North Hertfordshire District Council

Air Quality Action Plan for the Stevenage Road, Hitchin Air Quality Management Area and the Payne's Park, Hitchin Air Quality Management Area

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

June 2017

Local Authority Officer	David Carr
Department	Environmental Protection and Housing
Address	Council Offices, Gernon Road, Letchworth Garden City, SG6 3JF
Telephone	01462 474263
E-mail	david.carr@north-herts.gov.uk
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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 North Hertfordshire between 2017 and 2021.

This action plan replaces the previous action plan which was specific to the Stevenage Road, Hitchin AQMA and which ran from 2013 to 2016. Projects delivered through the past action plan include:

- An Air Quality Policy (Policy D4) has been accepted in the Local Plan (2016-2031). In support of this Policy an Air Quality Planning Guidance Document has been produced which identifies specific expectations for developers with regard to providing air quality mitigation as an integral part of their development proposals.
- Provision of Electric Vehicle (EV) recharging infrastructure across the District, but with a focus in Hitchin, specifically two dual plug fast charging posts within Hitchin town centre public car parks.
- Encouragement of uptake of EV by providing free parking while charging at NHDC owned recharging infrastructure and by not charging a fee for the use of the electricity at those charging points.
- Heavy Duty Vehicles (HDV) survey of the Hitchin road network to establish the routes of movement of HDV that utilise Stevenage Road. This survey is being used by Hertfordshire County Council (HCC) Highways and Transport as part of their evidence base, alongside other considerations, in determining whether a Hitchin Industrial Area Relief Road is warranted. The project is currently in the feasibility study phase.
- Initiated and maintained contact with HCC Public Health with the purpose of raising awareness of local air quality issues. A public health and air quality working group achieved the following:
    - Hertfordshire wide network of $PM_{2.5}$ monitors, one of is located within the Stevenage Road AQMA.
    - Greater awareness among Local Councillors which has raised the profile of air quality within the community and the Local Authorities,

including within the Strategic Planning and Development Control functions.

- Greater awareness within and influence with the HCC Highway and Transport Department.

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]. North Hertfordshire District Council is committed to reducing the exposure of people in North Hertfordshire to poor air quality in order to improve health.

In this AQAP we have developed actions that can be considered under nine (9) broad topics:

- Alternatives to private vehicle use
- Freight and delivery management
- Policy guidance and development control
- Promoting low emission transport
- Promoting travel alternatives
- Public information
- Transport planning and infrastructure
- Traffic management
- Vehicle fleet efficiency

Our priority is to tackle emissions arising from service and freight vehicles and so we will be engaging with businesses operating in Hitchin to try to reduce movements through the AQMA and/or improve the efficiency and emissions of the vehicles that have no alternative but to travel through the AQMA (Section 3.5 & Table 5.1).

[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 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, and so we will continue to work with regional and central government on policies and issues beyond North Hertfordshire's direct influence.

Responsibilities and Commitment

This AQAP was prepared by the Environmental Protection and Housing Team of North Hertfordshire District Council with the support and agreement of the following officers and departments:

Louise Symes – NHDC Strategic Planning and Projects Manager

Peter Carey – NHDC Environmental Health Manager

Daniel Tancock – HCC Strategies and Programmes Manager

Jacob Wing – HCC Sustainable Transport and Development Officer

Bethan Clemence – HCC Health Improvement Lead, Planning and Place

The majority of the above will form the North Hertfordshire District Council Air Quality Management Area Steering Group.

This AQAP has been approved by:

Andy Godman – NHDC Head of Housing and Public Protection Service

Bernard Lovewell – Executive Member for Housing and Environmental Health

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

If you have any comments on this AQAP please send them to David Carr, Environmental Protection Officer, at:

Town Lodge, Gernon Road, Letchworth Garden City, SG6 3HN

01462 474263

david.carr@north-herts.gov.uk

Table of Contents

Executive Summary i

Responsibilities and Commitment iii

1. Introduction 1

2. Summary of Current Air Quality in North Hertfordshire 2

3. North Hertfordshire's Air Quality Priorities 3

3.1 Public Health Context 3

3.2 Planning and Policy Context 4

3.3 Source Apportionment 5

3.3.1 Stevenage Road AQMA 5

3.3.2 Payne's Park AQMA 6

3.4 Required Reduction in Emissions 8

3.5 Key Priorities 10

4. Development and Implementation of North Hertfordshire District Council AQAP 12

4.1 Consultation and Stakeholder Engagement 12

4.2 Steering Group 13

5. AQAP Measures 15

Appendix A: Response to Consultation

Appendix B: Reasons for Not Pursuing Action Plan Measures

Appendix C: Calculation of Concentrations of Nitrogen Dioxide at Nearest Residential Receptors within the Hitchin AQMA

