



Air Quality Strategy 2024

Introduction:

This document outlines the comprehensive approach being undertaken by Welwyn Hatfield Borough Council, in collaboration with various partners, to enhance Air Quality in our region. While there has been noteworthy progress in improving air quality across England in recent years, it remains a paramount concern for public health, with the most vulnerable segments of our population, such as children, the elderly, and those already facing health challenges, being disproportionately affected. Additionally, inadequate air quality exerts adverse effects on crop yields and, particularly in the case of pollutants like ammonia and oxides of nitrogen (NOx), poses significant threats to the natural environment and biodiversity.

The Government released an updated Air Quality Strategy in August 2023, outlining a framework for local authorities' role in addressing this critical issue. This document elucidates the powers, responsibilities, and the additional measures that the government expects local authorities to undertake.

As part of its existing responsibilities, the Council is obliged to address air quality exceedances within its jurisdiction. This mandate includes the designation of Air Quality Management Areas and the publication of Air Quality Action Plans that delineate the strategies and actions to be implemented for achieving compliance. It is noteworthy that, currently, the Council has not identified any air quality exceedances in our region, and therefore no Air Quality Management Areas have been declared. However, the Council remains committed to proactively minimising public exposure to specific pollutants whenever feasible. This commitment underscores our dedication to the well-being of our community and the preservation of our environment.

This is especially important for the pollutant PM_{2.5}, for which there are currently no safe levels of exposure (please refer to section 4). It is important to establish a framework that considers air quality considerations across the borough. This promotes a better understanding, encourages a change in behaviour and overall make improvements across the borough.

The air quality within the borough is generally favourable, with some areas experiencing low pollution levels in relation to the objective limits in the legislation. The council places a strong emphasis on monitoring air quality and strives to make improvements wherever feasible, considering this is a key target.

This air quality strategy intends to unite all the different areas of work undertaken by the council to bring them together by looking at the actions and interventions the council currently makes. The aim is to recognise success and to find new methods which can be implemented to make improvements.

The council declared a climate emergency in 2019 and subsequently developed a climate change strategy and climate action. The council has a commitment to being net zero as an organisation by 2030 and as a borough by 2050.

This air quality strategy will feed into the climate change agenda as the two issues are interlinked in many ways, and mitigation and adaptation measures can result in a number of mutual benefits. We intend to work with our partner organisations, businesses, education establishments and the public. The Environmental Health Team are responsible for air quality monitoring and prioritise air quality improvements as a key target for the future.

This air quality strategy should be read in conjunction with the most recent Air Quality Annual Status Report.

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1. Aims & Strategic Objectives:

The primary aims and objectives of our Air Quality Strategy are to focus on air quality improvement. We are committed to creating a cleaner, healthier, and more sustainable community for our residents. Our strategy encompasses a comprehensive approach that includes reducing emissions, promoting public awareness, and fostering collaboration with stakeholders. Through proactive measures we seek to enhance air quality and mitigate the impacts of air pollution on public health.

To achieve this we must work collaboratively across Hertfordshire because changes cannot occur in isolation. There needs to be a consistent relationship with our partners in tackling this important task.

The legal obligation to monitor and manage air quality lies with the borough and district councils. However, County Councils are expected to contribute to district council air quality action plans and strategies.

We want the area to continue to be a place that our residents and visitors enjoy. We want everybody to feel safe in the knowledge that the air that they are breathing is as clean as it can be.

We want to obtain a better understanding of the air quality issues within the borough and use development control as a method to promote air quality and reduction in local emissions, as well as considering the introduction of smoke control areas.

The focus is on promoting the installation of green travel alternatives for new developments and change of use. This will include utilising spatial planning to minimise air pollution hotspots and promote cleaner environments. Identify areas with poor air quality and develop policies that encourage the separation of sensitive land uses, such as schools and hospitals, from major pollution sources like busy roads or industrial sites.

Green Infrastructure and Urban Design: Incorporate green infrastructure elements, such as parks, green spaces, and trees into urban design plans. These elements can help absorb pollutants, provide shade, and improve overall air quality. Incorporate green roofs, green walls, and permeable surfaces into building designs to mitigate pollution.

Building Design and Energy Efficiency: Promote energy-efficient building design and construction practices to reduce emissions from heating and cooling systems. Incorporate ventilation systems that filter outdoor air and prevent the infiltration of pollutants. Encourage the use of low-emission building materials and construction techniques. The use of conditions to include the provision of cycle facilities, boiler emission limits and the installation of electric vehicle charging points. This will begin to facilitate the use of greener transport across the borough and make that process more convenient.

2. Air quality Objectives in England:

The Air Quality (England) Regulations 2000 (2002 as amended). These pollutant limits apply locally under the Air Quality Management framework.

