2024 Air Quality Annual Status Report (ASR)

In fulfilment of Part IV of the Environment Act 1995 Local Air Quality Management, as amended by the Environment Act 2021

This report provides a detailed overview of air quality in the East Herts District Council during 2023

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Executive Summary: Air Quality in Our Area

Air Quality in East Herts

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, 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[1,2].

The mortality burden of air pollution within the UK is equivalent to 29,000 to 43,000 deaths at typical ages[3], with a total estimated healthcare cost to the NHS and social care of £157 million in 2017[4].

East Herts is the most rural district in the County and has a great deal of natural and built heritage in the combination of villages and market towns. Although the district's countryside character means it has an important agricultural base, the local economy is dominated by the service sector with the majority of the firms being small and medium sized enterprises.

There are 3 areas in East Herts where a combination of traffic congestion and road layout had led to Nitrogen Dioxide (NO_2) concentrations being in exceedance of the UK annual mean air quality objective. These areas are known as Air Quality Management Areas (AQMA). The locations of the AQMAs can be found in Appendix D, and the AQMAs are also included within the national list of AQMAs or on the council website Air Quality | East Herts District Council

East Herts Council have been monitoring air pollution at various locations around the District since the LAQM regime began in 1995. Diffusion tubes are predominantly used for

[1] Public Health England. Air Quality: A Briefing for Directors of Public Health, 2017

[2] Defra. Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

[3] Defra. Air quality appraisal: damage cost guidance, January 2023

[4] Public Health England. Estimation of costs to the NHS and social care due to the health impacts of air pollution: summary report, May 2018

monitoring and in 2016 a new continuous monitoring site was commissioned at Gascoyne Way, Hertford (measuring Particulate matter ($PM_{2.5}$))[5] alongside the existing NO_2 monitor. The latest monitoring data shows pollution levels remained stable when compared to 2022 levels at 12ugm^3.

We work closely with our partners at Hertfordshire County Council (HCC) and have produced a new Air Quality Action Plan (AQAP) for which a number of key stakeholders, across public health and transport at HCC were involved in.

Actions to Improve Air Quality

Whilst air quality has improved significantly in recent decades, there are some areas where local action is needed to protect people and the environment from the effects of air pollution.

The Environmental Improvement Plan[6] sets out actions that will drive continued improvements to air quality and to meet the new national interim and long-term $PM^{2.5}$ targets. The National Air Quality Strategy, due to be published in 2023, will provide more information on local authorities' responsibilities to work towards these new targets and reduce $PM_{2.5}$ in their areas. The Road to Zero[7] details the approach to reduce exhaust emissions from road transport through a number of mechanisms; this is extremely important given that the majority of Air Quality Management Areas (AQMAs) are designated due to elevated concentrations heavily influenced by transport emissions.

Core actions being taken by East Herts Council target sources of pollution within our area over the past reporting year are presented in our air quality action plan and include extensive promotional and public awareness campaigns as a result of successful grant funding. Alongside this many of our resources have been focussed on the production of a new air quality action plan and subsequent public consultation. The plan is due to be formally adopted by East Herts Council in February 2024.

[5] https://www.airqualityengland.co.uk/local-authority/?la_id=408

[6] Defra. Environmental Improvement Plan 2023, January 2023

[7] DfT. The Road to Zero: Next steps towards cleaner road transport and delivering our Industrial Strategy, July 2018

Policies & Planning

Our taxi licensing policy ensures no taxis older than five years old will get a licence and all taxis will meet a minimum of Euro VI emissions, it is the most stringent taxi licensing policy in Hertfordshire.

Public Awareness

Our successful air quality grant for a promotional campaign to improve knowledge and information about air quality, raise awareness of air pollution as a health issue, and promote alternatives to car travel.

This has seen the council complete the following;

Schools

In schools we have been continuing our delivery of air quality awareness workshops, including sessions introducing air pollution and sessions tackling the issue of idling engines. We have also been supporting schools with delivering their own air quality awareness initiatives alongside the workshops. In total, 58 individual school workshops have been delivered to 1988 students across the 4 towns of Hertford, Bishop's Stortford, Sawbridgeworth and Ware.

Key statistics

- 37 schools spoken to
- 14/37 schools signed up to the Breathe Clean Challenge
- 13/37 schools have had a Breathe Clean workshop (either a video workshop, an air quality introduction or anti-idling)
- 2,280 students have taken part in a workshop
- 3/3 student-led air quality awareness video workshops have been delivered, and the videos have been created and shared
- 12/15 air quality introduction workshops have been delivered and 3 are booked in
- 7/15 anti-idling workshops have been delivered, 1 is booked in and 6 schools are interested in booking in
- 120 people including 76 drivers spoken to across the 7 anti-idling events
- 25% (18) drivers idling and 83% (15) of these stopped idling
- 98% of people spoken to pledged to never idle

Businesses

We have continued our engagement with East Herts businesses and expect to reach our target of writing travel plans for 6 businesses.

Key statistics

- 1300 businesses identified
- 97 businesses spoken to, including 23 in Bishop's Stortford, 28 in Sawbridgeworth, 44 in Hertford, and 2 in Ware
- 51 businesses engaged
- 3 draft travel plans written
- 2 businesses completing travel surveys and freight audits ahead of having travel plans written
- 220 employee travel survey responses received

Community

Community group engagement continues to be successful, but not the highest priority for the project at the moment.

Key statistics

- Good relationships and lines of communication established with 12 local groups and community leaders
- 2 meetings with local parish councils to understand their local areas and air quality issues
- One local community active travel event in Sawbridgeworth, the "Sawbo Travel Challenge Town Walk"
- Engaged with 80 members of the public about air pollution

Social media

Our social media plan has been going well and has been generating consistent engagement. We have posted 44 individual posts in total.

Key statistics

- 19 posts on Twitter
- 17 posts on Facebook
- 7 posts on Instagram
- 1 post on LinkedIn
- We have completed one of three sponsored social media campaigns. This campaign focused on discouraging idling engines near train stations, level crossings and drive-thru restaurants, which were highlighted to us as key issues in the district. The adverts were live on Facebook and Google for 30 days and included a click-through link to a blog page with more information about the dangers of engine idling for local air quality and personal air pollution exposure.
- We are currently running a second campaign which is focusing on idling outside of schools. This campaign will follow a similar strategy and will also be live for 30 days.

Air Quality Monitoring

We have recently installed our 3 air quality monitors, one in each of the AQMAs: Bishop's Stortford, Sawbridgeworth and Hertford. The monitors are Iknaia Airscans and are a significant upgrade from East Herts current methods of measuring air pollution using diffusion tubes, which only measure NO2 and not in real time. These Airscan monitors will provide real-time and high accuracy measurement of polluting gases and particulates so we can accurately and consistently monitor the level of human exposure to air pollution. The Airscans use electrochemical gas sensors to measure Nitrogen Dioxide (NO_2), Sulphur Dioxide (SO_2), Carbon Monoxide (CO) and Ground Level Ozone (O_3). They use laser scattering sensors to measure two different sizes of particulates ($PM_{2.5}$ and PM_{10}). They also have environmental sensors to measure temperature and humidity. We will be able to consistently access the air quality data via an online dashboard

Clean Air Day

We chose clean air day this year to launch our 'Breathe Clean' campaign, the project will work with schools, workplaces and community groups to highlight things people can do to protect themselves from air pollution while reducing their personal contribution to the issue.

The launch took place at Abel Smith School, Hertford, at a clean air workshop for 30 Year 5 children. The session aimed to raise their awareness of topics such as air quality and the benefits of walking and cycling. The youngsters also helped create a short film about air quality to be shared with parents and the wider community.

Air quality action plan

We have drafted a new air quality action plan which has been through full public consultation and is awaiting formal adoption by the council which is scheduled for February 2023

Joint working

The council continue to disseminate pollution alerts through the Herts and Beds alert system as well as supporting and promoting alert services. Local Authority Data - Air Quality monitoring service (airqualityengland.co.uk)

The Hertfordshire and Bedfordshire Air Quality Forum, continue to meet quarterly (virtually). The group includes representatives from Hertfordshire District Councils, public health professionals in addition to HCC transport professionals. The group works on identifying and addressing local priorities and challenges.

Hertfordshire County Council have formally adopted a new EV charging strategy, which serves as a roadmap for facilitating the transition to an electrified transportation network. It sets out plans to accelerate provision of EV charging points both on publicly owned land as well as facilitating provision at a household level.

Hertfordshire county council have procured new air quality modelling software and given each of the districts' access to it in order to allow the districts to interrogate it to help inform any potential projects or developments and their impacts on air quality within the district.

Air quality monitoring

We continued to maintain our continuous monitoring station and diffusion tube monitoring networks because there are critical for understanding where pollution is most acute, and what measures are effective to reduce pollution. Our hourly readings can be viewed from Herts Air Quality Network's pollution analysers[8] online. Our air quality forecasting services

is available via uBreathe[9] App. This app provides air pollution health advice where and when its needed most via the colour-coded UK map that locates where you are and provides you instant access to current and forecast air pollution information.

Successful grant funding has funded 3 new air quality monitors which have been allocated to each of our 3 AQMA's and are awaiting installation and commissioning.
An additional continuous monitor has also been added in the Bishop's Stortford AQMA as a result of Herts County Council grant funding, HCC will share the data with East Herts once the monitor is online.

Likely future impacts on air quality

There have not been any new major sources of emissions introduced into East Hertfordshire in 2023; however the District Plan sets out a framework to deliver a minimum of 18,458 new dwellings and the associated infrastructure by 2033. Neighbouring districts also need to accommodate similar levels of growth and there is a proposal for the expansion of Stanstead Airport (located on the Eastern boundary of East Hertfordshire) from 28million passengers per annum (mppa) with agreement already to increase this to 35mppa and the planned extension taking this to 43mppa. Therefore, the cumulative impact of this scale of developments is likely to generate an increase in road traffic within and through East Hertfordshire and so potentially increase the emission of air pollution. This represents the only currently foreseeable major future source of air pollution in the district that could impact upon the air quality particularly in Bishop's Stortford the nearest town to the airport which already has an AQMA.

Conclusions and Priorities

The 2024 Air Quality Status Report is based on the most up-to-date full year validated statistics from 2023.

Only one exceedance of the objective levels was seen this year which was within the AQMA of Bishop's Stortford.

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8 Air quality in England (airqualityengland.co.uk)

9 http://www.ricardo-aea.com/ubreathe/.

The general trend across all monitoring locations has been a decrease in concentrations which follows the pre pandemic trend of pollution owing to a combination of factors such as greener fleets and more flexible working patterns.

Monitoring results within the AQMAs of Hertford and Sawbridgeworth were below thew objective levels, it is not however possible to revoke these AQMA's as there has not been 5 consecutive years of such levels excluding the pandemic years. As both AQMAs showed exceedances in 2019, 2018 and 2017.

East Herts Council are in the process of adopting a new air quality action plan which has passed public consultation, this is due in February 2024.

Local Engagement and How to get Involved

There are many ways in which the public can get involved in helping to improve air quality in their area, from using your car less, driving more efficiently when you do have to drive or considering a cleaner vehicle when you choose to upgrade your car. Many smart travel choices and other tips to reduce air pollution can be found in the links below:

- Let's clear the air (hertfordshire.gov.uk)
- https://liftshare.com/uk/community/hertfordshire = Hertfordshire liftshare scheme
- https://www.environmental-protection.org.uk/national-clean-air-day/ = national clean air day campaign
- https://www.traveline.info/ = public transport journey planning
- https://www.goultralow.com/ = Central Government website about low emission vehicles
- https://www.airqualityengland.co.uk/local-authority/?la_id=408 = East Herts live monitoring data
- https://www.airqualityengland.co.uk/local-authority/hnb-diffusion-tubes = Diffusion tube locations
- https://uk-air.defra.gov.uk/aqma/maps/?t=635861666056569563 = AQMA maps
- https://www.zap-map.com/live/ = Locations of EV charging points across UK
- http://www.hertsdirect.org/services/transtreets/ltplive/ = HCC Local Transport Plan

Local Responsibilities and Commitment

This ASR was prepared by the Environmental Health Department of East Herts Council

This ASR has been approved by:

Jonathan Geall

Head of Housing and Health

East Herts Council

This ASR has not been signed off by a Director of Public Health.

