

## **10 Appendices**

## Appendix 1 Lickey End AQAP update 2010

## (A) Progress on Direct Action Plan measures

Action	Description	Organisation responsible	Original Timescale	Progress with measures	Outcome to date	Comments
Option 1	Speed Restriction to 50mph (80kph)	DfT/Highway Agency/ Police	Yet to be agreed (short/ medium term)	Liaison is continuing with the Highways Agency to discuss potential direct options for the M42 Junction 1. The Highways Agency attends the Air Quality Steering Group and met with BDC in June 2009 to review the Action Plan.	There are currently no proposals to introduce speed restrictions on the M42	Unlikely to be progressed before EU Limit target date of 2010.
Option 2	Reduction in traffic flows on the M42	Central Government/ Highways Agency	Not agreed. Need to identify measures that would enable it to be achieved.	Following a successful trial of Active Traffic Management (ATM) on the M42 (between J3a and J7), a feasibility study identified strategic locations to expand the use of this technology. Several schemes are currently in construction or design in the West Midlands based on locations that experience the greatest traffic volumes and congestion. The Highways Agency currently has no proposals to introduce this technology in the immediate vicinity of M42 J1.	No outcome to date	Unlikely to be progressed before EU Limit target date of 2010.
Option 3	Reduction in %LGV flows on the M42	Central Government/ Highways Agency	Not agreed. Need to identify measures that would enable it to be achieved.	Ramp Metering is in operation on some slip roads primarily to manage vehicular access onto the Motorway by improving traffic flows and thereby reducing congestion. The effect of Ramp Metering on local air quality was monitored at M5 J1 from September 2006 to January 2008. The results of this monitoring exercise were insufficiently conclusive and would not support the Highways Agency offering ramp metering as a proven means of contributing to the improvement of local air quality. Should further studies subsequently prove that ramp metering can be effective in contributing to the improvement of local air quality, Bromsgrove District Council will be pushing for the active consideration by the Highways Agency of the installing of ramp metering at M42 Junction 1.	There is insufficient evidence at present to justify the installation of Ramp metering at M42 J1 solely on the basis of improvements to local air quality.	Unlikely to be progressed before EU Limit target date of 2010. M42 Junction 1 does not meet the criteria for Ramp Metering.

Option 4	Reduction in overall background levels	Central Government/ WCC/BDC	Ongoing	Being progressed through General Borough-wide measures. Refer to Table B, which follows.	Refer to Table B, which follows.	
Option 5	Introduction of tolls	Central Government/ Highways Agency	Central government, HA or BDC have no plans to introduce tolls in this area.	Liaison is continuing with the Highways Agency to agree potential direct options for the M42 Junction 1. Update provided by Highways Agency is shown above.	No outcome to date	Unlikely to be progressed before EU Limit target date of 2010. Central government or the HA do not currently have a policy to introduce tolls or road user charging on the SRN.
Option 6	Improvements to Junction 1 of the M42	Highways Agency	The HA is proposing to put in box markings at junction 1 to reduce congestion due to gridlock and hence reduce emissions at the junction. Yet to be agreed (short/ medium term)	Observations indicate these markings are having a positive effect when traffic queues onto the junction by making a break in the queue so traffic can circulate to the M42 northbound. This helps to keep the traffic moving around the junction, reduces the likelihood of gridlock occurring and contributes to a reduction in emissions at the junction.	Completed in 2008	
Option 7	Removal of the M42 Junction 1 slip roads	Highways Agency/WCC/ BDC	The HA do not intend to do this as it would lead to increased flows on local roads with increased accidents and congestion.		No further action is proposed by the Highways Agency	Unlikely to be progressed before EU Limit target date of 2010.
Option 8	Improved layout and signing on the M42 J1 westbound – M5 J4A to reduce collisions (and resulting congestion) and driver confusion resulting in them taking the wrong road and having to double back	Highways Agency	Scheme implemented in July 2007	This scheme will be subject to a Road Safety Audit Stage 4 report to review incident data in relation to the scheme. Data has recently been made available and the report is expected for autumn 2009. A subsequent safety study of the link roads from the M42 to the M5 has some further improvements that will be implemented as a scheme in 2009/10. These improvements will further reduce the risk of incidents and resulting congestion, and have a positive effect in reducing associated emissions.	RSA4 expected for autumn 2009	

