Cherwell District Council
Air Quality Action Plan

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

August (2016)

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Executive Summary

This Air Quality Action Plan (AQAP) has been produced as part of our statutory duties required by the Local Air Quality Management framework. It outlines the action we will take to improve air quality in Cherwell between 2016 and 2020.

Air pollution is associated with a number of adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children and older people, and those with heart and lung conditions. There is also often a strong correlation with equalities issues, because areas with poor air quality are also often the less affluent areas[1,2].

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion[3]. Cherwell District Council is committed to reducing the exposure of people in Cherwell to poor air quality in order to improve health.

We have developed actions that can be considered under five broad topics:

- Policy guidance and development control
- Promoting low emission transport
- Promoting travel alternatives to private vehicle use
- Transport planning and infrastructure
- Public information

Our priorities are:

- Priority 1 – Strengthening local policy to improve air quality and its role in protecting health;
- Priority 2 – Reducing NO_x emissions from cars in all AQMAs;
- Priority 3 – Ensuring new developments encourage and facilitate low emission and alternative transport;
- Priority 4 – Ensuring transport infrastructure delivery takes account of air quality improvement potential within AQMAs;
- Priority 5 – Raising awareness of poor air quality and encouraging improvement actions by vehicle users and fleet managers.

[1] Environmental equity, air quality, socioeconomic status and respiratory health, 2010
[2] Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006
[3] Defra. Abatement cost guidance for valuing changes in air quality, May 2013

In this AQAP we outline how we plan to effectively tackle air quality issues. It is recognised that Public Health and Highways Authority matters are beyond Cherwells direct control and partnership working to deliver the measures outlined is essential.

We recognise that there are a large number of air quality policy areas that are further outside of our influence (such as vehicle emissions standards agreed in Europe), but for which we may have useful evidence, and so we will continue to work with regional and central government on related policies and issues.

Responsibilities and Commitment

This AQAP was prepared by the Public Protection Service of Cherwell District Council with the support and agreement of the following officers and departments:

List officers/departments involved in the preparation of the AQAP

This AQAP has been sent for approval to go to out to public consultation by the Councils Executive at their meeting on 3rd September 2016.

This AQAP will be subject to an annual review and appraisal of progress each year will be reported in the Annual Status Reports (ASRs) produced by Cherwell District, as part of our statutory Local Air Quality Management duties, and to the Councils Executive.

If you have any comments on this AQAP please write to us using the following details and quoting AQAP in the title / header:

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1 Introduction

This report outlines the actions that Cherwell District Council will deliver in order to reduce concentrations of air pollutants and exposure to air pollution; thereby positively impacting on the health and quality of life of residents and visitors to the Cherwell area.

It has been developed in recognition of the legal requirement on the local authority to work towards Air Quality Strategy (AQS) objectives under Part IV of the Environment Act 1995 and relevant regulations made under that part and to meet the requirements of the Local Air Quality Management (LAQM) statutory process.

This Plan will be reviewed every five years at the latest and progress on measures set out within this Plan will be reported on annually within Cherwell District's air quality ASR.

2 Summary of Current Air Quality in Cherwell District

Cherwell District Council has identified four areas where air quality does not meet national air quality objectives for nitrogen dioxide. The locations of these four Air Quality Management Areas (AQMAs) can be found on our website at www.cherwell.gov.uk/airqualitymanagement. There are two in Banbury, one in Bicester and one in Kidlington. These concentrations are largely related to road traffic emissions.

AQMA No.1 in Hennef Way exceeds the annual and hourly mean objectives for nitrogen dioxide.

AQMA No.2 between Oxford Road to Southam Road, Banbury, including a section of High Street exceeds the annual mean objective for nitrogen dioxide.

AQMA No.3 on a section of Bicester Road, Kidlington to the north of the Water Eaton Lane controlled junction exceeds the annual mean objective for nitrogen dioxide.

AQMA No.4 between the mini roundabout in Kings End through Queens Avenue to the Field Street mini roundabout, including St Johns, exceeds the annual mean objective for nitrogen dioxide.

