



Cheshire East Borough Council Air Quality Action Plan 2018-2023

In fulfilment of Part IV of the
Environment Act 1995
Local Air Quality Management
December (2018)

Cheshire East Borough Council

Local Authority Officer	Sarah Allwood Dr. Adobi Okam Martin Brown
Department	Environmental Protection
Address	Municipal Buildings, Earle Street, Crewe
Telephone	0300 1235015
E-mail	airquality@cheshireeast.gov.uk
Report Reference number	AQAP July 2018 version 1.0
Date	July 2018

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 Cheshire East Borough Council between 2018 and 2023.

This Action Plan replaces the previous Action Plan which ran from 2011 to 2017. Projects delivered through the past Action Plan include: upgrading the lights at the pedestrian crossing on West Road; comprehensive traffic reviews and resigning in and around Nantwich, completion of the Crewe to Nantwich Cycleway (Connect2); completion of the Crewe Green Link Road; additional entrance at Crewe Station to alleviate traffic flow; and lights have been installed at Redhouse Lane, Disley.

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 equality, as 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 billion³. Cheshire East Borough Council is committed to reducing the exposure of people in Cheshire East Borough to poor air quality in order to improve health.

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

- Environmental permits
- Policy guidance and development control
- Promoting low emission transport
- Promoting travel alternatives
- Public information, Awareness and Education
- Transport planning and infrastructure
- Traffic management
- Vehicle fleet efficiency

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

Our priorities are to tackle vehicular emissions by applying AQMA targeted measures as well as taking a holistic/integrated approach across Cheshire East. These measures include:

- ❖ development and planning
- ❖ traffic management
- ❖ alternative travel
- ❖ active travel
- ❖ low emission transportation
- ❖ transportation
- ❖ public awareness
- ❖ use of NOx-busting paint and green planting

In this AQAP we outline how we plan to effectively tackle air quality issues within our control. However, we recognise that there are a large number of air quality policy areas that are outside of our influence (such as vehicle emissions standards agreed in Europe), but for which we may have useful evidence. Therefore we will continue to work with regional and central government on policies and issues beyond Cheshire East's direct influence.

Responsibilities and Commitment

This AQAP was prepared by the Air Quality Team of Cheshire East Borough Council with the support and agreement of the Air Quality Steering Group.

This AQAP has been approved by the Air Quality Steering Group. The Air Quality Steering group consists of high level Council members such as the Portfolio Holder for Housing, Planning and Regeneration, the Director of Environment and Planning, Head of Highways, Transport Planning and Public Health.

This AQAP will be subject to an annual review, appraisal of progress and reporting to the Air Quality Steering Group. Progress each year will be reported in the Annual Status Reports (ASRs) produced by Cheshire East Borough Council, as part of our statutory Local Air Quality Management duties.

If you have any comments on this AQAP please send them to The Air Quality Team at:

Cheshire East Borough Council

Address: Municipal Buildings, Earle Street, Crewe, Cheshire CW1 2BJ

Telephone: 0300 123 5015

Email: airquality@cheshireeast.gov.uk

Table of Contents

Executive Summary	i
Responsibilities and Commitment	ii
1 Introduction.....	1
2 Summary of Current Air Quality in Cheshire East.....	3
3 Cheshire East Borough Council's Air Quality Priorities.....	5
3.1 Public Health Context	5
3.2 Planning and Policy Context.....	5
3.3 Source Apportionment.....	6
3.3.1 Vehicular Emission Contributions.....	7
3.3.2 Air Quality Management Area source apportionment	9
3.4 Required Reduction in Emissions.....	11
3.5 Key Priorities.....	13
4 Development and Implementation of Cheshire East Borough Council AQAP	14
4.1 Consultation and Stakeholder Engagement.....	14
4.2 Steering Group	14
5 AQAP Measures.....	15
5.1 Air Quality Monitoring and Management Measures	15
5.2. General Action Plan Measures	17
5.3. Site specific measures	22
Appendix A: Response to Consultation.....	27
Appendix B: Reasons for not Pursing Action Plan Measures	31
Appendix C: Additional Information	35
Glossary of Terms	36

List of Tables

Table 1.1 - Relevant Air Quality Objective summary	1
Table 3.1 -Required Reduction Emission to achieve NO ₂ national objective in the AQMAs	12
Table 5.1 - Air Quality Action Plan Measures general action borough wide	17
Table 5.2 - Air Quality Action Plan Measures for specific AQMA.....	22

List of Figures

Figure 2.1 - Map of Cheshire East Borough showing the active NO ₂ diffusion tubes	4
Figure 3.1 - Estimate of vehicular emission contribution for Cheshire East 2013-2016	8
Figure 3.2 - Source apportionment for some of the AQMAs and Cheshire East overall based on 2016 NO ₂ data	10

1 Introduction

Cheshire East Borough Council is comprised mostly of rural areas and some urban towns. These urban towns suffer from poor air quality as a result of traffic related emissions, thereby resulting in areas where concentrations of pollutants such as Nitrogen dioxide (NO₂) exceed the national Air Quality Objective standards.

The national Air Quality Objective is a health based guideline set out in Part IV of the Environment Act 1995 to protect the air that people are exposed to. Table 1.1 shows the summary of the objective for NO₂ and Particulate Matter (PM).

Table 1.1 - Relevant Air Quality Objective summary

Pollutant	Concentration	Measured as
Nitrogen dioxide (NO ₂)	40 µg/m ³	Annual average
	No more than 18 exceedances of 200 µg/m ³ per year	1-hour average
Particulate Matter (PM ₁₀)	40 µg/m ³	Annual average
	No more than 35 exceedances of 50 µg/m ³ per year	24-hour average
Particulate Matter (PM _{2.5})	Work towards reducing emissions/concentrations	Annual average

Despite active air quality management and progress being made within the Borough, Cheshire East still experiences NO₂ objective breaches in some areas. In addition to the existing 12 Air Quality Management Areas (AQMAs), 5 additional AQMAs were declared in 2017. As such a review and update of the 2011 Air Quality Action Plan (AQAP) is required.

Actions will therefore be developed in recognition of the legal requirement on the local authority to work towards the 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. Under the Act, the council is mandated to designate an AQMA where the concentrations of the pollutant measured is in breach of the Air Quality Objective in Table 1.1.

The council will deliver the action plan in this report over the period 2018–2023. The AQAP will be reviewed at least once every five years and progress on measures set out within this Plan will be reported annually within Cheshire East Council's Air Quality Annual Status Report (ASR).

This report will consist of actions aimed at reducing concentrations of air pollutants and exposure to air pollution across the borough in order to improve health and quality of life, environmental health and support sustainable economic growth. The actions will particularly focus on vehicular emissions from road transport as this is the dominant source of air pollution in the borough.

2 Summary of Current Air Quality in Cheshire East

Cheshire East has 17 AQMAs all of which breach the NO₂ Air Quality Objective. The main NO₂ contributor in Cheshire East is traffic/vehicular emissions. The AQMAs are predominantly in towns where there is a high volume of traffic, very busy junctions and congested areas.

Across the borough NO₂ concentration measurements were conducted using both continuous and passive monitoring systems, i.e. diffusion tubes. Figure 2.1 shows the Cheshire East AQMAs and monitoring sites. These sites are reviewed regularly to make sure that the monitoring is still relevant to sensitive receptor exposure.

Please refer to the current Annual Status Report for Cheshire East for more detailed air quality information.

