



Air Quality Strategy

Foreword – Cllr Tim Hutchings, Executive Member for Public Health and Prevention

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Poor air quality is everybody's business. This is primarily due to the huge environmental health risks that it can bring. Whilst health is the primary motivation for improving the quality of Hertfordshire's air, most measures that will follow from this strategy will also reduce pressures on our roads and promote sustainable transport.

Equally this strategy is not the last word or the only word on it. This plan sets out some of the things we will seek to do, but our transport strategy is also important in this regard, committing us to make sustainable transport a greater part of our transport as a county. At the same time, we will work with our ten District and Borough partners to create a Hertfordshire wide approach to air quality improvement.

We at Hertfordshire County Council acknowledge the accountability that our colleagues at the District and Borough Councils hold with regards to measuring, monitoring and improving air quality. We hope that this strategy makes clear the County Council's position on air quality and demonstrates a desire and commitment to work in partnership going forward.

With the rise in technology and innovation, we want Hertfordshire to lead the way in measuring and reducing pollutants and increasing the availability of cleaner modes of transport.

Fundamentally, we at the County Council believe that we can do our part, as a Highways authority and a Public Health Service, to inform our residents of the health risks that poor air quality poses and to equip them with the necessary options to travel in a 'cleaner' way.

Poor air quality is an unavoidable issue. The Government is taking action through their recent Clean Air Strategy and now we, at Hertfordshire County Council, plan to do the same.



Executive Summary

The purpose of this document is to set out, at a strategic level, the County Council's position on air quality.

This document has been developed across several departments and services within the County Council. Namely, Public Health, Environment and Infrastructure. The County Council has also engaged with partners across the District and Borough Councils in the process of developing this document.

The responsibilities and actions that belong to the District and Borough Councils, as well as their working relationship with the County Council, will be developed at a later date as part of a county-wide Air Quality Strategy.

Air quality has been of increasing prevalence within national and local media and is an undeniable risk to the population's health. Therefore, as a Highways authority and a Public Health Service, the County Council is legally, morally and logistically obliged to ensure that, as an organisation, we are doing all that we can to improve the air quality of Hertfordshire.

This document includes our strategic vision, aims and objectives that will hold us, as a County Council, to account in playing our part in improving air quality for Hertfordshire. The document also provides a summary of the scientific challenges around air quality, as well as the legal framework within which we can operate.

Finally, this document acknowledges the work of the District and Borough Councils through their monitoring of air pollution and the improvement of any designated Air Quality Management Areas (AQMAs). This will help the County Council target our supportive efforts more effectively as we can see where the issues are and the causes.

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Vision: Clean Air for All

Aims:

- To achieve clarity on the role of County Council in improving the quality of air within Hertfordshire and the surrounding areas
 - o As air quality is an agenda that spreads across the functions of the County Council, we want to be able to offer our staff, our partners and the residents of Hertfordshire a clear understanding of how we, as a County Council, can use our Highways officers, Public Health Service and planners, amongst others, to improve Hertfordshire's air quality.
- To achieve a clear and consistent relationship with our partners in tackling this important agenda
 - o The legal obligations and responsibilities around air quality primarily sit with lower tier authorities, however we will work to be a reliable and resourceful partner to our colleagues at the District and Borough councils when working towards cleaner air for Hertfordshire.
- To achieve an improvement in Hertfordshire's air quality through the work that we do. We want Hertfordshire to continue to be a county that our residents and visitors enjoy. We want everybody to feel safe in the knowledge that the air that they are breathing is clean.

Our strategic objectives:

- To gain a stronger understanding of the air quality issues within Hertfordshire.
- To ensure that air quality is an integral part of everything that we do
- To develop a productive relationship with partners, in particular the District and Borough Councils, to achieve positive air quality outcomes.
- To create clear leadership on air quality
- To establish a coherent workstream on air quality, including clarification on roles and responsibilities

Context

On the 23rd January 2018, the County Council hosted an Air Quality Seminar. This was attended by a combination of County Council and District and Borough councillors and officers. The conclusion of this event was that all eleven authorities within Hertfordshire would come together and establish a 'county-wide' strategic position on air quality. Prior to this work taking place, it has been agreed that the authorities should first consider and solidify their own position. For the County Council, this document hopes to do exactly that, and is accompanied by an Implementation Plan which hopes to put the aims of objectives of this strategy into action.

In 2015, an Air Quality Strategic Plan was written by Public Health. This primarily looked at a specific pollutant - PM_{2.5} - and therefore had a narrower focus. It is also now in need of review. The aim of this document is to take a more holistic view to the air quality agenda.