The latest monitoring indicates nitrogen dioxide concentrations are trending downwards in most places. This includes within the AQMAs, although concentrations in the AQMAs remain above the national air quality objective levels for nitrogen dioxide. Further information can be found in the latest Annual Status Report which can be downloaded at the website above. Monitoring locations and the latest monitoring data can also be found using the interactive map on https://oxfordshire.air-quality.info/.

3 Cherwell District's Air Quality Priorities

3.1 Public Health Context

Four AQMAs have been identified with people exposed to sufficiently poor air quality to require legal intervention under Environment Act 1995, which this action plan contributes to. Table 3.1 shows the number of residential properties within the AQMAs.

Table 3.1 – Residential properties within AQMAs

AQMA	Description	Nitrogen Dioxide Concentration ($\mu g/m^3$)[a]	Approximate No. residential properties within AQMA
AQMA No.1	Hennef Way, Banbury	59.8	3
AQMA No.2	Banbury	40.9	86
AQMA No.3	Kidlington	41.1	5
AQMA No.4	Bicester	46.0	111

Notes:

[a] 2015 Concentration at relevant exposure reported in ASR 2016

These AQMAs are localised areas representing the worst affected places. The main source of pollutants in these AQMAs is traffic emissions. Traffic emissions aren't localised i.e. journeys originating and terminating within the AQMA so measures to address emissions district-wide are collated as general measures.

It is anticipated that most general measures to reduce emissions will also contribute to reducing $PM_{2.5}$ emissions from vehicles.

Where local measures to reduce pollutant concentrations are identified, these measures have been related to that specific AQMA.

Oxfordshire County Councils Joint Strategic Needs Assessment (JSNA) provides information about Oxfordshire's population and the factors affecting health, wellbeing, and social care needs and can be found at http://insight.oxfordshire.gov.uk/cms/joint-strategic-needs-assessment

Air quality is included in Section 4.2.8 of the 2016 JSNA under the “Wider Determinants; Environment” section and recognises:

-Poor air quality is known to have negative impacts on health.

-In the more densely populated areas of the county, and those which experience high traffic flows, increased levels of air pollution are of concern. In these areas, road traffic is the most significant source of pollutant emissions.

-There are currently 13 AQMAs in Oxfordshire, where the annual mean objective for nitrogen dioxide is being exceeded (four in Cherwell, one covering the whole of Oxford, three in South Oxfordshire, three in Vale of White Horse and two in West Oxfordshire).

-Trends in air quality across some of Oxfordshire’s long-standing AQMAs show signs of improvement, with reductions in concentrations of nitrogen dioxide over recent years. However, new AQMAs are still being identified.

-Air Quality and Mortality Estimates In 2010 the UK Committee on the Medical Effects of Air Pollutants estimated that removing all man-made, particulate matter air pollution could save the UK population approximately 36.5 million life years over the next 100 years, and would be associated with an increase in UK life expectancy from birth, of six months on average.

-The calculated attributable proportion of deaths associated with air pollution, among those aged 25 and over in Oxfordshire, was 5.6% in 2010. However, given the uncertainties this could, in fact, be somewhere between 0.9% and 11%. For 2013 it was estimated that 5.3% of all-cause mortality among people aged 30 and over in Oxfordshire was attributable to particulate air pollution from man-made sources. This value has fluctuated between 5.1% and 5.6% over the years between 2010 and 2013 but it is not possible to tell whether or not changes are statistically significant.

-The national and regional averages in 2013 were 5.3% (England) and 5.2% (South East). Meanwhile, the proportion of mortality attributable to man-made air pollution in the districts ranged from 5% (in West Oxfordshire) to 5.6% (in Oxford) with the other three districts at 5.3%.

-The quantification of mortality burden associated with long term nitrogen dioxide concentration exposure is not currently available.

3.2 Planning and Policy Context

3.2.1 Cherwell Local Plan Part 1

The Cherwell Local Plan Part 1 was adopted in July 2015. It sets out proposals to support the local economy and the community between 2011 and 2016. This can be downloaded from the Cherwell District Council website or by following this link.

Sustainable development is a key part of this Plan focussing proposed growth in and around Banbury and Bicester and limiting growth in rural areas. The Plan sets out planning policies grouped around three themes; Developing a Sustainable Local Economy, Building Sustainable Communities and Ensuring Sustainable Development. Section C outlines how these themes will be delivered in Bicester, Banbury, Kidlington and villages and rural areas.

