2025 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

Date: May 2025

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Local Responsibilities and Commitment

This ASR was prepared by the Public Health and Protection Department of Welwyn Hatfield Council.

This ASR has been approved by:

Sue McDaid who is the Executive Director of Resident Services & Climate Change.

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

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Executive Summary: Air Quality in Our Area

Air Quality in Welwyn Hatfield Council

Breathing in polluted air affects our health and costs the NHS and our society billions of pounds each year. Air pollution is recognised as a contributing factor in the onset of heart disease and cancer and can cause a range of health impacts, including effects on lung function, exacerbation of asthma, increases in hospital admissions and mortality.

Air pollution particularly affects the most vulnerable in society, children, the elderly, and those with existing heart and lung conditions. Low-income communities are also disproportionately impacted by poor air quality, exacerbating health and social inequalities.

Table ES 1 provides a brief explanation of the key pollutants relevant to Local Air Quality Management and the kind of activities they might arise from.

Table ES 1 - Description of Key Pollutants

Pollutant	Description
Nitrogen Dioxide (NO_2)	Nitrogen dioxide is a gas which is generally emitted from high-temperature combustion processes such as road transport or energy generation.
Sulphur Dioxide (SO_2)	Sulphur dioxide (SO_2) is a corrosive gas which is predominantly produced from the combustion of coal or crude oil.
Particulate Matter (PM_{10} and $PM_{2.5}$)	Particulate matter is everything in the air that is not a gas. Particles can come from natural sources such as pollen, as well as human made sources such as smoke from fires, emissions from industry and dust from tyres and brakes. PM_{10} refers to particles under 10 micrometres. Fine particulate matter or $PM_{2.5}$ are particles under 2.5 micrometres.

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[1] sets out actions that will drive continued improvements to air quality and to meet the new national interim and long-term targets for fine particulate matter ($PM_{2.5}$), the pollutant of most harmful to human health. The Air Quality Strategy[2] provides more information on local authorities' responsibilities to work towards these new targets and reduce fine particulate matter in their areas.

The Road to Zero[3] details the Government's approach to reduce exhaust emissions from road transport through a number of mechanisms, in balance with the needs of the local community. This is extremely important given that cars are the most popular mode of personal travel and the majority of Air Quality Management Areas (AQMAs) are designated due to elevated concentrations heavily influenced by transport emissions.

The air quality within the borough is monitored to observe any potential changes and what this may attributed to. The council are dedicated to try and make changes to improve air quality across the borough. The council are working towards the implementation of an effective climate change strategy. This links in with air quality monitoring and the change of operations internally within the council. A hybrid working system is now well established, this means that's staff split their working locations between home and the office, thus significantly reducing the need to commute, which helps reduce their carbon footprint. The council also make use of electric vehicles when possible.

Planning and development control is regularly being used to assist with the implementation of green travel alternatives, along with the facilities to allow the use of electric vehicles. Typically, where a development provides car parking, electric charging points are required for each space. This provides occupants with the choice of electric vehicle use and makes it a more convenient choice should someone wish to purchase an electric vehicle. Where possible, spatial planning is used to minimize 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.

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

[2] Defra. Air Quality Strategy – Framework for Local Authority Delivery, August 2023

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

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 and boiler emission limits.

Monitoring locations are still being closely monitored, and diffusion tube sites will be relocated when necessary. There is not a particular issue with any one pollutant across the borough. The main aim is to reduce all levels of pollution as much as possible. The diffusion tube locations were relocated every year, however, without careful planning, this could mean a reduction of comparison trends within certain location. A decision has been made to evaluate and review the relocation process every two years.

The Hertfordshire and Bedfordshire air quality group are working closely with Hertfordshire County Council to join forces and align joint practices to make improvements across the county. This relationship is blossoming, and the collaborative working allows us to develop plans together, share information and to ensure that we are working towards the same goal. The connection with the County Council opens access to information regarding the highway infrastructure, transport planning and key highway networks.

In last year's annual status report, reference was made to the progress of our air quality strategy. The air quality strategy has now been completed and approved. This is a significant milestone for the council and to be seen as a success. The council are in the process of making the strategy available to the public. When it does become available, it will be accessible via the council website. Welwyn Hatfield Council Air Quality Page.

The aims and objectives of our air quality strategy are as follows:

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, mitigate the impacts of air pollution on public health.

Conclusions and Priorities

The air quality strategy which has recently been approved, proposes to introduce the implementation of a smoke control area. Whilst we do not have evidence that smoke from chimneys within the borough is a significant issue, it does not mean that implementing additional measures would not have a positive effect on pollution levels across the borough. Initially, the proposal will be to undertake a borough wide public consultation process. This is intended to obtain a comprehensive and up to date opinion of the public's view on the local area. Whether there would be significant objection to such measures and to also review any comments and support of implementing a smoke control area. The process of public consultation will be useful to assess public engagement and assist in trying to encourage community involvement. The consultation process is proposed to take place during 2025.

The monitoring results from 2024 demonstrate that overall, pollution levels have fallen, quite significantly in some areas, which is the same as last year. This is very good to see and is a positive outcome. There is evidence that in 2022, some locations increased, from personal experience driving around the area, this is down to the fact that traffic levels subjectively appear to have returned to pre covid levels.

There are one or two locations where results have stayed the same or have increased very slightly, but this is marginal and not a cause for concern. The results are generally consistent a downward improving trend.

The results do not show any breaches in any of the air quality objectives, and this does not seem likely to occur going forward. The monitoring network is well established, and is gathering very important data across the borough, locations are reviewed, and observations are made as to whether any other locations within the borough are congested and should be included in the network. This is an ongoing process.

Planning development is still key in terms of introducing and promoting new green transport initiatives and facilities.

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, this engagement is set to

continue and improve. The sharing of data and knowledge during quarterly meetings is showing benefits, 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 main sources of pollution within the borough are likely to be from road traffic, this is predominantly the focus of the monitoring that is undertaken. Monitoring locations are situated as close to the roadside as possible to establish an accurate picture of the current situation. The sources of $PM_{2.5}$ and Nitrogen Dioxide in this case will be from vehicle exhausts, along with tyre and brake wear.

Work in terms of the air quality strategy has been completed and approved. This is a very significant step which is positive. The strategy makes recommendations to consider declaring a smoke area across the borough. This will be taken through a public consultation process is 2025. The council are working with Hertfordshire County Council and the neighbouring district and borough councils to attend regular air strategy meetings. This is so that we can share our plans and strategies and work collectively together across the county to try and make improvements on a wider scale.

How to get Involved

The council is dedicated in trying to raise awareness and public engagement in relation to improvements in air quality. In recent years, members of the community have become more aware of air quality matters. Queries have been raised with the council by residents regarding advice and concerns on local air quality matters. Information and advice are always promptly provided regarding actions that can be taken to make improvements.

In addition, residents are always made aware of the air alert scheme that we provide, as well as the previous air quality reports and live monitoring results on the Air Quality England Website.

Public engagement is also carried out through the council's social media channels, to try and encourage engagement and awareness of current issue and air quality information.

To try and improve and encourage the council's engagement and interaction with the community, and to facilitate people becoming more involved, the planned public consultation for the proposed smoke control area will be key here. Whilst the consultation will be focused on a smoke control area, it will also encapsulate air quality as a whole and it will inevitably encourage the public to be aware that air quality is important. It will invite people to engage and facilitate a mechanism whereby the community can make comments about air quality in general, their views and feelings, and allow them to raise issues and ideas that the council had not previously considered.

Through the day-to-day work of the public health and protection team, the council deal with pollution matters, such as bonfires and industrial emissions through complaint work. Whilst dealing with such matters, we work to provide advice and guidance on pollution control, and we ensure that we promote the work that we do, advising people how they can assist with pollution prevention, and inform them of the information that is available and the actions that they can take to make improvements.

The council run an air quality alert scheme to help try and keep people involved. Access to this scheme can be found by using the following link.

Local Authority Data - Air Quality monitoring service

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1 Local Air Quality Management

This report provides an overview of air quality in Welwyn Hatfield Council during 2024. 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 Welwyn Hatfield 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

2.1 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.

Welwyn Hatfield Council currently does not have any declared AQMAs. Please refer to table 2.1 which shows the measures taken to help reduce pollution.

2.2 Progress and Impact of Measures to address Air Quality in Welwyn Hatfield

Defra's appraisal of last year's ASR concluded:

The report is well structured, detailed, and provides the information specified in the Guidance.

The following comments are designed to help inform future reports:

1. The Council do not have an AQMA in place. As such they are required to produce and AQS. The council have stated that they are currently in the process of developing an AQS. The council is encouraged to include more information in the next report.

The air quality strategy has now been completed and approved. A summary of the aims and conclusions of the strategy have been provided within this report.

2. The previous years comments are included and responded to. This is welcomed.

3. The How to Get Involved section is brief. More could be included so that members of the public reading the report are aware of the steps they undertake to get involved with the Council's initiatives and improve air quality in their area.

Additional information has been provided in this report, which will hopefully be sufficient. Information has also been included with regards to the proposed consultation regarding the introduction of a smoke control area, this will include public engagement with a view to being able to encourage and enable people to become more involved.

4. The Council included the PHOF DO1 indicator which showed that $PM_{2.5}$ mortality is

considerable above the average. The council stated their intention to prioritise $PM_{2.5}$ going forward. The Council is encouraged to put a focus on $PM_{2.5}$ in their upcoming AQS and consider possible measures that directly target $PM_{2.5}$.

This has been noted and taken forward.

5. The Council included an appropriate QAQC section. It is noted that a national bias adjustment factor has been applied to the diffusion tube data. As the council has an automatic monitor, it is suggested they consider a co-location study so that a local factor can be calculated.

A diffusion tube has been located next to the inlet of our automatic analyser for a while now. However, there appears to be repeated attempts by members of the public in tampering with the diffusion tube. It is often found upside down and showing clear signs of tampering. Whilst the results do not indicate any adverse anomalies, a decision has been made to relocate the diffusion tube elsewhere. Despite attempts to make the tube more secure and tamper proof, issues continued to occur. Since the diffusion tube was often tampered with, it did not seem appropriate to rely on this data for a co-location study.