**(B): Progress on General Action Plan measures**

Proposed measure	Description	Organisation responsible	Original timescale	Progress measures with	Outcome to date	Comments
Measure 1	BDC will ensure that the Action Plan measures are co-ordinated with relevant Local Transport Plan (LTP) measures and provide WCC with annual progress reports on air quality.	BDC/ WCC	Ongoing	BDC has been working in partnership with WCC on air quality input into the LTP2. and forthcoming LTP 3	A38/M42 Lickey End AQMA and relevant action plan measures incorporated within the LTP3 under shared priorities Air Quality and Congestion	LTP3 includes strategies to reduce the impact of traffic on air quality. LTP3 aims to reduce congestion on the A38 through Bromsgrove through encouraging modal shift to the parallel rail corridor, and traffic management measures to reduce congestion at M42 Junction 1
Measure 2	BDC will work together with WCC to improve public transport facilities within Bromsgrove and develop Quality Partnerships <sup>1</sup> (BQP) with transport providers to promote greater uptake of public transport.	BDC/ WCC	Ongoing	Bromsgrove Railway Station rebuilding programme are being progressed in 2011. The station is to be completely relocated south of existing location	No observed increase in public transport uptake to date.	. Capacity at Bromsgrove identified as constraint in LTP2. Improvements proposed include platform lengthening to allow longer trains to stop, and additional parking and facilities for cycling. A detailed plan for the new station has been completed and funding is now being sought.
Measure 3	BDC will work with WCC to develop and implement a Council Travel Plan in accordance with the LTP Objectives	BDC/ WCC	2004/5 This was delayed.	Work on this was suspended, a scheme to discourage usage of vehicles has been devised whereby car mileage allowances have been cut and bicycle mileage allowances have been promoted.	Evolving progress	Radical Changes to Structure of Council with Shared Services project with Redditch BC and formation of Worcestershire Regulatory Services, have driven these changes.
Measure 4	BDC will continue to work together with WCC to encourage the uptake of Employer and School Travel Plans within Bromsgrove.	BDC/ WCC	Ongoing	The LTP delivery report 2001-6 reported Employer and School Travel Plans to be above target.	In 2007 92% of the County's schools have implemented Safe Routes to Schools and 50% of schools have developed travel plans.	Proposals in LTP2 to have 100% schools with travel plans and to meet the Government target by 2010.

<sup>1</sup> Informal partnership involving dialogue with local authorities, public transport providers and other relevant stakeholders to improve public transport facilities

Proposed measure	Description	Organisation responsible	Original timescale	Progress measures with	Outcome to date	Comments
Measure 5	BDC will work together with WCC to improve the facilities for cycling and walking within Bromsgrove and encourage greater uptake. For new development, developers will be encouraged to provide secure parking facilities and cycle paths where appropriate.	BDC/WCC	Ongoing	BDC continues to work in partnership with WCC to deliver the cycling and walking strategies.	The decline in levels of cycling seen prior to LTP1 has been reversed and Worcestershire has evidence of increased levels (14% increase between 2001 and 2006) of cycling from the 15 permanent cycle monitoring sites established throughout the County and through the monitoring of School and Employer Travel Plans with an average increase in cycling to school and work after the implementation of a Travel Plan of 33% and 37% respectively	During 2005/06 around 2,000 children received on road pedestrian training and 3,500 cycle training.
Measure 6	BDC will work together with WCC to develop Freight Quality Partnerships <sup>2</sup> and encourage wider uptake of freight by rail.	BDC/WCC	Ongoing	BDC continues to work in partnership with WCC	Countywide Freight Quality Partnership has been developed, which includes a Lorry Route Map	
Measure 7	BDC Environmental Health Services will continue to work closely with the Planning Department to ensure that air quality is taken into account in the planning process when located in or close to the AQMA or in areas marginally below air quality Objectives.	BDC	Ongoing	Worcestershire Regulatory Services continues to work closely with Planning Department	Ongoing process which takes place as part of the application process Countywide Air Quality Planning protocol adopted by all District Councils in Spring 2009	
Measure 8	BDC will continue to work together with developers to improve sustainable transport links serving new developments.	BDC	Ongoing	BDC continues to work together with developers	Ongoing process which take place as part of the application process	
Measure 9	BDC will develop supplementary planning guidance to assist with air quality assessments of development proposals	BDC	2004/5	Countywide Air Quality Planning protocol adopted by all District Councils in Spring 2009 this enabled AQ impact assessments to be demanded where criteria require it .	as a result of the Planning protocol being adopted separate document not needed. Reference within that is made to to the EPUK guidance where appropriate.	