Pollutant	Objective	Averaging period
Nitrogen dioxide - NO2	200 µg/m ³ not to be exceeded more than 18 times per year	1-hour mean
Nitrogen dioxide - NO2	40 µg/m ³	Annual mean
Fine and coarse particulate matter - PM10	50 µg/m ³ not to be exceeded more than 35 times/ year	24-hour mean
Fine and coarse particulate matter - PM10	40 µg/m ³	Annual mean
Sulphur dioxide (SO2)	266 µg/m ³ not to be exceeded more than 35 times per year	15 minute mean
Sulphur dioxide (SO2)	350 µg/m ³ not to be exceeded more than 24 times per year	1 hour mean
Sulphur dioxide (SO2)	125 µg/m ³ not to be exceeded more than 3 times per year	24 hour mean
Benzene	16.25 µg/m ³	Running annual mean
Benzene	5.00 µg/m ³	Annual mean
1,3-butadiene	2.25 µg/m ³	Running annual mean
Carbon monoxide	10.00 mg/m ³	Maximum daily running 8-hour mean
Lead	0.5 µg/m ³	Annual mean
Lead	0.25 µg/m ³	Annual mean

The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023

Pollutant and metric	Target	Target Year
PM2.5 annual mean concentration	Interim target: 12 µg/m ³	2028
PM2.5 annual mean concentration	Legally binding target: 10 µg/m ³	2040
PM2.5 population exposure	Interim target: 22% reduction in exposure compared to 2018	2028
PM2.5 population exposure	Legally binding target: 35% reduction in exposure compared to 2018	2040

The Air Quality Standards Regulations 2010

Pollutant	Objective	Concentration measures as	Date to be achieved by and maintained thereafter
PM10	50 µg/m ³ not to be exceeded more than 35 times a year	24 hour mean	31 December 2004
PM10	40 µg/m ³	annual mean	31 December 2004
PM2.5	20 µg/m ³	annual mean	1 January 2020
PM2.5	Target of 20% reduction in concentrations at urban background	annual mean	Between 2010 and 2020
Nitrogen dioxide (NO ₂)	200 µg/m ³ not to be exceeded more than 18 times a year		1 January 2010
Nitrogen dioxide (NO ₂)	40 µg/m ³		1 January 2010
Ozone (O ₃)	100 µg/m ³ not to be exceeded more than 10 times a year	8 hour mean	

The local air quality management process places an obligation on all local authorities to regularly review and assess air quality in their areas and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place to achieve and maintain the objectives and the dates by which each measure will be carried out.

This air quality strategy aligns with our Annual Status Report, which presents the strategies we employ to improve air quality and detail any progress that has been made.

The following is taken from Local Air Quality Management Policy Guidance (PG22) August 2022

The Environment Act 2021 established a legally binding duty to set a target on fine particulate matter (PM_{2.5}), in addition to at least one long-term target on air quality, by 31st October 2022. The proposed targets are: - a maximum annual mean concentration of PM_{2.5} in ambient air - a population exposure reduction target for PM_{2.5}. Whilst the responsibility for meeting the PM_{2.5} targets sits with national government; local authorities have a role to play in delivering reductions in PM_{2.5}.

Local Authority PM_{2.5} Role: Local authorities will need to take action to reduce emissions and the precursors of PM_{2.5}, with action to tackle PM₁₀/NO_x usually contributing to this.

Local authorities should:

Identify measures already in place that can help with reducing concentrations of PM_{2.5} (examples of these type of measures are included in the Technical Guidance);

Identify new priority measures to tackle PM2.5 (these should be discussed with the Director of Public Health and other relevant partners).

Local authorities can consider how to address PM2.5 alongside, its precursors and other pollutants when tackling their own vehicle fleets and services and/or work with communities and businesses to achieve improvements in air quality.

Public Health England compiled a report entitled 'Estimating Local Mortality Burdens Associated with Particulate Air Pollution' which is designed to help local authority air quality practitioners and public health professionals understand the mortality burden of fine particulate pollution within their area, which can then be used to raise awareness of the problem and how best to remediate it.

3. Air quality monitoring

Welwyn Hatfield Borough Council have two automatic (continuous) air quality analysers at monitoring at 2 sites within the borough. One is a Chemiluminescent analyser that monitors the pollutant NO2 which is in West View in Hatfield. The other analyser is a Beta Attenuation analyser that monitors the pollutant PM2.5 which is in the Great North Road in Hatfield.

For more information on the details regarding the air quality monitoring that the council undertake, please refer to the annual air quality status report on the [Council's Website](#).