The need to consider the effects of development on air quality, and how they can contribute towards improvements, is identified as a key challenge to ensuring sustainable development. Commuters in Cherwell travel relatively long distances to work and reducing travel by car and managing traffic congestion are identified as key challenges. Maximising the opportunity to shift from dependency on cars to sustainable modes of transport is also identified.

Relevant objectives and policies which may contribute to improvements in air quality within the AQMAs are referred to below. Further detail can be found in the adopted Local Plan.

The strategic objectives (SO) for ensuring sustainable development include minimising carbon emissions, promoting decentralised and renewable or low carbon energy where appropriate (SO11), reducing the dependency on the private car with increasing the attraction of public transport, cycling and travel by foot (SO13).

Policy SLE4 includes new developments to provide financial and/or in-kind contributions to mitigate the transport impacts of development. All development where reasonable to do so, should facilitate the use of sustainable modes of transport to make the fullest possible use of public transport, walking and cycling. Encouragement will be given to solutions which support reductions in greenhouse gas emissions and reduce congestion. Development which is not suitable for the

roads that serve the development and which have a severe traffic impact will not be supported.

Policies ESD 1 – ESD 5 address carbon emission reductions. These include a requirement that all new residential development will be expected to incorporate sustainable design and construction technology to achieve zero carbon development. All new non-residential development will be expected to meet at least BREEAM 'Very Good' (ESD 3). The encouragement of decentralising energy systems in developments e.g. district heating or combined heat and power (ESD 4). Support for renewable and low carbon provision wherever adverse impacts can be addressed satisfactorily is part of ESD 5.

Policy ESD10 includes the requirement for air quality assessments where development proposals would be likely to have a significantly adverse impact on biodiversity by generating an increase in air pollution.

Policy BSC 8 acknowledges the local environment has a fundamental impact on the health and well-being of local people. By providing facilities such as local open space this allows for activities such as walking and cycling, promoting healthy lifestyles.

Policy ESD 17 refers to providing opportunities for walking and cycling by maximising the opportunity to maintain and extend green infrastructure links and connecting the towns to the urban fringe and the wider countryside beyond.

Section C of The Cherwell Local Plan Part 1 contains the policies for Cherwells Places and includes detailed site-specific policies for large strategic evelopments. This includes a new zero-carbon mixed use development including 6000 homes at North West Bicester (Bicester 1: North West Bicester Eco-town).

The Infrastructure Delivery Plan (IDP) is appended to the Local Plan Part 1 and details projects to facilitate the proposed development growth. Some of these will contribute to improvements in air quality within the AQMAs. The IDP is reviewed on an annual basis.

3.2.2 Cherwell Local Plan Part 2

Cherwell District Council is currently preparing Cherwell Local Plan 2011-2031 (Part 2) which will contain non-strategic site allocations and development management policies.

An Issues Consultation Paper was published in January 2016. Related documents can be on the Cherwell District Council website or following this link.

3.2.3 Corporate Policy

Further information to be included in this section following the consultation process on:

- *Cherwell District Council travel plan*
- *The Bicester Sustainable Transport Strategy*
- *Carbon Policy*
- *Procurement policy for CDC vehicles*
- *Local Transport Plan 4 (LTP4)*
- *Local car parking policy and air quality.*
- *Local taxi licensing policy and air quality*
- *Strategic Economic Plan and air quality*
- Cherwell Sustainable Community Strategy

3.3 Source Apportionment

The AQAP measures presented in this report are intended to be targeted towards the predominant sources of emissions within Cherwell District's area.

Source apportionment exercises have been undertaken. These are presented in the in the following reports which can be found on www.cherwell.gov.uk/airqualitymanagement:

- Further Assessment - Hennef Way (2013)
- Banbury Source Apportionment (2015)
- Kidlington Source Apportionment (2015)
- Detailed Assessment – Bicester (2015)

The source apportionment aspects of these reports have been revised using the most recent emission factors (including petrol / diesel vehicle apportionment), background concentrations and monitoring results. The traffic survey data used is the same.