If you have any comments on this ASR please send them to Claire Spendley at:

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Table of Contents

Figures

Tables

1 Local Air Quality Management

This report provides an overview of air quality in East Herts during 2023. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021), and the relevant Policy and Technical Guidance documents.

The LAQM 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 in order to achieve and maintain the objectives and the dates by which each measure will be carried out. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by East Herts Council to improve air quality and any progress that has been made.

The statutory air quality objectives applicable to LAQM in England are presented in Table E.1.

2 Actions to Improve Air Quality

Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority should prepare an Air Quality Action Plan (AQAP) within 18 months. The AQAP should specify how air quality targets will be achieved and maintained, and provide dates by which measures will be carried out.

A summary of AQMAs declared by East Herts can be found in Table 2.1. The table presents a description of the Three AQMAs that are currently designated within East Herts Appendix D: Map(s) of Monitoring Locations and AQMAs provides maps of AQMAs and also the air quality monitoring locations in relation to the AQMAs. The air quality objectives pertinent to the current AQMA designations are as follows:

- NO_2 annual mean

Table 2.1 – Declared Air Quality Management Areas

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	One Line Description	Is air quality in the AQMA influenced by roads controlled by Highways England?	Level of Exceedance: Declaration	Level of Exceedance: Current Year	Number of Years Compliant with Air Quality Objective	Name and Date of AQAP Publication	Web Link to AQAP
AQMA 1 Hockerill Junction, Bishop`s Stortford (516)	2007	NO_2 annual mean	A number of properties around the junction of Dunmow Road, Hockerill Street, London Road and Stanstead Road in Bishop's Stortford	No	**54**	**41.9** (distance corrected)	Not compliant	East Herts AQAP 2017-2020	http://www.eastherts.gov.uk/article/9550/Air-Quality
AQMA 2 Gascoyne Way, Hertford (663)	2010 Amended 21/08/2012	NO_2 annual mean	A number of properties in central Hertford	No	**46**	24.9	Four including two covid years, so two excluding covid years	East Herts AQAP 2017-2020	http://www.eastherts.gov.uk/article/9550/Air-Quality

AQMA 3 London Road Sawbridgeworth (1590)	2015	NO_2 annual mean	A number of properties along London Road and Cambridge Road and the adjoining roads	No	**45**	36.4 (distance corrected)	Not compliant (within 10% of limit value)	East Herts AQAP 2017-2020	http://www.eastherts.gov.uk/article/9550/Air-Quality

☒ East Herts District Council confirm the information on UK-Air regarding their AQMA(s) is up to date

☒ East Herts District Council confirm that all current AQAPs have been submitted to Defra

Current year level of exceedance results have been taken from diffusion tubes:

- 19, 39 & 40 along London Road in Bishop's Stortford
- 79, 80, & 81 along Gascoyne Way in Hertford
- 57 along London Road in Sawbridgeworth

Progress and Impact of Measures to address Air Quality in East Herts District Council

Defra's appraisal of last year's ASR is as follows:

1. Good quality graphs have been produced in Figures A.1 and A.5 that show the recorded monitoring results at each monitoring site since 2018. This allows the reader to compare results from different monitoring sites from different years.
2. Good quality maps have been produced in Appendix D showing the locations of each monitoring site and the boundaries of each declared AQMA. This allows the reader to see where each monitoring site is in relation to major/main roads and to see if the current monitoring network is still fit for purpose.
3. The details included in Table 2.1 for each AQMA should match the details of each AQMA included in the Portal by Defra. This should be corrected for future reports.
4. Column 'Number of Years Compliant with Air Quality Objective' in Table 2.1 has not been fully filled out for all declared AQMAs. This should be corrected for future reports.
5. There is no text where current AQMA designations have been reviewed as to whether they should be amended or revoked. This should be included in future reports.
6. All sections of Table 2.2 should be filled out (where possible) for all measures. The funding source and estimated cost of measure is missing from quite a few of the measures included in Table 2.2. This should be included in future reports.
7. Table A.2 should be kept up to date as to whether a monitoring site is located in an AQMA, and which AQMA the monitoring site is located in (if applicable).
8. The first two graphs included in Figure A.1 are a bit hard to read due to a bright yellow line being included on a white background. Colours that are easy to read on a white background should be used for graphs for future reports.

All points have been addressed in this years ASR aside form point 6 as this was not done at the time of production of the original AQAP, it is not possible to retrospectively guesstimate these actions and a new AQAP has been produced which will feature in next years ASR once adopted.

East Herts Council has taken forward direct measures during the reporting year of 2023 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2. 26 measures are included within Table 2.2, with the type of measure and the progress East Herts Council have made during the reporting year of 2023 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.2.

More detail on these measures can be found in their respective Action Plan[10]. Key completed measures this year are:

- Completion of the new Air Quality Action Plan
- The delivery of an air quality promotion and awareness campaign which saw;
    - Delivery of 58 individual school workshops to 1988 students across the towns of Hertford, Bishop's Stortford, Sawbridgeworth and Ware.
- 120 people including 76 drivers spoken to across 7 anti-idling events
- We have continued our engagement with East Herts businesses reaching 51 and writing 3 draft travel plans
- Community group engagement continues to be successful, with communication established with 12 local groups and community leaders and completed one local community active travel event in Sawbridgeworth, the "Sawbo Travel Challenge Town Walk" where we engaged with 80 members of the public about air pollution
- Social media
  Our social media plan has been going well and has been generating consistent engagement. We have posted 19 unique social media posts on Facebook, Twitter, Instagram and LinkedIn, with 44 individual posts in total.
    - 19 posts on Twitter
    - 17 posts on Facebook
    - 7 posts on Instagram
    - 1 post on LinkedIn

[10] https://cdn-eastherts.onwebcurl.com/s3fs-public/documents/East_Herts_Air_Quality_Action_Plan_2017-18_-_2019-20_3_final.pdf

- We have completed one of three sponsored social media campaigns. This campaign focused on discouraging idling engines near train stations, level crossings and drive-thru restaurants, which were highlighted to us as key issues in the district. The adverts were live on Facebook and Google for 30 days and included a click-through link to a blog page with more information about the dangers of engine idling for local air quality and personal air pollution exposure.
- We are currently running a second campaign which is focusing on idling outside of schools. This campaign will follow a similar strategy and will also be live for 30 days.
- Air Quality Monitoring - We have recently installed our 3 air quality monitors, one in each of the AQMAs: Bishop's Stortford, Sawbridgeworth and Hertford. The monitors are Iknaia Airscans and are a significant upgrade from East Herts current methods of measuring air pollution using diffusion tubes, which only measure NO_2 and not in real time. These Airscan monitors will provide real-time and high accuracy measurement of polluting gases and particulates so we can accurately and consistently monitor the level of human exposure to air pollution. The Airscans use electrochemical gas sensors to measure Nitrogen Dioxide (NO_2), Sulphur Dioxide (SO_2), Carbon Monoxide (CO) and Ground Level Ozone (O_3). They use laser scattering sensors to measure two different sizes of particulates ($PM_{2.5}$ and PM_{10}). They also have environmental sensors to measure temperature and humidity. We will be able to consistently access the air quality data via an online dashboard.
- Spectrum is funding some public access bike racks at St Andrews Street Church on St Andrew's Street in Hertford via UKSPF grant funding – not installed yet but a successful grant application, volunteered by community, enabled by East Herts.
- The Local Cycling and Walking Infrastructure Plan (LCWIP) consultation received some 900 contributions in the first stakeholder round. Preparations for the full public consultation will take place ahead of a planned launch in summer 2024.

East Herts Council expects the following measures to be completed over the course of the next reporting year:

- Adoption of the new Air Quality Action Plan
- Completion of air quality promotion and awareness campaign
- Adoption of LCWIP

- Application to HCC for a share of its 6m funding which is to be allocated to District councils for the provision of on street EV charging provision.

Table 2.2 – Progress on Measures to Improve Air Quality

N	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date 2023	Comments / Barriers to Implementation
1	Support the Goods Yard	Transport Planning and Infrastructure	Public transport improvements interchanges stations and services	2007	2018	East Herts District Council		No			Completed	ND	ND	ND	ND
2	Develop a bid for Bishop's Stortford station to be part of pilot station travel plan programme	Promoting Travel Alternatives	Promote use of rail and inland waterways	2017	2018	Herts County Council		No			Completed	ND	ND	ND	ND
3	Investigate the opportunities to improve bus infrastructure along the bus routes through each AQMA	Traffic Management	UTC, congestion management and traffic reduction	2017	2018	Herts County Council		No	Not Funded		Completed	ND	Reduction in traffic flows especially HGVs	Could have positive impact upon accessibility and bus patronage.	ND
4	Undertake improvements to signal equipment with a view to improving efficiency e.g. investigate the use of an Urban Traffic Control System	Transport Planning and Infrastructure	Traffic Management	2017	2018	Herts County Council and East Herts Council		No			Completed	Reduced vehicle emissions	Reduction in Traffic Flows	Marked as completed previously as signage was installed.	Marked as completed previously as signage was installed. SCOOT traffic signal equipment installed at the Hockerill junction in Bishop's Stortford.
5	Check status of school travel plans for those schools located in the vicinity of each AQMA	Promoting Travel Alternatives	School Travel Plans	2017	2018	East Herts Council		No			Completed	Reduced vehicle emissions	Reduction in NOx	Completed	Completed

N	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date 2023	Comments / Barriers to Implementation
6	Travel Stall in Hertford market. This was a one-off stall at the Hertford weekly market, to promote eco-friendly travel. Visitors to the stall were able to pick up the Hertford Travel Leaflet, and details on local health walks, and cycling information. Free fluorescent rucksack covers were given away.	Promoting Travel Alternatives	Intensive active travel campaign and infrastructure	2017	2018	Herts County Council and East Herts Council		No			Completed	Reduced vehicle emissions	Increased sustainable travel to school and work	Completed	Completed
7	Consider further improvements to the bypass with a view to reducing the impact of through traffic	Transport Planning and Infrastructure	Other	2015	2021	Herts County Council		No	Funded		Completed	Reduced vehicle emissions	Reduction in traffic through the Hockerill Junction and measured Concentration at z…	Subject to landowner agreement, some early works are planned to take place towards the end of 2018 and into 2019 which may include environmental mitigation and utility diversion works. Some advanced enabling works are already underway for the scheme at the A1184/ A120 roundabout.	Marked as completed previously as modelling showed it could not be improved and signals were installed.

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8	Seek potential funding to clean-up and banner wrap pedestrian subways under the A414 in Hertford to encourage more journeys on foot	Promoting Travel Alternatives	Promotion of walking / Promotion of cycling	2016	2020	East Herts Council, Herts County Council	Defra, East Herts Council, Herts County Council	Partial	Partially Funded		Completed	Reduced vehicle emissions	Increased use of subways for local travel	Banner wrapping complete on 4 subways within the Hertford AQMA at the end of August 2017.	2 further subways banner wrapped with community artwork/ community art gallery and improved pedestrian signage to encourage active pedestrian/cyclist cross town movement under A414.
9	Investigate better signage for the bypass with a view to reducing the impact of through traffic.	Traffic Management	UTC, Congestion management, traffic reduction	2017	2019	East Herts Council	East Herts District Council	No	Not Funded		Completed/ongoing	2%	% of x..	Use of VMS has been included as part of the interventions identified in the Bishop Stortford Transport Plan for congestion issues. No permanent signs allowed as not permitted on highway	
10	Consider options for Park and Ride scheme	Alternatives to Private Vehicle Use	Bus based Park and Ride	2015	2021	East Herts Council		No	Funded		completed	Reduced vehicle emissions	Reduction in Traffic Flows in AQMA	.Studies undertaken so far have indicated that it would not be viable to introduce park and ride to Bishop's Stortford or Hertford	Post-scheme surveys arranged by HCC to examine whether some of the rat-running issues during scheme construction have been alleviated.