NO2 Analyser:



PM2.5 Analyser:



Diffusion tubes:

Welwyn Hatfield Borough Council undertake passive monitoring of NO₂ at 51 sites across the borough.



There is an expectation that the main pollutants which require direct action are fine particulate matter, nitrogen oxides and ammonia.

Fine particulate matter – PM_{2.5}:

Fine particulate matter is everything in the air that is not a gas. The size of airborne particles governs their behaviour. The legislation encompasses both PM₁₀ (particles

under 10 micrometres comprising both fine and coarse particulate matter) and PM2.5 (particles under 2.5 micrometres or fine particulate matter). This strategy focuses on PM2.5 recognising this has widespread health impacts. PM2.5 is either emitted directly from sources, known as primary PM2.5, or formed in the air from chemical reactions between other pollutants, known as secondary PM2.5. Primary PM2.5 is emitted from human activities like burning fuels, braking and various industrial processes, as well as from natural sources like sea spray and dust. Domestic combustion contributed 27% of emissions in 2021 and industrial combustion of biomass fuels accounts for 18%. A portion of the PM2.5 present in our air originates in other countries, with southeast England particularly affected. Correspondingly, some PM2.5 emitted in the UK travels abroad. (Ref DEFRA Air Quality Strategy).

Nitrogen oxides – NOx (nitrogen dioxide, NO2, and nitric oxide, NO)

Nitrogen oxides are gases which are generally emitted from high-temperature combustion processes. We deal with nitrogen dioxide and nitric oxide together as “NOx ” because they convert between each other in the air very quickly. The main sources of NOx in the UK are road transport (27% in 2021) and other transport (aviation, rail, shipping) (14% in 2021). NOx can impact human health, usually recognised for exacerbating asthma and other respiratory diseases. It also damages biodiversity by depositing reactive nitrogen into plants and soil. (Ref DEFRA Air Quality Strategy).

Ammonia (NH3)

Ammonia is a reactive gas which impacts biodiversity. It also reacts with other chemicals in the air to form particulate matter. Its main source in the UK is agriculture (87% in 2021) (Ref DEFRA Air Quality Strategy).

4. The reduction of PM2.5:

Whilst local authorities do not have ultimate control over all PM2.5 emissions, there is a responsibility to work together nationally to reduce emissions as much as possible. Therefore, local authorities should focus on the local PM2.5 emissions that they can control.

The council is currently meeting the 2040 national target of 10 µg/ m³ for PM2.5. However, there is no room for being complacent and further work should be done to make further improvements. The national target also includes the requirement for an interim target of 22% by 2028 and a 35% improvement by 2040 when compared to the 2018 baseline level.

The pollutant PM2.5 tends to travel across great distances, which tends to affect background levels over a wide area. This is where action is required by multiple local authorities to work together across a county wide area. A joint working program is

the best way to help a reduction in PM2.5 not just locally but nationally and internationally.

Until 2021, the World Health Organisation (WHO) limit was set at 10 µg/m³. This has now been updated to 5 µg/m³.

The WHO limit was reduced in part because of research from systematic reviews which suggests that there is a potential increased risk of mortality even in areas where PM2.5 is below the previous WHO limit of 10µg/m³.

5. Environmental Permitting:

Environmental permits are a way to regulate certain activities. These include permitted processes that emit pollution such as paint spraying, mobile plant, cement batching, petrol stations and dry cleaners.

The permitted processes are split into three sections, Part A (1), Part A (2) and Part B processes. The categories are dealt with by different authorities which is split between the local authority and the Environment Agency.

6. Air quality in Welwyn Hatfield Borough:

Air pollution is associated with several 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, the elderly, and those with existing heart and lung conditions. There is also often a strong correlation with equalities issues because areas with poor air quality are also often less affluent areas.

The mortality burden of air pollution within the UK is equivalent to 29,000 to 43,000 deaths at typical ages, with a total estimated healthcare cost to the NHS and social care of £157 million in 2017.

Our 2023 Air Quality Annual Status Report showed that pollution levels have reduced slightly or remain unchanged across the borough. There are currently no locations across the borough that breach the air quality objectives so there is no requirement to declare an air quality action area. The monitoring network is well established, and this is gathering very important data across the borough. Work is ongoing with the Planning Team to install and provide more green transport solutions. Green transport facilities should be provided for new developments to aid the green transport infrastructure across the borough.

The council are prioritising air quality and emission reduction and take this matter very seriously. The engagement with Hertfordshire County Council has been vital in improving communication and working together to make improvements. The sharing of data and knowledge during quarterly meetings is showing benefits and measures

are in place to make improvements where possible. These measures encourage the use of public transport where possible. This reduces the number of private vehicles in operation reducing pollutant concentration through the number of vehicles and reducing congestion; walk or cycle if your journey allows. From choosing to walk or cycle for your journey the number of vehicles is reduced, this also encourages and improves health and fitness. This can be promoted via travel plans through the workplace and within schools, as well as promotion through planning and development control.