A summary of sources is shown in Table 3.2 below. The data used to inform these calculations is shown in Appendix B:

Table 3.2 Summarised NO_2 concentrations in AQMAs apportioned by source

AQMA	NO_2 Concentration	% NO_2 by Source				
		Background	Cars	LGVs	HGVs	Buses
1 (Hennef Way)	59.8 µg/m^3	32%	39%	17%	10%	2%
2 (Banbury)	40.9 µg/m^3	32%	39%	13%	10%	6%
3 (Kidlington)	41.1 µg/m^3	35%	41%	9%	6%	9%
4 (Bicester)	46.0 µg/m^3	27%	50%	8%	2%	13%

3.3.1 AQMA No.1 Hennef Way, Banbury - Source Apportionment

The source apportionment works reported in the 2013 Further Assessment for Hennef Way, Banbury were based on an exceedence of the annual mean objective not being predicted by the modelling undertaken. Uncertainties were identified in the monitoring i.e. significantly above the objective at the property boundary but significantly below at the property façade facing away from the roadside, which translated into the modelling. Subsequent Monitoring at relevant exposure is reported in the Updating and Screening Assessment 2015 and Annual Status Report 2016. Monitoring at both facades, at different heights on the roadside façade and at the property boundary fence have been reported and show exceedences at the roadside façade. The worst of these exceedences has been used for the source apportionment in this AQMA.

The worst case NO_2 of 59.8 µg/m^3 is apportioned to:

- 6.3 µg/m^3 NO_2 (10.5%) Regional Background
- 12.9 µg/m^3 NO_2 (21.6%) Local Background
- 23 µg/m^3 NO_2 (38.5%) Cars of which,

        - 19.8 µg/m^3 NO_2 (33.1%) Diesel Cars
    - 10.2 NO_2 µg/m^3 NO_2 (17.1%) Light Goods Vehicles
    - 6.1 µg/m^3 NO_2 (10.2%) Heavy Goods Vehicles
    - 1 µg/m^3 NO_2 (1.7%) Buses

Cars are the main contributor (38%) to this NO_2 concentration. Diesel car emissions are attributed to the majority of these car related emissions with 33% of the total, 19.8 µg/m^3. This diesel car fraction is larger than the total background NO_2 concentrations of 19.2 µg/m^3.

Light goods vehicles, of which the majority are diesel, make up the next highest proportion (17.1%) of this concentration, with HGVs accounting for 10% and buses a much smaller fraction (1.7%).

3.3.2 AQMA No.2 Banbury - Source Apportionment

The worst case NO_2 of 40.9 µg/m^3 is apportioned to:

- 8.9 µg/m^3 NO_2 (21.8%) Regional Background
- 8.7 µg/m^3 NO_2 (21.3%) Local Background
- 19.2 µg/m^3 NO_2 (46.9%) Cars of which,
    - 16.4 µg/m^3 NO_2 (40.1%) Diesel Cars
- 6.3 µg/m^3 NO_2 (15.4%) Light Goods Vehicles
- 5 µg/m^3 NO_2 (12.2%) Heavy Goods Vehicles
- 2.8 µg/m^3 NO_2 (6.8%) Buses

Cars are the main contributor (46.9%) to this NO_2 concentration. Diesel car emissions are attributed to the majority of these car related emissions with 40.1% of the total, 16.4 µg/m^3. The total background concentration of NO_2 (17.6 µg/m^3) is attributed to 43.1% of the total.

Light goods vehicles, of which the majority are diesel, make up the next highest proportion (15.4%) of this concentration, with HGVs accounting for 12.2% and buses a smaller fraction (6.8%).

3.3.3 AQMA No.3 Bicester Road, Kidlington - Source Apportionment

The worst case NO_2 of 41.1 µg/m^3 is apportioned to:

- 6.4 µg/m^3 NO_2 (15.6%) Regional Background
- 7.8 µg/m^3 NO_2 (19.0%) Local Background
- 16.8 µg/m^3 NO_2 (40.9%) Cars of which,
  - 14.3 µg/m^3 NO_2 (34.8%) Diesel Cars
- 3.5 µg/m^3 NO_2 (8.5%) Light Goods Vehicles
- 2.6 µg/m^3 NO_2 (6.3%) Heavy Goods Vehicles
- 3.9 µg/m^3 NO_2 (9.5%) Buses

Cars are the main contributor (40.9%) to this NO_2 concentration. Diesel car emissions are attributed to the majority of these car related emissions with 34.8% of the total, 14.3 µg/m^3. The total background concentration of NO_2, 14.2 µg/m^3, is attributed to 34.8% of the total.