<sup>2</sup> Informal partnership involving dialogue with local authorities, the freight industry and other relevant stakeholders to improve freight operation in the area and minimise its impact

## Appendix 2 Horsefair &amp; Welch Gate AQAP update

Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Indicator	Target annual emission reduction in the AQMA	Progress to date	Progress in last 12 months	Estimated completion date	Comments relating to target emissions reductions
Implement Air Quality Strategy	Improve ability to manage air quality across the district	District Council	2005	2006	Adoption of Strategy	N/A	Strategy was adopted in 2006	N/A	N/A	N/A
Implement Hereford & Worcestershire County Air Quality Strategy	Improve ability to manage air quality across the region	District Councils	2008	2009	Adoption of Strategy	N/A	Strategy was adopted in 2009	On going	On going	N/A
Reduce NO <sub>2</sub> emissions within Welch Gate AQMA	Improve traffic management & reduce unit emissions of NO <sub>2</sub>	Worcestershire County Council & Halcrow	2009	2010-2011	National Objectives for NO <sub>2</sub>	Yes	County Council Considering options	Feasibility Study Completed by Halcrow (See additional information below)	On going	Reduction of NO <sub>2</sub> to a level that is managed below 40 µg/m <sup>3</sup>
Reduce NO <sub>2</sub> emissions within Horsefair/Radford Avenue AQMA	Improve traffic management & reduce unit emissions of NO <sub>2</sub>	ReWyre Prospectus. County Council/Wyre Forest District Council	2009	2009-	National Objectives for NO <sub>2</sub>	Yes	None to date	Publication of ReWyre Prospectus & Promotion (See additional information below)	On going	Reduction of NO <sub>2</sub> to a level that is managed below 40 µg/m <sup>3</sup>

## Appendix 3 LTP3 summary

<b>LTP3 ID</b>	<b>Scheme Name</b>	<b>Description of Improvements</b>	<b>AQMA benefitting</b>	<b>Improvement Type - Direct/Adjacent/Indirect or General</b>	<b>Current Status/Timeline for completion from WCC Highways Feb 2013</b>
BR1	Bromsgrove New Station Scheme	Will allow longer trains to call at station, increased public transport capacity, increase to 350 car parking spaces	Mostly Redditch Rd, Worcester Rd	Indirect. General improvement to public transport	Public consultation underway. Programme date for opening 17th May 2015.
BR2	Bromsgrove Eastern Bypass Enhancement Scheme (including AQMA remediation)	A package of enhancement measures, including major junction improvements and measures to improve accessibility to the railway. Integrated with other schemes in Bromsgrove	Redditch Rd, Lickey End	Directly linked to AQMA	One of options for Bromsgrove Transport Package. No decision on what package will entail.
BR4	Bromsgrove Traffic and Parking Management Study	Study would identify where to focus investment to improve the operation of the local transport network.	Redditch Rd, Worcester Rd, Lickey End	Indirect. Could lead to more focus on alleviating AQMAs	One of options for Bromsgrove Transport Package. No decision on what package will entail.
BR5	Bromsgrove Minor Transport Improvements Scheme	Minor complimentary transport improvements to enhance safety, accessibility, information and travel choice.	Redditch Rd, Worcester Rd, Lickey End	Indirect. General improvements across area	One of options for Bromsgrove Transport Package. No decision on what package will entail.
NE5	Hagley Station Enhancement	Improvements to passenger facilities	Hagley	Indirect. General improvement to public transport	No proposals at this time.
W1	Worcester Foregate Street Enhancement	Significant improvement to passenger facilities including quality of interchange with other transport modes	All Worcester AQMAs	Indirect. General improvement to public transport	Awaiting funding clearance from Department for Transport. Programmed date for completion is September 2013.
W2	Worcester Shrub Hill Station Enhancement	Improvements to infrastructure and facilities	All Worcester AQMAs potentially	Indirect. General improvement to public transport	No proposals at this time.

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W7	Worcester Shrub Hill and Lowesmoor Area Maintenance & Improvement	A comprehensive programme of junction and traffic signals enhancements, street furniture decluttering, replacement and enhancement, and improved information systems	Lowesmoor – Rainbow Hill	Adjacent. Improvements to connecting route	At planning stage.
W9	Worcester City Walls Rd/ Cathedral Sq/ Deansway corridor maintenance & improvement	A comprehensive programme of junction and traffic signals enhancements, street furniture decluttering, replacement and enhancement, and improved walk and cycle infrastructure, and passenger transport infrastructure and information	Bridge St/ Dolday	Adjacent. Improvements to connecting route	At planning stage.
W11	Worcester – City Secure Cycle parking	Provision of indoor cycle parking facilities in City Centre to make cycling more attractive	All Worcester AQMAs potentially	Indirect. General improvement to other transport facilities	No proposals at this time.
W14	Worcester – Crown East (West of Worcester) Park & Ride	Provide a Park and ride alternative to access for residents of the rural areas to the west of Worcester as well as residents of any new developments approved in the area.	St Johns, Bridge St/ Dolday, Foregate St	Indirect. General improvement to public transport	No proposals at this time.
W17	Worcester – Rail capacity Improvement	Upgrading rail signalling and junctions, removal of single track operations, enhance capacity and improve reliability	All Worcester AQMAs	Indirect. General improvement to public transport	Not in current Network Rail work scheme. Likely to be 2021-2025.
SW6	Evesham B4035 Port St/Waterside Junction Enhancement (AQMA remediation scheme)	Maintenance and upgrading of this busy junction including MOVA intelligent traffic signal control system.	Port St, Evesham	Direct	Related to replacement of Abbey Bridge.