6. The Council should include a statement in the QAQC section confirming whether the diffusion tubes have been deployed in line with the Defra calendar.

This has been included in this report.

7. Throughout the report pollutants have not been subscripted correctly. Future reports should be screened for such issues.

An additional check will be carried out to try and avoid this issue reoccurring.

Welwyn Hatfield Council has taken forward a number of direct measures during the current reporting year of 2024 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.1

Table 2.1 – Progress on Measures to Improve Air Quality

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
1	Electric fleet council vehicles	Alternative use from diesel and petrol vehicles	Emission reduction	N/A	Ongoing	Local authority	Local authority/County Council	Partially funded	£20k	Implemented	Reducing vehicle emissions	50%	Ongoing	The use of council fleet vehicles, such as council contractor maintenance fleet, that are used to move across the borough. These vehicles are now mostly electric. This helps to reduce vehicle emissions from council fleet vehicles.
2	Development control	Policy Guidance and Development Control	Intensive active travel campaign & infrastructure	N/A	Ongoing	Local Authority Environmental Health	Environmental health	Funded	< £10k	Implementation	Reduced vehicle emissions	100%	Implementation on-going	For development projects, air quality conditions are being put on applications for provision of cycle storage and electric vehicle charging points
3	Introduction of a smoke control area	Particulate emission reduction	Emission reduction	N/A	2026	Welwyn Hatfield Council	DEFRA/Government	Funds obtained	Up to £10000	Ongoing	Reduction of emissions from smoke from chimneys	Assessment through air quality monitoring and assessment of nuisance complaints	Ongoing	Initially, there will be a borough wide public consultation to assess public response to the proposal. This will be via various social media channels and maybe through the local press.
4	Electric Cars	Alternatives to private vehicle use	Car Clubs	N/A	Ongoing	Local authority	Local authority	Funded	< £10k	Completed	Reduced vehicle emissions	80%	Ongoing	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. The electric car use is encourage through internal media channels.

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5	Working at home/hybrid working	Promoting Travel Alternatives	Encourage / Facilitate home-working	N/A	Ongoing	Local authority	Local authority	Funded	< £10k	Implementation	Reduced vehicle emissions	80%	Ongoing	The councils hybrid working scheme is still working well with staff effectively balancing time between home and office working.
6	Permits	Environmental Permits	Other measure through permit systems and economic instruments	N/A	Annually	Local authority	Local authority/consultant	Funded	< £10k	Implementation	Permitted process emission controls	100%	Ongoing	A consultant has been employed to assist with the permitting process and to ensure that inspections are carried out and permits are issued
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	N/A	Ongoing	Local authority	Local authority	Funded	£10k - 50k	Implementation	Reduced vehicle emissions	70&	Ongoing	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 – The group are also part of a separate air quality meeting for the County Council Air Quality Strategy, this helps with county wide joint

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														working and ensuring that we all have the same goals and can work collaboratively.
8	Air Alert Scheme	Public Information	Via the Internet	N/A	2025	Local authority	Local authority	Funded	< £10k	Completed	Awareness of AQ in locality and promotion of green travel	100%	Ongoing	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 increase.

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9	Climate Change Carbon Emission Reduction - Herts County Council Sustainability Partnership	Other	Other	N/A	2030	Local authority	Local authority	Partially Funded	£10k - 50k	Planning	Decarbonisation	20%	Ongoing	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.

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10	AQ schools project	Promoting Travel Alternatives	School Travel Plans	N/A	Ongoing	Local Authority Environmental Health, Local Authority Transport Dept.	Local authority/Charity/Volunteer	Fully funded	< £10k	Planning	Reduced vehicle emissions	60%	Ongoing	Continue obtaining data using diffusion tubes.
11.	Hertfordshire County Council – tree giveaway	Other	Emission reduction	N/A	ongoing	Local authority and County Council	Local authority/County Council	Partially funded	N/A	Implemented	Planting of trees to help remove emissions	100%	Ongoing	For the last 2 years we have been involved with an HCC campaign giving away trees to residents in the borough. Last year we gave away 10,000 small trees to residents living in the Borough as part of the Your tree our Future campaign. These were very small trees but potentially could become quite big in some instances.

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12	Strategic Action Plan Transport - Herts County Council Sustainability Partnership	Promoting Low Emission Transport	Other	N/A	2030	Local authority	Local authority	Partially Funded	£10k - 50k	Planning	Decarbonisation	20%	Ongoing	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

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
13	Links with Air quality and public health - hertfordshire councty council	Other	Other	N/A	Ongoing	Local authority	Local authority	Not Funded	< £10k	Implementation	Increased awareness	70&	Ongoing	Hertfordshire County Council have employed an air quality programme manager - this has provided a very useful link between the district councils and the county council. This link is vital, because it allows communication with multiple departments, links with highways, public health, schools. It permits a very broad range of facilities to promote and improve air quality awareness
14	Staff pool bikes	Promoting Travel Alternatives	Emissions reduction	N/A	Ongoing	Welwyn Hatfield Council	Internal	Not funded	< £2,0000	Ongoing	Avoiding vehicle emission	Number of times bikes used by staff	Ongoing	Bikes need to be services annually and promoted internally to increase uptake
15	Off street EV chargepoint installed (EV 1 and EV 2)	Promoting Travel Alternatives	Emissions reduction	N/A	2024	Welwyn Hatfield and Blink	ORCS	Complete	EV 1 - £138,320.00 EV2 - £1,160,936.96	Approx 192 off street EV chargepoints installed	Avoided emission	Number of EV chargepoints installed. Ongoing usage	EV 1 Completed EV2 to be compelted sumer 2025	

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
16	Community engagement and behaviour change	Behaviour change	Other	N/A	Ongoing	Welwyn Hatfeild Council	N/A	No funding	Unknown	Ongoing	Avoided emissions	Number of people attending events (not possible at every event)	Ongoing	
17	Bike maintenance stands	Avoided emissions	Other	N/A	Ongoing	Hertfordshire County Council and	Local Cycling and Walking Infrastructure Plan	Completed	Under £2,000	Completed	Avoided emission	Number of bike maintenance stands installed	Completed	
18	Herts Living Lab	Transport Planning and Infrastructure	Other	N/A	Ongoing	Environmental Health, Herts County Council, Ocado, University of Hertfordshire	Multiple project schemes	Funded	£10k - 50k	Planning	Reduced vehicle emissions	10%	Implementation on-going	I am currently waiting for an update from the project partners, the project has temporarily stalled at this moment in time.

2.3 $PM_{2.5}$ – Local Authority Approach to Reducing Emissions and/or Concentrations

As detailed in Policy Guidance LAQM.PG22 (Chapter 8) and the Air Quality Strategy[4], local authorities are expected to work towards reducing emissions and/or concentrations of fine particulate matter ($PM_{2.5}$)). There is clear evidence that $PM_{2.5}$ (particulate matter smaller 2.5 micrometres) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

Welwyn Hatfield Council is taking the following measures to address $PM_{2.5}$:

The council officers, aside from core emergency staff, are mostly working to a hybrid scheme. This has resulted in staff working at home some of the time and then working in the office for the rest of the time. This has significantly reduced the need for all staff to commute to work every day. The council have also continued to undertake virtual meetings where possible with the main view to reducing carbon emissions from reduced travel.

The council have also invested in a fleet of electric council vehicles that are used to travel around the borough for council maintenance staff. These have replaced diesel and petrol vehicles.

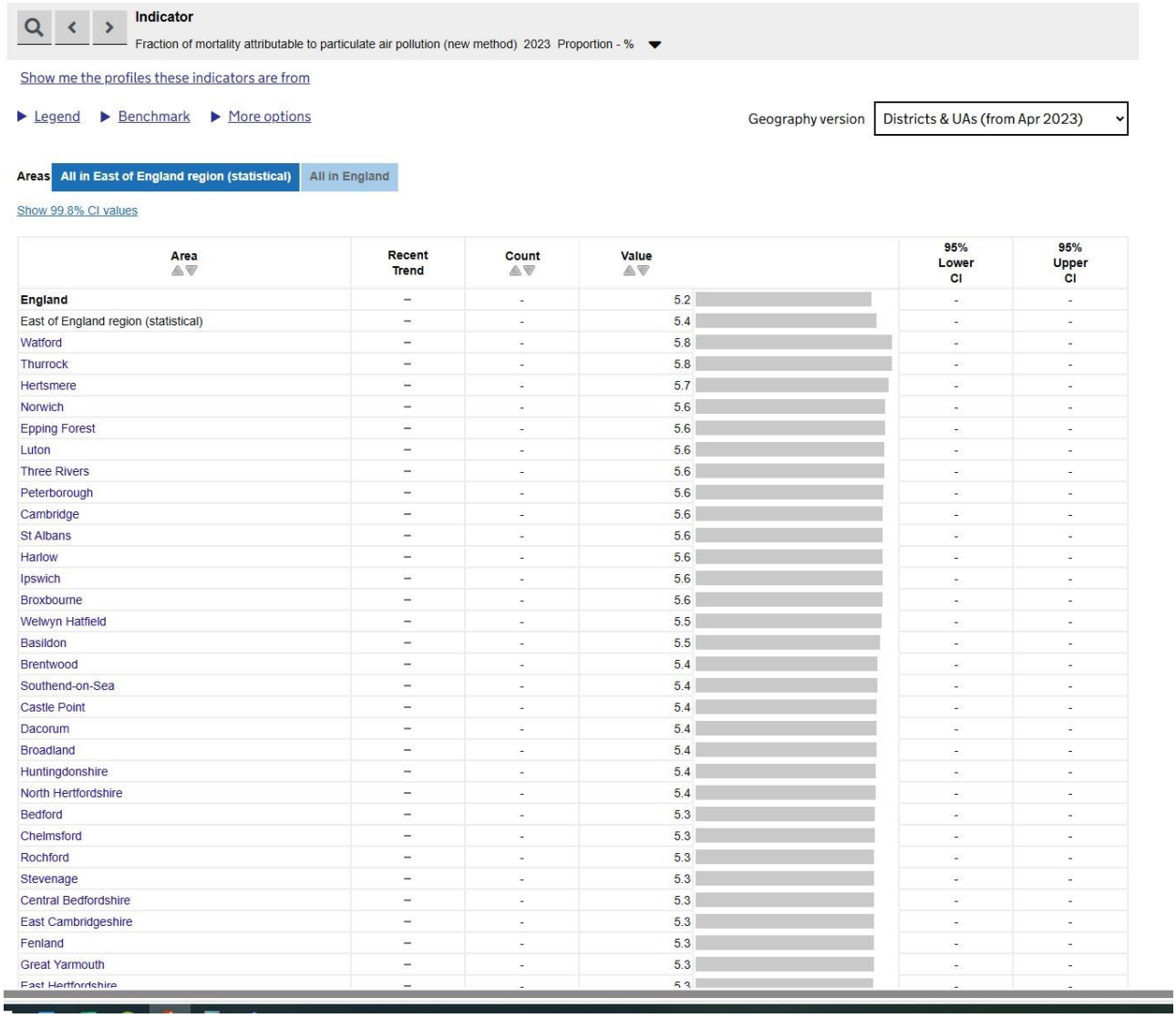
The council are also working closely with Hertfordshire County Council via the air quality forum. This work involves consulting and reviewing the county wide transport plan with a view to reducing emissions from $PM_{2.5}$