The diffusion tube monitoring for the 33 sites across the borough demonstrate the difference in data prior to the pandemic. Typically, pollution emissions from road traffic tend to improve year on year, despite an increase in road traffic, the introduction of greener transport helps to make improvements each year. Therefore, in general air quality will tend to improve slightly for any given location. The data generally shows that pollution levels reduced from 2018 to 2019. When the pandemic hit, the data in the main shows a noticeable reduction in pollution levels for 2020.

As the pandemic eased, traffic levels increased, and the population started to travel again. However, there has been a significant change in general working practices in that a lot of people are now permitted to work from home more often. This may not remain in place for years to come, but at this present time the data demonstrates that current pollution levels have not generally returned to pre pandemic levels.

The data for 2021 and 2022 shows some fluctuations in certain locations. There are improvements in some areas but then regression in others. This is likely to be down to the fact that the country is still adjusting and recovering from the pandemic, some businesses are still changing working patterns and the requirement for people to return to office working. However, the changes in levels are considered to be minor and will hopefully show consistent improvements in future years.

The schools air quality project started in 2020. The locations have remained the same, so this provides a stable data set. The data clearly shows a noticeable increase in pollution levels in 2021 as lockdowns were lifted. However, more encouragingly, there has been a reduction in the 2022 dataset closer to the levels captured during the pandemic. The monitoring locations are immediately at the front of the school. This hopefully demonstrates the use of active travel such as cycling and walking.

The automatic analyser located at West View in Hatfield shows a stable dataset from 2020 to 2022. It is encouraging to note that pollution levels have stayed fairly consistent over this time, there has not been a significant rise in pollution levels in this location as the pandemic eased. There has never been an exceedance recorded for the 1 hour mean by this analyser.

In relation to PM2.5 The data from 2017 to 2022 shows a marked decrease from 2017 until 2020. This is consistent with national data which demonstrates that pollution levels tend to improve slightly year on year. The data from 2020 to 2021 is identical which will be due to the pandemic. There is an increase in 2022 which is

back to pre pandemic levels. This is obviously disappointing, but it is expected. The pandemic created a rather unusual scenario in that roads were extremely quiet. There are changes still being made with some businesses still making changes and bringing people back into the office. This will increase pollution levels. It also appears that travel patterns and routines are now different, people tend to operate in a more sporadic way in terms of travelling to and from a place of work, this means that peak times are fluctuating. This will naturally influence the data that is recorded.

7. Climate Change:

The Council declared a climate emergency in 2019 and has committed to becoming net zero as an organisation by 2030 and as a borough by 2050. The council has established a climate members group, which has cross party membership, a climate officers group, with senior staff from all service areas, and a climate change portfolio holder; the Leader of the Council. The council has a climate action plan, which lists and details approximately 100 actions across a range of areas that must be implemented to meet the net zero targets. A Climate change officer coordinates the climate agenda, monitors the climate action plan and delivers specific projects.

As we endeavour to mitigate and adapt to climate change, there are a number of actions identified which have co benefits, and improving air quality is one example of this. For instance, as we reduce fossil fuel powered transport and increase active and sustainable transport, we also improve local air quality by reducing the amount of NOX and PM 2.5. As we increase tree canopy cover to alleviate the heat island effect as summer temperatures rise and heatwaves occur more frequently, PM2.5 levels can be reduced as foliage filters out this pollutant.

Some co beneficial actions within the climate action plan include the following:

Ref	Theme/Impact Area	Action	Action owner	Status	Carbon reducti impact	Action typ
12	Engagement	Monitor AQ around the borough and engage with residents around AQ issues	Env Health Technical Officer	In progress	Low	Tangible
17	Engagement	Promote public transport, walking and cycling as alternative to driving through public engagement and internally	Communications & Marketing Manager	Ongoing	Medium	Enabling
28	Biodiversity	Plant and maintain wildflower meadows along key roads	Environment Services Manager	Ongoing	Low	Tangible
32	Biodiversity	Plant 300 street trees (of appropriate species and in appropriate locations) per year until WHBC	Landscape and Ecology Manager	Complete	Medium	Tangible
46	Transport	Develop Local Plan and Local Transport Plan policies that facilitate a significant uptake in cycling by improving safety, travel routes and storage facilities.	Service Manager (b/repairs & C/change)	Complete	High	Tangible
47	Transport	Continue to work with Herts County Council to implement policies in Local Transport Plan and other transport plans	Assistant Director (Planning)	Ongoing	Medium	Enabling
48	Transport	Ensure Local Plan policies include provision for pedestrians, cyclists, public transport and electric vehicles	Assistant Director (Planning)	Complete	Medium	Tangible
49	Transport	Carry out a new staff travel survey and produce an up-to-date Green Staff Travel Plan, and moving forward it should be updated at least bi annually.	Climate Change Officer	In progress	Low	Tangible
52	Transport	Apply for Government funding for new electric vehicle charge points in council-owned car parks as and when funding is available	Parking and Playground Services Manager	Ongoing	Medium	Tangible
55	Transport	Work with Herts County Council to prepare Walking and Cycling Improvement Plan for Welwyn Garden City and Hatfield	Senior Projects Officer (Planning)	Complete	Medium	Enabling