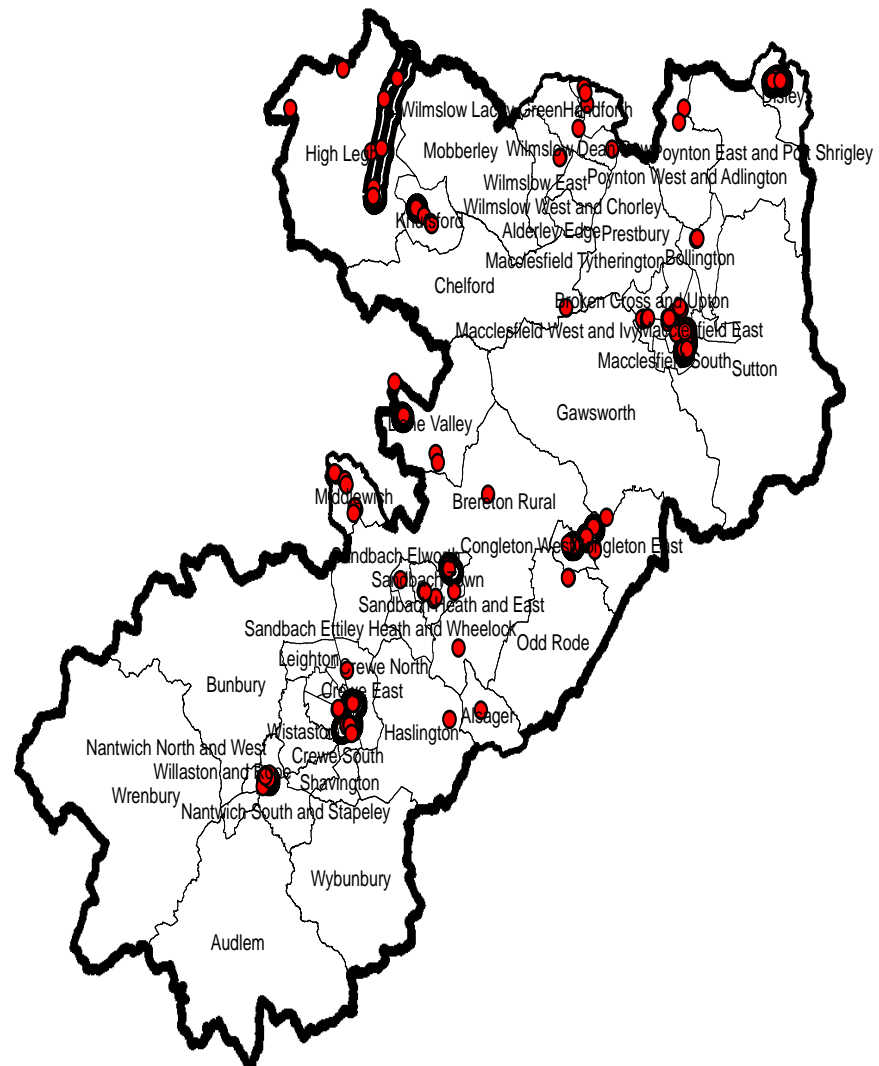


Figure 2.1 - Map of Cheshire East Borough showing the active NO₂ diffusion tubes

3 Cheshire East Borough Council's Air Quality Priorities

3.1 Public Health Context

The Public Health Outcomes Framework (PHOF) is a Department of Health data tool for England. It is intended to focus on Public Health action to increase life expectancy and reduce differences in life expectancy between communities⁴. The Public Health Outcome Framework includes an indicator for air quality. As such, Cheshire East Public Health and Air Quality teams are working together to prioritise measures on air quality within the Borough to help reduce the effect of air pollution on public health. The main source of NO₂ and PM in Cheshire East is road traffic, thus measures that will reduce emissions and also have a complementary effect on health are encouraged. For example, encouraging active travel (walking and cycling) will result in a decrease in traffic congestion, a reduction of emissions and also help to improve general health. The Cheshire East Air Quality and Public Health teams are also working together to communicate air quality effects on health to the wider public as well as trying to develop a Cheshire East based health impact assessment.

3.2 Planning and Policy Context

There are a number of policies, strategies and plans at national and local levels which contribute towards improvements in air quality. Described below are some of the local strategies used in Cheshire East:

- **Cheshire East Air Quality Strategy (AQS):** - this is an overarching document providing an overview of the roles and responsibilities of Council services which can influence air pollution. It promotes consistency across the range of policies that influence/affect air quality in the borough. It ensures that air quality is considered in all relevant decisions to support improvement across the borough. The Air Quality Strategy is critical to the implementation of specific actions through the AQAP.

⁴ LAQM PG16 <https://laqm.defra.gov.uk/documents/LAQM-PG16-April-16-v1.pdf>

- **Cheshire East Low Emission Strategy (LES):** - the LES is a policy involving a plan of actions that is designed to lower the emissions from transport and encourage developers to implement sustainable planning systems/developments to improve air quality. The LES is intended to fit with both National and Local Plan policies with respect to supporting sustainable development. This will manage the overall contribution of developments within the borough rather than looking at each application on a case by case basis and encourage developers to understand the importance of protecting local air quality and their role in mitigating any impact from development.

Cheshire East Local Transport Plan (LTP): - this is a framework for strategic and local highway transport planning in the borough. It ensures that air quality is considered within all aspects of transportation and the local transport strategy. This includes sustainable transport and the management of travel demand by cars and focuses on areas such as traffic management and transport infrastructure in all modes of transportation. Examples include the Cheshire East Cycling strategy which promotes and improves active travel and lifestyle, sustainable modes of travel to school strategy, electric vehicle infrastructure and travel planning. The Transport and Highway team are part of the Air Quality Steering Group and work along side the Air Quality Team.

3.3 Source Apportionment

In Cheshire East, like many other boroughs in the United Kingdom and cities all over the world, the dominant source of air quality degradation is vehicular emissions so any increase in these emissions will continue to exacerbate the situation.

Therefore, the AQAP measures presented in this report are designed to predominately target the traffic (vehicular) emissions.

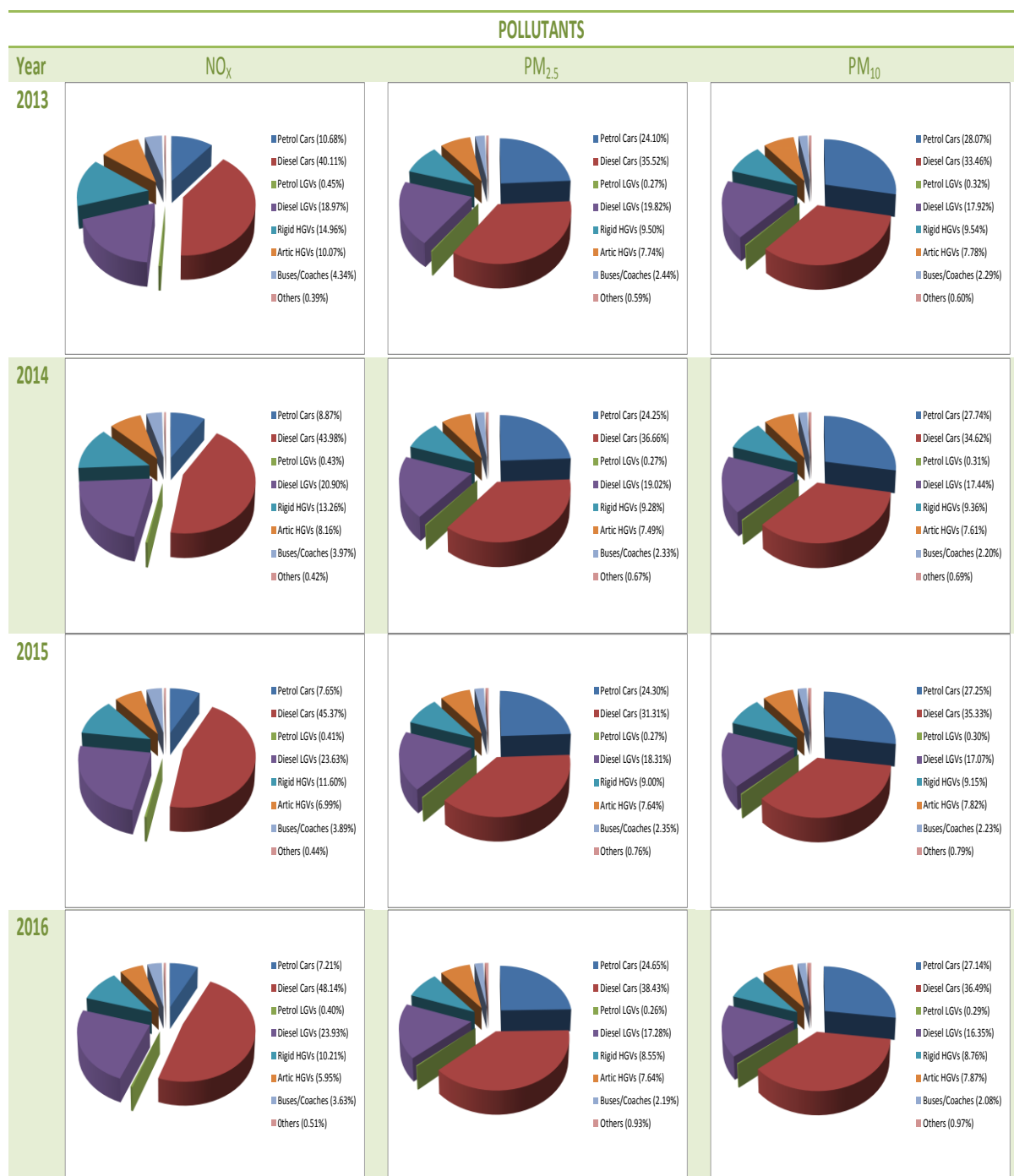
NO₂ concentrations are currently widely measured within Cheshire East, whilst other pollutants such as PM are not currently monitored. However, PM resulting from vehicular emissions can be estimated using the Department of Food and Rural Affairs (DEFRA) quantification tool. The NO₂ measurement made within the borough is used to determine where there are breaches of the NO₂ objective.

