 x animal feed
- 1 x coating process
- 1 x dry-cleaners
- 1 x A1 electricity production process with nitrogen oxides (NO and NO₂) emission limits

Key:

Grey highlights = Environment Agency regulated

Figure 11



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As can be seen, there are few processes with emission limits for nitrogen oxides. The emission limits are given in the process permit, and will continue to be regulated by the appropriate regulatory body.

From spring 2011, the Environmental Health Department have been inspecting the district so as to identify industrial activities potentially requiring an environmental permit. This exercise will be repeated on frequent and regular intervals.

Planned Action – Continue to regulate industry under The Environmental Permitting (England and Wales) Regulations 2007.

Timescale – Ongoing.

Cost:	No additional cost	low
Benefit:	Measures already in place contribute to preventing ambient NO ₂ concentrations from rising higher. However, there is little prospect that industrial emission control will provide further improvements in the foreseeable future.	Low

The Way Forward

Parties responsible for the various actions listed in the plan will take measures to complete actions within the relevant time scale. Cannock Chase Council will review progress on an annual basis, and make relevant changes to the actions as progress is achieved, other options become available or evidence changes.

Appendix

The following table was produced from the Steering Group meetings and intended to represent the decisions made at the time. The options to carry forward have altered since these discussions took place:

Table 3: Scoping Matrix produced from Steering Group Meetings

Action	Option	Description	Lead Organisation	Cost	Score	Timescale	Score	AQ Impact	Score	Other Impacts/ comments	Rank/ Scoping Decision
Option 1c	Reduction in HDV 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 NO ₂ emissions, less congestion, company efficiencies for hauliers. Resistance due to	9.5

										commercial rivalry. Needs to be emphasised to Manufacturing/ Distribution Companies running their own fleets. Needs further analysis of current trends	
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 HDVs, 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,	7

										road safety and congestion elsewhere too. Could increase number of short trips.	
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 air quality 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 Comment	No control over MEL										Not taken Forward

s											
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										Not taken forward
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 HDV Content on road	Weight restrictions	SCC, HA		L	3	S	3	MA	6	<p>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?</p> <p>With regard to the A460 Wedges Mills, a weight restriction may be difficult to enforce and would require considerable consultation. Enforcement</p>	12
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										difficulties confirmed by liaison with Staffordshire Police.	
Scoping Comments	Further information required on current usage for Wedges Mills – Requires support of Staffordshire Police.										Not taken Forward
Option 1b	Reduction in HDV 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	12

										signs. Needs to consider strategic signage (e.g. in Town Centre)	
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, too 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	9

										desired improvement for some AQMAs.	
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			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	Limited number of schools in vicinity of A5 and do not contribute significantly to traffic - 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.	9

										Observation indicates vehicles move regular short (<10 m) distance in congestion, negating possibility of using this power	
Scoping Comments	Not considered viable as vehicles are not waiting for any appreciable length of time.										Not taken Forward
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,	8.5

										displacing traffic onto other routes. Causes detrimental impact in other areas as vehicles try to avoid charges.	
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.										Initially intended for inclusion in Action Plan, but no capability available.

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 inspectorate. 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	II	I	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. HA expressed concern on safety grounds if signage were changed.										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	Improvement ?	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 AQMA's	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 10 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	6

										to be contributing significant impacts on NO ₂ levels in AQMAs	
										Unsure of how this will impact on AQMA as local improvements may not focus on the A5/A460	
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	Central Government	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	Limited to cars - which is not the main source of pollution in this locality Current scheme run by Dept for Business, Innovation and Skills runs to 2010										Not taken forward

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
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	Truck stop adjacent to A5 in SSDC area considered to attract HDVs onto the A5. See ' Error! Reference source not found. ' Considered as not a viable option by joint Steering Group, but later raised by Highways Agency										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 South Staffs Action Plan
Option 23	NO ₂ Eating paintwork and slabs	Has the effect of reducing NO ₂ 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	H	1	L	1	MI	1	Could encourage more traffic in the area delivering to terminal	3
Scoping Comments	Issues with gauge of rail line, issues with height of bridges to get containers under.										Not taken Forward

New Option 2	Junction alteration	Reallocate Lanes at Walkmill Lane and A5 Watling Street. No right turn into North Street	HA, SCC, CCDC	M	2	M	2	MA	6	Will reduce congestion	10
Scoping Comments	Will move majority of traffic centrally, thereby increasing distance between traffic and some receptors										For inclusion in Action Plan
New Option 3	Junction alteration	Replace series of traffic islands at Churchbridge junction with signalised scheme.	HA, CCDC	VH	0	M - L	1.5	MA	6	Will reduce congestion, improve safety, allow sustainable transport infrasture to be incorporated (i.e. better pedestrian and cycle facilities) thereby linking Great Wyrley with south Cannock. These are issues identified as a significant in Highways Agency report.	8

Scoping Comments	Will reduce the tailback of easterly traffic approaching the Churchbridge junction, thereby reducing NO _x emissions adjacent to properties on the northern side of Watling Street in Bridgtown.										For inclusion in Action Plan
New Option 4	Junction alteration	Improve existing traffic islands at Churchbridge in terms of size and lane markings.	HA, SCC, CCDC	H	1	M - L	1.5	MA	5	As New Option 3	8
Scoping Comments	As New Option3, although air quality improvements potentially less.										For inclusion in Action Plan

Key:

Cost	<i>Low (L) < £10,000 or already in place</i>	<i>Medium (M) = £10,000 to £100,000</i>	<i>High (H) > £100,000</i>
Timescale	<i>Short (S) < 6 months</i>	<i>Medium (M) = 6 months to 2 years</i>	<i>Long (L) = > 2 years</i>
AQ Impact	<i>Major (MA) = > 2 µgm⁻³</i>	<i>Medium (ME) = 1-2 µgm⁻³</i>	<i>Minimal (MI) <1 µgm⁻³</i>