Ref	Theme/Impact Area	Action	Action owner	Status	Carbon reducti impact	Action typ
56	Transport	Approve and publish Local Plan and Local Transport Plan policies that facilitate a significant uptake in cycling by improving safety, travel routes and storage facilities.	Senior Projects Officer (Planning)	In progress	Medium	Tangible
57	Transport	Explore the possibility of replacing general vehicles with electric vehicles (community buses now contracted out to 'Communities first')	Service Director (Residents & Neighbourhoods)	In progress	High	Tangible
58	Transport	Commission a study to determine the most suitable locations for public EV charge point infrastructure	Parking and Playground Services Manager	In progress	Medium	Tangible
63	Council Housing	Ludwick Way & Commons - 10 family homes, air source heat pumps, solar panels, water saving systems e.g toilet cistern, fabric first approach, EV charging points	Housing & Development Strategy Services Manager	Complete	Medium	Tangible
64	Council Housing	Howlands House and Burfield Close temporary accommodation schemes, 116 homes, which will include, air source heat pumps, solar panels, water saving devices, fabric first approach, mechanical ventilation and heat recovery, EV car sharing points	Housing & Development Strategy Services Manager	In progress	Medium	Tangible
85	Internal	Implement agile working arrangements for most WHBC staff	Executive Director (Finance & Transformation)	Complete	Medium	Tangible
86	Internal	Ensure that New Hatfield Commons multi-storey car park includes low energy features and 8 electric vehicle charge points	Development Manager	Complete	High	Tangible

8. Planning development control:

The Environmental Health Team are a consultee for planning applications that come into the council. These applications vary from a single dwelling to commercial units and large residential developments. The team are responsible for considering various subject areas as part of each development and this includes air quality. This provides the opportunity to specify and encourage the use of cleaner technologies and the promotion of green travel.

This allows the consultation response to consider potential air quality impacts and use our own monitoring network and data to assess the likely outcome and can include construction of roads, combustion processes, industrial development, and major developments. Where necessary, an air quality impact assessment is requested as part of the planning application process. This will predict and assess the likely impact of the proposed development on existing air quality and can also offer mitigation measures to make improvements. The current air quality network does include monitoring locations which have been strategically placed to provide data as part of the local plan. This provides local data which allows us to see the

current and historical pollution levels. It will also prove useful as baseline data to assist with air quality impact assessments.

Air quality is a consideration for planners when dealing with proposed development. If a development is situated in an area of poor air quality, it can have a detrimental impact on the people that live there.

Due regard must be given to the climate change emergency. The consideration of air quality is a major part of development control and people’s public health must be protected and promoted as a key factor going forward. The Environmental Health team promote this message and implement improvements and mitigation controls through the planning consultation process.

9. Air quality group:

The Hertfordshire and Bedfordshire air quality group consist of all the Hertfordshire local authorities, including the County Council, as well as Luton, Bedford, and Central Bedfordshire. The group has a representative chair that arranges quarterly meetings. The group regularly stay in contact and share a lot of information and resources. It acts like a knowledge hub so we can effectively work together to promote air quality throughout the counties. This is especially useful because it also feeds into the public health team at the County Council. This results in a consistent approach to make improvements to air quality and climate change across a county (regional) wide area. The group also feed into one data management company that holds and presents all our air quality monitoring data.