In addition to this, as part of the councils approved air quality strategy, there are plans to open a public consultation with a view to introducing a borough wide smoke control area. This would be to help control and enforce smoke emissions from domestic chimneys. The public consultation will not only seek to obtain local community views but to also raise awareness and encourage public engagement and help people become involved. The introduction of a smoke control area will help to directly reduce concentrations of $PM_{2.5}$

[4] Defra. Air Quality Strategy – Framework for Local Authority Delivery, August 2023

Public Health Outcomes Framework - Fraction of mortality attributable to particulate air pollution 2023:

Table extract from: [Public Health Outcomes Framework Data]



Indicator

Fraction of mortality attributable to particulate air pollution (new method) 2023 Proportion - %

Show me the profiles these indicators are from

▶ Legend ▶ Benchmark ▶ More options

Geography version: Districts & UAs (from Apr 2023)

Areas: All in East of England region (statistical) | All in England

Show 99.8% CI values

Area	Recent Trend	Count	Value	95% Lower CI	95% Upper CI
England	–	-	5.2	-	-
East of England region (statistical)	–	-	5.4	-	-
Watford	–	-	5.8	-	-
Thurrock	–	-	5.8	-	-
Hertsmere	–	-	5.7	-	-
Norwich	–	-	5.6	-	-
Epping Forest	–	-	5.6	-	-
Luton	–	-	5.6	-	-
Three Rivers	–	-	5.6	-	-
Peterborough	–	-	5.6	-	-
Cambridge	–	-	5.6	-	-
St Albans	–	-	5.6	-	-
Harlow	–	-	5.6	-	-
Ipswich	–	-	5.6	-	-
Broxbourne	–	-	5.6	-	-
Welwyn Hatfield	–	-	5.5	-	-
Basildon	–	-	5.5	-	-
Brentwood	–	-	5.4	-	-
Southend-on-Sea	–	-	5.4	-	-
Castle Point	–	-	5.4	-	-
Dacorum	–	-	5.4	-	-
Broadland	–	-	5.4	-	-
Huntingdonshire	–	-	5.4	-	-
North Hertfordshire	–	-	5.4	-	-
Bedford	–	-	5.3	-	-
Chelmsford	–	-	5.3	-	-
Rochford	–	-	5.3	-	-
Stevenage	–	-	5.3	-	-
Central Bedfordshire	–	-	5.3	-	-
East Cambridgeshire	–	-	5.3	-	-
Fenland	–	-	5.3	-	-
Great Yarmouth	–	-	5.3	-	-
East Hertfordshire	–	-	5.3	-	-

The region of Welwyn and Hatfield has a value of 5.5% and this compares to the East of England region which is 5.4%.

The value for Welwyn Hatfield indicated in last years ASR was 7.1% so the figure has clearly reduced, which is a very positive result. It also demonstrates that Welwyn Hatfield is more in line with the overall rate for the East of England region which is positive.

The mortality figure does not consider locations of previous residences or locations of where people work, or indeed ongoing health conditions. Therefore, it is not clear how much local factors have on the overall mortality rate.

Mortality attributed to pollution must be taken seriously and it is a subject that is high on the agenda for the council. Therefore, matters regarding reducing emissions and having a robust monitoring network is vital to do everything we can to reduce and control emissions. Health promotion is a key target as well as trying to manage emissions via the planning consultation process and the local plan.

The council regard the reduction of $PM_{2.5}$ emissions to be a priority, and this will remain the case going forward, particularly concentrating on the possible introduction of a smoke control area across the borough.

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

This section sets out the monitoring undertaken within 2024 by Welwyn Hatfield Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2020 and 2024 to allow monitoring trends to be identified and discussed.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

Welwyn Hatfield Council undertook automatic (continuous) monitoring at 2 sites during 2024.

Table A.1 in Appendix A shows the details of the automatic monitoring sites. NB. 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 Hertfordshire and Bedfordshire - Air Quality monitoring service page presents automatic monitoring results for Welwyn Hatfield Council.

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

Welwyn Hatfield Council undertook non- automatic (i.e. passive) monitoring of NO_2 at 51 sites during 2024. Table A.2 in Appendix A presents the details of the non-automatic sites.

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.

3.2 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.

3.2.1 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 2024 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.

The trends in annual mean NO2 concentrations can be observed in the charts presented in figure A1. The diffusion tube monitoring for the 33 sites across the borough are starting to show a trend since the pandemic. As expected, there was a significant reduction due to the pandemic, then pollution levels began to increase again. This did not occur in all locations, but it did occur at some, which is to be expected.

The monitoring results demonstrate that overall, pollution levels have fallen, quite significantly in some areas, which is the same as last year. This is very good to see and is a positive outcome. There is evidence that in 2022, some locations increased, from personal experience driving around the area, this is down to the fact that traffic levels subjectively appear to increase following the pandemic. From a subjective point of view, traffic levels in 2021 did not appear to be back to how the levels were pre covid.

There are one or two locations where results have stayed the same or have increased very slightly, but this is marginal and not a cause for concern. The results are generally consistent a downward improving trend. The monitoring data from the automatic analysers

within borough also are typically showing a downward trend in that air quality levels are improving. The automatic analysers show a stable dataset. It is encouraging to note that pollution levels have stayed 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 the automatic analysers.

The results do not show any breaches in any of the air quality objectives, and this does not seem likely to occur going forward. Whilst the monitoring network is established, and this is gathering very important data across the borough, locations are reviewed, and observations are made as to whether any other locations within the borough are congested and should be included in the network. This is an ongoing process.

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 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.

3.2.2 Particulate Matter ($PM_{2.5}$)

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

The data from 2020 to 2024 shows no change in pollutions levels from 2020 to 2021, an increase in 2022 then a steady reduction in 2023 and 2024. 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 consistent with traffic levels and other daily tasks increasing as activities increased after the pandemic. There are changes still being made with some businesses still making changes and bringing people back into the office. This will increase pollution levels slightly. 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 have an effect on the data that is recorded.

The data collected for 2023 shows a marked reduction since 2022 which is really encouraging. There is also the fact that people are now more interested in pollution and greener transport.

The latest data in 2024 shows another reduction in pollution levels which is fantastic. It fits with a generic trend of pollution improvements as years go on, along with the reduction in PM2.5 due to local actions, awareness and the facilitation of greener trasnsport. There is no place for complacency however as pollution can have negative effects even at lower levels. The council are dedicated to continue to reduce pollution levels across the borough.

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? (1)	Monitoring Technique	Distance to Relevant Exposure (m) (2)	Distance to kerb of nearest road (m) (1)	Inlet Height (m)
WHBAM	Great North Rd/A1000	Roadside	523292	209170	$PM_{2.5}$	No	NA	Beta Attenuation	10	8	1.5
WHNOX	West View	Roadside	522106	209460	NO_2	No	NA	Chemiluminescent	16	3	1.8

Notes:

(1) N/A if not applicable

(2) 0m if the monitoring site is at a location of exposure (e.g. installed on the façade of a residential property).

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)
WH1	Great North Rd A1000(2)	Roadside	523326	209153	NO_2	No	6.0	2.0	No	2.0

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)
WH2	Bessemer Road, WGC	Roadside	524340	213087	NO_2	No	23.0	2.0	No	2.0
WH3	West View, Hat, next to nox analyser	Roadside	522102	209455	NO_2	No	16.0	3.0	No	2.0
WH4	Valley Rd, WGC	Roadside	523213	213237	NO_2	No	22	2.0	No	2.0
WH5	Cuffley High Street 1	Roadside	530553	202715	NO_2	No	16.0	5.0	No	2.0
WH6	Cuffley High Street 2	Roadside	530502	202694	NO_2	No	6.0	5.0	No	2.0
WH7	Briars Lane, Hatfield	Roadside	522193	208434	NO_2	No	18.0	2.0	No	2.0
WH8	Black Fan Road - Opposite Morrisons	Roadside	525688	212769	NO_2	No	14.0	3.0	No	2.0
WH9	Great North Rd Adjacent to A1(M)	Kerbside	522429	212150	NO_2	No	13.0	1.0	No	2.0
WH10	Parkside, Welwyn	Near road	523347	216002	NO_2	No	9.0	3.0	No	2.0
WH11	Knighsfield, WGC	Roadside	524429	214000	NO_2	No	20.0	2.0	No	2.0
WH12	St Albans Road East/Heyford Way, Hatfield	Roadside	523148	209148	NO_2	No	6.0	2.0	No	2.0
WH13	Stanborough Rd 2, WGC	Near road	523416	211958	NO_2	No	9.0	2.0	No	2.0