3.3.1 Vehicular Emission Contributions

To quantify emissions from vehicles, DEFRA has published a tool called the Emission Factors Toolkit (EFT). The EFT_2016 version 7.0 was used for the analysis in this report. The EFT is able to estimate proportions of nitrogen oxides (NO_x – a combination of nitrogen oxide and nitrogen dioxide, or NO and NO_2), PM_{10} and $\text{PM}_{2.5}$ emissions from vehicular sources, using the fleet type, Average Annual Daily Traffic (AADT), road type (that is urban, rural and motorway), speed and year of AADT collection for Cheshire East.

The AADT data used in the toolkit was obtained from the Department for Transport (DFT) traffic count website.

Figure 3.1 shows the estimated proportions from the calculation for the years 2013 to 2016 for each vehicular fleet to road traffic for NO_x , $\text{PM}_{2.5}$ and PM_{10} .



Others=contribution from motorcycle and other energy/fuel types used by vehicles

Figure 3.1 - Estimate of vehicular emission contribution for Cheshire East 2013-2016

Figure 3.1 shows the trend in the fleet percentage contribution for Cheshire East.

Cars make up about 80% of the fleet on Cheshire East's roads based on AADT (Annual Average Daily Traffic) and of that percentage, diesel cars account for most of the vehicular NO_x emission's contribution (ranging from 40% – 48% in Figure 3.1). In

fact, for all the three pollutants and for all the years calculated, diesel cars show to be the highest contributors (Figure 3.1).

LGVs and HGVs (Artic + Rigid) make up 13% and 5% of Cheshire East's road fleet respectively. HGVs, although small in road fleet percentage ([Appendix C](#)), contribute 16 – 25% NO_x and 17% PM of the emissions over the years reviewed (Figure 3.1).

The data in this report agrees with other national reports which suggest that the main source of NO_x is from road transport⁵.

The largest source of this NO₂ in the UK is from LGVs (vans + cars) which have significantly grown in number over the past 10 years⁶, especially diesel vehicles which contribute most of the NO₂ emissions⁵.

For PM_{2.5} and PM₁₀, the contribution from petrol cars in comparison to NO_x is higher

This shows that in addition to the direct exhaust tail emissions, other non-exhaust sources such as brakes, tyres and re-suspension from the road surface are contributing factors. However, diesel cars when compared to petrol cars still show higher emissions of PM (2.5 and 10).

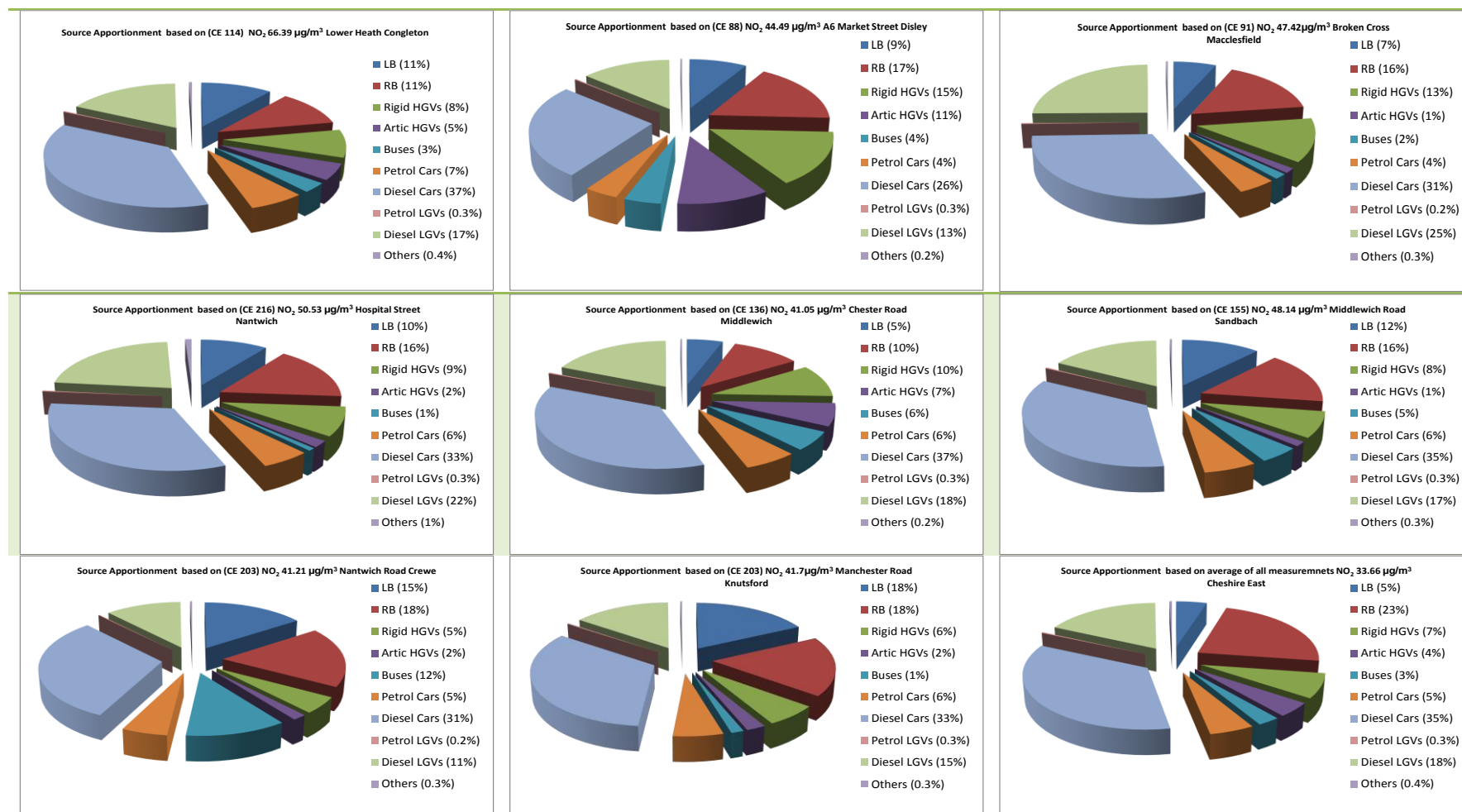
3.3.2 Air Quality Management Area source apportionment

In order to understand sources that influence air quality and identify the key priorities for the Action Plan, a source apportionment exercise was carried out by Cheshire East Council. The source apportionment was calculated for NO₂, using the method described in the Technical Guidance LAQM.TG16 Chapter 7.