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11	Promote the Benefits of Cycling	Promoting Travel Alternatives	Promotion of cycling	2013	2021	East Herts Council		No	Funded	£50k/£50k	Completed / ongoing	0.2µg/m3 and reduction in use of private vehicles	Increased sustainable travel to school and work # of y..	Implementation on-going. Cycle and Walk to Work Day organised between EHC and HCC with annual Bike Breakfast at EHDC with active travel promotion and cycle support. ongoing since 2015. See action 13	Cycle/scooter Storage installed at schools near the AQMA. Also upgrade the bicycle racks at East Herts Council. New shower block facilities to encourage council staff to cycle or run to work were completed 2023 funding from spectrum is funding some public access bike racks at St Andrews Street Church on St Andrew's Street in Hertford via UKSPF grant funding – not installed yet but due to be in 2024 volunteered by community, enabled by East Herts Council.

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12	Devise a toolkit for 16 – 18 year olds to raise awareness of air pollution whilst working towards a British Science Association Crest Award	Promoting Travel Alternatives	School Travel Plan	2018	2021	East Herts Council		No	Funded	< £10k/£10k	completed	Reduced vehicle emissions	Increase in sustainable travel to school	Worked with two Secondary schools in AQMAs in partnership with the London Sustainability Exchange. Air Quality Toolkits have been developed which can be linked to curriculum and BSA Crest Award progress.	ND
13	Hertfordshire Year of Cycling ran from May 2014 to late summer 2015 and will see a massive boost in the awareness of cycling and how the people of Hertfordshire can better integrate it with their lives.	Promoting Travel Alternatives	Promotion of cycling	2014	2021	Herts County Council, East Herts Council		No	Funded	< £10k/£10k	Completed / ongoing	Reduced vehicle emissions	Increase in number of people cycling	Hertford Cycle Hub launched June 2014. Active-In are seeking to build the number of people using the hub and the related activities including organised rides and bike repair and confidence training courses	We currently commission ‘active in the community’ who run projects to support and enable more cycling in the community.

N	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date 2023	Comments / Barriers to Implementation
14	Hertfordshire Year of Walking ran throughout 2015 and beyond. The project aims to inspire and motivate more people in the county to walk, whether that's for exercise, to explore the countryside or simply getting from A to B.	Promoting Travel Alternatives	Promotion of Walking	2015	2022	Herts County Council, East Herts Council		No			complete	Reduced vehicle emissions	Increase in number of people walking	Two walk to schools weeks (Sawbridgeworth & Hertford) led by HCC Sustainable Travel Team. Supported by EH Councillors in Sawbridgeworth and with funding provided by East Herts to support the Hertford Week. Walk to school week is now an annual event	Local campaigns with schools and supported by EH councillors took place. Clean Air Day supported by EHC with HCC and various campaign channels covered with promotional materials and banners including "turn your key and be idle free".
15	Encourage the use of Euro 6 engines in buses that run in Bishop's Stortford.	Vehicle Fleet Efficiency	Other	2018	Not defined	Herts County Council	Not funded	No			Implementation	Reduced vehicle emissions	Cleaner buses travelling through AQMA	Two of three Trusty bus services pass through an AQMA area and meet the highest emission standards. Arriva 310, 508, 509, 510 also meets the standard. Unsuccessful CBTF for 724 routes.	ND.

N	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date 2023	Comments / Barriers to Implementation
16	Using our Defra/DfT Air Quality grant award, work to deliver a pilot public electric car scheme in Hertford and Bishop's Stortford.	Alternatives to Private Car Use / Promoting Low Emission Transport	Public Vehicle Procurement - Prioritising uptake of low emission vehicles	2016	2019	East Herts Council	DEFRA/East Herts District Council	Yes- for pilot phase	Funded		Completed	Reduced vehicle emissions	Number of members of the public using the electric vehicles	Two chargers and designated spaces for public electric car scheme installed at Council offices in Hertford. The updates to chargers in Hertford AQMA underway. Scheme fully delivered and in operation: 5 fully electric cars have now been deployed for over 2 years following grant award- 2 cars in Stortford/3 cars in Hertford. All vehicles are joint use public/council staff with public use out of business hours and at weekends	.

N	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date 2023	Comments / Barriers to Implementation
17	Expand electric charging points for electric vehicles - ensuring that all AQMAs have at least two set of charging points located within their boundaries, including at least one rapid charger.	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2016	2023	East Herts Council	East Herts Council	Partial	Partially Funded		Completed / ongoing	Reduced vehicle emissions	Number of electric charging points in district	60 council owned EV charging units now available Currently all units offer free electricity and charging to encourage take up of EV by public across East Herts.	Plans for at least 2 rapid charging sites are in preparation . There is a view to pursue s106 money for some chargers. Aim to install chargers at new Old River Lane site in Bishop's Stortford has been delayed due to insufficient grid capacity.
18	Investigate opportunity to encourage establishment of electric taxi project in Hertford and Bishop's Stortford	Promoting Low Emission Transport	Taxi emission incentives / Other	2018	2023	East Herts Council	East Herts Council	No	TBC	TBC	Implementation	Reduced vehicle emissions	TBC	East Herts is supporter of Herts 2025 Electric Taxi scheme which is an ERDF funded project to encourage take of EV taxis by drivers through a subsidised lease period and promotion of rapid charging infrastructure. ERDF funding bid for electric taxi project secured by LA/Private Operator Partnership following approval by MHCLG.	Changes in vehicle age and emissions policy set the standards for any vehicles licenced by EHC project complete policy implemented

N	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date 2023	Comments / Barriers to Implementation
19	Ensure that developers have taken sufficient steps to minimise any increase in air pollution (includes an assessment of air quality implications where applicable)	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2018	2022	East Herts Council	S106	NO			completed	Reduced vehicle emissions	Not defined	New SPD adopted and being used	New air quality policy incorporated in district plan that is significantly more stringent on requiring consideration of air quality in all planning apps
20	Develop personalised travel planning for residents of Hertford and for residents of the new Bishop's Stortford North development.	Promoting Travel Alternatives	Personalised Travel Planning	2017	2023	Herts County Council, East Herts Council	S106 contributions	NO	Funded	TBC	Implementation	Reduced vehicle emissions	Number of travel plans for residents	A Bishop Stortford Town wide travel plan (including Personalised Travel Planning) is being developed.	This will provide both North and South Developments with range of travel choice materials and additional walking, cycling and public transport infrastructure to encourage more sustainable travel choices within and across the Town.

N	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date 2023	Comments / Barriers to Implementation
21	Work with Hertfordshire Sustainability Forum to deliver Air Quality Conference in 2018 to promote air quality activity and best practice across Hertfordshire	Public Information	Other	2018?	Ongoing	East Herts Council		No			completed	Reduced vehicle emissions	Not defined	Successful forum has been held and was well attended, there is now a permanent sustainability coordinator, to enable this work to continue	HSF is now replaced by Hertfordshire Climate Change and Sustainability Partnership. No current plans for specific AQ conference. Some AQ measures are included in evolving Transport Action plan being developed by the Partnership
22	Projects to improve the commuter infrastructure for non-motorised users between residential areas and towns. Promotion to encourage use	Promoting Travel Alternatives	Promotion of cycling	2019	2021 and onwards	Herts County Council	TBC	NO	Funded	TBC	Implementation	Reduced vehicle emissions	Use of commuter infrastructure	Plans are underway for works to begin and funding has been secured for the works.	.
23	Air Quality Notification System. System will allow users to make better informed decisions around their health and air pollution	Public Information	Other	2021	Ongoing	East Herts, other Herts local authorities & Herts County Council Public Health	East Herts Council	No	Funded	< £10k/£10k	Complete / ongoing	Decrease ill health impacts from air pollution	Numbers of members of the Notification System	System up and running with 161 users in East Herts so far	Ongoing work with public health to try and get better promotion of the scheme to increase uptake

N	Measure	Category	Classification	Year Measure Introduced	Estimated / Actual Completion Year	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date 2023	Comments / Barriers to Implementation
24	Install anti-idling guidance /advisory signage in council carparks	Public Information	Other	2019	2021	East Herts Council	East Herts Council	NO	Funded	< £10k	complete	ND	ND	Community competition to design anti- idling signage held in 2020 as part of Clean Air Day. Roll out of signs in idling "hotspots" in council car parks in June 2021.	Project to deliver anti-idling posters for use in shop windows in Sawbridgeworth in June 2021.
25	Assess evidence-base for benefits of green walls	Other	Other	2019	2020	East Herts Council	Not Funded	NO	Not Funded	Not Funded	complete	ND	ND	DEFRA refused air quality grant bid for these works stating no evidence of benefits.	Included in formally agreed Environmental Sustainability SPD guidance (March 2021).
26	Keep under review the potential for East Herts Council's own fleet to move to electric vehicle operation if feasible as leases expire	Vehicle Fleet Efficiency	Other	2018	2021	East Herts Council		NO			Complete	ND	Number of diesel vans in council fleet reduced.	All vans now replaced with electric Nissan leafs	

PM2.5 – Local Authority Approach to Reducing Emissions and/or Concentrations

As detailed in Policy Guidance LAQM.PG22 (Chapter 8), local authorities are expected to work towards reducing emissions and/or concentrations of $PM_{2.5}$ (particulate matter with an aerodynamic diameter of 2.5µm or less). There is clear evidence that $PM_{2.5}$ has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

The Air Quality Expert Group (2015) estimate that UK emissions contribute to approximately 50-55% of the total annual average $PM_{2.5}$ in the UK. The European Environment Agency estimates that road transport sources contribute to 13% of European emissions of $PM_{2.5}$ in 2013. Data presented by the Air Quality Expert Group (2015) estimated the contribution from traffic to be 7% in the UK. This emphasises that a large proportion of airborne $PM_{2.5}$ originate from other sources, including sea-salt, inorganic aerosols, organic aerosols and non-traffic generated rural and urban particulates including biomass burning both domestic and commercial. There is clear evidence that $PM_{2.5}$ has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases. The obligation placed upon local authorities in respect of $PM_{2.5}$ is that they are expected to work towards reducing emissions and concentrations of $PM_{2.5}$ in their local area as practicable and consider action if necessary to address $PM_{2.5}$ issues in their area, and aligning those interests with those public health officers.

However policy guidance LAQM.PG16 does not prescribe what the local authority role should be; it is for the local authority in consultation with its public health officials and others to consider how it wishes to define this role.

Whilst there are no numerical limit values prescribed for $PM_{2.5}$ for England and no statutory obligations on local authorities in respect of monitoring concentrations of $PM_{2.5}$ in the ambient air, the EU Ambient Air Quality Directive has identified 25ug/m3 as a limit value to be met by 2020 and the World Health Organisation (WHO) has set an air quality guideline of $10ug/m^3$ as an annual mean for $PM_{2.5}$.

The only specific indicator for $PM_{2.5}$ is included within the Public Health Outcomes Framework (Public Health Outcome Indicator (PHOI) 3.01) which is stated as: ‘The fraction of annual all-cause mortality attributable to long-term exposure to current levels of anthropogenic particulate pollution.’ This indicator is based on an estimated amount of

$PM_{2.5}$ derived by Defra modelling from local measurement, including one site in Borehamwood, Hertfordshire and another in Bedfordshire. That data has been adjusted by way of population to give a population weighted figure before its use in deriving the PHOI. The $PM_{2.5}$ focused PHOI reflects the adverse impact that this type of air pollution can have on public health as a result of the fine particles being carried deep into the lungs where they can cause inflammation and a worsening of heart and lung diseases.

Within Hertfordshire joint working on air quality issues between the local authorities and Hertfordshire County Council for $PM_{2.5}$ as part of the Herts and Beds air quality group has included a local monitoring project. The aim has enabled the collection of real-time direct measurements of $PM_{2.5}$ concentrations from multiple locations within Hertfordshire in order to address the paucity of $PM_{2.5}$ data available within the County.

The Hertfordshire Local Authorities Report on Particulate Matter ($PM_{2.5}$) in Ambient Air for Hertfordshire County Council Public Health PM2_5_2022_data_Report_for_PH_2023_FINAL.pdf (airqualityengland.co.uk) identifies that it is important to recognise that the figures published for PHOI 3.01 are estimates and therefore cannot be used for performance monitoring; they can only provide an indication of the scale of the issue. Further information on the use of health related air quality data is available at:

PH Briefing Note - Air Quality: FAQs about the data (hertshealthevidence.org)

It is for this reason that the report does not make direct reference to the PHOI figures, but uses the population weighted Defra modelled $PM_{2.5}$ concentrations in their place.