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SW13	Worcester to Evesham Rail line Dualling Scheme	Reinstate dual track increase capacity on Cotswold Line	Port St, Evesham, all Worcester AQMAs	Indirect. General improvement to public transport	No proposals at this time.
SW19	Evesham River Avon Walk Cycle Bridge (north of walkmans bridge)	Development of a walk cycle bridge from new Offenham Rd Estate to High St/Railway station in Evesham providing link to key facilities and Evesham Town Centre	Port St, Evesham	Indirect. General improvement to other transport facilities	No proposals at this time.
K2	Kidderminster – Ring Road Junction and Public Realm Improvement Scheme	Enhancement/redevelopment of the ring road to improve efficiency, functionality and appearance, in particular to mitigate the AQMA	Horsefair, Kidderminster	Direct	Would form part of Wyre Forest Transport Package. Programmed for later in Local Transport Plan.
K3	Kidderminster – Station Enhancement	Upgrading railway station to more attractive and appropriate transport gateway to town and integrated with Severn Valley Railways.	Horsefair, Kidderminster	Indirect. General improvement to public transport	On hold pending identification of funding.
K5	Kidderminster – Traffic & Parking Study	Study would identify where to focus investment to improve the operation of the local transport network.	Horsefair, Kidderminster	Indirect. Could lead to more focus on alleviating AQMAs	Would form part of Wyre Forest Transport Package. Programmed for later in Local Transport Plan.
K6	Kidderminster – Minor Transport Improvements Scheme	Minor complimentary transport improvements to enhance safety, accessibility, information & travel choice integrated with other schemes	Horsefair, Kidderminster	Indirect. General improvements across area	Would form part of Wyre Forest Transport Package. Programmed for later in Local Transport Plan.
K7	Kidderminster – Secure Cycle Parking Scheme	Provision of indoor cycle parking facilities in Town Centre to make cycling more attractive	Horsefair, Kidderminster	Indirect. General improvement to other transport facilities	Would form part of Wyre Forest Transport Package. Programmed for later in Local Transport Plan.

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BE1	Bewdley (Welch Gate) AQMA Remediation	Involve changing traffic flows through Bewdley Town Centre using a variety of measures, to manage traffic flows through Town Centre to manage traffic flow and mitigate AQMA at Welch Gate	Welch Gate, Bewdley	Direct	Trials have been held. Next step to commission design based on trial outcomes.
BE3	Bewdley – Traffic & Parking Study	Study would identify where to focus investment to improve the operation of the local transport network.	Welch Gate, Bewdley	Indirect. Could lead to more focus on alleviating AQMAs	Would form part of Wyre Forest Transport Package. Programmed for later in Local Transport Plan.
BE4	Bewdley – Minor Transport Improvements Scheme	Minor complimentary transport improvements to enhance safety, accessibility, information & travel choice integrated with other schemes	Welch Gate, Bewdley	Indirect. General improvements across area	Would form part of Wyre Forest Transport Package. Programmed for later in Local Transport Plan.
BE5	Bewdley – Walk/Cycle Bridge Scheme	Development of a walk/cycle bridge over River Severn south of Bewdley bridge	Welch Gate, Bewdley	Indirect. General improvement to other transport facilities	Would form part of Wyre Forest Transport Package. Programmed for later in Local Transport Plan.
WF1	A456 Kidderminster – M5 (J3 and J4) Inter urban corridor maintenance and improvement	A comprehensive corridor length programme of improvements including junction enhancements, street furniture decluttering, replacement and enhancement	Horsefair, Kidderminster	Adjacent. Improvements to connecting route	No proposals at this time.
WF2	A448 Kidderminster – Bromsgrove Inter urban corridor maintenance and improvement	A comprehensive corridor length programme of improvements including junction enhancements, street furniture decluttering, replacement and enhancement	Horsefair, Kidderminster, Worcester Road, Bromsgrove	Adjacent. Improvements to connecting route	See comments relating to Bromsgrove and Wyre Forest Transport Packages.

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WF3	A449 Kidderminster – Worcester Inter urban corridor maintenance and improvement	A comprehensive corridor length programme of improvements including junction enhancements, street furniture decluttering, replacement and enhancement	Horsefair, Kidderminster	Adjacent. Improvements to connecting route	No proposals at this time.