Figure 3.2 shows the source apportionment for the AQMAs and Cheshire East overall. One AQMA was selected from each town to represent the town it is located in.

⁵ Department of Environment, Food and Rural Affairs (2004) The Air Quality Expert Group Nitrogen Dioxide in the United Kingdom summary. <https://uk-air.defra.gov.uk/assets/documents/reports/ageg/nd-summary.pdf>

⁶ Department of Environment, Food and Rural Affairs (2015) Draft plans to improve air quality in the UK Tackling nitrogen dioxide in our Towns and cities. UK overview document https://consult.defra.gov.uk/airquality/draft-aq-plans/supporting_documents/Draft%20plans%20to%20improve%20air%20quality%20in%20the%20UK%20%20Overview%20document%20September%202015%20final%20version%20folder.pdf



Others=contribution from motorcycle and other energy/fuel types used by vehicles. LB=Local Background, RB=Regional Background

Figure 3.2 - Source apportionment for some of the AQMAs and Cheshire East overall based on 2016 NO₂ data

Local background (LB) shows the percentage contribution of other NO₂ local sources such as boilers, Combine Heat and Power (CHP), Non-Road Mobile Machinery (NRMM), agricultural, aviation, industrial and other sources in the AQMAs and borough wide (Figure 3.2).

The regional background (RB) shows the influence of the sources from outside the borough.

Vehicular emissions contribute more than 60% of NO₂ emissions in the AQMAs and borough wide source apportionment (Figure 3.2).

Figure 3.2 shows that cars contribute between 30 - 44%, LGVs 11 - 25%, and HGVs 7 - 26% of NO₂ emissions in the source apportionment. HGV NO₂ emission contribution across the AQMAs and the borough is greater than 10 % with Disley showing the highest contribution of 26% in comparison to the other AQMAs listed (Figure 3.2).

Therefore, it is apparent that the impact of LGV (cars and vans) emissions is significant across the AQMAs and the borough as a whole. Henceforth, measures to reduce the impact of LGV emissions should be implemented in the AQMAs to help improve air quality. In addition, the large percentage of cars causes congestion at pinch-points which further impacts air quality.

3.4 Required Reduction in Emissions

The key priority areas for action are where the measured NO₂ concentration is in breach of the NO₂ objectives. The AQAP aims at reducing the NO₂ concentrations in these areas as much as possible with an overall goal of achieving compliance with the UK National Air Quality Objective. Table 3.1 shows the individual AQMAs and the road NO_x reduction expressed as a percentage needed to attain the objective concentration. This was calculated in line with Technical Guidance LAQM.TG16 Chapter 7. Cheshire East will continue to work to achieve these reductions following the measures outlined in this document.

Table 3.1 -Required Reduction Emission to achieve NO₂ national objective in the AQMAs

Tube ID	Location	City/Town	2016 NO ₂ Measured (µg/m ³)	NOx equivalent of NO ₂ (µg/m ³)	NOx-required concentration (µg/m ³)	Road NOx reduction (µg/m ³)	reduction expressed as (%)
CE1	Park Lane	Macclesfield	42.82	64.88	58.05	6.83	10.53
CE10	Cross Street	Macclesfield	49.74	83.69	59.21	24.48	29.25
CE11	London Road	Macclesfield	38.52	54.54	58.05		
CE16	The Crescent	Disley	58.66	108.59	59.63	48.96	45.09
CE39	Old Post Office/Iron Gates Farm, Monks Heath	Chelford	39.18	59.53	61.49		
CE47	Manchester Road	Knutsford	41.7	56.58	52.54	4.04	7.14
CE48	Holly Tree Cottage	Mere	50.2	80.14	54.71	25.43	31.73
CE51	RTA, Chester Road	Mere	48.72	79.42	57.69	21.73	27.36
CE54	Almond Tree Cottage	Tabley	40.94	41.18	39.03	2.15	5.22
CE55	Old Hall Lane	Over Tabley	52.98	70.64	39.03	31.61	44.75
CE57	Cobblestones	Over Tabley	45.09	64.13	51.85	12.28	19.15
CE61	Mere Corner Cottage	Mere	41.84	59.01	54.61	4.4	7.46
CE84	Tollbar Cottage	Mere	45.81	65.92	51.85	14.07	21.34
CE86	Hibel Road	Macclesfield	43.33	62.86	54.84	8.02	12.76
CE88	By RTA, Market Street, Disley	Disley	44.49	70.64	59.63	11.01	15.59
CE91	Broken Cross	Macclesfield	47.42	79.54	61.03	18.51	23.27
CE93	Henshall Road	Bollington	40.9	62.46	60.29	2.17	3.47
CE94	Chelford Road	Knutsford	52.66	82.85	51.18	31.67	38.23
CE104	West Road	Congleton	64.5	124.4	58.6	65.8	52.89
CE114	Lower Heath	Congleton	66.39	123.8	53.15	70.65	57.07
CE116	Rood Hill	Congleton	42.89	65.24	58.24	7	10.73
CE117	Rood Hill takeaway	Congleton	46.01	73.03	58.24	14.79	20.25
CE127	Rose Cottage, Peel Lane	Astbury	40.39	64.57	63.63	0.94	1.46
CE136	Chester Road	Middlewich	41.05	72.72	70.13	2.59	3.56
CE152	Brickhouse Barns, Holmes Chapel Road	Sandbach	47.62	64.37	46.01	18.36	28.52
CE155	Middlewich Road	Sandbach	48.14	76.06	55.92	20.14	26.48
CE203	NW Traffic lights on Mill Street crossroads	Crewe	41.21	57.7	54.82	2.88	4.99
CE216	Hospital street	Nantwich	50.53	84.43	57.94	26.49	31.38
CE221	Hospital Street	Nantwich	46.97	75.17	57.94	17.23	22.92

3.5 Key Priorities

From the source apportionment work (Figure 3.2), it was concluded that the major contributors to NO₂ in all the AQMAs are LGVs (Vans and cars) but the influence of HGVs will not be discounted, particularly given the higher HGV concentrations in Disley. Therefore, AQMA specific targeted measures will be implemented to reduce the impact of these vehicle types. However, a holistic or integrated approach will also be incorporated across the borough to manage air quality. This integrated approach will be applied in the priority areas of:

- ❖ development and planning
- ❖ traffic management
- ❖ alternative travel
- ❖ active travel
- ❖ low emission transportation
- ❖ transportation
- ❖ public awareness
- ❖ use of NO_x-busting paint and green planting

4 Development and Implementation of Cheshire East Borough Council AQAP

4.1 Consultation and Stakeholder Engagement

In updating this AQAP, we have worked with other local authorities, external agencies, Highways, Public Health, Parish Councils, businesses and the local community to improve local air quality.

Importantly, we have also undertaken consultation and engagement with the public in the different towns containing AQMAs. Local knowledge is fundamental to the development of local actions by helping to identify air quality related problems in towns affected and provide an opportunity for an open forum to discuss these issues and help generate new ideas for action.

These consultations will also allow the local public the opportunity to give feedback on the proposed air quality measures and help them understand the rationale behind them.

The response to our public consultation engagement is given in Appendix A.

4.2 Steering Group

The development of an Air Quality Steering Group was approved by the Public Health Forum in April 2016. It aims to encourage greater involvement of Public Health local directors and other relevant services within the Council.

The group is made up of senior officers from Public Health, Planning, Highways and Environmental Health. The group meets quarterly and is tasked with the strategic overview of the Council's approach to improving air quality and the direction of services to achieve positive results.