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)
WH14	Campion Road, Hatfield	Roadside	521585	209696	NO_2	No	6.0	3.0	No	2.0
WH15	Cuffley High Street 3	Near road	530439	202681	NO_2	No	25.0	2.0	No	2.0
WH16	Standborough Road 1, WGC	Roadside	523358	211931	NO_2	No	9.0	3.0	No	2.0
WH17	Great North Road, Hatfield (A1000)	Near road	523293	209164	NO_2	No	15.0	5.0	No	2.0
WH18	B195/Broadwater Road, WGC	Near road	524285	212988	NO_2	No	16.0	5.0	No	2.0
WH19	Comet Way on A1001 & A1M	Near road	522144	209516	NO_2	No	50.0	5.0	No	2.0
WH20	Wellfield Road, Hatfield	Roadside	522466	208908	NO_2	No	13.0	2.0	No	2.0
WH21	Roadside Laybay A414 Essendon	Background	527258	210364	NO_2	No	7.0	5.0	No	2.0
WH22	Garden Village, Hatfield	Kerbside	521801	209471	NO_2	No	20.0	1.0	No	2.0
WH23	Longmead, Hatfield	Roadside	523036	209830	NO_2	No	4.0	2.0	No	2.0
WH24	Great North Rd, Old Hatfield 1	Roadside	523251	208495	NO_2	No	12.0	2.0	No	2.0
WH25	West View, Hatfield	Near road	522093	209431	NO_2	No	8.0	5.0	No	2.0
WH26	West View, Hatfield	Near road	522064	209328	NO_2	No	24.0	5.0	No	2.0

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)
WH27	West View, Hatfield	Near road	522060	209289	NO_2	No	8.0	5.0	No	2.0
WH28	Stanborough Rd, 3	Roadside	523545	212021	NO_2	No	13.0	3.0	No	2.0
WH29	Stanborough Rd, 4	Roadside	523623	212056	NO_2	No	30.0	1.0	No	2.0
WH30	Great North Rd, Old Hatfield 2	Roadside	523287	208450	NO_2	No	10.0	2.0	No	2.0
WH31	B197 - Opp The East WGC	Roadside	522579	211012	NO_2	No	9.0	2.0	No	2.0
WH32	Clock Hotel, Welwyn	Near road	523438	216512	NO_2	No	12.0	5.0	No	2.0
WH33	Southway Roundabout, Hatfield	Roadside	523287	208450	NO_2	No	13.0	2.0	No	2.0
SCH1	Monks Walk 1	Urban Background	523466	214929	NO_2	No	10.0	3.0	No	2.0
SCH2	Monks Walk 2	Urban Background	523481	214962	NO_2	No	17.0	3.0	No	2.0
SCH3	Monks Walk 3	Urban Background	523544	215011	NO_2	No	7.0	2.0	No	2.0
SCH4	Monks Walk 4	Urban Background	523590	215042	NO_2	No	12.0	2.0	No	2.0
SCH5	Monks Walk 5	Urban Background	523580	215018	NO_2	No	11.0	2.0	No	2.0
SCH6	Monks Walk 6	Urban Background	523635	215003	NO_2	No	12.0	2.0	No	2.0

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)
SCH7	Panshanger Academy 1	Urban Background	525626	213140	NO_2	No	29.0	2.0	No	2.0
SCH8	Panshanger Academy 2	Urban Background	525616	213123	NO_2	No	21.0	2.0	No	2.0
SCH9	Panshanger Academy 3	Urban Background	525622	213114	NO_2	No	11.0	1.0	No	2.0
SCH10	Panshanger Academy 4	Urban Background	525610	213113	NO_2	No	25.0	2.0	No	2.0
SCH11	Panshanger Academy 5	Urban Background	525594	213093	NO_2	No	19.0	2.0	No	2.0
SCH12	Panshanger Academy 6	Urban Background	525578	213070	NO_2	No	20.0	2.0	No	2.0
SCH13	Countess Anne 1	Urban Background	522985	208913	NO_2	No	9.0	2.0	No	2.0
SCH14	Countess Anne 2	Urban Background	523003	208919	NO_2	No	9.0	2.0	No	2.0
SCH15	Countess Anne 3	Urban Background	523018	208925	NO_2	No	14.0	2.0	No	2.0
SCH16	Countess Anne 4	Urban Background	523044	208936	NO_2	No	17.0	3.0	No	2.0
SCH17	Countess Anne 5	Urban Background	523086	208961	NO_2	No	13.0	2.0	No	2.0
SCH18	Countess Anne 6	Urban Background	523078	208926	NO_2	No	8.0	2.0	No	2.0

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 NO_2 Monitoring Results: Automatic Monitoring (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
WHNOX	522106	209460	Roadside	95	95	29	27	28	26	22

☐ **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.**

☐ **Where exceedances of the NO_2 annual mean objective occur at locations not representative of relevant exposure, the fall-off with distance concentration has been calculated and reported concentration provided in brackets for 2024.**

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 NO_2 Monitoring Results: Non-Automatic Monitoring (µg/m^3)

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 2024 (%) (2)	2020	2021	2022	2023	2024
WH1	523326	209153	Roadside	100	100	17.6	18.7	24.9	23.2	22.7
WH2	524340	213087	Roadside	75	75	27.4	24.9	25.3	22.2	15.6
WH3	522106	209460	Roadside	100	100	19.1	26.1	25.6	25.4	23.1
WH4	523213	213237	Roadside	100	100	14.6	14.7	14.9	13.5	10.4
WH5	530553	202715	Roadside	92	92	24.5	23.9	22.0	16.9	17.9
WH6	530502	202694	Roadside	83	83	19.7	19.8	18.8	19.7	15.2
WH7	522193	208434	Roadside	100	100	19.9	19.9	20.3	19.8	15.9
WH8	525688	212769	Roadside	100	100	21.2	19.6	20.9	17.9	17.5
WH9	522429	212150	Kerbside	100	100	26.8	27.6	26.6	21.9	20.3
WH10	523347	216002	Near road	100	100	19.0	18.2	19.1	15.1	14.8
WH11	524006	215162	Roadside	100	100	15.7	15.4	16.4	12.6	13.8

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 2024 (%) (2)	2020	2021	2022	2023	2024
WH12	523148	209148	Roadside	100	100	19.8	18.8	19.1	18.9	17.4
WH13	523416	211958	Near road	100	100	14.1	34.2	33.5	30.9	25.4
WH14	521585	209696	Roadside	100	100	25.3	23.3	25.5	21.6	18.8
WH15	530439	202681	Near road	100	100	14.0	18.8	17.7	15.6	14.0
WH16	523358	211931	Roadside	100	100	30.2	29.2	29.0	27.2	23.9
WH17	523293	209164	Near road	100	100	20.8	19.4	20.0	17.6	16.3
WH18	524285	212988	Near road	100	100	24.0	23.2	25.0	21.5	19.6
WH19	522144	209516	Near road	100	100	31.8	32.4	32.3	27.7	25.5
WH20	522466	208908	Roadside	100	100	22.3	22.8	23.9	20.6	17.2
WH21	527258	210364	Background	100	100	21.6	22.0	22.0	18.7	18.0
WH22	521801	209471	Kerbside	100	100	28.1	26.8	26.1	26.1	21.9
WH23	523036	209830	Roadside	100	100	19.3	19.2	19.4	15.8	18.1
WH24	523251	208495	Near road	100	100	25.2	24.8	20.8	16.3	19.7

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 2024 (%) (2)	2020	2021	2022	2023	2024
WH25	522093	209431	Near road	83	83	28.9	26.7	29.3	24.1	21.9
WH26	522064	209328	Near road	100	100	35.1	33.5	32.6	28.8	27.9
WH27	522060	209289	Near road	92	92	26.2	26.2	26.5	23.3	21.9
WH28	523545	212021	Near road	100	100	17.2	16.7	21.5	19.6	17.1
WH29	523623	212056	Near road	92	92	25.3	24.9	23.8	17.2	15.3
WH30	523287	208450	Roadside	100	100	18.4	17.1	16.6	14.2	14.0
WH31	522579	211012	Roadside	100	100	23.6	25.2	27.0	23.6	20.2
WH32	523438	216512	Near road	100	100	23.5	22.1	23.3	20.4	20.3
WH33	523287	208450	Roadside	100	100	15.2	14.8	19.9	17.2	13.4
SCH1	523466	214929	Urban Background	83	83	16.3	15.5	12.5	11.3	11.3
SCH2	523481	214962	Urban Background	100	100	13.4	14.7	13.1	11.6	11.0
SCH3	523544	215011	Urban Background	100	100	11.8	12.4	10.8	10.6	11.3
SCH4	523590	215042	Urban Background	100	100	11.4	12.0	13.4	11.3	10.0

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 2024 (%) (2)	2020	2021	2022	2023	2024
SCH5	523580	215018	Urban Background	92	92	10.4	12.1	11.9	10.4	10.7
SCH6	523635	215003	Urban Background	83	83	10.2	11.1	11.4	10.0	12.6
SCH7	525626	213140	Urban Background	92	92	12.4	15.2	13.8	12.9	18.1
SCH8	525616	213123	Urban Background	100	100	14.0	16.7	15.2	11.6	9.6
SCH9	525622	213114	Urban Background	92	92	12.0	13.2	12.8	12.1	12.6
SCH10	525610	213113	Urban Background	100	100	13.8	16.0	15.0	13.7	12.2
SCH11	525594	213093	Urban Background	100	100	13.5	15.6	14.6	13.5	10.5
SCH12	525578	213070	Urban Background	100	100	14.8	16.7	16.0	13.8	10.8
SCH13	522985	208913	Urban Background	100	100	15.1	17.0	15.1	15.4	11.5
SCH14	523003	208919	Urban Background	100	100	13.6	15.7	14.2	14.1	10.8
SCH15	523018	208925	Urban Background	100	100	13.8	16.3	15.6	13.3	12.0
SCH16	523044	208936	Urban Background	100	100	13.9	15.1	14.9	13.8	10.9
SCH17	523086	208961	Urban Background	100	100	13.0	14.8	14.4	12.1	10.3

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 2024 (%) (2)	2020	2021	2022	2023	2024
SCH18	523078	208926	Urban Background	92	92	13.7	15.7	15.1	13.6	10.5

☐ **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**.