This Strategy sits as a supporting document to the Local Transport Plan¹, a document that looks at how transport can deliver a positive future for Hertfordshire. It also meets priorities identified in the Public Health Strategy 2017-2021², specifically its commitment to reduce health inequalities within Hertfordshire and to continue to '*support a multi-agency approach to ensure good air quality in Hertfordshire*'.

Hertfordshire's Health and Wellbeing Strategy is committed to optimising health and wellbeing within Hertfordshire and tackling the social determinants of health, which our work to address poor air quality will underpin. This work also meets a number of priorities set out in the County Council Corporate Plan.

Corporate plan:

Priority	Air Quality Relevance
Opportunity to be Health and Safe	Reducing levels of pollutants within the air that we all breathe, particularly when in cars and travelling. Reducing the number of people that go on to develop diseases such as lung cancer and cardiovascular complications.
Opportunity to Thrive	Promoting the use of green space within Hertfordshire and encouraging the use of public transport, thus becoming a cleaner and healthier county.
Opportunity to Prosper	Will promote a more efficient transport network, encouraging reduced congestion and reliable public transport. Both of which are essential for economic growth.
Opportunity to Take Part	Engaging schools, local businesses and other partners in schemes and initiatives which will make Hertfordshire's air cleaner.

¹ <https://www.hertfordshire.gov.uk/services/recycling-waste-and-environment/planning-in-hertfordshire/transport-planning/local-transport-plan.aspx>

² <https://www.hertfordshire.gov.uk/services/health-in-herts/news-events-and-campaigns/new-public-health-strategy.aspx>

The Scientific Challenge

According to the Department for Environment, Food & Rural Affairs (DEFRA), poor air quality is the largest environmental risk to our health. There is increasing evidence that poor air quality is a significant contributor to preventable illnesses and early deaths. Whilst legal limits of air pollutant levels are in place, there is no 'safe level' and health effects can be seen below these limits. Indeed, a recent annual report from the Chief Medical Officer clearly stresses that '*addressing pollution is...disease prevention*'.²

The most important primary air pollutants are *particulate matter (PM)* and *nitrogen dioxide (NO₂)*.

Nitrogen dioxide is a gas that is produced with nitric oxide (NO) by combustion processes and together they are often referred to as oxides of nitrogen (NO_x). On average around 80% of NO_x emissions in areas where the UK is exceeding EU NO₂ limit values are due to transport³. The largest source is emissions from diesel light duty vehicles (cars and vans) and there has been significant growth in these vehicle numbers over the last 10 years. DEFRA has estimated that NO₂ contributes to shortening lives by an average of around 5 months.

Particulate Matter comprises micron sized particles (a micron is 1000th of a millimetre) and is studied in three main size fractions; PM₁₀, PM_{2.5} and PM_{0.1}. Particulate Matter can be composed of particles from combustion products; from abrasion of engine components, brakes and tyres on road surfaces, generated during construction and agricultural processes, as well as components generated by chemical reactions in the air. However, much particulate matter in urban pollution hotspots, particularly those close to roads, derives from traffic sources and comprises soot, part-burnt diesel and petrol compounds that form benzene-based carcinogens, heavy metals, silica, bitumen, rubber and other organic waste matter from road surfaces.

There are several social and biological factors that determine one's vulnerability to the effects of poor air quality. For example, the Hertfordshire Joint Strategic Needs Assessment (JSNA)⁴ has identified that areas of increased deprivation are more likely to experience poorer air quality due to less green space, poorer housing (which creates poor indoor air quality) and the fact that moving out of the area is difficult and unaffordable.⁶

The Law

Section 82 of the Environment Act 1995 provides that every local authority shall review the air quality within its area, both at the present time and the likely future air quality. In two-tier local government areas such as Hertfordshire, this duty sits with the District and Borough Councils.

² Annual Report of the Chief Medical Officer 2017, Health Impacts of All Pollution – what do we know?

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/684962/CMO_Annual_Report_2017_Health_Impacts_of_All_Pollution_what_do_we_know.pdf

³ *Improving air quality in the UK: Tackling nitrogen dioxide in our towns and cities*. Defra 2015.