East Herts Council is taking the following measures to address $PM_{2.5}$:

- all the actions in our action plan serve not only to help reduce NO_2 emissions but also those of $PM_{2.5}$,
- the council are also engaging with the local health and well-being board to help raise the profile of air quality with a view to link in more closely with the health agenda in the future,
- the council, working with the public health team at HCC have now got $PM_{2.5}$ monitoring equipment installed in our AQMA in Hertford which provides invaluable data to help inform future action

3 Air Quality Monitoring Data and Comparison with Air Quality Objectives and National Compliance

This section sets out the monitoring undertaken within 2023 by East Herts Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2019 and 2023 to allow monitoring trends to be identified and discussed.

Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

East Herts Council undertook automatic (continuous) monitoring at one site during 2023. Table A.1 in Appendix A shows the details of the automatic monitoring sites. Local authorities do not have to report annually on the following pollutants: 1,3 butadiene, benzene, carbon monoxide and lead, unless local circumstances indicate there is a problem. The automatic monitoring results[11] for East Herts Council, with automatic monitoring results also available through the UK-Air website.

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on how the monitors are calibrated and how the data has been adjusted are included in Appendix C.

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on how the monitors are calibrated and how the data has been adjusted are included in Appendix C.

3.1.2 Non-Automatic Monitoring Sites

East Herts Council undertook non-automatic (i.e. passive) monitoring of NO_2 at 34 sites with seven of those triplicate sites during 2021. Table A.2 in Appendix A presents the details of the non-automatic sites.

[11] https://www.airqualityengland.co.uk/local-authority/data?la_id=408

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on Quality Assurance/Quality Control (QA/QC) for the diffusion tubes, including bias adjustments and any other adjustments applied (e.g. annualisation and/or distance correction), are included in Appendix C.

Individual Pollutants

The air quality monitoring results presented in this section are, where relevant, adjusted for bias, annualisation (where the annual mean data capture is below 75% and greater than 25%), and distance correction. Further details on adjustments are provided in Appendix C.

3.1.3 Nitrogen Dioxide (NO_2)

Table A.3 and Table A.4 in Appendix A compare the ratified and adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40µg/m^3. Note that the concentration data presented represents the concentration at the location of the monitoring site, following the application of bias adjustment and annualisation, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment).

For diffusion tubes, the full 2023 dataset of monthly mean values is provided in Appendix B. Note that the concentration data presented in Table B.1 includes distance corrected values, only where relevant.

Table A.5 in Appendix A compares the ratified continuous monitored NO_2 hourly mean concentrations for the past five years with the air quality objective of 200µg/m^3, not to be exceeded more than 18 times per year.

No exceedances of the air quality objectives for annual mean and 1-hour (where applicable) objectives were recorded in 2023 as shown in Table A.5. No exceedences of 60µg/m^3 were recorded which indicates that no exceedance of the 1-hour mean objective were recorded.

3.1.4 Particulate Matter (PM_{10})

There are currently no PM_{10} monitors installed across East Hertfordshire.

3.1.5 Particulate Matter ($PM_{2.5}$)

$PM_{2.5}$ is the pollutant which has the biggest impact on public health and on which the Public Health Outcomes Framework (PHOF) indicator is based. Therefore, although not covered by the LAQM regulations, Table A.8 in Appendix A presents the ratified and adjusted monitored $PM_{2.5}$ annual mean concentrations for the past five years.

Table A.6 in Appendix A presents the ratified and adjusted monitored $PM_{2.5}$ annual mean concentrations for the past five years.

3.1.6 Sulphur Dioxide (SO_2)

There are currently no SO_2 monitors installed within East Hertfordshire.

Appendix A: Monitoring Results

Table A.1 – Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Inlet Height (m)
EH79	Gascoyne Way	Roadside	532464	212338	NO_2, $PM_{2.5}$	Yes AQMA 2	Chemiluminescent, BAM	3	2.5	1.5

Notes:

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).

(2) N/A if not applicable

Table A.2 – Details of Non-Automatic Monitoring Sites

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
EH12 EH31 EH32	Hockerill St Bishop's Stortford	Kerbside	549154	221242	NO_2	Yes AQMA 1	0.9	1.4	No	2.5
EH17 EH35 EH36	Dunmow Rd Bishop's Stortford	Kerbside	549364	221215	NO_2	Yes AQMA 1	7.4	1.8	No	2.5
EH18 EH37 EH38	Stanstead Rd Bishop's Stortford	Kerbside	549298	221313	NO_2	No	2.7	1.4	No	2.5
EH19 EH39 EH40	London Rd Bishop's Stortford	Kerbside	549250	221200	NO_2	No	0.4	1.1	No	2.5
EH25	Old Cross Hertford	Kerbside	532446	212669	NO_2	Yes AQMA 2	3.1	0.9	No	2.5
EH28 EH48 EH49	Castle Street Hertford	Roadside	532542	212370	NO_2	Yes AQMA 2	12.5	2.4	No	2.5
EH42 EH43 EH44 (co-located with EH29)	West Street Hertford	Roadside	532408	212371	NO_2	Yes AQMA 2	4.8	2.8	No	2.5
EH79 EH80 EH81	Gascoyne Way Hertford	Roadside	532464	212338	NO_2	Yes AQMA 2	3	2.5	Yes	2.5

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
EH30	Hertingfordbury Road Hertford	Kerbside	532023	212550	NO_2	Yes AQMA 2	1.8	0.5	No	2.5
EH41	Ware Road Hertford	Roadside	533101	212755	NO_2	Yes AQMA 2	2.1	1.1	No	2.5
EH52	Cowbridge Hertford	Roadside	532307	212814	NO_2	Yes AQMA 2	1.5	3.2	No	2.5
EH53	Viaduct Road Ware	Roadside	536068	214120	NO_2	Yes AQMA 2	3.1	1.8	No	2.5
EH54	Station Road Ware	Roadside	536085	214077	NO_2	No	20.7	1.8	No	2.5
EH57	Opp Bell Street Sawbridgeworth	Roadside	548123	214903	NO_2	No	0.6	2.8	No	2.5
EH62	Northgate End Bishop's Stortford	Roadside	548723	221719	NO_2	No	6.0	2.5	No	2.5
EH64	Rye Street Bishop's Stortford	Roadside	548741	222109	NO_2	No	3.6	1.5	No	2.5
EH66	Rye Street Bishop's Stortford	Roadside	549134	222676	NO_2	No	0	1.5	No	2.5

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
EH68	Hadham Road Bishop's Stortford	Roadside	548611	221541	NO_2	No	0.5	1.5	No	2.5
EH70	High Street Buntingford	Roadside	536205	229558	NO_2	No	0	1.5	No	2.5
EH73	Horseshoe Cott's Buntingford	Roadside	536186	229430	NO_2	No	0	1.5	No	2.5
EH82	Bullocks Lane Hertford	Roadside	532186	211739	NO_2	Yes AQMA 2	0	1.5	No	2.5
EH83	Port Hill Hertford	Roadside	532355	213032	NO_2	No	0	1.5	No	2.5
EH84	North Road Hertford	Roadside	532113	212604	NO_2	No	0	1.5	No	2.5
EH85	North Road Hertford	Roadside	531911	212711	NO_2	No	0	1.5	No	2.5
EH86	North Road Hertford	Roadside	531577	213073	NO_2	No	0	1.5	No	2.5
EH87	Viaduct Road Ware	Roadside	536060	214128	NO_2	No	0	1.5	No	2.5

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
EH88	High Street Ware	Roadside	535793	214312	NO_2	No	0	1.5	No	2.5
EH89	High Street Ware	Roadside	535743	214348	NO_2	No	0	1.5	No	2.5
EH90	Pye Corner Gilston	Roadside	544885	212254	NO_2	No	0	1.5	No	2.5
EH91	London Road Sawbridgeworth	Roadside	548012	214579	NO_2	Yes AQMA 3	0	1.5	No	2.5
EH92	South Street Bishop's Stortford	Roadside	548865	220981	NO_2	No	0	1.5	No	2.5
EH93	Station Road Bishop's Stortford	Roadside	548904	221020	NO_2	No	0	1.5	No	2.5
EH94	Potter Street Bishop's Stortford	Roadside	548778	221308	NO_2	No	0	1.5	No	2.5
EH95	Stortford Road Little Hadham	Roadside	543996	222731	NO_2	No	0	1.5	No	2.5
EH96	Standon Road Little Hadham	Roadside	543944	222725	NO_2	No	0.0	1.5	No	2.5

Notes:

(1) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).

(2) N/A if not applicable.

Table A.3 – Annual Mean NO2 Monitoring Results: Automatic Monitoring (µg/m3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period 2023 (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
EH79	532464	212338	Roadside	99.8	99.8	33	20	26	28.9	25

☒ Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22

☒ Reported concentrations are those at the location of the monitoring site (annualised, as required), i.e. prior to any fall-off with distance correction

Notes:

The annual mean concentrations are presented as µg/m^3.

Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in bold.

All means have been "annualised" as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

Concentrations are those at the location of monitoring and not those following any fall-off with distance adjustment.

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

Table A.4 – Annual Mean NO2 Monitoring Results: Non-Automatic Monitoring (µg/m3)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%)	2019	2020	2021	2022	2023
EH25	532446	212669	Kerbside	100	100.0	**41.8**	33.1	32.3	32.0	30.3
EH30	532023	212550	Kerbside	100	100.0	37.3	31.3	30.0	33.3	29.5
EH12, EH31, EH32	549154	221242	Kerbside	100	100.0	**43.8**	34.5	33.4	38.9	33.9
EH17, EH35, EH36	549364	221215	Kerbside	100	100.0	**59.5**	**46.9**	**47.3**	**48.8**	39.5
EH18, EH37, EH38	549298	221313	Kerbside	100	100.0	36.1	30.8	30.7	33.1	30.7
EH19, EH39, EH40	549250	221200	Kerbside	92.6	92.6	**59.1**	**48.9**	**48.3**	**50.0**	**44.2**
EH41	533101	212755	Roadside	100	100.0	**40.8**	32.2	31.6	36.1	31.5
EH42, EH43, EH44	532408	212371	Roadside	100	100.0	**41.4**	31.8	32.1	36.8	30.6
EH28, EH48, EH49	532542	212370	Roadside	100	100.0	34.7	28.0	28.1	31.8	27.4
EH52	532307	212814	Roadside	100	100.0	28.7	22.5	20.0	23.7	20.6
EH54	536085	214077	Roadside	100	100.0	27.0	20.3	19.5	24.2	20.5
EH57	548123	214903	Roadside	82.7	82.7	**50.4**	**40.5**	**40.9**	**42.9**	37.8
EH62	548723	221719	Roadside	83	83.0	30.7	24.4	25.4	29.3	24.4
EH64	548741	222109	Roadside	100	100.0	30.2	22.7	21.6	24.9	22.1
EH66	549134	222676	Roadside	100	100.0	19.0	14.8	14.1	17.1	15.9

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%)	2019	2020	2021	2022	2023
EH68	548611	221541	Roadside	100	100.0	31.2	24.2	23.9	27.4	23.5
EH70	536205	229558	Roadside	100	100.0	23.7	18.9	18.2	20.7	17.2
EH73	536186	229430	Roadside	100	100.0	28.2	23.2	22.5	25.8	24.1
EH79, EH80, EH81	532464	212338	Roadside	100	100.0	32.0	25.6	26.1	28.9	24.9
EH82	532186	211739	Roadside	100	100.0	27.7	22.5	22.5	26.2	22.4
EH83	532309	212820	Roadside	100	100.0	25.9	21.4	19.5	21.4	18.5
EH84	531577	213073	Roadside	100	100.0	31.5	25.9	23.7	25.9	22.8
EH85	531911	212711	Roadside	100	100.0	39.7	30.2	31.5	37.3	33.8
EH87	536060	214128	Roadside	100	100.0	35.4	30.1	31.1	33.3	28.8
EH88	535793	214312	Roadside	100	100.0	37.9	24.9	25.8	32.6	29.9
EH89	535743	214348	Roadside	100	100.0	29.5	21.3	21.7	26.3	22.5
EH90	531184	211869	Roadside	90.3	90.4	26.3	20.3	17.6	22.0	18.9
EH91	548012	214579	Roadside	100	100.0	39.5	32.7	33.6	37.3	31.9
EH92	548865	220981	Roadside	100	100.0	27.1	23.1	22.1	24.6	21.3
EH93	548904	221020	Roadside	100	100.0	**41.0**	30.3	27.1	33.2	31.0
EH94	548778	221308	Roadside	100	100.0	32.8	22.9	23.3	28.3	25.7

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%)	2019	2020	2021	2022	2023
EH95	543996	222731	Roadside	100	100.0	22.8	17.2	18.7	17.2	14.6
EH96	543944	222725	Roadside	90.3	90.4	25.0	19.8	16.9	15.3	13.1

☒ Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22

☒ Diffusion tube data has been bias adjusted

☐ Reported concentrations are those at the location of the monitoring site (bias adjusted and annualised, as required), i.e. prior to any fall-off with distance correction

Notes:

The annual mean concentrations are presented as µg/m^3.