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

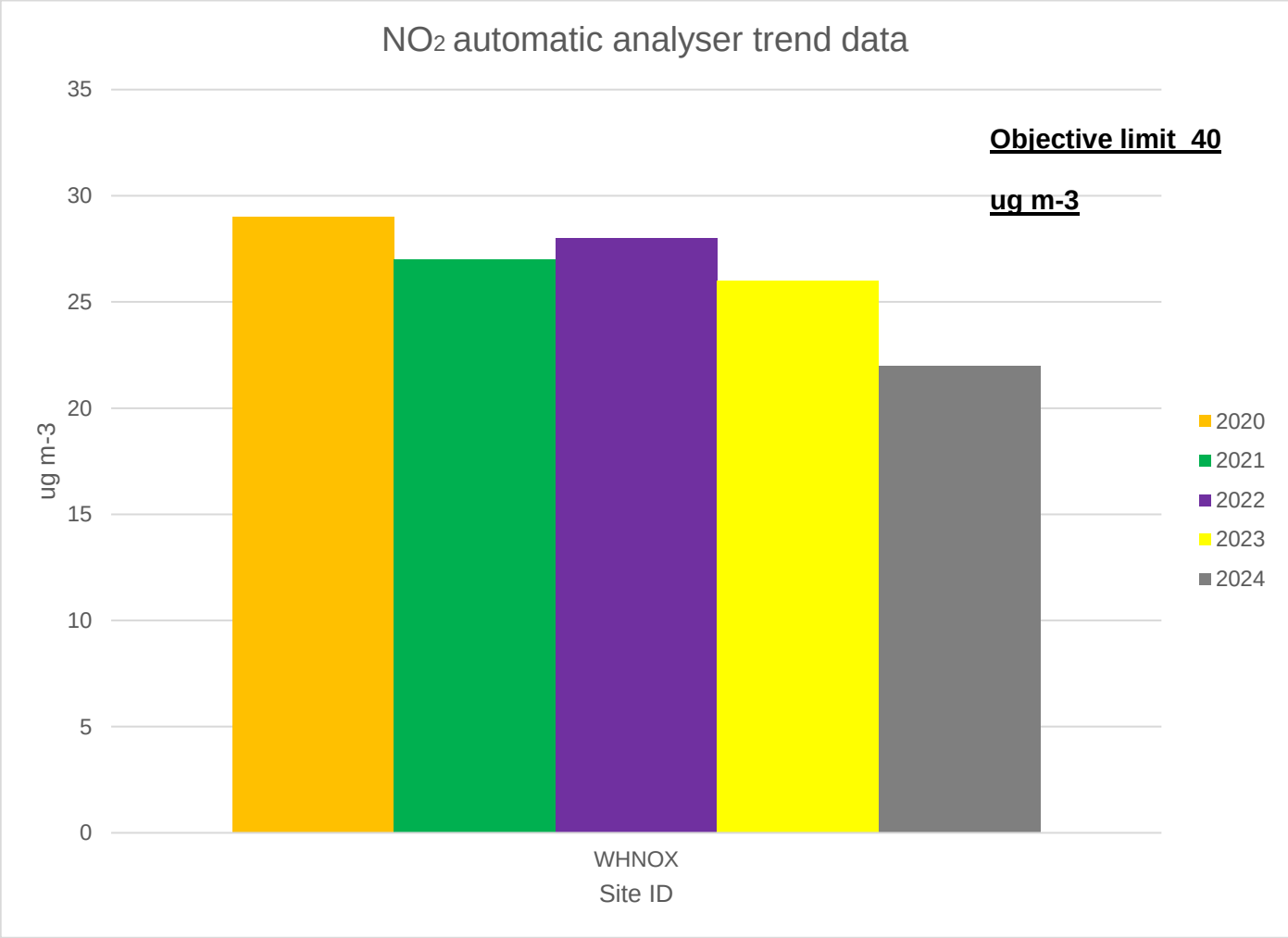
Means for diffusion tubes have been corrected for bias. All means have been “annualised” as per LAQM.TG22 if valid data capture for the full calendar year is less than 75%. See Appendix C for details.

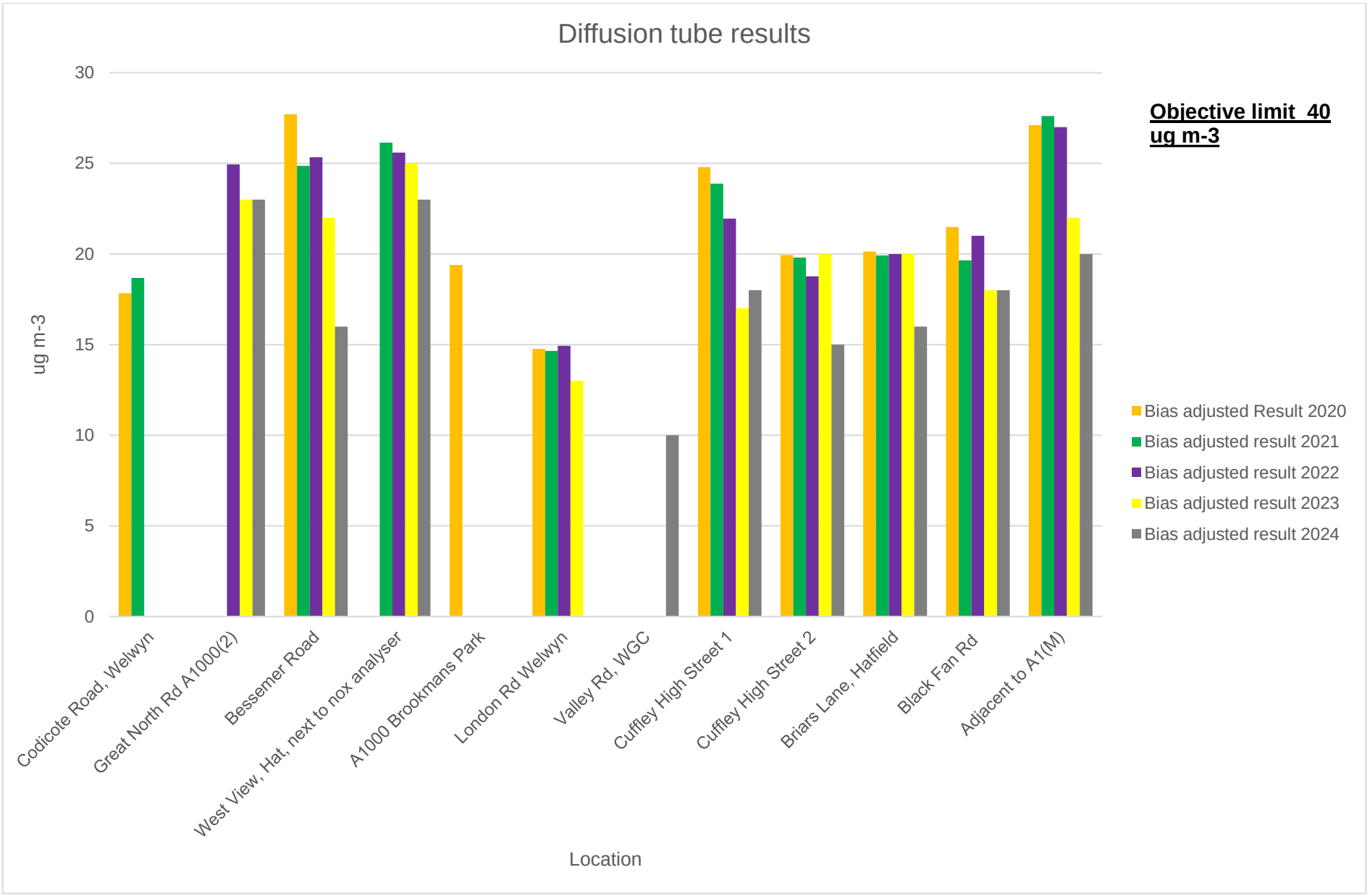
Concentrations are those at the location of monitoring and not those following any fall-off with distance adjustment.