Buses make up the next highest proportion (9.5%) with 3.9 µg/m^3. Light goods vehicles make up the next highest proportion (8.5%) of this concentration, with HGVs accounting for a lower fraction of 6.3%.

3.3.4 AQMA No.4 Bicester - Source Apportionment

The worst case NO_2 of 46.0 µg/m^3 is apportioned to:

- 6.6 µg/m^3 NO_2 (14.3%) Regional Background
- 5.9 µg/m^3 NO_2 (12.8%) Local Background
- 22.8 µg/m^3 NO_2 (49.6%) Cars of which,
  - 19.5 µg/m^3 NO_2 (42.4%) Diesel Cars
- 3.6 µg/m^3 NO_2 (7.8%) Light Goods Vehicles
- 0.8 µg/m^3 NO_2 (1.7%) Heavy Goods Vehicles
- 6.2 µg/m^3 NO_2 (13.5%) Buses

Cars are the main contributor (46.9%) to this NO_2 concentration. Diesel car emissions are attributed to the majority of these car related emissions with 42.4% of

the total, 19.5 µg/m^3. The total background concentration of NO_2 (12.5 µg/m^3) is attributed to 27.1% of the total.

Buses, 6.2 µg/m^3, make up the next highest proportion (13.5%) of this concentration with light goods vehicles accounting for 7.8 % and HGVs a much smaller fraction (1.7%).

3.4 Required Reduction in Emissions

The required reduction in emissions has been calculated in line with Defras statutory Technical Guidance document (LAQM.TG16) to determine the road NOx reduction required to meet the annual mean air quality objective of 40 µg/m^3 NO_2. It is anticipated that this reduction will also achieve the hourly mean objective.
Total oxides of nitrogen (NOx) are used for the required reduction in vehicle emissions. This is routinely used for vehicle emissions standards instead of NO_2. Vehicles emit nitrogen dioxide (NO_2) and nitrogen oxide (NO) which make up the total NOx. The NO reacts with ozone in sunlight to create NO_2. The relationship between NOx emitted and ambient NO_2 isnt linear so emission reductions are presented in NO_x.

3.4.1 AQMA No.1 Hennef Way, Banbury – Required Reduction

To reduce the total NO_2 concentration by 19.8 µg/m^3 at the worst case monitoring location in this AQMA, a road NO_x reduction of 61.6 µg/m^3 (52%) is required.

3.4.2 AQMA No.2 Banbury – Required Reduction

To reduce the total NO_2 concentration by 0.9 µg/m^3 at the worst case monitoring location in this AQMA, a road NO_x reduction of 11.1 µg/m^3 (16%) is required.

3.4.3 AQMA No.3 Bicester Road, Kidlington – Required Reduction

To reduce the total NO_2 concentration by 1.1 µg/m^3 at the worst case monitoring location in this AQMA, a road NO_x reduction of 11.2 µg/m^3 (17%) is required.

3.4.4 AQMA No.4 Bicester – Required Reduction

To reduce the total NO_2 concentration by 6 µg/m^3 at the worst case monitoring location in this AQMA, a road NO_x reduction of 25.6 µg/m^3 (30%) is required.

3.5 Key Priorities

The key priorities for action are:

- Priority 1 – Strengthening local policy to improve air quality and its role in protecting health;
- Priority 2 – Reducing NO_x emissions from cars in all AQMAs;
- Priority 3 – Ensuring new developments encourage and facilitate low emission and alternative transport;
- Priority 4 – Ensuring transport infrastructure delivery takes account of air quality improvement potential within AQMAs;
- Priority 5 – Raising awareness of poor air quality and encouraging improvement actions by vehicle users and fleet managers.

4 Development and Implementation of Cherwell District AQAP

4.1 Consultation and Stakeholder Engagement

In developing this draft AQAP, we have worked with other local authorities and agencies to improve local air quality. Schedule 11 of the Environment Act 1995 requires local authorities to consult the bodies listed in Table 4.1.