10: Measures to improve air quality:

Measure No.	Measure	Category	Classification	Comments / Barriers to Implementation
1	AQ schools project	Promoting Travel Alternatives	School Travel Plans	Continue obtaining data using diffusion tubes.
2	Development control	Policy Guidance and Development Control	Intensive active travel campaign & infrastructure	For development projects, air quality conditions are being put on applications for provision of cycle storage and electric vehicle charging points

Measure No.	Measure	Category	Classification	Comments / Barriers to Implementation
3	Herts Living Lab	Transport Planning and Infrastructure	Other	Local air quality monitors are being prepared to be located in strategic positions
4	Electric Cars	Alternatives to private vehicle use	Car Clubs	The electric cars are used for air quality monitoring work where possible. Staff are encouraged to use the electric vehicles for district visits. The cars are available for public hire out of hours and over the weekends.
5	Working at home/hybrid working	Promoting Travel Alternatives	Encourage / Facilitate home-working	The council has implemented hybrid working. The offices are set up for hot desking. This is working well, and staff are still working from home on a regular basis. In general each officer is in at least two days a week.
6	Permits	Environmental Permits	Other measure through permit systems and economic instruments	This service has temporarily been externalised ensuring all permitted processes are inspected to ensure they're compliant, permits are regularly reviewed to ensure they comply with the latest guidance, no changes to the processes have been made without permission and applications for new permits are processed in a timely manner to ensure emissions are compliant with the regulations

Measure No.	Measure	Category	Classification	Comments / Barriers to Implementation
7	Herts & Beds AQ Group	Policy Guidance and Development Control	Regional Groups Co-ordinating programmes to develop Area wide Strategies to reduce emissions and improve air quality	<p>The group meet quarterly through the year and have regular contact at other times - Promotion and implementation of air quality strategies - promotion and sharing knowledge regarding improvements to air quality via development control - sharing new guidance - sharing measures adopted across the county to improve air quality - Links to Hertfordshire County Council Public Health to network and link in with projects to improve and promote public health county wide</p>
8	Air Alert Scheme	Public Information	Via the Internet	<p>The air alert scheme has been reviewed, in terms of membership sign up. There has been a significant advertising drive to promote the system across the county. This has been actively supported by the county council public health team. The promotion of the service has been via social media and medical centres. As a result, sign up rates have now increased.</p>
9	Cycle to work scheme	Alternatives to private vehicle use	Other	Scheme available for staff to purchase bikes once every 6 months through the subsidised scheme

Measure No.	Measure	Category	Classification	Comments / Barriers to Implementation
10	Climate Change Carbon Emission Reduction - Herts County Council Sustainability Partnership	Other	Other	<p>Most of the changes in how and what the community, (households and businesses) consumes as energy will change radically over the coming decades. Most of that change will depend on central government policy on decarbonisation of electricity production. There will be a switch to electrical heating of homes, as we move to greener electricity production. The Council, as most local authorities in the country will have to manage and facilitate this change by providing help to the most vulnerable households, to reduce fuel poverty and offering advice and managing behavioural change as we move to net zero emissions.</p>
11.	Electric fleet council vehicles	Alternative use from diesel and petrol vehicles	Emission reduction	<p>The use of council fleet vehicles, such as the council contractors' vehicles used by its maintenance staff to repair and improve our houses, are now mostly electric. This helps to reduce vehicle emissions from council fleet vehicles.</p>

Measure No.	Measure	Category	Classification	Comments / Barriers to Implementation
12	Strategic Action Plan Transport - Herts County Council Sustainability Partnership	Promoting Low Emission Transport	Other	<p>Deliver net zero carbon emissions for local authority transport operations by 2030 - Work towards zero carbon emissions for Hertfordshire's transport network by 2050 - Embed sustainable transport policies in Local Plans and prioritise the needs of sustainable travel within every planning decision - Only support new developments where they will have full sustainable transport access - Systematically pursue opportunities for active travel in everything we do - Look to reduce air pollution arising from local transport sources - Promote a shift to active travel and public transport through behaviour change campaigns and infrastructure improvements - Facilitate a move to BEV for taxis across the county - Facilitate appropriate EV charging networks across Hertfordshire</p>
13	Links with Air quality and public health - Hertfordshire county council	Other	Other	<p>Hertfordshire County Council have employed an air quality programme manager - this has provided a very useful link between the district and borough councils and the county council. This link is vital, because it allows communication with multiple departments, such as highways, public health and education. It permits a very broad range of facilities to promote and improve air quality awareness</p>

11. Air quality powers available to local authorities:

There is a statutory responsibility on local authorities to monitor and report on air quality within their borough. In addition, steps should be taken (as far as practicable), to try to make improvements to air quality. There are various powers available to enable this process to take place. This section will highlight these powers and propose actions going forward. It is also important to note the overarching responsibility of Local authorities to exercise their functions, as far as practicable, in a way which improves air quality.

Domestic Burning:

Domestic burning, if not undertaken properly, can cause a significant amount of pollution. The council actively discourage the burning of unsuitable materials to try to reduce the pollution risk.