Exceedances of the NO_2 annual mean objective of 40µg/m^3 are shown in bold.

NO2 annual means exceeding 60µg/m^3, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in bold and underlined.

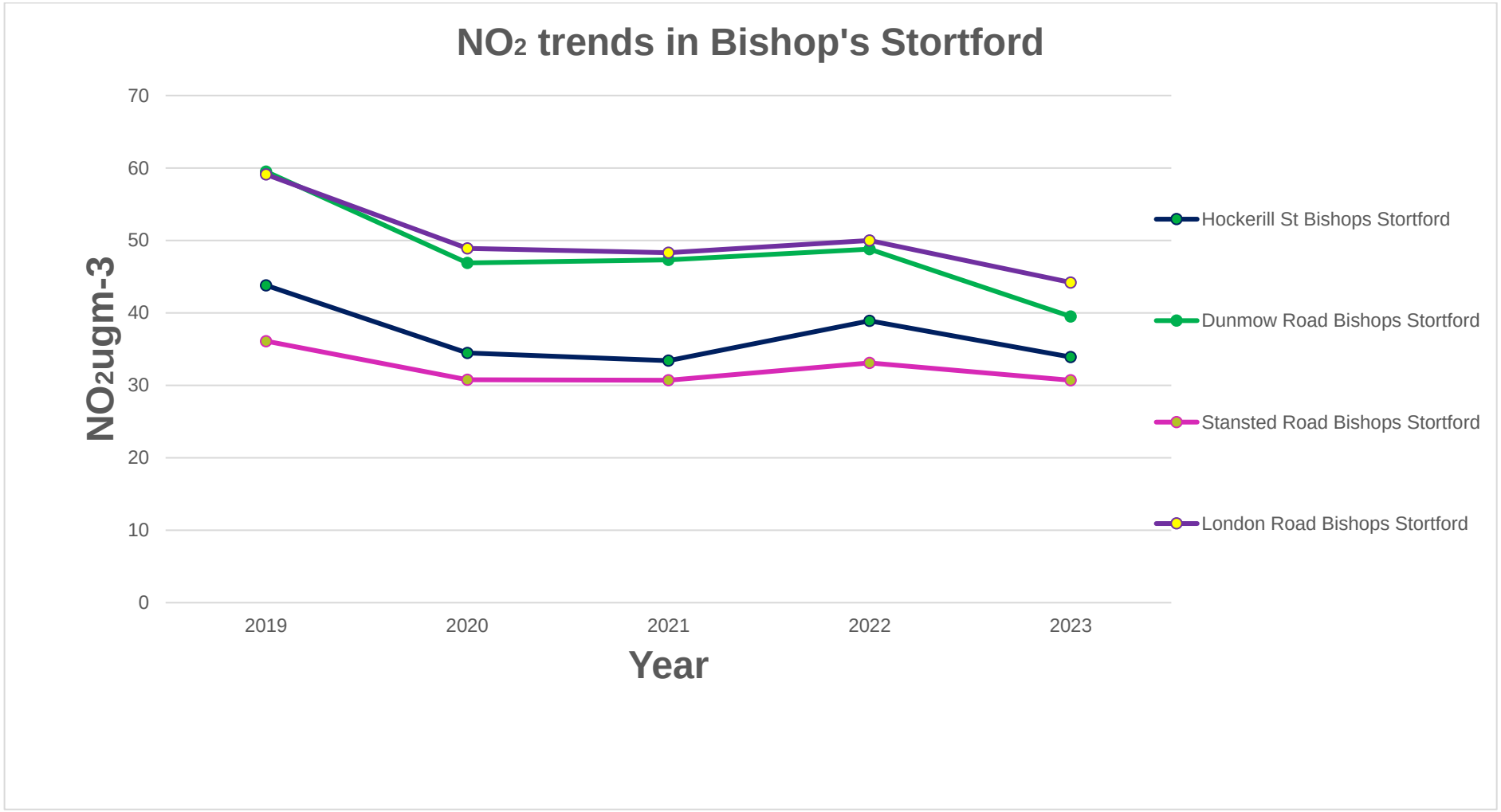
Means for diffusion tubes have been corrected for bias. All means have been “annualised” as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

Concentrations are those at the location of monitoring and not those following any fall-off with distance adjustment.

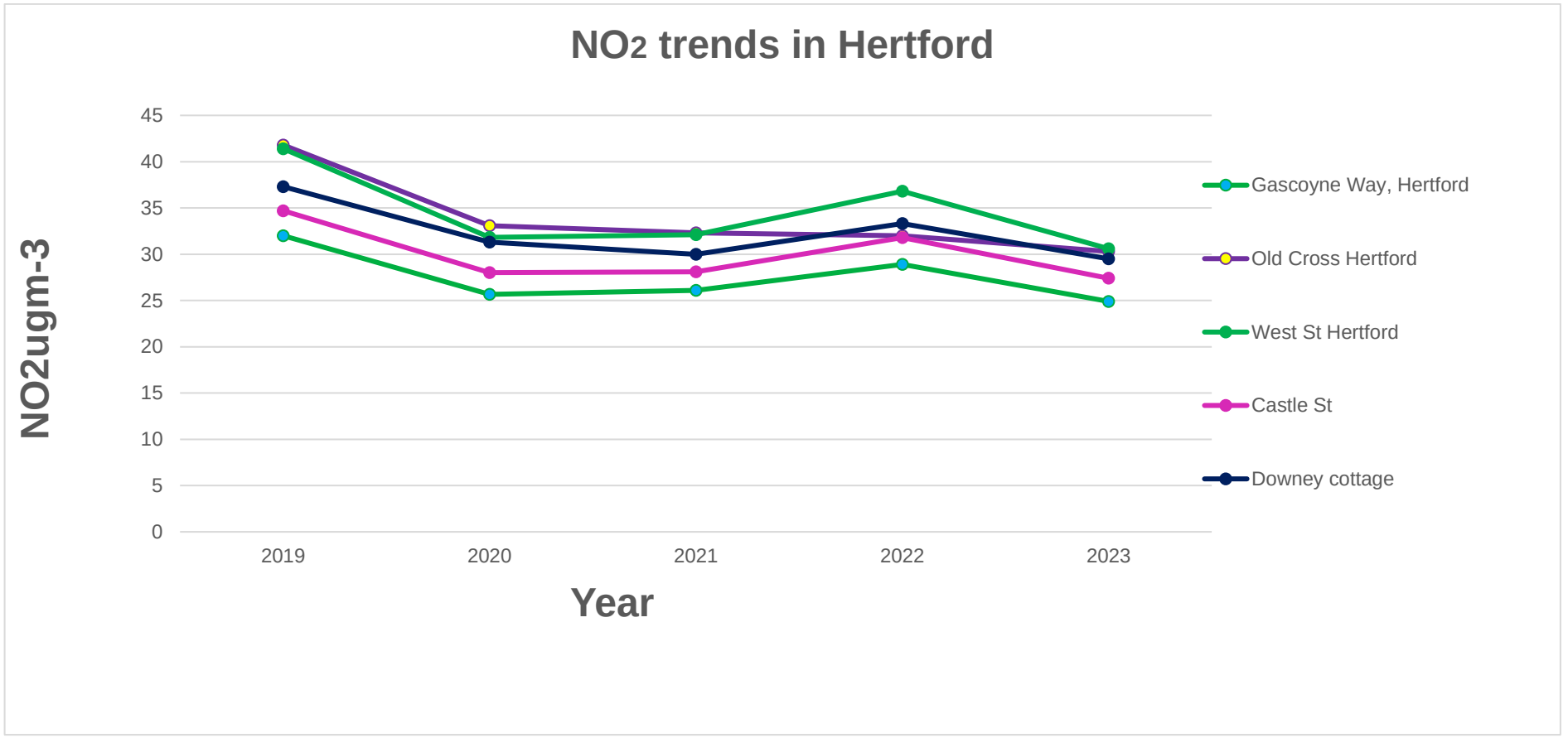
(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

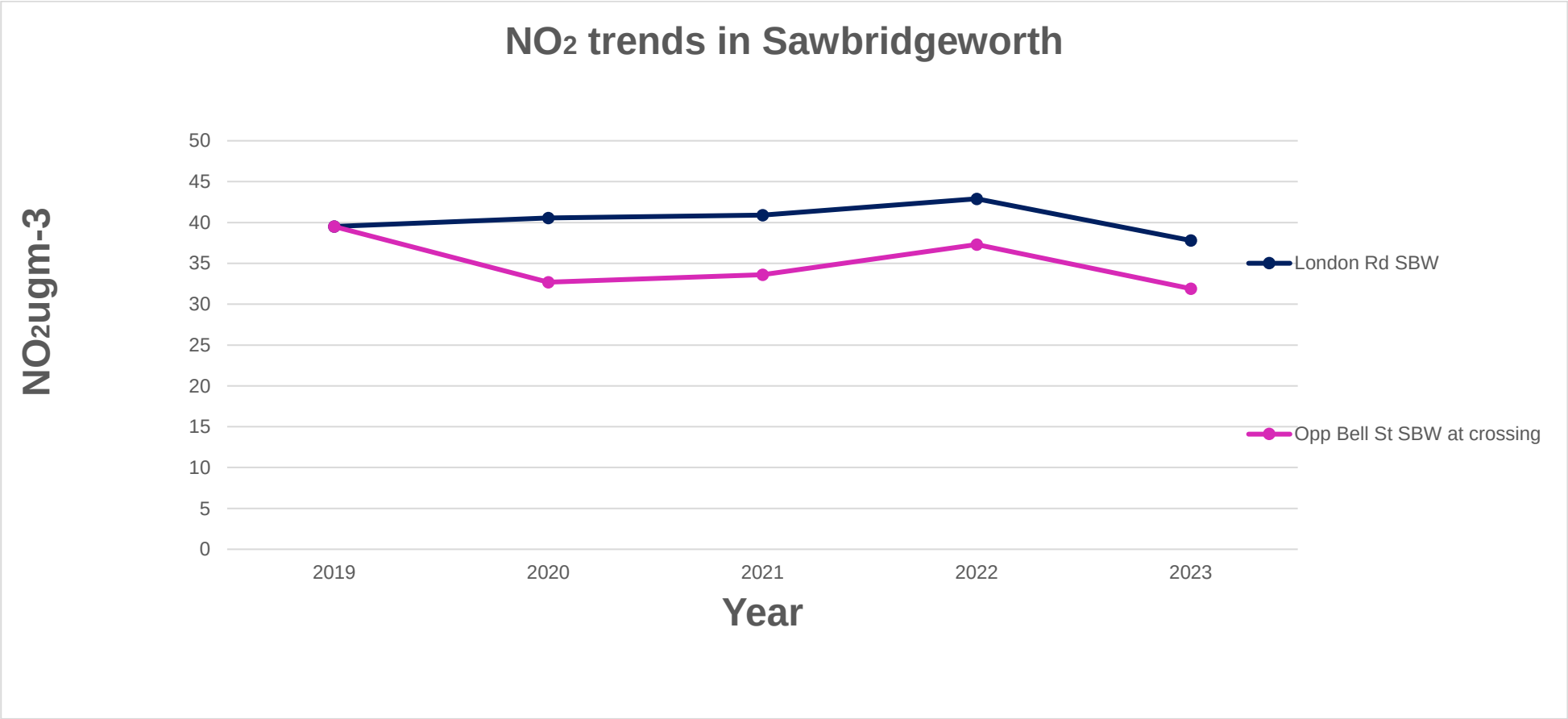
Figure A.1 – Trends in Annual Mean NO2 Concentrations



Note: the relevant Diffusion tubes are EH12/Hockerill Street, EH17 Dunmow Road, EH18/ Stansted Road and EH19/London Road



Note: The relevant diffusion tubes are EH80/Gascoyne Way, EH25/Old Cross, EH28/Castle Street, EH30/Downey Cottage, Hertingfordbury Road and EH42/West Street



Note: The relevant diffusion tubes are EH57/London Rd Crossing at Bell Street and EH91/London Road

Table A.5 – 1-Hour Mean NO_2 Monitoring Results, Number of 1-Hour Means > 200µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period 2023 (%) (1)	Valid Data Capture 2023(%) (2)	2019	2020	2021	2022	2023
EH79	532464	212338	Roadside	99.81	99.81	0	0	0	0	0

Notes:

Results are presented as the number of 1-hour periods where concentrations greater than 200µg/m^3 have been recorded.