In addition we will undertake the following stakeholder engagement:

- Website consultation
- Article in local press
- Article in local newsletter

(The response to our consultation / stakeholder engagement will be appended to the final AQAP)

Table 4.1 – Consultees from Schedule 11 of EA 1995

Consultee
Secretary of State
Environment Agency
Highways authority
Neighbouring local authorities
Other public authorities as appropriate, such as Public Health officials
Bodies representing local business interests and other organisations as appropriate

List these here:

4.2 Steering Group

Defras Statutory Policy Guidance (LAQM.PG16) recommends the steering group is of sufficient seniority to ensure that the outputs from the group are taken forward and as significant action is required from Oxfordshire County Council to resolve the air quality issues, it would be beneficial to have a senior county council representative as co-chair.

A steering group will be set up to consider the actions in Tables 5.1 to 5.5. Officer level engagement has been undertaken to develop some of these measures.

Several steering group meetings were run in 2013 to develop action measures for AQMA No.1 – Hennef Way. These actions were not taken further due to the uncertainties raised over an exceedence occurring at a relevant receptor (identified in the 2013 Further Assessment report) and Defra requiring further monitoring to address this uncertainty. These measures are included in tables 5.1 – 5.5.

(To give the public further confidence that the work being taken forward to tackle air quality is supported at the highest level, it's recommended that engagement in and sign-off of Action Plans and annual reports is undertaken by both the Chief Executive and also the heads of the main departments involved)

5 AQAP Measures

Table 5.1 to 5.5 show the Cherwell District AQAP measures. It contains:

- a list of the actions that form part of the plan
- the responsible individual and departments/organisations who will deliver this action
- expected benefit in terms of pollutant emission and/or concentration reduction
- the timescale for implementation

Updates on the implementation of these measures will be reported on in future Annual Status Reports which will be available to download at www.cherwell.gov.uk/airqualitymanagement.

Measures that will not be pursued and the reasons why are shown in Table A.1 in Appendix A.

Table 5.1 – Air Quality Action Plan General

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Target Pollution Reduction in the AQMA	Progress to Date	Comments
G.1	Explore Local Plan including Low Emission Vehicle uptake measures incorporated into all new developments	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	CDC	2016/17	2017	medium		
G.2	All major developments to include Emission statements and mitigation strategies within an appropriate air quality assessment submitted at the application stage.	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	CDC	2016/17	2017	medium		

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Target Pollution Reduction in the AQMA	Progress to Date	Comments
G.3	Damage cost calculations to be included in air quality assessments to show the financial impact of developments.	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	CDC	2016	2016	low	n/a	
G.4	Major developments in or within 100 metres of an AQMA will be air quality neutral	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	CDC	tbc	tbc	low	n/a	All major developments within 100 metres of an AQMA will be air quality neutral to avoid impacting the local background NOx contribution.

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Target Pollution Reduction in the AQMA	Progress to Date	Comments
G.5	Travel plans submitted with development proposals will make reference their contribution to the mitigation strategy and progress will be reported to CDC for 5 years post development completion.	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	OCC / CDC	tbc	tbc	low		Travel plans should address air quality specifically and be reported in such a fashion they can be included in the Annual status report.
G.6	Air Quality actions to be included in the Local Transport Plan	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	OCC	2015	2016	medium	LTP4 (2016 update) includes an annex on actions to address air quality	Ongoing measure development and updates to LTP4 to represent changes in air quality. Maintain close links between OCC and CDC.

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Target Pollution Reduction in the AQMA	Progress to Date	Comments
G.7	Air Quality included in the Public health framework Joint Strategic Needs Assessment	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	OCC	2015	2015	low	JSNA includes statement on air quality	JSNA includes air quality. To maintain, update and progress actions as part of the annual review process.
G.9	Include low emission vehicles in taxi licensing policy to encourage their take up and use within the district.	Policy Guidance and Development Control	Other Policy	CDC	2016	2017	low		Taxi licensing policy is currently being revised.
G.10	Low emission plant, vehicle, delivery and fleet requirements to be included in sustainable procurement section of CDC procurement policy.	Policy Guidance and Development Control	Sustainable procurement guidance	CDC	2016	2017	low		