(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 NO_2 Concentrations




Diffusion tube results
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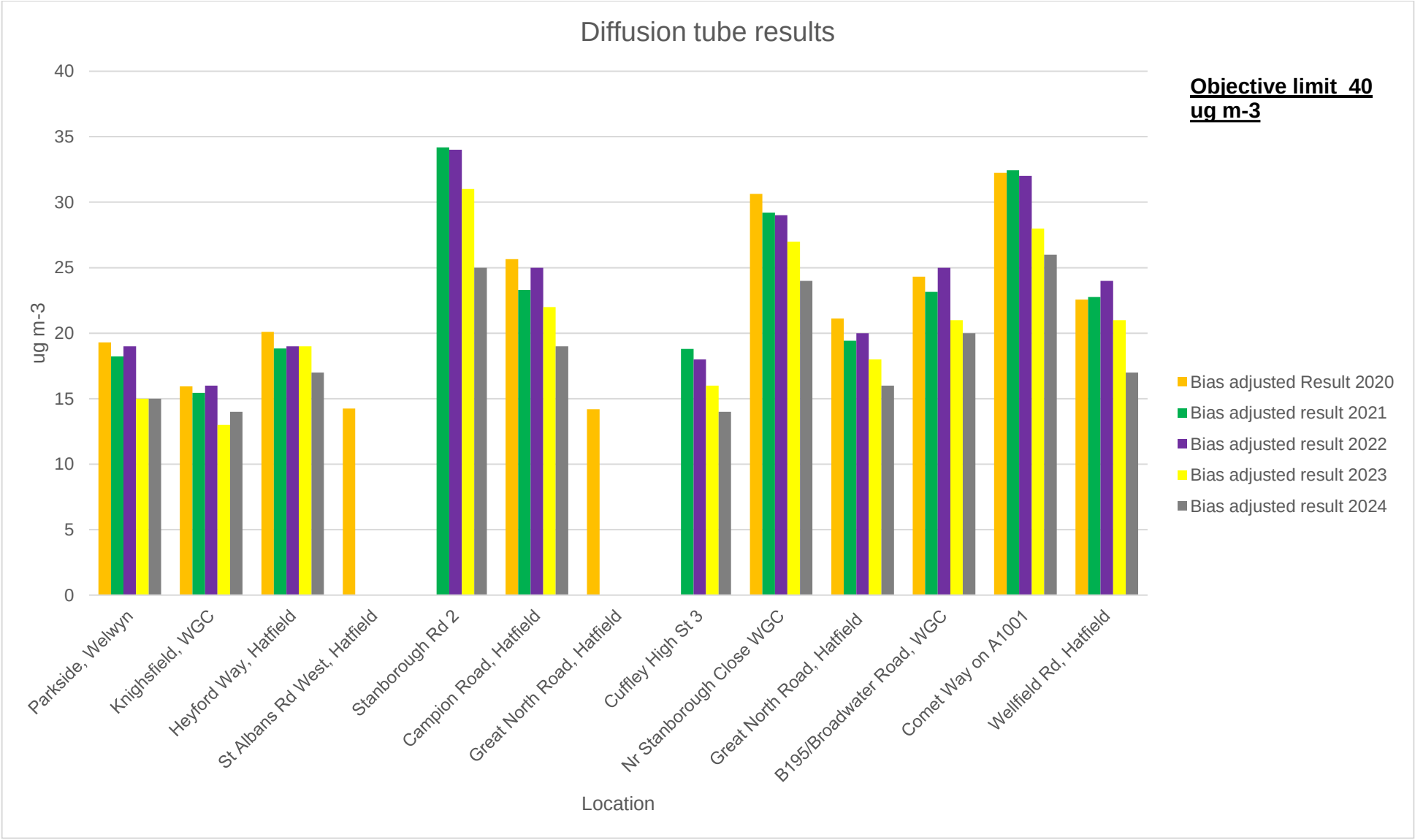
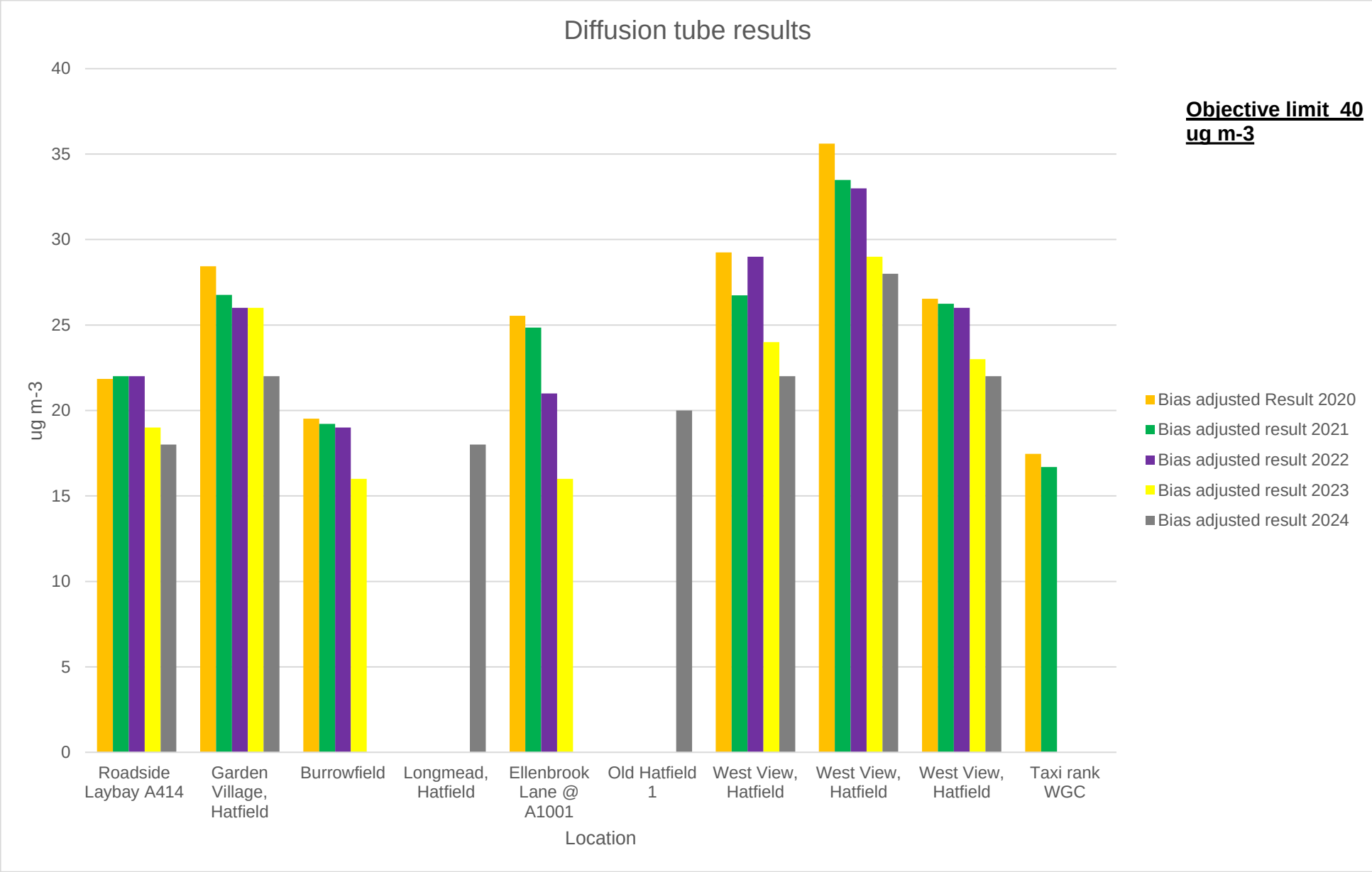
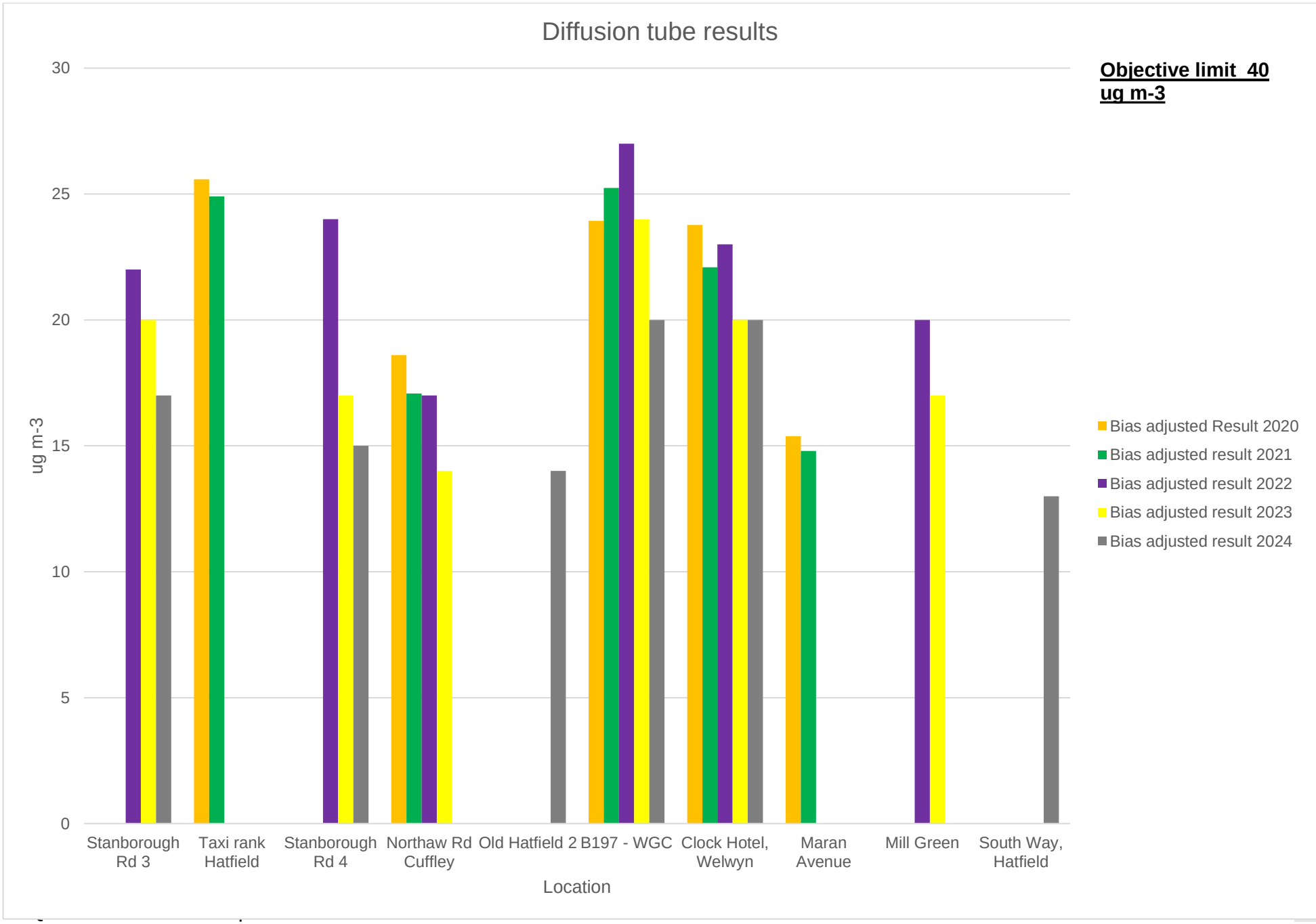
25
20
15
10
5
0
Codicote Road, Welwyn
Great North Rd A1000(2)
Bessemer Road
West View, Hat, next to nox analyser
A1000 Brookmans Park
London Rd Welwyn
Valley Rd, WGC
Cuffley High Street 1
Cuffley High Street 2
Briars Lane, Hatfield
Black Fan Rd
Adjacent to A1(M)
Location
Objective limit 40 ug m-3
Bias adjusted Result 2020
Bias adjusted result 2021
Bias adjusted result 2022
Bias adjusted result 2023
Bias adjusted result 2024


Diffusion tube results
ug m-3
40
35
30
25
20
15
10
5
0
Parkside, Welwyn
Knighsfield, WGC
Heyford Way, Hatfield
St Albans Rd West, Hatfield
Stanborough Rd 2
Campion Road, Hatfield
Great North Road, Hatfield
Cuffley High St 3
Nr Stanborough Close WGC
Great North Road, Hatfield
B195/Broadwater Road, WGC
Comet Way on A1001
Wellfield Rd, Hatfield
Location
Objective limit 40 ug m-3
Bias adjusted Result 2020
Bias adjusted result 2021
Bias adjusted result 2022
Bias adjusted result 2023
Bias adjusted result 2024