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/486636/aqplan-2015-overview-document.pdf

⁴ <https://www.hertfordshire.gov.uk/services/health-in-herts/news-events-and-campaigns/new-public-health-strategy.aspx> ⁶

Section 83 requires these local authorities to designate an Air Quality Management Area (AQMA) where air quality objectives are not being achieved (or are not likely to be achieved) as set out in the Air Quality (England) Regulations 2000. Once designated, Section 84 requires the local authority to develop an Action Plan detailing remedial measures to tackle the problem within the AQMA.

There are obligations placed on the County Council however – detailed in the 2016 Defra Local Air Quality Management guidance⁵. In summary, the district/borough councils are accountable for monitoring air quality, designating AQMAs, preparing the annual reports and Action Plans. However, the Secretary of State expects county councils to actively engage at all stages of review, assessment and action planning, and ensure that all necessary measures to address air pollution in their local area are included.

National Policy and Guidance

The recent publication of the Government's Clean Air Strategy⁶ sets out how the government will work to implement its 25-year environment plan, alongside its clean growth proposals. The cross government plan is published by the Departments for Business, Energy and Industrial Strategy, Environment, Food and Rural Affairs, Transport, the Health and Social Care, the Treasury, and the Ministry of Housing, Communities and Local Government. Officers believe that this is a clear indication that poor air quality can only be tackled across services, departments and disciplines – an issue recognised very early on in our work to develop the County Council response.

The Government Clean Air Strategy details a raft of new powers for local authorities and sets out a number of options which could be included in the Draft Environment (Principles and Governance) Bill 2018, although it is (at the time of writing) unclear who these duties would fall on within councils, nor how they would be funded. The Clean Air Strategy focusses on the importance of facilitating the sharing of best practice and knowledge between local authorities.

February 2019 saw the publication of the National Institute for Clinical Excellence (NICE) Quality Standard for outdoor air pollution and health, describing high-quality actions in priority areas for improvement. The standard is endorsed by The Department of Health and Social Care as required by the Health and Social Care Act (2012) builds on the 2017 publication of NICE air pollution guidance NG70⁷.

Public Health England published a review of interventions to improve outdoor air quality and public health in March 2019⁸, and was unequivocal in stating that the evidence for effective air quality interventions is developing all the time and can face challenges and limitations. This Strategy and Implementation Plan is mindful of this and recognises that ambition is of equal importance as setting out a public strategy that is achievable. The PHE review sets out a number of clear principles, which will further guide the development of the Implementation Plan, including:

Local authorities need to work together

Effective strategies require a coherent approach

Everyone has a role to play

It is better to reduce air pollution at source than to mitigate the consequences

Improving air quality can go hand in hand with economic growth

As action is taken some groups may need particular support

⁵ <https://laqm.defra.gov.uk/documents/LAQM-PG16-April-16-v1.pdf>

⁶ <https://www.gov.uk/government/publications/clean-air-strategy-2019>

⁷ <https://www.nice.org.uk/guidance/ng70>

⁸ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/784055/Review_of_interventions_to_improve_air_quality.pdf

Hertfordshire's Air Quality

At the time of writing (March 2019), there are **31 Air Quality Management Areas** (AQMAs) across Hertfordshire, 10 of which are on major roads and fall under Highways England responsibilities. The remaining AQMAs relate to roads for which the County Council is the highway authority. A map of these locations is included in Appendix 1.

The current challenge within Hertfordshire is that we only have realtime monitoring in certain parts of the county, and this mainly takes place in the AQMAs. There may be a public health problem even where there isn't an AQMA, however there is no local health data that can demonstrate cause and effect.

In 2015, the Hertfordshire Public Health Service funded 10 real-time PM_{2.5} monitors and these have collected data since 2016. Data to date has indicated two important things. Firstly, that moderate/high air pollution typically occurred in the winter and, secondly, that DEFRA modelled PM_{2.5} concentrations were largely consistent with those being measured. This data provides limited interpretive benefit but does give us a useful baseline.

In December 2017, a Joint Strategic Needs Assessment was created on air quality within Hertfordshire. This found that in 2011, Hertfordshire had a higher mean concentration of fine particulate matter than England and whilst in 2015, both Hertfordshire and England's mean concentration had fallen, Hertfordshire was still higher than England's average.

The Air Quality Management Areas in Hertfordshire are very specific locations (see location map in Appendix 1 and AQMA pollutant monitoring table in Appendix 2) which can be as small as a junction, and that have been identified as meeting certain criteria and pose an issue with regards to air quality. Appendix 2 does not list every monitoring location, just those that are declared AQMAs; nor does it list monitoring locations that are the responsibility of other statutory bodies (e.g. Highways England).