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Target Pollution Reduction in the AQMA	Progress to Date	Comments
G.11	Low emission plant, vehicle, delivery and fleet requirements to be included in sustainable procurement section of OCC procurement policy.	Policy Guidance and Development Control	Sustainable procurement guidance	OCC	2016	2017	medium		

Table 5.2 – AQMA No.1 Hennef Way Air Quality Action Plan

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Target Pollution Reduction in the AQMA	Progress to Date	Comments
1.1	Banbury Park and Ride Bus service around M40 junction	Alternatives to private vehicle use	Bus based Park & Ride	OCC	tbc	tbc	medium	tbc	OCC to add. Feasibility done?
1.2	Targeted business-led employee lift share schemes	Alternatives to private vehicle use	Car & lift sharing schemes	OCC	tbc	tbc	low	tbc	Target Banbury - Brackley employee journeys and local industrial estates i.e. Wildmere and Overthorpe
1.3	Corporate policy encouraging home working where possible and equipment provision.	Promoting Travel Alternatives	Encourage / Facilitate home-working	CDC	2014	2014	low	complete	CDC transport policy encourages home working and regularly reviews work travel.
1.4	Promote use of canal towpath routes	Promoting Travel Alternatives	Promote use of rail and inland waterways	CRT	tbc				
1.5	Promote use of rail to get into Banbury	Promoting Travel Alternatives	Promote use of rail and inland waterways	OCC					
1.6	Identify school journeys on this route e.g. Banbury - Middleton Cheney to monitor and promote school travel plans	Promoting Travel Alternatives	School Travel Plans	OCC					

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Target Pollution Reduction in the AQMA	Progress to Date	Comments
1.7	Green Wall Barrier between carriageway and receptor	Transport Planning and Infrastructure	Other	OCC					
1.8	Targeted business-led workplace travel plan promotion	Promoting Travel Alternatives	Workplace Travel Planning						Target Banbury - Brackley employee journeys and local industrial estates i.e. Wildmere and Overthorpe

Table 5.3 – AQMA No.2 Banbury Air Quality Action Plan

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Target Pollution Reduction in the AQMA	Progress to Date	Comments
2.1	Banbury Park and Ride Bus service	Alternatives to private vehicle use	Bus based Park & Ride	OCC	tbc	tbc	medium	tbc	OCC to add. Feasibility done?
2.2	Priority parking for lift share permit holders in CDC owned car parks	Alternatives to private vehicle use	Car & lift sharing schemes	CDC	tbc	tbc	low	tbc	Lift share permit system and assign priority parking for permit holders.
2.3	Banbury wide car club	Alternatives to private vehicle use	Car Clubs	OCC	2017	tbc	low	tbc	Assess feasibility for Banbury area.
2.4	Corporate policy encouraging home working where possible and equipment provision.	Promoting Travel Alternatives	Encourage / Facilitate home-working	CDC	2014	2014	low	complete	CDC transport policy encourages home working and regularly reviews work travel.
2.5	Promote use of canal towpath routes	Promoting Travel Alternatives	Promote use of rail and inland waterways	CRT	tbc				
2.6	Promote use of rail to get into Banbury	Promoting Travel Alternatives	Promote use of rail and inland waterways	OCC					Promote use of rail to get into Banbury

Table 5.4 – AQMA No.3 Kidlington Air Quality Action Plan

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Target Pollution Reduction in the AQMA	Progress to Date	Comments
3.1	Lift share campaign at Water Eaton Park and ride	Alternatives to private vehicle use	Car & lift sharing schemes	OCC	tbc	tbc	low	tbc	Water Eaton traffic drives through this AQMA. Promote lift share to encourage sharing to the park and ride.
3.2	Promote use of canal towpath routes	Promoting Travel Alternatives	Promote use of rail and inland waterways	CRT	tbc				
3.3	Promote use of rail to get into Bicester	Promoting Travel Alternatives	Promote use of rail and inland waterways	OCC					Promote use of rail to get into Bicester
3.4	Feasibility for traffic light management to reduce north side queuing to be investigated.	Traffic Management	UTC, Congestion management, traffic reduction	OCC					