Glossary of Terms

References

List of Tables

Table 3.3.1 – Percentage contributions to NOx emissions from different vehicle types using the Hitchin Hill Roundabout, Stevenage Road, Hitchin (20/09/2012)…….6

Table 3.3.2 – NO_2 concentrations ($\mu g/m^3$) measured within the Stevenage Road Hitchin AQMA 2011-2014……...6

Table 3.3.3 - Percentage contributions to NOx emissions from different vehicle Types at Payne's Park AQMA using annual average daily traffic (AADT) 2015……7

Table 3.3.4 - NO2 concentrations ($\mu g/m^3$) measured within the Payne's Park, Hitchin AQMA 2011-2015……..7

Table 3.4.1 – Contribution of road emission NOx to NO2 within the Stevenage Road AQMA and required reduction to meet the AQO (all units $\mu g/m^3$)……..9

Table 4.1 – Consultation Undertaken 12

Table 5.1 – Air Quality Action Plan Measures 16

1. Introduction

This report outlines the actions that North Hertfordshire District Council will deliver between 2017-2021 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 North Hertfordshire.

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 North Hertfordshire's air quality Annual Status Report.

2. Summary of Current Air Quality in North Hertfordshire

The latest Annual Status Report from North Hertfordshire District Council can be found here https://www.north-herts.gov.uk/home/environmental-health/pollution/air-quality/air-quality-reports but a summary is below.

Across North Hertfordshire, where monitoring is undertaken, the concentrations of nitrogen dioxide (NO_2) have been declining, which means air quality has been improving. In 2015, in all but two monitoring locations, the annual average concentration of NO_2 was found to be lower than when monitoring began at each monitoring location. The longest periods of monitoring at any location are five years. The decline in concentrations has not been consistent across the monitoring period at each location. It is hoped that the decline in NO_2 levels will continue and that low emission vehicles and improved engine technology will support this trend, but the demand for housing and associated growth in the area is a factor that has the potential to delay, or reverse, the improvement in air quality.

Air quality is below the health based limits set by Government across the majority of the District, but even with the observed improvement in air quality, as measured by NO_2 concentrations, there remain two areas where the health limits are exceeded. The two areas are in Hitchin, specifically at Stevenage Road and in the vicinity of Payne's Park. The primary source of the pollution is the exhaust emissions from petrol and diesel engine road vehicles moving through the areas. As a result of the elevated NO_2 concentrations NHDC has designated an area along the Stevenage Road, Hitchin and an area at the Payne's Park roundabout, Hitchin, as Air Quality Management Areas (AQMA).

The presence of two AQMA that are located close to one another in Hitchin is the reason why this joint Action Plan has been prepared.

3. North Hertfordshire's Air Quality Priorities

3.1 Public Health Context

The House of Commons Environmental Audit Committee published its report on air quality in the UK in December 2014, which included evidence that estimated air pollution could be contributing to as many as 50,000 deaths in the UK per year. Defra data estimated that 29,000 people died prematurely in the UK due to air pollution in 2008 (Air Quality Strategic Plan for Hertfordshire 2015-2020).

Tackling air pollution is vital to improve the health and quality of life of people who live, work or visit Hertfordshire, especially those who are vulnerable, such as children with asthma and older people with heart and respiratory diseases (Air Quality Strategic Plan for Hertfordshire 2015-2020).

Particulate matter, especially the smaller $PM_{2.5}$ particles are one of the best evidenced in terms of the health impact from long term exposure. This is reflected in Public Health England including premature death due to particulate air pollution in the Public Health Outcomes Framework (Outcome 3.01) (Air Quality Strategic Plan for Hertfordshire 2015-2020).

Estimates published by Public Health England suggest that 514 premature deaths in people aged over 25 years occur per year in Hertfordshire, which equates to 5,258 life years lost due to $PM_{2.5}$ alone (Air Quality Strategic Plan for Hertfordshire 2015-2020).

In addition to particulate matter in the air, nitrogen dioxide (NO_2) has known harmful effects on human health with the gas causing irritation of the airways of the lungs and increasing the symptoms of those suffering from lung diseases (Air Quality Strategic Plan for Hertfordshire 2015-2020). It is the Air Quality Objective (AQO) that has been set for annual average exposure to nitrogen dioxide that has been exceeded at the two AQMA in Hitchin. It is important to note that the AQO has been set at a level to be protective of human health.