Exceedances of the NO_2 1-hour mean objective (200µg/m^3 not to be exceeded more than 18 times/year) are shown in bold.

If the period of valid data is less than 85%, the 99.8th percentile of 1-hour means is provided in brackets.

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

Table A.6 – Annual Mean PM2.5 Monitoring Results (µg/m3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2022 (%) (2)	2019	2020	2021	2022	2023
EH79	532464	212338	Roadside	99.5	99.5	8.1	10.6	12	12	8

☒ Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22

Notes:

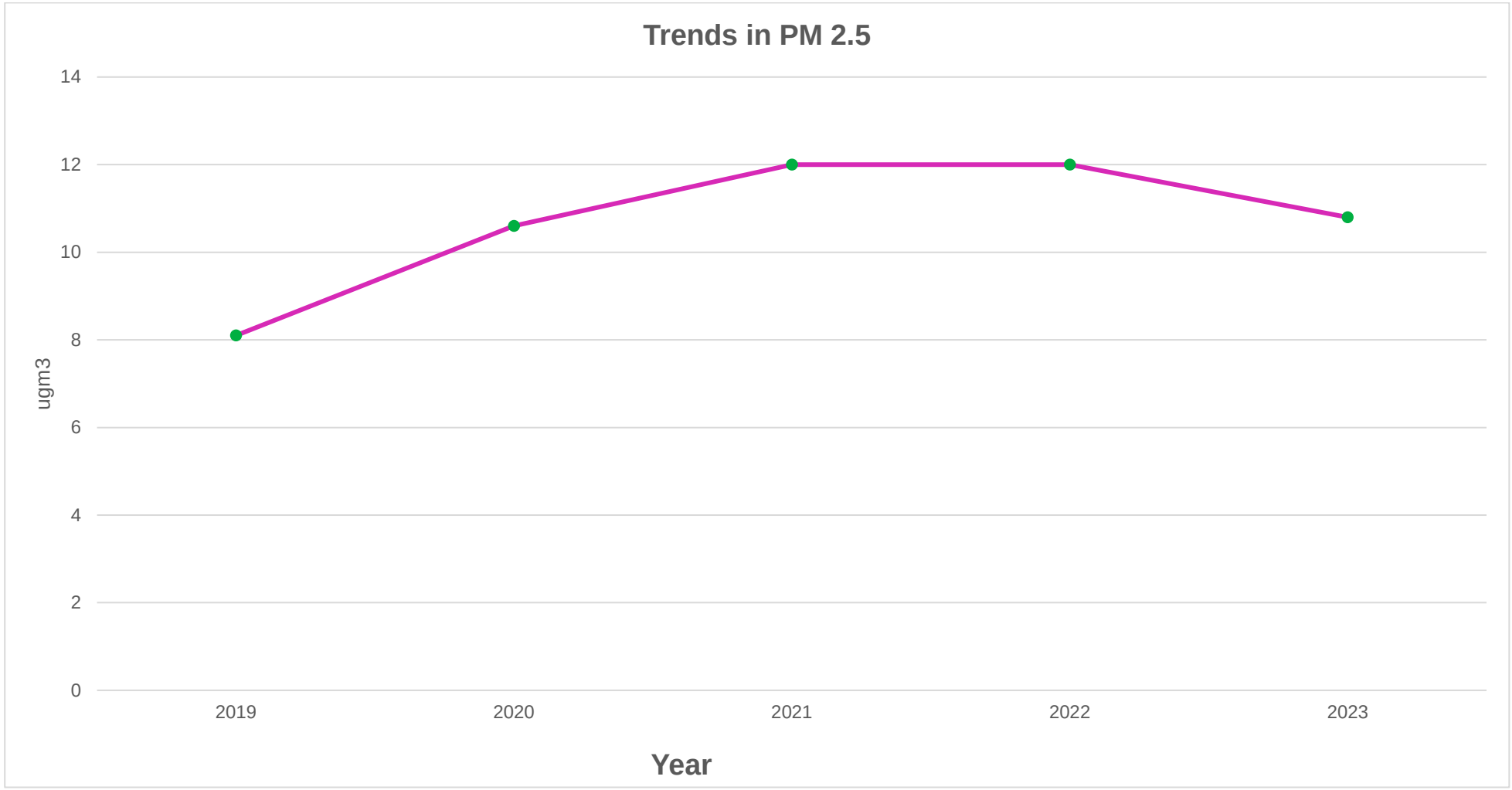
The annual mean concentrations are presented as µg/m^3.

All means have been “annualised” as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

(1) Data capture for the monitoring period, in cases where monitoring was only carried out for part of the year.

(2) Data capture for the full calendar year (e.g. if monitoring was carried out for 6 months, the maximum data capture for the full calendar year is 50%).

Figure A.2 – Trends in Annual Mean PM2.5 Concentrations



Note: The relevant monitoring location is Gascoyne Way Hertford

Appendix B: Full Monthly Diffusion Tube Results for 2023

Table B.1 – NO2 2023 Diffusion Tube Results (µg/m3)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Easting)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Local Bias Adjusted (1.04)	Annual Mean: Distance Corrected to Nearest Exposure Local	Comment
EH12	549154	221242	35.8	40.8	36.0	34.0	22.0	28.0	30.0	30.0	37.0	35.0	33.0	26.0	-	-	_	
EH17	549364	221215	45.2	52.0	44.0	45.0	38.0	32.0	28.0	29.0	36.0	33.0	36.0		-	-	_	
EH18	549298	221313	34.6	37.5	31.0	24.0	20.0	21.0	28.0	27.0	34.0	32.0	36.0	27.0	-	-	_	
EH19	549250	221200		55.2	48.0	42.0	39.0	38.0	38.0	38.0	45.0	42.0	46.0	34.0	-	-	_	
EH25	532446	212669	31.8	36.1	30.0	29.0	26.0	27.0	24.0	26.0	30.0	31.0	34.0	25.0	29.2	30.3	_	
EH28	532542	212370	30.6	30.0	29.0	30.0	25.0	27.0	20.0	23.0	28.0	28.0	28.0	21.0	-	-	_	
EH30	532023	212550	29.7	33.1	29.0	29.0	24.0	27.0	25.0	25.0	33.0	31.0	30.0	24.0	28.3	29.5	_	
EH31	549154	221242	32.3	39.9	34.0	33.0	24.0	28.0	29.0	32.0	39.0	37.0	33.0	31.0	-	-	_	
EH32	549154	221242	34.3	40.9	35.0	34.0	24.0	29.0	30.0	31.0	38.0	34.0	33.0	30.0	32.6	33.9	_	
EH35	549364	221215	40.4	52.8	42.0	46.0	44.0	36.0	30.0	29.0	36.0	34.0	36.0	26.0	-	-	_	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Easting)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Local Bias Adjusted (1.04)	Annual Mean: Distance Corrected to Nearest Exposure Local	Comment
EH36	549364	221215	47.8	53.1	47.0	49.0	44.0	35.0	29.0	31.0	36.0	36.0	35.0	27.0	38.0	39.5	27.8	
EH37	549298	221313	32.9	37.0	30.0	25.0	20.0	24.0	27.0	31.0	34.0	33.0	35.0	28.0	-	-	-	
EH38	549298	221313	35.0	36.7	30.0	25.0	20.0	23.0	29.0	28.0	36.0	32.0	33.0	27.0	29.5	30.7	-	
EH39	549250	221200		57.6	45.0	43.0	39.0	38.0	37.0	38.0	47.0	41.0	46.0	35.0	-	-	-	
EH40	549250	221200		52.3	50.0	42.0	41.0	40.0	39.0	38.0	46.0	42.0	47.0	35.0	42.5	**44.2**	**41.9**	
EH41	533101	212755	35.6	36.1	30.0	28.0	24.0	26.0	27.0	25.0	35.0	33.0	34.0	30.0	30.3	31.5	-	
EH42	532408	212371	37.5	39.3	31.0	31.0	30.0	28.0	18.0	25.0	29.0	30.0	32.0	23.0	-	-	-	
EH43	532408	212371	37.5	35.6	30.0	32.0	31.0	28.0	20.0	23.0	31.0	27.0	33.0	24.0	-	-	-	
EH44	532408	212371	35.7	36.6	30.0	33.0	31.0	28.0	20.0	24.0	28.0	29.0	34.0	25.0	29.5	30.6	-	
EH48	532542	212370	29.7	29.7	27.0	30.0	23.0	27.0	18.0	24.0	28.0	29.0	25.0	20.0	-	-	-	
EH49	532542	212370	29.0	31.1	30.0	30.0	24.0	25.0	21.0	24.0	30.0	29.0	24.0	22.0	26.4	27.4	-	
EH52	532307	212814	25.8	23.3	22.0	17.0	15.0	15.0	15.0	17.0	22.0	22.0	24.0	20.0	19.8	20.6	-	
EH54	536085	214077	28.6	29.8	21.0	15.0	13.0	12.0	14.0	16.0	20.0	22.0	26.0	19.0	19.7	20.5	-	
EH57	548123	214903	40.4	49.3	39.0	35.0	30.0	28.0	35.0	31.0	40.0			36.0	36.4	37.8	36.4	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Easting)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Local Bias Adjusted (1.04)	Annual Mean: Distance Corrected to Nearest Exposure Local	Comment
EH62	548723	221719		32.2	26.0	22.0	19.0		17.0	18.0	25.0	27.0	26.0	22.0	23.4	24.4	-	
EH64	548741	222109	28.3	27.2	24.0	18.0	15.0	18.0	17.0	17.0	22.0	21.0	27.0	21.0	21.3	22.1	-	
EH66	549134	222676	21.0	21.8	12.0	13.0	10.0	12.0	12.0	12.0	17.0	20.0	19.0	14.0	15.3	15.9	-	
EH68	548611	221541	28.6	26.6	24.0	23.0	18.0	20.0	15.0	19.0	26.0	26.0	26.0	19.0	22.6	23.5	-	
EH70	536205	229558	23.7	22.0	19.0	15.0	12.0	11.0	11.0	12.0	17.0	21.0	19.0	16.0	16.6	17.2	-	
EH73	536186	229430	29.1	32.2	25.0	23.0	20.0	20.0	18.0	19.0	23.0	23.0	26.0	20.0	23.2	24.1	-	
EH79	532464	212338	30.1	27.0	27.0	28.0	26.0	24.0	14.0	20.0	24.0	25.0	26.0	18.0	-	-	-	
EH80	532464	212338	28.6	26.3	25.0	29.0	25.0	24.0	14.0	21.0	24.0	26.0	26.0		-	-	-	
EH81	532464	212338	29.1	26.7	26.0	28.0	26.0	25.0	14.0	19.0	25.0	26.0	25.0	17.0	24.0	24.9	-	
EH82	532186	211739	26.4	26.8	22.0	22.0	19.0	20.0	16.0	18.0	25.0	23.0	22.0	18.0	21.5	22.4	-	

☒ All erroneous data has been removed from the NO2 diffusion tube dataset presented in Table B.1

☒ Annualisation has been conducted where data capture is <75% and >25% in line with LAQM.TG22

☒ Local bias adjustment factor used

☐ National bias adjustment factor used

☒ Where applicable, data has been distance corrected for relevant exposure in the final column

☒ East Herts confirm that all 2023 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System

Notes:

Exceedances of the NO_2 annual mean objective of 40µg/m_3 are shown in bold.