The AQAP proposed measures were discussed by the group, giving stakeholders the opportunity to provide input, generate new ideas, critically appraise the measures proposed and provide a sense check that the measures proposed are realistic and achievable. The Steering Group were also kept updated on the outcomes of the public consultation work; some members even attending the consultation sessions.

5 AQAP Measures

The following sections discuss the measures applied to manage and achieve improved Air Quality standards across the whole of Cheshire East. These include overarching and supportive work, general actions to improve air quality and also actions that are relevant to individual Air Quality Management Areas.

5.1 Air Quality Monitoring and Management Measures

Part IV of the Environment Act 1995 requires that all local authorities in England, Northern Ireland, Scotland and Wales should conduct local Air Quality reviews. Section 82(1) of the Act requires that these reviews should include assessment of the current air quality in the area.

Cheshire East is committed to taking action to improve air quality and protect the public through a number of more general and ongoing actions including;

- The use of diffusion tubes and real-time monitors for air quality monitoring in order to produce higher quality data on which to monitor effectiveness of initiatives and base decisions. Also to increase confidence in monitoring data and quality of monitoring to provide support for modelling work.
- The annual review of air quality monitoring sites so as to ensure that they are suitable and relevant to monitoring in regards to sensitive sites.
- Review and assess air quality within the borough, in accordance with the government guidance and policies, making sure that statutory requirements are met.
- Revision of the Local Emission Inventory for source apportionment providing a better understanding of pollutant contribution and to improve any local air quality modelling work.
- Regulation and enforcement of legislative requirements for industrial processes in line with the Environmental permitting programme.
- Work with partner agencies including Highways, DFT, Public Health, and Environment Agency to help coordinate activities and disseminate information which promotes and improves air quality in Cheshire East

NB: Please see future ASRs for regular annual updates on implementation of these measures

5.2. General Action Plan Measures

Table 5.1 deals with the general measures that will be implemented throughout the borough in relation to improving Air Quality

Table 5.1 - Air Quality Action Plan Measures general action borough wide

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase Implementation Phase	Key Performance Indicator	Progress to Date	Estimated Completion Date /Comments
GN1	Policy Guidance and Development	Land-use and planning, Demolition and construction. Transportation and service delivery.	<p>Review the air quality Strategy</p> <p>Implement Low Emission Strategy</p> <p>When considering planning applications will have regard to relevant guidance for construction, Land-Use and Development Control</p> <p>Integration of air quality into all relevant council policies and documents, e.g. LDF, LTP, core strategy</p> <p>Use the existing development control processes to improve air quality</p>	<p>Cheshire East Council</p> <p>Planning</p> <p>Air Quality Team</p> <p>Highways</p>	<p>Emission assessment from each site/development should be carried out at the planning application stage as a standalone and its effect to existing developments/site.</p> <p>Ongoing.</p>	<p>Published AQS and LES.</p> <p>Suitable mitigation measures.</p>	<p>LES completed 2018</p>	<p>Review the Air Quality Strategy-2018</p> <p>LES requires formal adoption and implement - 2018</p>
GN2	Environmental Permits	Industrial installations and processes	Continue to enforce environmental permits in accordance with legislation and relevant guidance.	Environmental Protection Team	Ongoing	Inspection programme where inspection reports are produced and emission reports submitted.		Inspection programme completed annually
GN3	Public Information, Awareness and Education	Website	Regularly review the website to raises awareness on air quality, health effects and provide information on individual actions to improve air quality	<p>Air Quality Team</p> <p>Public Health</p>	Ongoing	Functional website with up to date information		Ongoing

Cheshire East Borough Council

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase Implementation Phase	Key Performance Indicator	Progress to Date	Estimated Completion Date /Comments
		Air Quality Education packs for delivery in schools	Produce resources on air quality for students and school children to provide better awareness Provide school children with air quality information leaflets to give their parents Encourage walking buses to schools	Air Quality Team	2018/2019 plan and design educational resources for the campaign	Air quality educational campaign	Discussion with SHIFT project to start campaign with schools in AQMAs	Ongoing
GN4	Promoting alternative travel	Travel planning	Support and encourage establishments and individuals to produce, implement and make available travel plans that give low emission travel choice and options. Working with schools to produce and implement their travel plan Link to previous schools measure	Air Quality Team Highways	Ongoing	Require Travel planning/residential travel information pack conditions on planning applications	Ongoing	Ongoing
		Council Travel	Support a staff travel plan, car share scheme and lift share Encourage work from home policy Promote and encourage the use of technological tools such as telephone and video facilities for meetings and conferences. Accessibility of council services via the internet	Cheshire East Council		Reduce need to travel and more online services	Ongoing	Ongoing
		Active Travel	Encourage and promote cycling and walking where possible Active travel/cycling strategy	Air Quality Team Public Health	Ongoing	Additional cycling and walking schemes around the borough	A number of schemes have been implemented across the borough	Ongoing

Cheshire East Borough Council

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase Implementation Phase	Key Performance Indicator	Progress to Date	Estimated Completion Date /Comments
GN5	Traffic Management	Anti-idling enforcement	Educate and where possible enforce requirement to switch off idling engines	Air Quality Team Wardens		Launch Anti-idling campaigns		Ongoing
		Emission based parking or permit Schemes	Promote a consistent and structured approach to parking supply, management and tariffs Incentivise parking for low emission vehicle	Air Quality Team Parking Transport	Review of car parking charges	Incentivised parking scheme implemented Consistent car parking management		This has currently been looked at as part of the 2018 parking strategy review. However, will be kept in in case the opportunity arises for introduction in the future
		Access and congestion management Traffic reduction	To work with partners to manage the highway network, manage delay and improve traffic flow	DFT	Various highway improvement schemes ongoing (SMART motorway, Crewe Green Roundabout) and in the planning stage (Congleton link road and Middlewich bypass)	SMART Motorway completed Highway improvement schemes implemented		Ongoing SMART Motorway April 2019 Crewe Green Roundabout Nov 2018
		Strategic routing for HGVs	Weight restrictions in AQMAs	Highways Transport		Weight restrictions reviewed and implemented if applicable		Weight restrictions on certain roads will ensure that freight is kept to the designated routes
		Ensure all relevant road markings are maintained	Ensure all relevant road markings e.g. box junctions are maintained and clearly visible	Highways		All relevant road markings are maintained		Ongoing
GN6	Promoting low emission transport	Taxi licence condition	Encourage taxis licensed by the council comply with vehicle emission limits	Licensing	Ongoing	Number of Taxi's Licenced. Number of LEV Taxis in the fleet All Taxis licenced by council should meet at least the minimum emission standard		Ongoing

Cheshire East Borough Council

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase Implementation Phase	Key Performance Indicator	Progress to Date	Estimated Completion Date /Comments
		EV charging and Low Emission vehicle	Continue to promote and increase the installation of EV charging points across the borough Promote Low emission vehicles	Air Quality Team Planning Transport	Ongoing	Increased installation of EV charging points		EV charging point conditions are required through planning. ongoing
GN7	Transport planning and infrastructure	Public transport improvement	Support improvement of public transport facilities, service level and reliability Investigate feasibility of bus shelters at bus stops in AQMAs	Transport Highways	Ongoing	Public transport improved Bus shelters installed		Ongoing
		Cycle scheme and network	Support improvement of the cycle network and cycling safety where possible	Transport	Ongoing	Cycling network improved Active travel promoted		Ongoing
GN8	Vehicle fleet emission efficiency	Driving training and ECO driving aids	To promote an eco-driving campaign for Cheshire East work force and other groups Promote driver training to operators to reduce emission	Cheshire East	Ongoing	Driver training completed Eco-driving campaign promoted		Ongoing
		Fleet efficiency and recognition schemes	Support procurement of greener fleet (low carbon, hybrid-electric) Support scheme that promotes reduced emissions from HGV's	Cheshire East	Ongoing	Greener fleet		Ongoing
		Testing Vehicle Emissions	To work with partners to undertake vehicle emission testing schemes	VOSA Police Air Quality Team	Ongoing	Vehicle emission testing completed		Ongoing