3.2 Planning and Policy Context

North Hertfordshire District Council's new Local Plan which will cover the period 2011-2031 is due for submission to the Inspector in June 2017. The Local Plan sets targets for new homes, employment and retail development and identifies areas of land where these developments should be built. It will also consider what infrastructure is needed to support the proposed development. The Local Plan also includes policies that will be used for making decisions on planning applications that are submitted to address the development needs in the District.

One such policy is the Air Quality Policy (Policy D4) and it is included below. The supporting background information and how this policy fits in with the wider policies can be found within the Local Plan 2011-2031 Proposed Submission October 2016 downloadable from http://www.north-herts.gov.uk/home/planning/planning-policy/local-plan/proposed-submission-local-plan-2011-2031.

Policy D4: Air quality

Planning permission will be granted where development proposals:

a. Give consideration to the potential or actual impact on local air quality, both during the demolition/ construction phase and as a result of its final occupation and use;

b. Propose appropriate levels of mitigation to minimise emissions to the atmosphere and their potential effects upon health and the local environment; and

c. Carry out air pollution impact assessments, where required, to determine the impact on local air quality of the development, otherwise the development may be refused.

Where air pollution impact assessments are not required there will still be a requirement on developers to provide appropriate levels of mitigation to address emissions of pollutants to the atmosphere.

In order to add detail and clarity to the Air Quality Policy a supplementary planning guidance document has been produced and it is referenced within the Local Plan, although does not have Supplementary Planning Document status. The North Hertfordshire District Council Air Quality Planning Guidance document can be

downloaded from http://www.north-herts.gov.uk/home/environmental-health/pollution/air-quality/air-quality-and-planning

Its aim is to facilitate sustainable development by helping to achieve the best possible public health protection outcomes in relation to air quality.

The pressure for development to be accommodated within the district boundary of North Hertfordshire is detailed within the Local Plan 2011-2031 and emphasises the need for a robust Policy and approach to air pollution mitigation.

It identifies that 14,000 homes need to be provided to meet the needs of North Hertfordshire, plus an additional 1,950 homes to be accommodated within North Hertfordshire to contribute to the need for housing arising from Luton.

Those 1,950 homes are planned for land to the west of Hitchin as is a 700 home strategic site. There are also two strategic housing sites of 600 and 900 homes identified as being needed to the east of Hitchin. These 4,150 homes are of specific relevance to the two AQMA within Hitchin because the only direct east-west route linking Luton, including London-Luton Airport, to Stevenage and the A1(M) is the A505 and A602 through the south of Hitchin.

3.3 Source Apportionment

The AQAP measures presented here are targeted towards the predominant sources of emissions of nitrogen oxides (NOx) within North Hertfordshire.

Source apportionment exercises were carried out by North Hertfordshire in 2013 (using 2012 data) for the AQMA at Stevenage Road, Hitchin and in 2016 (using 2015 data) for the AQMA at Payne's Park, Hitchin.

3.3.1 Stevenage Road AQMA

The 2013 exercise identified that at the AQMA at Stevenage Road, Hitchin the percentage source contributions were as follows:

Table 3.3.1: Percentage contributions to NOx emissions from different vehicle types using the Hitchin Hill Roundabout, Stevenage Road, Hitchin (20/09/2012)

Vehicle Type	% Composition of 2012 Vehicle Count at Hitchin Hill Roundabout, Stevenage Rd	% Contribution to NOx Emissions
Motorbikes	0.7	1
Cars/Taxis	84.3	44
Public Transport	0.8	9
Light Goods Vehicles	12.2	15
Heavy Goods Vehicles	3.2	31

An overview of the air quality data from the monitoring locations within the Stevenage Road AQMA are presented in Table 3.3.2. This was a process that was undertaken in 2015.

Table 3.3.2: NO_2 concentrations ($\mu g/m^3$) measured within the Stevenage Road, Hitchin AQMA 2011-2014

Monitoring Location	2011	2012	2013	2014	Mean Average
Analyser * (annual mean)	47.5	no data	46	48	47.2
(No. of times hourly mean exceeded)	*3*	*no data*	*1*	*1*	*not applicable*
NH105 **	no data	45.8	47	51.4	48.1
NH92 **	53.5	51.1	47.6	48.1	50.1
NH103 **	no data	43.6	41.7	40.8	42.0
NH104 **	no data	33.9	31.5	30.4	31.9
NH45 **	48.9	46.3	42.0	46.6	46.0

* = chemiluminescent analyser ** = diffusion tube (bias adjusted results)

Of the results presented above the data from NH92 would still exceed the mean annual NO_2 AQO of $40\mu g/m^3$ at the nearest residential receptor. The concentration has been calculated to be $42.6\mu g/m^3$ after accounting for the drop off in NO_2 concentrations with distance to the nearest residential receptor (Table C.1 Appendix C).