Diffusion tube results
40
35
30
25
20
15
10
5
0
ug m-3
Objective limit 40 ug m-3
Bias adjusted Result 2020
Bias adjusted result 2021
Bias adjusted result 2022
Bias adjusted result 2023
Bias adjusted result 2024
Roadside Laybay A414
Garden Village, Hatfield
Burrowfield
Longmead, Hatfield
Ellenbrook Lane @ A1001
Old Hatfield 1
West View, Hatfield
West View, Hatfield
West View, Hatfield
Taxi rank WGC
Location


Diffusion tube results
Objective limit 40 ug m-3
ug m-3
30
25
20
15
10
5
0
Stanborough Rd 3
Taxi rank Hatfield
Stanborough Rd 4
Northaw Rd Cuffley
Old Hatfield 2
B197 - WGC
Clock Hotel, Welwyn
Maran Avenue
Mill Green
South Way, Hatfield
Location
Bias adjusted Result 2020
Bias adjusted result 2021
Bias adjusted result 2022
Bias adjusted result 2023
Bias adjusted result 2024

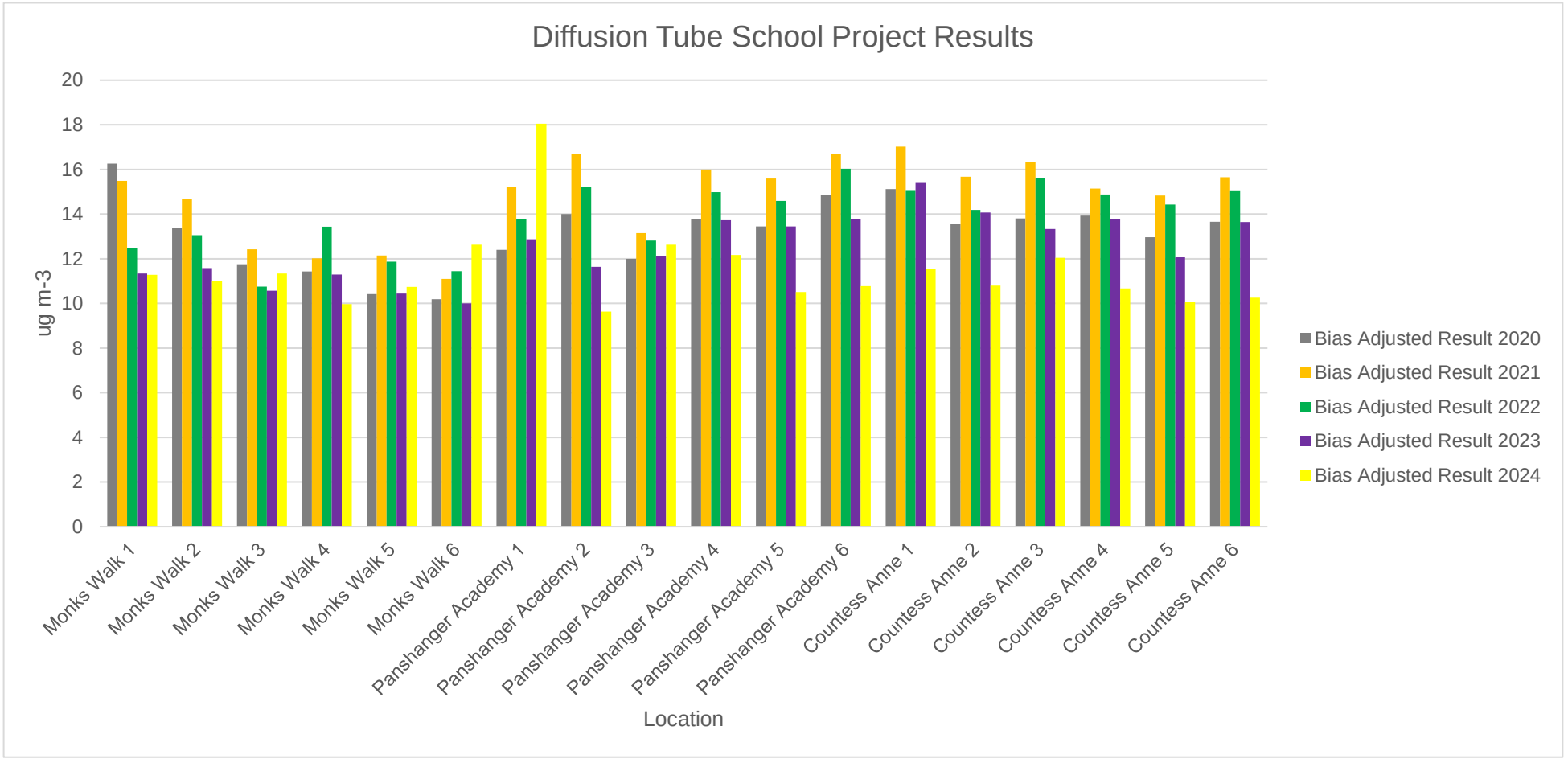

Diffusion Tube School Project Results
ug m-3
20
18
16
14
12
10
8
6
4
2
0
Monks Walk 1
Monks Walk 2
Monks Walk 3
Monks Walk 4
Monks Walk 5
Monks Walk 6
Panshanger Academy 1
Panshanger Academy 2
Panshanger Academy 3
Panshanger Academy 4
Panshanger Academy 5
Panshanger Academy 6
Countess Anne 1
Countess Anne 2
Countess Anne 3
Countess Anne 4
Countess Anne 5
Countess Anne 6
Location
Bias Adjusted Result 2020
Bias Adjusted Result 2021
Bias Adjusted Result 2022
Bias Adjusted Result 2023
Bias Adjusted Result 2024

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 (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
WHNOX	522106	209460	Roadside	95	95	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 $PM_{2.5}$ Monitoring Results (µg/m^3)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
WHBAM	523292	209170	Roadside	97	97	9	9	10	7	6

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

Notes:

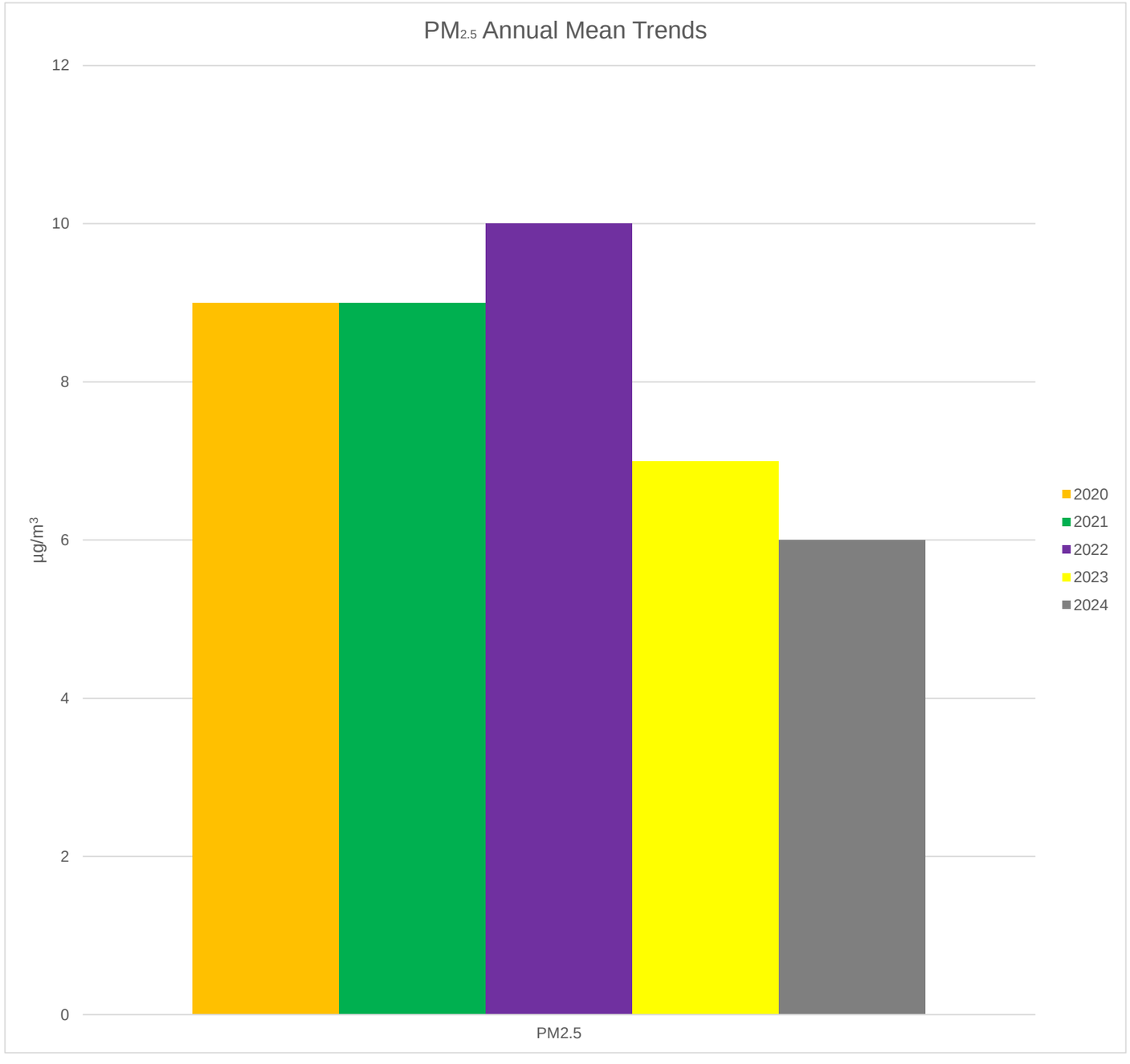
The annual mean concentrations are presented as µg/m^3.