Cheshire East Borough Council

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase Implementation Phase	Key Performance Indicator	Progress to Date	Estimated Completion Date /Comments
GN9	Others	NO _x -busting paint Green planting Roadside panels	Application of NO _x paint on surfaces across the city especially in AQMAs Support and promote green planting Support investigation of spaces for green planting	Air Quality Team Cheshire East Council	Ongoing	More green infrastructure across the borough		Ongoing

5.3. Site specific measures

Table 5.2 deals with the site specific measures that will be implemented in the AQMA's in the borough in relation to improving Air Quality

Table 5.2 - Air Quality Action Plan Measures for specific AQMA

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date /Comments
CONGLETON AREA- WEST ROAD CONGLETON, ROOD HILL AND LOWER HEATH										
CONG1	Traffic Management	Strategic highway improvements	Provide a Congleton Bypass	Highways	During 2018		Bypass completed 2020		Planning stage	The effect of this bypass will relieve WR and LH 2020
CONG2	Traffic Management	Strategic highway improvements	Review the need for traffic signalling and giving more priority to Buxton Road	Highways			Traffic signalling reviewed			Ongoing
CONG3	Traffic Management	Other	Review the need for the pedestrian crossing and the puffin traffic light within close proximity	Highways			Crossings around Lower Heath area reviewed			Ongoing
CONG4	Traffic Management	Other	Review west bound bus stop by Tesco Express	Highways			Bus stop reviewed			Ongoing
CONG5	Promoting low emission transport	Cycle scheme and network	Work with the Congleton Cycling Group to improve the cycling network around Congleton	Transport			Improvement of the cycling network			Ongoing
NANTWICH AREA: HOSPITAL STREET										
NANT1	Other	Other	Review the need for vehicle weight restriction 1-whole town 2-Hospital Street	Highways Transport			Weight restriction reviewed			Ongoing

Cheshire East Borough Council

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date /Comments
NANT2	Traffic Management	Other	Ensure Peter Destapleigh Way made more attractive to through traffic through effective traffic management	Highways			Increased use by through traffic			Ongoing
NANT3	Traffic Management	Anti-idling enforcement	Install switch off when idling signs at station crossing points Use of wardens to control idling	Air Quality Team Wardens			Launch anti-idling campaign			Ongoing
NANT4	Traffic Management	Other	Review the need for 'keep clear' signage on Hospital Street at junction with Crewe Road roundabout	Highways			Signage review completed			Ongoing
NANT5	Traffic management	Other	Review the timings on Wellington Road railway crossing Countdown clocks to trains passing	Cheshire East			Crossing timings reviewed			Ongoing
SANDBACH AREA: JUNCTION 17, MIDDLEWICH ROAD										
SAND1	Traffic Management	Review junction	Review flows and priorities at Ashfield Way	Highways			Priorities reviewed			Ongoing
SAND2	Freight and Delivery management	Strategic routing strategy for HGV's	Vehicle weight restriction on Middlewich Road	Highways			Weight restriction reviewed			Ongoing
A6 DISLEY										
DIS1	Traffic Management	Other	Ensure the A6 Corridor is managed as part of the SEMMMS scheme	Cheshire East			Mitigation implemented as part of the schemes			Planning conditions to require enhanced mitigation

Cheshire East Borough Council

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date /Comments
DIS2	Transport planning and infrastructure	Public transport improvements- interchanges stations and services	Support the improvement of rail facilities	Cheshire East			Rail facilities improved			Ongoing
DIS3	Traffic Management	Speed limit review	Speed limit reduction on A6	Highways			Reducing the speed limit to 30mph			Ongoing
DIS4	Promoting low emission transport	Low Emission Zone (LEZ) or Clean Air Zone (CAZ)	Investigate the feasibility of implementing LEZ or CAZ	Air Quality Team Transport Highways Cheshire East			Feasibility of LEZ/CAZ investigated and implemented if possible			Ongoing
DIS5	Traffic Management	Road Users Charging (RUC) and/or weight restriction	Investigate the feasibility of implementing RUC and/or weight restriction	Air Quality Team Transport Highways Cheshire East			Feasibility of RUC investigated and implemented if possible			Ongoing
DIS6	Traffic Management	Strategic highway improvements	Review the possibility of a Bypass round Disley	Highways			Review completed and Bypass implemented if possible			Ongoing
DIS7	Traffic Management	Others	Review Redhouse Lane lights	Highways			Review completed and changes implemented			Lights turn red even when no car waiting to exit
CREWE AREA: NANTWICH ROAD, EARLE STREET, WISTASON ROAD										
CRE1	Transport planning and infrastructure	Other	Review requirement of the pelican crossings along Nantwich Road	Highways			Crossings reviewed			Ongoing Use of smart or zebra crossings

Cheshire East Borough Council

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date /Comments
CRE2	Traffic Management	Others	Traffic flow review study from Manchester Bridge to Muni buildings roundabout, between Vernon Way and Macon Way junctions.	Highways			Traffic flow study completed			Ongoing
CRE3	Traffic Management	Others	Review Traffic light signalling in AQMAs	Highways			Signalling review completed			Ongoing
KNUTSFORD AREA: MANCHESTER ROAD										
KNU1	Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	Review A50 roundabout/junction	Highways			Junction reviewed			Ongoing
KNU2	Other	Other	Review pedestrian crossings on roundabout	Highways			Crossings reviewed			Ongoing
KNU3	Other	Other	Review A556 Bypass Impact	Cheshire East			Impact on NOx reviewed			Ongoing
MACCLEFIELD AREA: BROKEN CROSS, PARK LANE, HIBEL ROAD, CROSS STREET/LONDON ROAD										
MACC1	Traffic Management	Others	Explore the potential of redesigning the A523/Byrons Lane junction by introducing a roundabout on London Road	Highways			Junctions reviewed and any improvements implemented			Introduction of roundabout may smoothen the traffic flow
MACC2	Traffic Management	Others	Parking restriction on Broken Cross during peak period	Parking			Parking restrictions considered and implemented if possible			Ongoing

Cheshire East Borough Council

Measure No.	EU Category	EU Classification	Measures	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date /Comments
MACC3	Traffic Management	Others	Review Road Parking and Parking time on Park Lane	Parking			Review completed and any actions implemented			Ongoing
MACC4	Traffic Management	Strategic highway improvement	Review the A523/A527 Roundabout on Hibel Road.	Highways			Review completed and any actions implemented			Ongoing
MIDDLEWICH AREA: CHESTER ROAD										
MIDD1	Freight and Delivery management	Strategic routing strategy for HGV's	Vehicle weight restriction in AQMA's	Highways Transport Parking			Weight restriction reviewed and implemented if possible			Weight restriction of HGV's on this road will force the HGV's to go on the motorway. Obtain money from bypass.
MIDD2	Traffic Management	Strategic highway improvements	Provide a Middlewich Bypass	Highways	During 2018		Bypass completed 2021		Planning stage	Winter 2021

Appendix A: Response to Consultation

There was a wide range of views and comments and Table A.1 shows the summary of responses to the consultation.