Within the Stevenage Road AQMA the highest predicted NO_2 concentration at a residential receptor is $42.6\mu g/m^3$.

Within the Stevenage Road AQMA the biggest contributor to NOx emissions, 44%, are cars however, comparative to the overall number of vehicle movements, heavy goods vehicles contribute a disproportionate amount of NOx emissions, 31%.

3.3.2 Payne's Park AQMA

The 2016 source apportionment exercise identified that at the AQMA at Payne's Park, Hitchin the percentage source contributions were as follows:

Table 3.3.3: Percentage contributions to NOx emissions from different vehicle type at Payne's Park AQMA using Annual Average Daily Traffic (AADT) 2015

Vehicle Type	%age Vehicle Composition Park Way	% Contribution to NOx Emissions	%age Vehicle Composition Upper Tilehouse Street	%age Contribution to NOx Emissions
Motorbikes	0.6	0.1	0.9	0.2
Cars/Taxis	80.5	48.1	80.9	48.5
Public Transport	0.5	5.6	0.7	7.9
Light Goods Vehicles	14.6	18	14	17.3
Heavy Goods Vehicles	3.8	28.2	3.5	26.1

An overview of the air quality data from the two monitoring locations within the Payne's Park AQMA are presented in Table 3.3.4.

Table 3.3.4: NO_2 concentrations ($\mu g/m^3$) measured within the Payne's Park, Hitchin AQMA 2011-2015

Monitoring location	2010	2011	2012	2013	2014	2015	Mean Average
NH82 *	44.4	42.8	40.4	40.3	40.3	34.5	40.5
NH93 *	No data	53.1	54.8	52.1	54.1	45.5	51.9

* = diffusion tube (bias adjusted results)

Only the concentrations measured at location NH93 are considered to be representative of an exposure to NO_2 at a receptor that would exceed the mean annual average AQO once adjusted for drop off in NO_2 concentrations with distance to the nearest residential receptor has been calculated.

The data for 2015 has been considered as a best case (Table C.2 Appendix C) and the mean annual average for the five year period has been considered as being representative as worst case (Table C.3 Appendix C).

Within the Payne's Park AQMA the worst case predicted NO_2 concentration at a residential receptor is 47$\mu g/m^3$, although 2015 data taken in isolation predicts 41.5 $\mu g/m^3$.

Within the Payne's Park AQMA the biggest contributor to NOx emissions, 48.5%, are cars however, comparative to the overall number of vehicle movements, heavy goods vehicles contribute a disproportionate amount of NOx emissions, 26.1%.

3.4 Required Reduction in Emissions

Table 3.4.1 uses the worst case location for NO_2 at a receptor within Stevenage Road for the averaging period and the Defra NO_2 to NO_x conversion calculator (Appendix C) to show the reduction in road transport NO_x emissions needed to achieve the annual average NO_2 AQO.

Table 3.4.1: Contribution of road emission NOx to NO_2 within the Stevenage Road AQMA and required reduction to meet the AQO (all units μg/m^3)

Location	Pollutant	Annual AQO (μg/m^3)	Background NO_2 concentrations 2013 ref year	NOx contribution from road traffic to AQO	Highest concentration at residential receptor	NOx contribution from road traffic to peak	Reduction in NOx required	Percentage NO_X reduction required
Stevenage Road AQMA	NO_2	40	15.16449	54.52	42.6	61.2	6.68	10.9%
Payne's Park AQMA (worst case)	NO_2	40	16.89924	50.67	47	68.94	18.27	26.5%
Payne's Park AQMA (best case)	NO_2	40	16.89924	50.67	41.5	54.46	3.79	7.0%

3.5 Key Priorities

On the basis of this source apportionment work the following areas have been prioritised for action.

- Priority 1 – Freight and delivery management

  Main Reason: Source apportionment work illustrates that improvements in this area would have a significant impact on reducing NOx emissions.