All of Hertfordshire's District and Borough Authorities' are meeting their duties under the Environment Act. Whilst some may not have declared AQMAs, all monitor air quality in a range of locations. All continuous Hertfordshire monitoring data is available at https://www.airqualityengland.co.uk/local-authority/?la_id=408.

It is also worth noting that each of these local authorities are monitoring ambient nitrogen dioxide (NO₂) through diffusion tubes which are installed in a variety of locations across the district/borough. A weakness of these tubes is that they only monitor background pollution and therefore only provide a general indicator of pollution levels.

The Department for Environment, Food & Rural Affairs (DEFRA) also have an Automatic Urban and Rural Network (AURN) running across the country which monitors oxides of nitrogen (NO_x), sulphur dioxide (SO₂), ozone (O₃), carbon monoxide (CO) and particles (PM₁₀, PM_{2.5}). There is, however, an extremely limited presence of this network within Hertfordshire.

Understanding how County Council activity currently influences air quality



Meeting Our Objectives: ownership of air quality within the County Council

Our Executive Members have asked the County Council to develop a strategic position on air quality, which is corporately owned. The development of the supporting Implementation Plan has been taken forward by a corporate working group, chaired by the Director of Public Health. This group reports progress to the County Council Strategic Management Board, with membership comprising of officers from a variety of departments including Public Health, Highways, Spatial Planning and Property.

The corporate working group, through internal consultation, has developed a set of actions to meet the aims and objectives set out in this document.

These are summarised below, with more detail included in the accompanying Implementation Plan

Action		Related objective
	Quick Wins	<ul style="list-style-type: none"> To create clear leadership on air quality To ensure that air quality is an integral part of everything that we do
1	Establish Roles and Responsibilities	<ul style="list-style-type: none"> To create clear leadership on air quality To ensure that air quality is an integral part of everything that we do To establish a coherent workstream on air quality, including clarification on roles and responsibilities
2	Agree Communication pathway with District/Borough Councils	<ul style="list-style-type: none"> To develop a productive relationship with partners, in particular the District and Borough Councils, to achieve positive air quality outcomes.
3	Ensuring we respond to relevant consultations	<ul style="list-style-type: none"> To create clear leadership on air quality To ensure that air quality is an integral part of everything that we do
4	Link to Corporate Plan	<ul style="list-style-type: none"> To ensure that air quality is an integral part of everything that we do
5a	Develop a robust evidence base that offers clarity on monitoring and a greater appreciation of data limitations	<ul style="list-style-type: none"> To create clear leadership on air quality Gain a stronger understanding of the air quality issues within Hertfordshire
5b	Develop policy position on AQMA data	<ul style="list-style-type: none"> To develop a productive relationship with partners, in particular the District and Borough Councils, to achieve positive air quality outcomes.
5c	Supporting joint approaches with District and Borough Council's to tackle identified hotspots	<ul style="list-style-type: none"> To develop a productive relationship with partners, in particular the District and Borough Councils, to achieve positive air quality outcomes. Gain a stronger understanding of the air quality issues within Hertfordshire
6a	Develop spatial planning Informative Note	<ul style="list-style-type: none"> To develop a productive relationship with partners, in particular the District and Borough Councils, to achieve positive air quality outcomes.
6b	Develop Air Quality Guidance for Minerals and Waste applications	<ul style="list-style-type: none"> To ensure that air quality is an integral part of everything that we do
7	Reduce emissions from County Council fleet vehicles	<ul style="list-style-type: none"> To develop a productive relationship with partners, in particular the District and Borough Councils, to achieve positive air quality outcomes.
8a	Develop public-facing communications	<ul style="list-style-type: none"> To develop a productive relationship with partners, in particular the District and Borough Councils, to achieve positive air quality outcomes.
8b	Develop information briefings	<ul style="list-style-type: none"> Gain a stronger understanding of the air quality issues within Hertfordshire
9	Build air quality considerations into County Council property developments	<ul style="list-style-type: none"> To develop a productive relationship with partners, in particular the District and Borough Councils, to achieve positive air quality outcomes. To ensure that air quality is an integral part of everything that we do
10	Explore opportunities to tackle poor air quality in the vicinity of schools through policy and behavioural change initiatives	<ul style="list-style-type: none"> To create clear leadership on air quality To ensure that air quality is an integral part of everything that we do
11	Keeping in line with national policy	<ul style="list-style-type: none"> To create clear leadership on air quality .

Appendix 1: Air Quality Management Area Locations in Hertfordshire

Appendix 2: Air Quality Management Area Monitoring by Pollutant