Table 5.5 – AQMA No.4 Bicester Air Quality Action Plan

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Target Pollution Reduction in the AQMA	Progress to Date	Comments
4.1	Bicester Park and Ride Bus service	Alternatives to private vehicle use	Bus based Park & Ride	OCC	2015	2016	medium	Delivered	Potential to include alternative vehicle charging at this site to encourage low emission vehicle transport
4.2	Priority parking for lift share permit holders in CDC owned car parks	Alternatives to private vehicle use	Car & lift sharing schemes	CDC	tbc	tbc	low	tbc	Lift share permit system and assign priority parking for permit holders.
4.3	Bicester wide car club	Alternatives to private vehicle use	Car Clubs	OCC	2016	tbc	low	tbc	A2 dominion administers a car club for the Elmsbrook development. Assess feasibility for wider Bicester area.
4.4	Promote Oxford Parkway station for journeys into Bicester	Alternatives to private vehicle use	Rail based Park & Ride	OCC	tbc	tbc	low	tbc	Oxford Parkway alternative to travel to Bicester.
4.5	Low emission delivery plans	Freight and Delivery Management	Delivery and Service plans	OCC	tbc	tbc	low	tbc	Assess feasibility to introduce low emission delivery vehicle requirements.
4.6	Bicester active travel i.e. walking and cycling campaign	Promoting Travel Alternatives	Intensive active travel campaign & infrastructure	CDC	2016	2017	high	tbc	Healthy town to encourage active travel i.e. walking and cycling

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Target Pollution Reduction in the AQMA	Progress to Date	Comments
4.7	Identify school journeys on this route to monitor and promote school travel plans	Promoting Travel Alternatives	School Travel Plans	OCC					
4.8	Wayfinding campaign	Promoting Travel Alternatives	Other	CDC	2016	2017		tbc	Wayfinding campaign to signpost walking and cycling routes around Bicester.
4.9	Central corridor works in LTP	Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, inc Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	OCC					

Appendix A: Reasons for Not Pursuing Action Plan Measures

Table A.1 – Action Plan Measures Not Pursued and the Reasons for that Decision

Action category	Action description	Reason action is not being pursued (including Stakeholder views)
Bus based Park and ride	Removal of Water Eaton Park and Ride to reduce travel to this park and ride facility. .	The park and ride facility reduces journeys into neighbouring authorities AQMA.
Rail based Park & Ride	Promotion of rail based park and ride	Banbury and Bicester stations are located in areas which may encourage journeys through AQMAs.
Environmental Permits	Environmental permit based actions	Transport is the main contributor to pollutants in the AQMAs.
Freight Consolidation Centre	Freight Consolidation Centre	main emission source is cars
Freight Partnerships for city centre deliveries	Freight Partnerships for city centre deliveries	main emission source is cars
Quiet & out of hours delivery	Quiet & out of hours delivery	main emission source is cars
Route Management Plans/ Strategic routing strategy for HGV's	Route Management Plans/ Strategic routing strategy for HGV's	main emission source is cars
Public information via television	TV campaign	Limited impact
Anti-idling enforcement	Anti-idling enforcement campaign	Idling hasn't been identified as a significant issue in any AQMA.

Reduction of speed limits, 20mph zones	Reduction of speed limits	Speeding or faster moving traffic has not been identified as an issue. Hennef Way dual carriageway has a speed reduction to 50 mph in place currently.
Road User Charging (RUC)/ Congestion charging	Congestion charging in towns	No zone for congestion charging identified.
Testing Vehicle Emissions	Roadside testing of vehicle emissions campaigns	-
Workplace Parking Levy, Parking Enforcement on highway	Workplace Parking Levy, Parking Enforcement on highway	Roadside parking not identified as a significant issue.
Vehicle Retrofitting programmes	Vehicle Retrofitting programmes	-
Transport Planning and Infrastructure	Purchasing the 3 houses within AQMA No.1	Not improving air quality or the neighbourhood with empty properties.

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
AQS	Air Quality Strategy
ASR	Air quality Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
EU	European Union
LAQM	Local Air Quality Management
NO	Nitrogen Oxide
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
$PM_{2.5}$	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
…	…

References

Cherwell's Environmental Strategy for a Changing Climate (2008)