- Priority 2 – Vehicle fleet efficiency

  Main reason: This is priority is considered to be closely associated with the freight and delivery management priority because it will be targeted at commercial/industrial activities operating within Hitchin.

- Priority 3 – Promoting travel alternatives

  Main reason: Source apportionment work illustrates the high percentage of cars making up the traffic using the road through the AQMA, so any successes in reducing private vehicle use would reduce emissions directly and in-directly by easing congestion.

- Priority 4 - Promoting low emission transport

  Main reason: Source apportionment work illustrates the very high percentage of cars making up the traffic using the road through the AQMA, so any success in encourage low emission transport in place of internal combustion engine transport would reduce emissions directly.

- Priority 5 – Traffic Management

  Main reason: There is potential scope for anti-idling and parking related measures to improve air quality, but larger scale measures will not be viable in the short-term due to the considerable lead in time, political consent and availability of resources required.

- Priority 6 – Transport planning and infrastructure

  Main reason: This has significant potential to improve the air quality in the AQMA but potential measures relevant to the AQMA need considerable lead in time, political consent and sufficient funding. Of particular relevance is that the current and next version (2031-2050) of the Hertfordshire Local Transport Plan has not prioritised any projects specific to the AQMA or their immediate vicinity.

- Priority 7 – Alternatives to private vehicle use

  Main reason: Source apportionment work illustrates the high percentage of cars making up the traffic using the road through the AQMA, so any successes in reducing private vehicle use would reduce emissions directly and in-directly by easing congestion. However, commonly implemented solutions do not appear readily applicable to the locality of the two AQMA.

- Priority 8 - Public information

  Main reason: There is considerable information already available. However, efforts will be made to focus the provision of information to those areas within and around the AQMA where it could have the biggest influence on behaviour impacting the AQMA.

- Priority 9 – Policy guidance and development control

  Main reason: Considerable work has been undertaken on this category of action since the Stevenage Road AQMA Action Plan published in 2013 and the relevant policies and guidance documents are judged to be in place and fit for purpose.

4. Development and Implementation of North Hertfordshire District Council AQAP

4.1 Consultation and Stakeholder Engagement

In developing this AQAP, we have worked with other local authorities, agencies, businesses and the local community 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 have undertaken the following stakeholder engagement:

- North Hertfordshire District Council Website
- North Hertfordshire District Council Twitter Feed
- Articles in local newspaper
- NHDC newsletter
- Letters with website address to an on-line questionnaire (Survey-Monkey) distributed directly to households within and adjacent to the two AQMA and contact details if a hard copy of the questionnaire is required.

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

Table 4.1 – Consultation Undertaken

Yes/No	Consultee
Yes	the Secretary of State
Yes	the Environment Agency
Yes	the highways authority
Yes	all neighbouring local authorities
Yes	other public authorities as appropriate, such as Public Health officials
Yes	bodies representing local business interests and other organisations as appropriate

4.2 Steering Group

In order to push forward the implementation of the new joint AQMA Action Plan a new Steering Group has been established. The inaugural meeting was held at Hertfordshire County Council in February 2017 in order to:

- Agree the approach of combining the Action Plan for the Stevenage Road AQMA with an Action Plan for the Payne's Park AQMA that was designated in January 2017.
- Agree an ongoing commitment to share information and work together in bringing forward any measures identified in the Action Plan
- Discuss ideas for measures that may have positive impacts on the air quality specifically within the AQMA, but also beyond, with a view to including measures within the joint Action Plan.

The Hitchin Air Quality Management Area (AQMA) Steering Group comprises of the following posts:

North Hertfordshire District Council

- Environmental Protection Officer
- Environmental Health Manager
- Strategic Planning and Projects Officer
- Principal Transport Planning Officer
- Policy Officer

Hertfordshire County Council

- Transport and Highways Strategies and Programmes Manager
- Assistant Engineer, Transport Policy and Growth Team
- Health Improvement Lead, Planning and Place
- Deputy Team Leader
- Sustainable Transport and Development Officer

All of the AQMA are associated with local roads under the management of Hertfordshire County Council, so there is no advantage in involving Highways England in the Steering Group.

It should be noted that where identified measure highlight the need for additional expertise or experience the membership of the Steering Group will flexible enough to accommodate the necessary officers.

The Steering Group will meet annually on a routine basis. This meeting will be to have an overview of progress with the implementation of the Action Plan.

Additional Steering Group meetings will be planned to coincide with key stages of the Action Plan process, such as:

- Final Draft AQMA Action Plan prior to public consultation
- Final AQMA Action Plan post-public consultation

It is not the role of the Steering Group to implement the individual measures identified within the Action Plan. It will be the responsibility of individual officers and smaller working groups to implement the individual measures depending on the nature of the measures in question.