A suitable way to control this type of pollution is by the introduction of smoke control areas. A smoke control area means that businesses and people, should not emit a substantial amount of smoke from a chimney. The burning of unauthorised fuels and the use of unauthorised appliances is also prohibited. The enforcement of smoke control areas comes under the Environment Act 2021. The Act changed the enforcement for breaches of a smoke control area from a criminal offence to a civil offence.

Welwyn Hatfield Borough Council have not declared any smoke control areas. Local Authorities are required to keep under review the existing boundaries of smoke control areas as development takes place but also should consider whether it would be beneficial to declare a new Smoke Control Area. This strategy proposes that we investigate if it's beneficial to create smoke control areas in the borough. At this current time, the Environmental Health team deal with bonfires and domestic burning through nuisance legislation.

The government has stated that it recognises that some households are reliant on solid fuel burning as a primary source for heating, hot water and cooking, with this in mind government is not seeking to ban burning. This is particularly pertinent in light of the current focus on energy security and the global rise in energy prices.

It is important to note that Domestic burning of solid fuels accounted for 27% of PM2.5 in 2021.

Industrial emissions:

The pollution emissions from industrial processes have decreased significantly over the years. This is down to the introduction of new technology and increased awareness of pollution controls and the damage that pollution does. Whilst there have been improvements, industrial emissions are still a major part of localised and national pollution. The local authorities and the Environment Agency play a pivotal role in aiding the reduction of emissions.

The regulation of smaller scale industrial operation lies with the local authority, whereas large scale operations are the responsibility of the Environment Agency. This regulation involves the process of permitting and routine inspections to ensure that the pollution emission process is working as it should be.

There should be additional consideration for process that are close to residential areas, and in areas where existing pollution levels are elevated.

Transport and Machinery:

The road network is a key contributor to pollution emissions. This is where joint working with the County Council and highways operator is key. For example, key transport links, highway planning and integrating pollution reduction within these plans and transport networks.

The introduction of traffic management schemes, changes to road networks and town centre vehicle access, along with the provision of green transport facilities.

The use of cleaner machinery and equipment should also be considered for construction and highway maintenance. This is supported through transport planning consultations and air quality impact assessments for planning applications.

Public transport services are a crucial part of emission reductions. Firstly, ensuring that the vehicles using the road network are as efficient and pollutant free as they can be. In addition, the availability of the services for the community, ensuring that people can gain access to these services. This is part of the transport planning schemes put in place by the County Council, and additional public transport links for new developments.

The council can introduce anti idling schemes which involves enforcement for vehicles idling when they should not be and can be dealt with using fixed penalty notices. The council do not currently have an anti-idling policy in place, but this is something that we are considering going forward. They can be in places where existing pollution levels are elevated, and where vehicle idling occurs where it is not necessary. This could be areas such as town centres, schools, train stations, taxi ranks.

Agriculture

Local authorities, while lacking direct regulatory authority over agriculture, should collaborate with the industry to minimize emissions. This involves supporting innovation, providing advice, and engaging with farmers to encourage improvements. These are specifically noted in the air pollution from agriculture guidance prepared for DEFRA.

All local authorities are urged to promote adherence to the Code of Good Agricultural Practice for Reducing Ammonia Emissions. Planning policies and decisions should align with pollutant limits and national objectives, considering Air Quality Management Areas and clean air zones. Local Planning Authorities should assess the impact of ammonia emissions on the environment in local plans, incorporating it into strategic environmental assessments. Ammonia emissions may be a material

planning consideration for applications, depending on local circumstances and relevant policies, such as new slurry stores or livestock housing. Decision-makers should determine the relevance based on individual case circumstances, referring to the Air Quality chapter of the Planning Practice Guidance for additional guidance.

Pollution from agriculture summary:

Nitrogen-containing compounds (NO₂, NO, NH₃, N₂O) are emitted to the atmosphere from agricultural activities. In the case of ammonia (NH₃) and nitrous oxide (N₂O), agricultural sources are the main contributors, comprising 88% and 68% respectively of annual UK emissions in 2016. In addition, agricultural soils are becoming a significant source of nitric oxide (NO) (projected to be 6% of UK NO_x emissions by 2030) as emissions from combustion sources are reduced by control measures. Methane and non-methane volatile organic compounds (VOC) are emitted by agriculture, and livestock are an important source of methane in the UK budget (51% in 2016). The pesticides/fungicides hexachlorobenzene, hexachlorocyclohexane and pentachlorophenol, which are listed in the Stockholm Convention on Persistent Organic Pollutants, are also emitted from agricultural and forestry use. (Ref Air Pollution from Agriculture Document)

Indoor Air Quality:

Actions for local partners:

- Local authority front line, public health, environmental and planning professionals should be familiar with best practice on indoor air quality, including around ventilation.
- Where social housing is provided by local authorities, guidance to tenants on ventilation could be provided.