Table A.1 – Summary of Responses to Consultation and Stakeholder Engagement on the AQAP

Consultee	Category	Response
Air Quality Steering Group	Internal Consultation	Approved
Environment Agency	Statutory Consultation	No comments to make
Highways England	Statutory Consultation	No response
Public Health England	Statutory Consultation	No response
Cheshire West and Chester Council	Statutory Consultation	No comments to make
Shropshire Council	Statutory Consultation	No response
Warrington Borough Council	Statutory Consultation	No response
Trafford Council	Statutory Consultation	No response
Manchester City Council	Statutory Consultation	No response
Stockport Metropolitan Borough Council	Statutory Consultation	No comments to make
High Peak Borough Council	Statutory Consultation	No response
Staffordshire Moorlands District Council	Statutory Consultation	No response
Newcastle-under-Lyme Borough Council	Statutory Consultation	<p>Not knowing the individual areas and the issues they face, it would be helpful to an outsider to understand from a non-technical summary why the areas are covered by an AQMA, the extent of the AQMA and the reasons for declaration together with trends in emissions, source apportionment and key challenges and issues identified likely to have an impact on AQ during the life of the updated AQAP. (e.g. HS2, A500 widening, growth plans identified in the Local Plan, Northern Powerhouse related schemes).</p> <p>Newcastle has taken the opportunity to include in its AQAP document, PHOF Outcomes data and health profiles for the AQMA's within its area from data held and produced by the Director of Public Health. This we feel helps to draw attention to the contributory health impacts of poor AQ and would help in securing funding for future projects.</p>
Crewe and Nantwich Public	Public Consultation	It was suggested that greener fuels such as compressed natural gas for buses and lorries to improve diesel

Workshop		<p>emissions.</p> <p>General agreement with the plan to plant more foliage where possible</p> <p>It was suggested that development of more and improvement of cycle infrastructures should be provided. Also emphasis on active travel/cycling strategy was stressed.</p> <p>It was suggested that instead of installing only switch off when idling signs at the Nantwich station crossing points, countdown clocks to train passing should be considered; might not be possible but would be more effective</p> <p>Respondent agreed with the review for “keep clear” signage on Hospital Street at junction with Crewe Road roundabout. However respondent noted that it is not legally enforceable because Cheshire East Council policy is not to enforce yellow box junction.</p> <p>It was suggested that Bentley should provide incentives to support air quality.</p> <p>It was suggested that schools should have no driving boundaries in order to reduce cars around schools and reduce traffic build due to school run.</p> <p>It was suggested that free buses between Crewe railway station and the retail park/town centre, circular bus route and possibly link with town centre-hospital bus service should be provided. In order to reduce vehicles into the town centre and incentives for people to use public transportation.</p> <p>Respondent agreed with the review requirement for pelican crossings along Nantwich Road Crewe and suggested that the crossings be made smart or zebra crossing.</p> <p>It was suggested that Mill Street/Edleston Road be made one way with cycle lane counter flow.</p>
Congleton Public Workshop	Public Consultation	<p>Respondent suggested that funding and promotion of walking buses for schools to reduce the amount of cars that take children to school.</p> <p>Respondent agreed with plan to support planting trees/green spaces. Respondent also suggested water features.</p>
Macclesfield, Bollington and Knutsford Public Workshop	Public Consultation	<p>Park and ride schemes were suggested.</p> <p>Having appropriate public transport provision for schemes of more than 100 homes or development of strategic sites. Identifying major developments and possibly re-routing bus routes or providing new bus services before a development is completed, not leaving it until the properties are occupied.</p> <p>Using planning mitigation measures to apply landscaping, barriers and road design throughout the borough.</p>

		<p>Integrate transport assessment and air quality assessment in a document for major development sites borough wide</p> <p>Encourage technological improvements to reduce emissions. Change the vehicle fleet, low carbon, hybrid-electric vehicles. Anti-idling devices.</p> <p>Respondent was in agreement with the plan on Emissions based parking</p> <p>Respondent suggested monitoring around schools especially before and after school club and agreed with the plan on education of school children on idling in order for them to educate their wards.</p>
Disley Public Workshop	Public Consultation	<p>It was suggested that PM monitoring should be considered.</p> <p>Review the possibility for a bypass linked into the proposed A6-M60 in order to divert traffic away from town</p> <p>VOSA checks at garages to make sure cars are compliant</p> <p>Respondent suggested that Redhouse Lane junction traffic light should be reviewed because it turns red even when no car waiting to exit</p> <p>It was suggested that alternative walking routes be provided so that people can avoid the A6.</p> <p>It was also suggested that bus shelters be provided to shield people waiting for bus from fumes.</p> <p>Respondent suggested that there should be travel time assigned to HGVs.</p> <p>Agreed with plan for trees/shrubs to be planted.</p> <p>It was suggested that grants for air filters for homes should be provided</p> <p>Respondent feared that additional 4000 houses to High Lane would undoubtedly add to the volume of traffic along the A6. As such a bypass should be considered before embarking on this project</p>
Middlewich and Sandbach Public Workshop	Public Consultation	<p>It was suggested to remove the left filter light on turning left into Ashfield Way and put a give way sign to improve traffic flow.</p> <p>Alternative routes to school so that the kids are not exposed to air pollutants on the busy road.</p>

	<p>It was suggested that roadside panels be installed as barriers to reduce spread of vehicular emission.</p> <p>Respondent suggested that funding from Middlewich bypass should be used for Lewin street weight restriction and enforcement.</p> <p>Reduce cost of public transport as incentives for people to use public transport.</p> <p>Installation of green infrastructure for example green walls along Ashfields</p> <p>Install real-time analysers to measure hourly concentrations</p> <p>Respondent agreed with the plan of vehicle weight restriction in Middlewich Road Sandbach but thought it would be ignored when the M6 is closed. However thought it will be more advantageous to use such measure on Congleton Road to stop HGVs from entering town.</p> <p>Review of smoke control areas</p>
--	---

Appendix B: Reasons for not Pursuing Action Plan Measures

Table B.1 – Action plan not pursued and the Reasons for that Decision

Measure No.	Action Category	Action Description	Reason action is not being pursued (including Stakeholders views)
AR7	Awareness	Consider the introduction of a large scale pro-active public information system such as text messaging service	The goal is to give real-time update. Therefore in the future with improved technological resources this action could be reconsidered.
TR4	Others	Review current concessionary travel criteria to ensure it offers value for money and supports broader policy objectives. Additional discretionary elements to consider will include introduction of companion bus passes and/or taxi vouchers.	Completed. Concessionary travel is for only older people and for bus only (English National Buss Pass). It is a national scheme. They travel free after 9.30 am till last bus. No concessionary ticket for younger companions
TR11	Others	To map Congestion hotspots against AQMA / areas of concern and ensure congestion reduction measures are targeted in those areas	Completed. AQMAs and their hotspots are mapped and can be found on the website and the ASR. We have the AQMA's and buffer area layer in our GIS.
TRF1/TRF2	Freight and Delivery Management	Work with freight operators to establish appropriate freight routes, delivery routines and driver practices to reduce to reduce emissions Develop a database of freight distribution within borough	This is one of the proposed strategies in the LTP Refresh and will be adopted when the LTP Refresh plan is completed.
TRF3	Vehicle Fleet Efficiency	Examine feasibility for introduction of an eco-star scheme for freight operators	Completed. 2016 DEFRA Grant application with Cheshire West and Chester was unsuccessful. It was not supported by DEFRA.
AREA SPECIFIC ACTIONS WR-West Road, RH-Rood Hill, LH-Lower Heath, NANT-Nantwich, SAND-Sandbach, DIS-Disley, CRE-Crewe, KNU-Knutsford, EAR-Earle Street			
CR1 –CR7	Others Traffic Management	Various actions within the categories named in the action category column	Cranage AQMA has been revoked. It is no longer an AQMA because the sensitive receptors (two dwelling buildings) in the area of exceedances have been demolished. Only the general actions will now be applied to Cranage.
WR4/RH3/LH2	Others	Additional modelling of traffic flows	Completed. Undertaken as part of Congleton Link Road study. No further modelling will be done until Link Road is completed.
WR5/RH5	Traffic Management	Parking Enforcement	Completed. Parking is not a problem in this area. There are double yellow lines on the road and where necessary parking enforcement is ongoing.
WR7	Others	Timing changes to pedestrian crossing	Completed. Lights have been upgraded.