NO2 annual means exceeding 60µg/m^3, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in bold and underlined.

See Appendix C for details on bias adjustment and annualisation.

Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC

New or Changed Sources Identified Within East Herts District Council During 2023

East Herts District Council has not identified any new sources relating to air quality within the reporting year of 2023.

QA/QC of Diffusion Tube Monitoring

Diffusion tubes for NO_2 in East Hertfordshire are provided by Gradko International Ltd, using a preparation method of 50% Triethanolamine (TEA) in acetone.

Gradko participate in the AIR-PT scheme. AIR is an independent analytical proficiency-testing (PT) scheme, operated by LGC Standards and supported by the Health and Safety Laboratory (HSL). The AIR-PT scheme started in April 2014, combining two long running PT schemes: LGC Standards STACKS PT scheme and HSL WASP PT scheme.

AIR NO_2 PT forms an integral part of the UK NO_2 Network's QA/QC, and is a useful tool in assessing the analytical performance of those laboratories supplying diffusion tubes to Local Authorities for use in the context of Local Air Quality Management (LAQM). Defra and the Devolved Administrations advise that diffusion tubes used for LAQM should be obtained from laboratories that have demonstrated satisfactory performance in the AIR-PT scheme.

The AIR PT scheme tests laboratories' analytical performance on a quarterly basis. The percentage of results submitted by Gradko International Ltd that were subsequently determined to be satisfactory as per the following AIR PT rounds in 2023:

- 055 (January – February 2023) 100%
- 056 (May – June 2023) 100%
- 058 (July – August 2023) 100%
- 059 (September – August 2023) 100%

Gradko participates in the AIR proficiency testing (PT) scheme operated by LGC Standards and supported by the Health and Safety Laboratory (HSL), which provides a Quality Assurance/Quality Control (QA/QC) framework for local authorities carrying out diffusion tube monitoring as a part of their local air quality management process.

Diffusion Tube Annualisation

Where data capture is less than 75% of a full calendar year (less than 9 months), the mean should be “annualised” – i.e. adjusted using the methodology outlined in LLAQM.TG (16) before being compared to annual mean objectives. Data capture at all monitoring sites was greater than 75%, thus annualisation was not required.

All diffusion tube monitoring locations within East Herts District Council recorded data capture above 75% therefore it was not required to annualise any monitoring data for 2023. In addition, data capture below 25% was not recorded.

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2023 ASR have been corrected for bias using an adjustment factor. Bias represents the overall tendency of the diffusion tubes to under or over-read relative to the reference chemiluminescence analyser. LAQM.TG22 provides guidance with regard to the application of a bias adjustment factor to correct diffusion tube monitoring. Triplicate co-location studies can be used to determine a local bias factor based on the comparison of diffusion tube results with data taken from NO_x/NO_2 continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

East Herts District Council have applied a local bias adjustment factor of 1.04 to the 2023 monitoring data.

A summary of bias adjustment factors used by East Herts District Council over the past five years is presented in Table C.1.

Table C.1 – Bias Adjustment Factor

The local bias adjustment factors were chosen for the 2023, on the basis that these are higher than the national bias adjustment factors and to ensure consistency with the past 5-year trends of using the local factor.

East Herts Council has one co-location site, where triplicate EH79,EH80, EH81 diffusion tubes are co-located adjacent to the inlet of the continuous monitor, so that diffusion tube concentrations can adjusted for bias by comparing to the more accurate continuous monitoring dataset.

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2023	Local		1.04
2022	Local		1.08
2021	Local		0.96
2020	Local		1.03
2019	Local		1.02

Table C.2 – Local Bias Adjustment Calculation

	Local Bias Adjustment Input 1	Local Bias Adjustment Input 2	Local Bias Adjustment Input 3	Local Bias Adjustment Input 4	Local Bias Adjustment Input 5
Periods used to calculate bias	12				
Bias Factor A	1.04 (0.93 - 1.19)				
Bias Factor B	-4% (-16% - 8%)				
Diffusion Tube Mean (µg/m^3)					
Mean CV (Precision)	24.0				
Automatic Mean (µg/m^3)	2.5%				
Data Capture					
Adjusted Tube Mean (µg/m^3)	24.9				

Notes:

A single local bias adjustment factor has been used to bias adjust the 2023 diffusion tube results.

NO2 Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO_2 concentration at the nearest location relevant for exposure has been estimated using the Diffusion Tube Data Processing Tool/NO_2 fall-off with distance calculator available on the LAQM Support website. Where appropriate, non-automatic annual mean NO_2 concentrations corrected for distance are presented in Table B.1.

Table C.3 – NO2 Fall off With Distance Calculations (concentrations presented in µg/m3)

Site ID	Distance (m): Monitoring Site to Kerb	Distance (m): Receptor to Kerb	Monitored Concentration (Annualised and Bias Adjusted	Background Concentration	Concentration Predicted at Receptor	Comments
EH17, EH35, EH36	1.8	9.2	39.5	8.2	27.8	
EH19, EH39, EH40	1.1	1.5	44.2	8.2	**41.9**	*Predicted concentration at Receptor above AQS objective.*
EH57	2.8	3.4	37.8	8.2	*36.4*	*Predicted concentration at Receptor within 10% the AQS objective.*

QA/QC of Automatic Monitoring

Ratification of data

LSO duties within East Herts are carried out by LA officers, with calibrations taking place every 4 weeks. Ricardo has developed highly sophisticated state of the art air quality data management software, MODUS. The MODUS software is used to collect, check, scale, validate and ratify air quality data sets. It is proven in service and currently delivers ratified data in a cost-effective manner for all AURN sites.

Live air quality data is available through the Herts and Beds section of the Air Quality England website: Hertfordshire and Bedfordshire - Air Quality monitoring service (airqualityengland.co.uk)

PM10 and PM2.5 Monitoring Adjustment

The type of $PM_{2.5}$ monitor utilised within East Herts District Council do not required the application of a correction factor. East Herts District Council does not currently monitor PM_{10}.

Automatic Monitoring Annualisation

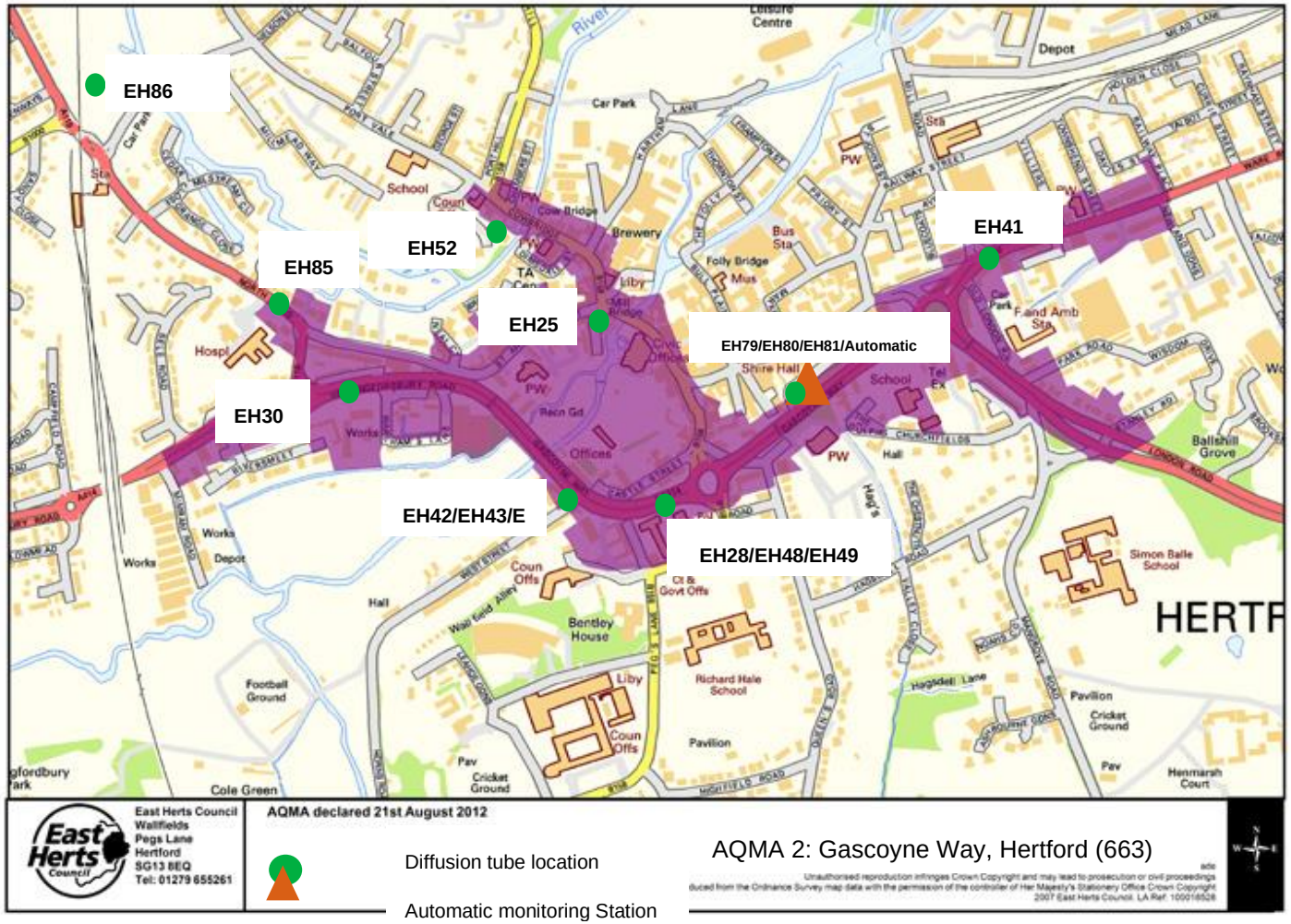
All automatic monitoring locations within East Herts District Council recorded data capture of greater than 75% therefore it was not required to annualise any monitoring data. In addition, any sites with a data capture below 25% do not require annualisation.