12. Proposed new actions table:

Action	Required by national strategy (Yes/No)	Suggested by national strategy (Yes/No)	Impact on air quality (Low/Med/High)	Additional funding required	Next steps - considerations
Consideration of introduction of a smoke control area	No	Yes	Med	Yes	Evaluate if it is beneficial to implement smoke control areas across the borough or parts of the borough, requirements – resources for the evaluation, implementation

					(including grants for expenditure incurred in adaptation of fireplaces on old dwellings) and enforcement.
Reduction in PM2.5 by 22% by Jan 2028 compared to the 2018 baseline - interim target	Yes and required by law by 2028	Yes	High	Yes	Investigate specific PM2.5 sources by additional monitoring develop action plans considering the contribution of the source, impact on air quality and the presence of vulnerable groups and the ability of the local authority to drive improvement and reduce and mitigate the emissions at source – road network, domestic/industrial burning, and farming. Identify resources required.
Reduction in PM2.5 by 35% by 2040 compared to the 2018 baseline.	Yes and required by law 2040	Yes	High	Yes	Investigate specific PM2.5 sources by additional monitoring develop action plans considering the contribution of the source, impact on air quality and the presence of vulnerable groups and the ability of the local authority to drive improvement and reduce and mitigate the emissions at source – road network, domestic/industrial burning, and farming. Identify resources required.

13. Communication:

It is important that the community feel that they can contact the council and raise any queries they wish in relation to air quality. The council have dedicated officers that deal with air quality and climate change. Please feel free to contact us and if you would like more information:

[Contact – Welwyn Hatfield Borough Council \(welhat.gov.uk\)](http://welhat.gov.uk)

14. Reference list of air quality documents:

More information on air quality and the work that we do can be found here:

[Air Quality – Welwyn Hatfield Borough Council \(welhat.gov.uk\)](http://welhat.gov.uk)

[Hertfordshire and Bedfordshire - Air Quality monitoring service \(airqualityengland.co.uk\)](http://airqualityengland.co.uk)

[Local Authority Data - Air Quality monitoring service \(airqualityengland.co.uk\)](http://airqualityengland.co.uk)

Please sign up to our free air quality alert system:

[Local Authority Data - Air Quality monitoring service \(airqualityengland.co.uk\)](http://airqualityengland.co.uk)

National strategies and plans

[The air quality strategy for England - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

[Environmental Improvement Plan](#): The Government's second Environmental Improvement Plan was published on 31 January 2023, setting out the 5-year delivery plan to improve the natural environment and work towards long-term environmental targets.

[Clean Air Strategy 2019](#): The Government's wide-ranging plan for clean air, setting out the actions we will take to reduce concentrations and emissions of air pollutants. The Clean Air Strategy remains the government's strategy for air quality.

[Air quality plan for nitrogen dioxide \(NO₂\) in the UK \(2017\)](#): our plan to achieve compliance with NO₂ concentration limits across England

Air Pollution – 2022's report laying out the scale of the challenge of reducing air pollution, the substantial progress that has been made and highlighting achievable solutions.

Local guidance

[Local Air Quality Management Policy Guidance](#) is policy guidance to air quality practitioners in English local authorities (except London)

[Air Quality Hub](#) is an online air quality information and knowledge sharing resource for local authorities.

[Clean Air Act 1993 \(legislation.gov.uk\)](https://www.legislation.gov.uk)

[Smoke control area enforcement by local authorities in England](#). This guidance covers the rules which local authorities should apply in smoke control areas under the [Environment Act 2021](#).

[Smoke Control Area Interactive Map](#). This interactive map allows you to explore the location of Smoke Control Areas and exemptions in England. The data for the map has been provided to Defra by local authorities but may not include all designated smoke control areas in England at this stage. You should always contact your local council to confirm if you live in a smoke control area.

[PM2.5 | Taskforce for Lung Health](#)

Indoor air quality guidance

[Indoor air quality at home \(nice.org.uk\)](#). This guidance covers indoor air quality in residential buildings. It aims to raise awareness of the importance of good air quality in people's homes and how to achieve this.

National statistics

Our national statistics: [Emissions of air pollutants](#) provides detail of emission sources across the UK.

The NAEI website provides the most granular data, broken down by source, activity, and fuel type ([Data - NAEI, UK](#)).

1. [Emissions of air pollutants in the UK - Summary ↵](#)
2. [The economic cost of air pollution: Evidence from Europe](#), Organisation for Economic Co-operation and Development (OECD) [↵](#)
3. [NFU helping local authorities work with farmers towards net zero ↵](#)