5. AQAP Measures

Table 5.1 shows the North Hertfordshire District Council 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
- estimated cost of implementing each action (overall cost and cost to the local authority)
- expected benefit in terms of pollutant emission and/or concentration reduction
- the timescale for implementation
- how progress will be monitored

NB: Please see future Annual Status Reports for regular annual updates on implementation of these measures

Table 5.1 – Air Quality Action Plan Measures

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
1	Introductions to & subsequent uptake of ECO Stars scheme in Hitchin Industrial Areas	**Freight Delivery & Management** And **Vehicle Fleet Efficiency**	**Delivery & service plans / route management** and **Driver training Fleet efficiency schemes**	North Herts	Summer/ Autumn 2017	Autumn/Winter 2017	Numbers of business engaged with the scheme	Targeted to both the **Stevenage Road AQMA** & the **Payne's Park AQMA**	Initial contact with ECO Stars	2018 & onwards	Anticipated that there will be new business interested once first companies are engaged with so measure should be ongoing
2	Introductions to & subsequent uptake of ECO Stars scheme in Hitchin Town Centre	**Freight Delivery & Management** And **Vehicle Fleet Efficiency**	**Delivery & service plans / route management** and **Driver training Fleet efficiency schemes**	North Herts	Summer/ Autumn 2017	Autumn/Winter 2017	Numbers of business engaged with the scheme	Targeted to both the **Stevenage Road AQMA** & the **Payne's Park AQMA**	Initial contact with ECO Stars	2018 & onwards	Will aim to work with Hitchin Town Centre Manager. Anticipated that there will be new business interested once first companies are engaged with so measure should be ongoing
3	Engage with & promote school travel plans in the 9 Hitchin schools	**Promoting Travel Alternatives**	**School travel plans**	North Herts & Herts CC	Summer/ Autumn 2017	Winter 2017	Numbers of Hitchin Schools updating & proactively engaging with travel planning	Targeted to both the **Stevenage Road AQMA** & the **Payne's Park AQMA**	Contact with Schools liaison officers at HCC	2018 & onwards	Will work with HCC officers, travel planning contractors & schools to optimise existing or introduce new plans
4	Promotion of walking & cycling for commuting within NH	**Promoting Travel Alternatives**	**Promotion of walking and cycling**	North Herts & Herts CC	2018	2018	Not defined	Not specific to the two AQMA	None	Not specified	Will work with NHDC Active Communities Team to investigate initiatives to promote walking & cycling

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
5	Increasing/ improving publicly available re-charging for Electric Vehicles (EV) in car parks	**Promoting Low Emission Transport**	**Procuring alternative refuelling infrastructure**	North Herts	2017	2017	EV ownership numbers in Hertfordshire & records of usage of available posts	Not specific to the AQMA	Upgrading of existing units to fully functional PAYG units	2017 for upgrades Ongoing for potential new sites	Considerable disruption to existing infrastructure for new EV owners due to Source East leaving the market. Hence need for this measure
6	Increasing/ improving publicly available re-charging for on-street EV	**Promoting Low Emission Transport**	**Procuring alternative refuelling infrastructure**	North Herts & Herts CC	2017	To be determined	Introduction of on-street re-charging infrastructure	Will initially be focussed on Hitchin, but actual if any infrastructure will depend on many variables	Contact with OLEV/EST staff responsible for new grant scheme	To be determined	Early stages only looking to establish if this is a viable option, because previous iteration of OLEV national scheme was unsuccessful
7	Increasing private availability of recharging infrastructure for Electric Vehicles	**Promoting Low Emission Transport**	**Procuring alternative refuelling infrastructure**	North Herts	Complete	Ongoing	Numbers of planning permissions with conditions in place for EV charging points	Requirement for EV infrastructure to be part of all new planning permissions is District wide	Standard conditions available & supported by Local Plan Policy & guidance document	Ongoing via planning application consultation process	First developments completed with Infrastructure in place. Multiple permissions granted with EV recharging infrastructure conditions in place
8	Dedicated & free parking bays for EVs at charging points	**Promoting Low Emission Transport**	**Priority Parking for LEVs**	North Herts	Complete	Complete	Continuation of agreement not to charge for EV parking at charge points	4 x charging points at Hitchin public car parks with associated free parking	Principle established	Complete	Will advocate continued support of this approach
9	Review NHDC fleet with focus on replacement of diesel with low emission vehicles	**Promoting Low Emission Transport**	**Company vehicle procurement**	North Herts	2018	2018/19	Presence in NHDC fleet of Low Emission Vehicles	Not specific to Hitchin	2015 study failed to make business case for EV uptake. Re-run study 2018	2019	Hoped that improved range & greater geographical spread of charging points will enable some EV uptake