Measure No.	Action Category	Action Description	Reason action is not being pursued (including Stakeholders views)
WR8/RH7/LH8	Promoting Low Emission Transporting	Examine the feasibility of introducing a LEZ for Congleton	Congleton bypass is set to overcome the NO ₂ exceedances. However, the LEZ option could be investigate post Congleton bypass if Air Quality problem persists.
RH4/LH3	Traffic management	Investigate further signal changes on traffic lights	Completed. MOVA system has been installed. Monitoring the NO ₂ in the area to measure effect of change due to the newly installed light is ongoing
RH6	Traffic Management	Junction improvement	This measure will not be taken forward due to the Congleton bypass. The bypass has to be completed before the junction improvement can be reviewed.
NANT1/NA NT7/NANT 12	Traffic Management	Comprehensive traffic, tourist re-signing and reclassification of roads in and around Nantwich Review of the configuration of junctions in the Town to ensure traffic is diverted away from the AQMA Review options to improve traffic flow on the bypass (A500) to reduce congestion in the town centre and the AQMA	Completed. Comprehensive traffic reviews and resigning have been completed.
NANT2	Transport planning and infrastructure	Improved rail facilities	Completed Station refurbishment has been undertaken.
NANT3	Traffic Management	Ensure parking restrictions are enforced in and around the area	Completed. Parking is not a problem in this area. However parking enforcement remains ongoing. This measure is also considered under the general actions
NANT4	Freight and Delivery Management	Contact stores in the area and request they route delivery vehicles away from the AQMA	Completed. Small interest in coordinated approach was identified in the survey undertaken. In addition limited data analysis hindered progress. However measure could be reconsidered with data and interest improvement.
NANT6	Traffic management	Review the need for 20mph speed limit: -Whole Town -Hospital Street	Completed. This action will not be pursued because the drivers on that road already drive on low speed due to the road characteristics. Therefore there will be no need for further reduction to 20 mph.
NANT8	Traffic Management	Review the impact of making A534 Hospital Street one way	Completed. Discussions with Highway planners have concluded that such a scheme would not be practical or deliverable in the town.
NANT9	Traffic Management	Review the need for carriageway alterations in Hospital Street/ Pratchett's Row to make route less appealing	Completed. Discussed with Highways. Cheshire East Council policy is against any traffic scheme which would interfere with flow because of road safety issues. Therefore this action will not be pursued.
NANT10	Traffic Management	Review the need to introduce a traffic management system using traffic lights	Completed. This measure will not be carried forward as there are too few traffic lights for the lights to communicate with each other.

Measure No.	Action Category	Action Description	Reason action is not being pursued (including Stakeholders views)
NANT11	Traffic Management	Contact satellite navigation companies to ensure that they have updated their maps to include the reclassification of the roads in Nantwich	Completed. Confirmation of changes has been received from satellite navigation companies. However, this measure will no longer be continued because journey planners/real-time travel info can be found on google.
NANT13	Others	Install automatic analyser in the AQMA (Hospital Street) to improve knowledge	Completed. NO ₂ concentration in the area is not breaching 60 µg/m ³ as such; it is likely that there is no hourly breach. In addition, there is no ideal location to place the RTA. Therefore resources will be focused on measures that can reduce the NO ₂ concentration in that area.
NANT15	Transport planning and infrastructure	Complete the Crewe to Nantwich Cycleway (Connect2)	Cycleway has been Completed .
NANT16	Traffic Management	Review the introduction of well designed Speed bumps on Hospital Street	Completed. Action has been discounted. This is because current administration does not favour this action. There is a corporate policy which actively encourages the removal of such schemes.
NANT18	Traffic Management	Provide a "Build out" at Crewe Road / Hospital Street junction to prevent HGV's and Speeding Cars using Hospital Street	Completed. This measure will not be taken forward. This is because, following discussion with Highways, there is a safety implication associated with this measure.
NANT19	Others	Investigate the proportion of locally generated traffic using Hospital Street as against the volume of traffic generated from outside	This measure is discounted; because based on local knowledge, as long as the bypass is clear then Hospital street is not used by out of town vehicles. Out of town traffic uses bypass due to new signalling. Also investigation will require resources to separate local vehicles from vehicles from outside the area.
NANT20	Traffic Management	Review the location of the current Pedestrian crossing on Pratchett's Row and examine need for one on Hospital Street	Completed. Reviewed by Highways in 2012. Unlikely to be removed for safety reasons.
NANT22	Traffic Management	Investigate traffic priority on Hospital Street / Pratchett's Row junction to give priority to Hospital Street traffic	Completed. This measure was incorporated into the review of traffic flow on hospital street.
SAND1/SAND2	Others	Additional air quality monitoring Air Quality modelling	Completed and the result has confirmed the need to extend the AQMA in Sandbach.
SAND3	Traffic Management	Installation of Ramp Access Controls at Junction 17	This measure has been Completed . Ramp management systems is in place and used during peak period. Also major improvement at M6 J17 is Completed .
SAND5	Traffic Management	Investigate the feasibility of traffic signalisation on part of the network	Signalisation project and review Completed .

Measure No.	Action Category	Action Description	Reason action is not being pursued (including Stakeholders views)
MERE1-MERE6	Traffic Management Others	A556 Bypass scheme AQ assessment for network improvements Regular review of AQ monitoring within AQMA and surrounding area Junction and signal improvements along the route Review monitoring data to refine the AQMA boundary	The measures proposed for MERE have been Completed . The regular review and monitoring of data to see impact of measure can be found in the ASR. However, the general actions will be applied in Mere.
DIS6	Traffic Management	Redhouse Lane development-signalled junction (s106)	Completed . Lights have been installed.
DIS8	Traffic Management	Shared Space Scheme at Fountain square	Completed . This scheme will not be pursued. It slows traffic so much because pedestrians will share the road with vehicles. This very slow traffic will reduce efficiency of the vehicle and leads to increase in vehicular emissions. Especially for the Diesel vehicles and HGV's.
DIS9	Vehicle Fleet Efficiency	Reduce emissions from HGV's	Completed . 2016 DEFRA Grant application with Cheshire West and Chester was unsuccessful. It was not supported by DEFRA.
DIS12	Others	Setup an A6 Air Quality Working group	Completed . Air Quality working group has been setup. Therefore Air Quality will continue to work with the group.
CRE1	Traffic Management	Crewe Green Link Road	This Link Road is Completed .
CRE3	Others	Relocate Crewe Station Entrance	This measure is Completed .
CRE4	Traffic Management	Box Junction enforcement/re-hatching	Completed . Enforcement remains ongoing.
CRE5	Others	Station parking review	Completed . Further parking was introduced and Crewe station entrance was relocated.
CRE6	Others	Relocate Bus Stop	Completed . This measure has been discounted because the Bus stop is at a safe place where there is sufficient space for vehicles to manoeuvre around stationary buses at the stop.
KNU5	Traffic Management	UTC, Congestion management, traffic reduction	Completed . Project was linked to development proposal within town. It was overseen by Cheshire East highways.
EAR3	Others	Investigate green planting around Retail Park	Completed . This measure will not be taken because planting spaces are not available. However, it will be considered as a general measure across the town.

Appendix C: Additional Information

Table C.1 Annual Average daily traffic count fleet percentage (2013 -2016)

AADT Year	Motorcycles (%)	Cars (%)	Buses Coaches (%)	LEV (%)	HGV (%)
2016	0.56	80.42	0.53	13.49	5
2015	0.57	80.30	0.56	13.48	5
2014	0.61	80.99	0.55	12.86	5
2013	0.63	81.44	0.56	12.34	5

Glossary of Terms

Abbreviation	Description
AADT	Average Annual Daily Traffic
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
CAZ	Clean Air Zone
Defra	Department for Environment, Food and Rural Affairs
DFT	Department for Transport
EFT	Emissions Factor Toolkit, DEFRA vehicle emission tool calculator
EU	European Union
EV	Electric-engine Vehicle
HGV	Heavy Goods Vehicles
LAQM	Local Air Quality Management
LES	Low Emission Strategy
LGV	Low Goods Vehicles
LTP	Local Transport Plan
LEZ	Low Emission Zone
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides

PHOF	The Public Health Outcomes Framework
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