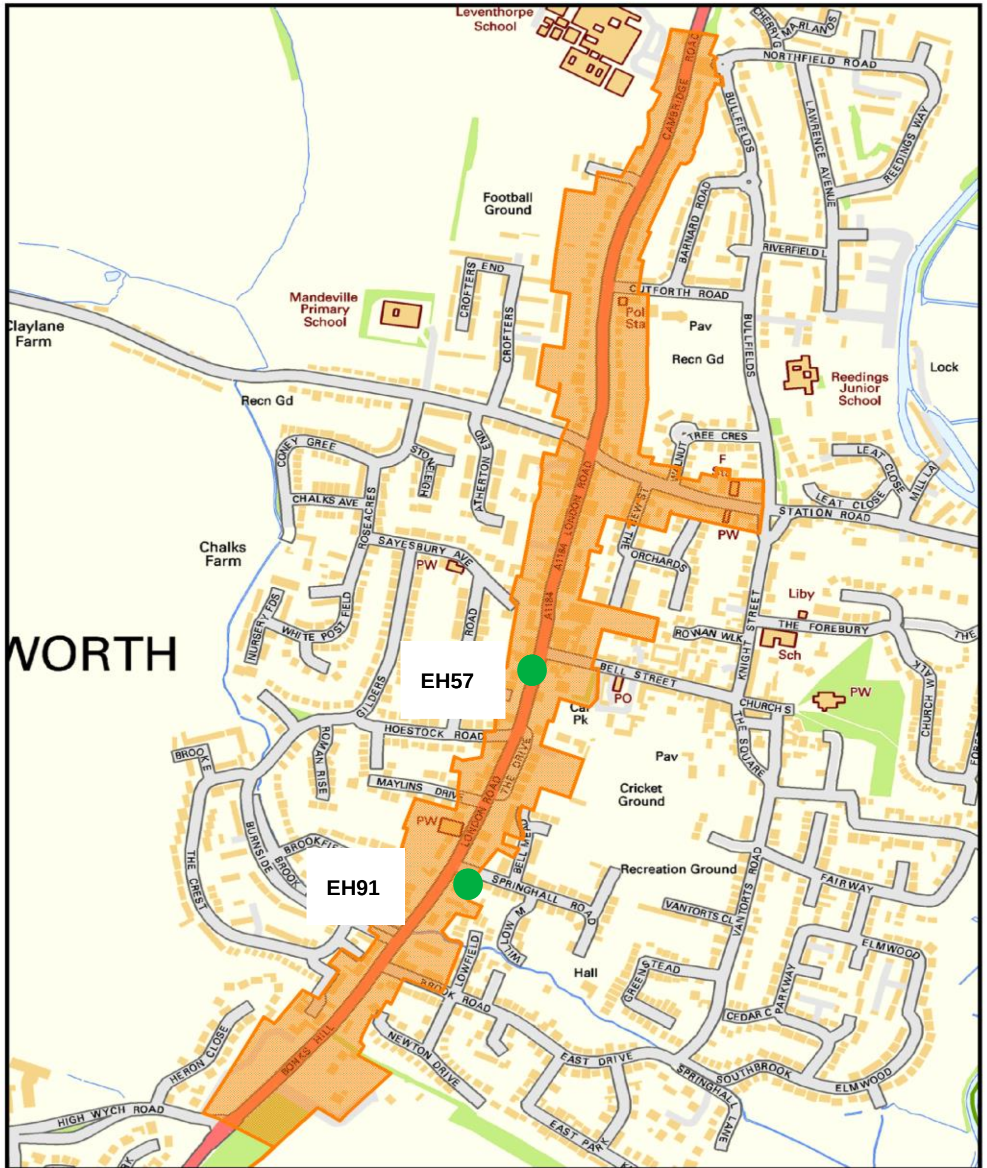
NO2 Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO_2 concentration at the nearest location relevant for exposure has been estimated using the NO_2 fall-off with distance calculator available on the LAQM Support website. Where appropriate, non-automatic annual mean NO_2 concentrations corrected for distance are presented in table C.4.

Appendix D: Map(s) of Monitoring Locations and AQMAs

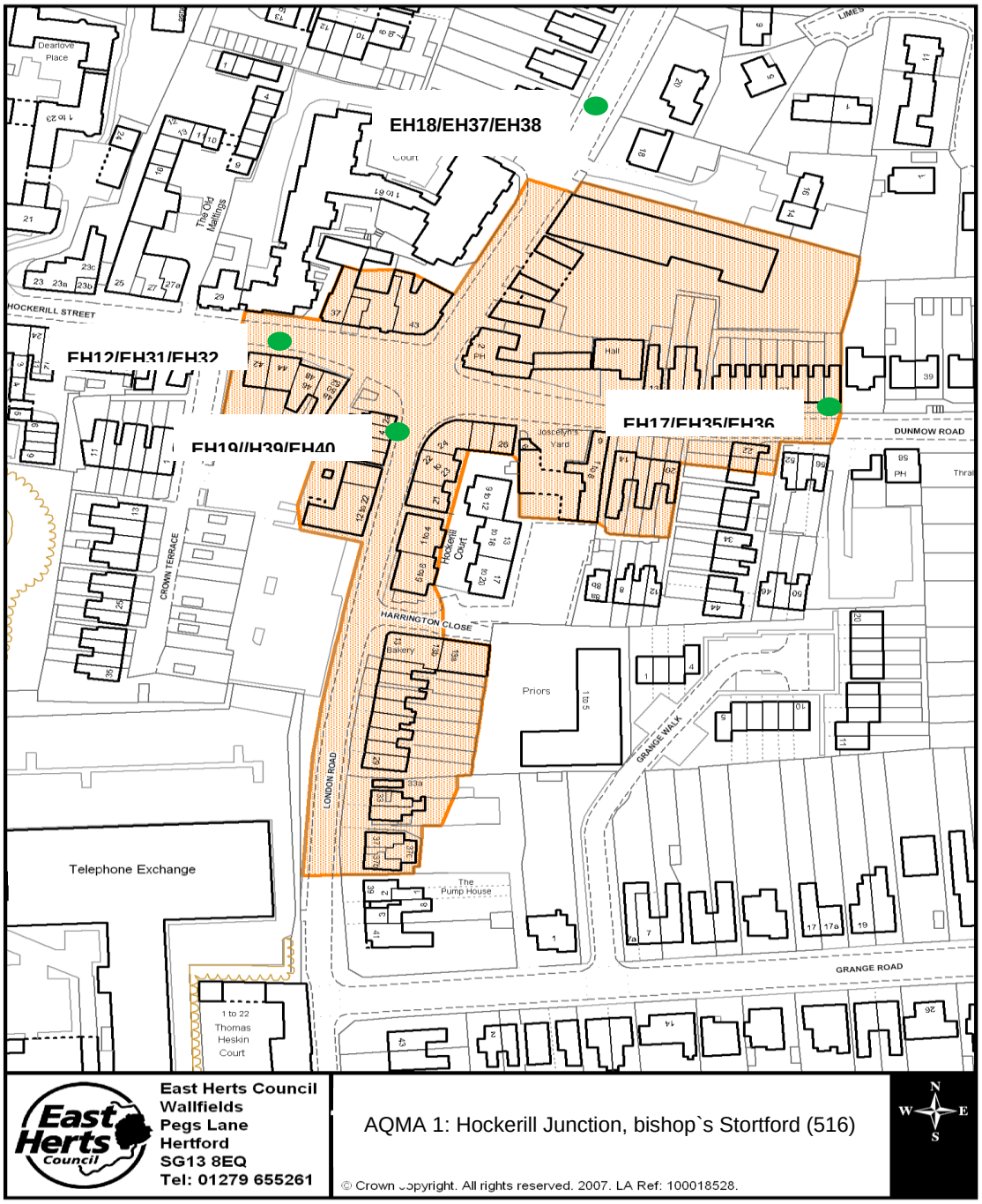
Figure D.1 – Map of Non-Automatic Monitoring Site





East Herts Council
Wallfields
Pegs Lane
Hertford
SG13 8EQ
Tel: 01279 655261

Air Quality Management Area, Sawbridgeworth


EH18/EH37/EH38
EH12/EH31/EH32
EH19//H39/EH40
EH17/EH35/EH36
HOCKERILL STREET
DUNMOW ROAD
CROWN TERRACE
HARRINGTON CLOSE
LONDON ROAD
GRANGE WALK
GRANGE ROAD
Priors
Telephone Exchange
The Pump House
1 to 22 Thomas Heskin Court
East Herts Council
Wallfields
Pegs Lane
Hertford
SG13 8EQ
Tel: 01279 655261
AQMA 1: Hockerill Junction, bishop`s Stortford (516)
© Crown Copyright. All rights reserved. 2007. LA Ref: 100018528.
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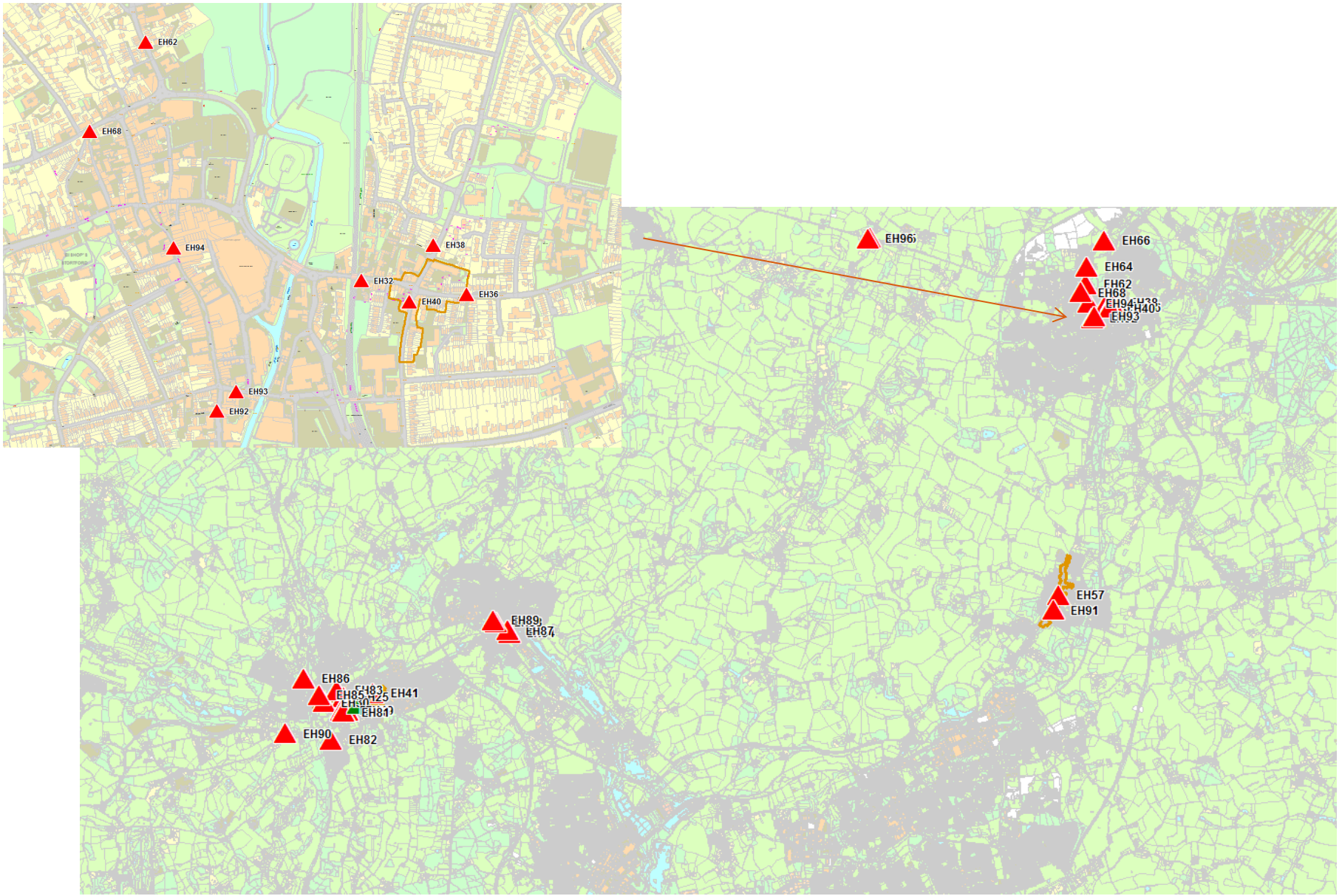

Map showing all current diffusion tubes (in red), our automatic monitoring station (green) and also the three Air Quality Management Areas (Brown/orange).

Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England12

Pollutant	Air Quality Objective: Concentration	Air Quality Objective: Measured as
Nitrogen Dioxide (NO_2)	200µg/m^3 not to be exceeded more than 18 times a year	1-hour mean
Nitrogen Dioxide (NO_2)	40µg/m^3	Annual mean
Particulate Matter (PM_{10})	50µg/m^3, not to be exceeded more than 35 times a year	24-hour mean
Particulate Matter (PM_{10})	40µg/m^3	Annual mean
Sulphur Dioxide (SO_2)	350µg/m^3, not to be exceeded more than 24 times a year	1-hour mean
Sulphur Dioxide (SO_2)	125µg/m^3, not to be exceeded more than 3 times a year	24-hour mean
Sulphur Dioxide (SO_2)	266µg/m^3, not to be exceeded more than 35 times a year	15-minute mean

[12] The units are in microgrammes of pollutant per cubic metre of air (µg/m^3).

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
ASR	Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways
EU	European Union
FDMS	Filter Dynamics Measurement System
LAQM	Local Air Quality Management
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm or less
$PM_{2.5}$	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO_2	Sulphur Dioxide

References

- Local Air Quality Management Technical Guidance LAQM.TG22. August 2022. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.
- Local Air Quality Management Policy Guidance LAQM.PG22. August 2022. Published by Defra in partnership with the Scottish Government, Welsh Assembly Government and Department of the Environment Northern Ireland.