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
10	Establish legal status of anti-idling provision (S.42 Road Traffic Act 1988) & application by NHDC	**Traffic Management**	**Anti-idling enforcement**	North Herts	2017	To be determined	Is legislation applicable Are resources available to act on legislation Statistics of prosecutions &/or frequency of occurrence	Targeted specifically at **Stevenage Road AQMA** where there are business taking deliveries & on-street parking for residences.	Initial enquiry with NHDC Legal Services & Parking Enforce-ment	To be determined	None
11	Review on-street parking designation & enforcement at Stevenage Road & Upper Tilehouse Street	**Traffic Management**	**Parking Enforcement on Highway**	North Herts	Autumn/ Winter 2017	2018	Changes to parking controls & enforcement activity. Reduced queuing	Targeted at **Stevenage Road AQMA** and **Payne's Park AQMA** (Upper Tilehouse Street)	None	2019	Identified as a possible option at the Steering Group Meeting February 2017
12	Hitchin Industrial Estate Relief Road	**Traffic Management**	**Strategic Highway Improvement**	Herts CC	Ongoing	Decision on whether implementation will happen is not imminent	If road is constructed – changes in numbers of HGV & impact on pollution levels	Targeted at **Stevenage Road AQMA** and **Payne's Park AQMA**	Feasibility Study under way at HCC	Not Known	Project dependant on HCC & associated financial, need & political issues. North Herts to be present at HCC Highways' quarterly Stevenage & NH Scheme Meetings
13	Engage with Herts CC on development of Local Growth & Transport Plan	**Traffic Management**	**Strategic Highway Improvement**	North Herts via Herts CC	2017	2018 onwards	Inclusion of Air Quality as consideration for prioritising projects for North Herts	Growth & Transport Plan (GTP) naturally expected to focus on key routes incl. through AQMA	Evidence base data collection to begin 2017	2018/19	No schemes of relevance are being put forward in the LTP4 2031-2050. So emphasis will be on engagement with GTP
14	Baseline survey – state of cycling provision in Hitchin	**Transport Planning & Infrastructure**	**Cycle Network**	North Herts with HCC	2018	Post 2018	Thorough understanding of the current situation & identification of future options	Focussed on Hitchin so potential for impact at both AQMA	None	Not Known	None

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
15	Workplace & School based car sharing	**Alternatives to Private Car Use**	**Car & lift sharing schemes**	North Herts	2017	Autumn / Winter 2017	Uptake by businesses & schools	Targeted to both the **Stevenage Road AQMA** & the **Payne's Park AQMA**	Contact with bodies able to facilitate such a measure	2018 and onwards	Linked directly to Measures 1, 2 & 3 as it would be hoped that this may be an outcome
16	Car clubs for new developments	**Alternatives to Private Car Use**	**Car Clubs**	North Herts	Planning application specific	Planning application specific	Prevalence of car clubs in North Herts	Not targeted at AQMA	Car clubs identified as air pollution mitigation measure within planning guidance document	Ongoing depending on planning permissions	None
17	Participate in National Clean Air Day	**Public Information**	**Internet & electronic media**	Herts CC	Ongoing	June 2017	Publicity generated	Not targeted at AQMA	Attending HCC working group	June 2017 & annually thereafter	None
18	Air Quality Notification System	**Public Information**	**Air Pollution Alert**	Herts CC	Complete	Summer 2017	Publicity & awareness. Potentially reduced emergency admissions related to pulmonary disorders	Targeted at vulnerable sectors of population rather than geographical area	Data collection & dissemin-ation mechanisms in place. Beta testing underway	Summer 2017	Organised via HCC Public Health based on Herts and Beds AQ Forum data collection and management systems
19	Engage with schools to raise awareness of air pollution	**Public Information**	**Other mechanisms**	North Herts in liaison with Herts CC	2017/18	2018	Number of schools utilising the Air Pollution teaching toolkit	Schools within Hitchin will be targeted	Air Quality for Schools Toolkit Resources are upload to the Herts Grid for learning	2018 Onwards	Toolkit is available needs to be effectively publicised within North Hertfordshire

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
20	Local Plan Policy and Air Quality Planning Guidance Document	**Policy Guidance & Development Control**	**Air Quality & Planning Guidance & Policy**	North Herts	Complete	Ongoing	Local Plan Policy accepted by Inspector	Not targeted at AQMA	Policy in Final Draft of Local Plan AQ Planning Guidance in use	2017 for Local Plan Policy AQ Planning Guidance complete	Planning consultations need to be continually responded to, to ensure developments are appropriate
21	Herts & Beds Air Quality Forum incorporating Public Health, Transport Planners and Development Control representation	**Policy Guidance & Development Control**	**Regional Groups Co-ordinating Programmes & Strategies**	North Herts (Chair of group)	Complete	Ongoing	County-wide initiatives and joint working	Not targeted at AQMA	Active & well-established Working Group	Completed but work ongoing	None
22	Green Wall	**Other**	**Other**	North Herts	2017/18	2018/19	Green Wall in place on west side of Park Way approaching Payne's Park roundabout (if viable)	Targeted at **Payne's Park AQMA**	None	2019 (if viable)	Will need funding from Defra or Planning Permission Obligations

Appendix A: Response to Consultation

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

Consultee	Category	Response

Appendix B: Reasons for Not Pursuing Action Plan Measures

Table B.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)

Appendix C: Calculation of Concentrations of Nitrogen Dioxide at Nearest Residential Receptors within the Hitchin AQMA

Table C.1. Impact, on concentration of NO_2, of distance from kerbside to monitoring point NH92 and to the nearest receptor on Stevenage Road

Step 1	**How far from the KERB was your measurement made (in metres)?**	**2**	metres
Step 2	**How far from the KERB is your receptor (in metres)?**	**5**	metres
Step 3	**What is the local annual mean background NO_2 concentration (in $\mu g/m^3$)?**	**15.16449**	$\mu g/m^3$
Step 4	**What is your measured annual mean NO_2 concentration (in $\mu g/m^3$)?**	**50.1**	$\mu g/m^3$
Result	**The predicted annual mean NO_2 concentration (in $\mu g/m^3$) at your receptor**	**42.6**	$\mu g/m^3$

(Issue 4: 25/01/11. Created by Dr Ben Marner; Approved by Prof Duncan Laxen. Contact: benmarner@aqconsultants.co.uk)

Table C.2. Impact on concentration of NO_2 of distance from kerbside to monitoring point NH93 and to the nearest receptor (2015) at Payne's Park/Park Way

Step 1	**How far from the KERB was your measurement made (in metres)?**	**1.6**	metres
Step 2	**How far from the KERB is your receptor (in metres)?**	**3**	metres
Step 3	**What is the local annual mean background NO_2 concentration (in $\mu g/m^3$)?**	**16.89924**	$\mu g/m^3$
Step 4	**What is your measured annual mean NO_2 concentration (in $\mu g/m^3$)?**	**45.5**	$\mu g/m^3$
Result	**The predicted annual mean NO_2 concentration (in $\mu g/m^3$) at your receptor**	**41.5**	$\mu g/m^3$

(Issue 4: 25/01/11. Created by Dr Ben Marner; Approved by Prof Duncan Laxen. Contact: benmarner@aqconsultants.co.uk)

Table C.3. Impact, on concentration of NO_2, of distance from kerbside to monitoring point NH93 and to the nearest receptor (2011 – 2015 annual mean) at Payne's Park/Park Way

Step 1	**How far from the KERB was your measurement made (in metres)?**	**1.6**	metres
Step 2	**How far from the KERB is your receptor (in metres)?**	**3**	metres
Step 3	**What is the local annual mean background NO_2 concentration (in $\mu g/m^3$)?**	**16.89924**	$\mu g/m^3$
Step 4	**What is your measured annual mean NO_2 concentration (in $\mu g/m^3$)?**	**51.9**	$\mu g/m^3$
Result	**The predicted annual mean NO_2 concentration (in $\mu g/m^3$) at your receptor**	**47**	$\mu g/m^3$

(Issue 4: 25/01/11. Created by Dr Ben Marner; Approved by Prof Duncan Laxen. Contact: benmarner@aqconsultants.co.uk)

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_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
$\mu g/m^3$	Mircogrammes per cubic meter
EV	Electric Vehicle

References

https://www.hertfordshire.gov.uk/services/health-in-herts/healthy-places.aspx#airquality Air Quality Strategic Plan for Hertfordshire 2015 - 2020.