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 $PM_{2.5}$ Concentrations



Appendix B: Full Monthly Diffusion Tube Results for 2024

Table B.1 – NO_2 2024 Diffusion Tube Results ($\mu g/m^3$)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted <(0.78)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
WH1	523326	209153	31.8	30.5	24.6	24.5	28.5	28.4	24.7	23.4	17.3	58.6	33.4	23.4	29.4	22.9	-	
WH2	524340	213087			24.1		18.6	18.9	17.2	16.6	17.0	19.9	29.2	18.1	19.9	15.5	-	
WH3	522106	209460	34.7	34.6	29.3	27.1	28.0	29.8	26.1	27.7	27.9	26.7	31.2	32.6	29.7	23.2	-	
WH4	523213	213237	18.3	17.6	13.5	9.4	10.9	8.6	10.6	9.7	11.1	16.2	20.0	14.0	13.4	10.5	-	
WH5	530553	202715		30.8	28.9	16.1	22.6	19.8	21.1	21.5	22.8	25.2	28.5	14.8	22.6	17.6	-	
WH6	530502	202694		19.8	24.0	16.0	15.9	19.2	13.3	16.2	19.6	23.6	27.4		19.5	15.2	-	
WH7	522193	208434	29.0	29.9	24.7	17.8	19.1	9.4	16.9	14.8	24.0	6.7	29.4	22.2	20.2	15.8	-	
WH8	525688	212769	26.2	27.1	22.7	18.6	19.9	19.2	19.8	19.9	18.3	28.0	28.8	21.2	22.5	17.6	-	
WH9	522429	212150	31.4	36.5	27.8	24.2	28.1	22.2	24.8	20.7	35.4	28.3	8.0	24.6	25.8	20.1	-	
WH10	523347	216002	18.9	27.4	26.4	14.8	17.5	15.1	18.2	23.6	19.6	23.5	7.9	14.6	18.7	14.6	-	
WH11	524006	215162	24.7	23.7	17.8	13.5	13.4	15.4	15.5	13.3	13.7	20.1	22.1	18.5	17.7	13.8	-	
WH12	523148	209148	27.7	25.8	23.6	16.3	17.0	17.2	16.8	17.8	9.3	60.3	29.5	7.1	22.7	17.7	-	
WH13	523416	211958	40.6	40.9	33.7	14.9	32.5	34.1	39.4	30.1	35.9	30.7	31.5	26.2	32.5	25.4	-	
WH14	521585	209696	32.9	35.8	27.6	19.2	19.4	13.1	21.6	21.3	25.7	20.8	32.7	19.5	24.0	18.7	-	
WH15	530439	202681	23.1	23.9	22.1	19.0	15.7	15.9	14.6	11.6	10.3	16.3	24.4	18.2	17.9	13.9	-	
WH16	523358	211931	34.7	40.0	36.2	13.3	29.4	31.3	34.5	30.3	31.9	32.3	30.3	23.9	30.5	23.8	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted <(0.78)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
WH17	523293	209164	8.4	25.8	22.0	13.3	18.2	15.2	16.8	19.5	12.5	52.9	28.1	18.3	20.7	16.1	-	
WH18	524285	212988	28.2	32.8	27.0	19.0	23.2	20.0	24.6	21.6	27.0	24.3	33.1	21.2	25.0	19.5	-	
WH19	522144	209516	39.5	42.2	27.2	30.6	33.5	36.8	31.4	30.8	35.2	28.6	37.7	19.3	32.6	25.4	-	
WH20	522466	208908	28.8	27.4	21.7	17.9	19.1	18.0	17.5	16.9	22.4	25.0	33.3	17.1	22.1	17.3	-	
WH21	527258	210364	21.3	25.7	15.7	14.9	26.1	23.6	21.1	20.0	32.8	25.9	28.8	21.3	23.0	18.0	-	
WH22	521801	209471	36.2	35.2	32.0	22.4	24.4	21.4	26.9	23.3	27.9	20.3	32.9	33.6	28.0	21.9	-	
WH23	523036	209830	30.0	29.3	23.2	15.9	19.3	19.2	40.7	18.1	20.2	22.9	27.5	12.8	23.2	18.1	-	
WH24	523251	208495	31.3	30.3	24.4	21.3	23.5	19.8	21.7	20.3	25.0	28.4	33.0	23.4	25.3	19.7	-	
WH25	522093	209431	27.4	36.8	28.6		28.0		24.6	26.6	29.9	20.2	26.4	32.5	27.7	21.6	-	
WH26	522064	209328	41.8	23.4	34.5	33.6	38.7	38.7	37.9	34.4	43.2	16.9	44.0	42.3	36.2	28.3	-	
WH27	522060	209289		38.2	27.7	29.1	24.7	21.6	27.8	22.7	28.9	26.4	30.4	30.7	27.6	21.5	-	
WH28	523545	212021	31.6	24.5	20.9	7.4	22.9	21.5	20.2	18.3	27.1	19.3	33.3	16.6	22.2	17.3	-	
WH29	523623	212056	27.3	29.6	23.0	8.0	19.7	16.9	19.8	15.4	21.2	22.3		13.2	19.6	15.3	-	
WH30	523287	208450	24.0	23.4	19.5	15.8	17.6	12.5	16.9	16.1	18.0	18.4	27.3	5.5	17.9	14.0	-	
WH31	522579	211012	30.3	25.6	25.7	25.1	30.7	25.4	26.9	20.6	30.0	29.6	32.9	7.3	25.9	20.2	-	
WH32	523438	216512	25.5	30.7	28.3	23.1	30.6	25.3	22.6	18.3	25.6	27.6	30.1	25.0	25.9	20.2	-	
WH33	523287	208450	22.4	26.9	17.3	14.3	15.5	13.7	13.9	13.8	16.8	22.6	22.8	6.5	17.1	13.3	-	
SCH1	523466	214929	18.8	20.4	15.1		10.8	5.8	11.8		9.6	18.1	20.5	13.8	14.5	11.3	-	
SCH2	523481	214962	19.0	18.0	15.7	10.0	11.2	10.4	12.4	11.0	8.8	17.3	20.4	15.2	14.2	11.1	-	
SCH3	523544	215011	16.8	18.8	15.2	12.6	11.4	11.3	13.5	12.0	11.0	18.3	20.3	13.3	14.5	11.3	-	
SCH4	523590	215042	18.6	17.6	13.3	6.8	10.5	10.6	10.5	8.9	10.5	16.7	16.2	13.2	12.9	10.0	-	

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted <(0.78)>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
SCH5	523580	215018	15.8	16.6		8.6	29.1	8.6	10.1	8.4	10.0	14.6	17.7	11.9	13.9	10.9	-	
SCH6	523635	215003	20.9	18.9	12.5	12.0	13.6			12.2	16.9	16.4	23.6	15.0	16.3	12.7	-	
SCH7	525626	213140	19.2	19.9	13.2	12.9	18.3	11.7		5.2	12.7	17.4	24.3	99.8	23.6	18.4	-	
SCH8	525616	213123	10.8	19.8	15.1	10.6	10.8	7.5	8.3	8.8	10.6	13.3	18.8	13.9	12.1	9.4	-	
SCH9	525622	213114	23.5	22.8	15.8	11.6	11.5	13.0		10.9	10.1	17.5	23.6	17.9	16.3	12.7	-	
SCH10	525610	213113	18.8	23.7	18.1	14.1	13.9	13.6	12.7	13.1	12.0	15.4	12.6	19.2	15.5	12.1	-	
SCH11	525594	213093	19.0	21.8	16.4	2.6	12.2	11.5	12.1	11.6	13.8	17.5	11.7	11.5	13.5	10.5	-	
SCH12	525578	213070	16.8	21.0	16.4	11.9	11.0	10.7	11.7	9.7	12.8	15.5	12.5	15.8	13.7	10.7	-	
SCH13	522985	208913	18.6	23.5	15.9	15.3	16.0	4.9	14.3	14.1	12.8	17.1	5.4	19.6	14.8	11.5	-	
SCH14	523003	208919	15.8	21.9	16.2	15.4	11.8	8.1	13.0	11.8	11.4	16.7	12.8	11.2	13.6	10.6	-	
SCH15	523018	208925	20.9	22.3	16.7	14.0	13.8	11.9	12.7	12.0	13.0	19.3	13.0	15.7	15.4	12.0	-	
SCH16	523044	208936	19.2	21.2	13.5	13.1	12.4	11.1	10.9	11.5	6.6	17.0	11.4	16.2	13.7	10.7	-	
SCH17	523086	208961	10.8	20.2	15.0	12.3	12.2	11.8	11.7	11.6	8.2	14.0	11.4	15.8	12.7	9.9	-	
SCH18	523078	208926	23.5		14.3	13.2	12.1	4.1	12.6	11.0	10.6	16.3	13.2	13.7	13.6	10.6	-	

☒ **All erroneous data has been removed from the NO_2 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.**

☒ **Welwyn Hatfield Council confirm that all 2024 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**.

NO_2 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

QA/QC of Diffusion Tube Monitoring

The diffusion samples have been analysed in accordance with Socotec (Didcot) standard operating procedure. This method meets the guidelines set out in DEFRA's 'Diffusion Tubes For Ambient NO_2 Monitoring: Practical Guidance.'

The tubes were prepared by spiking acetone:triethanolamine (50:50) onto the grids prior to the tubes being assembled. The tubes were desorbed with distilled water and the extract analysed using a segmented flow autoanalyser with ultraviolet detection. All samples were received in good condition, unless otherwise stated in the comments field of results table. Please note:

(i) As set out in the practical guidance, the results were initially calculated assuming an ambient temperature of 11oC, the reported values have been adjusted to 20oC to allow for direct comparison with EU limits.

(ii) The reported results have not been bias adjusted.

This analysis of diffusion tube samples to determine the amount of nitrogen dioxide present on the tube is within the scope of our UKAS schedule. Any further calculations and assessments requiring exposure details and conditions fall outside the scope of our accreditation.

Where possible, the diffusion tube distribution and collection dates have been in line with the DRFRA calendar dates. However, due to resourcing and staff availability, this has not always been possible. All collection and distribution dates have been recorded and submitted to the laboratory and have been entered into the diffusion tube data processing spreadsheet.

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2025 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.

Welwyn Hatfield Council have applied a national bias adjustment factor of 0.78 to the 2024 monitoring data. A summary of bias adjustment factors used by Welwyn Hatfield Council over the past five years is presented in Table C.1.

Table C.1 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	National	04/25	0.78
2023	National	03/24	0.77
2022	National	03/23	0.76
2021	National	03/22	0.78
2020	National	06/21	0.76

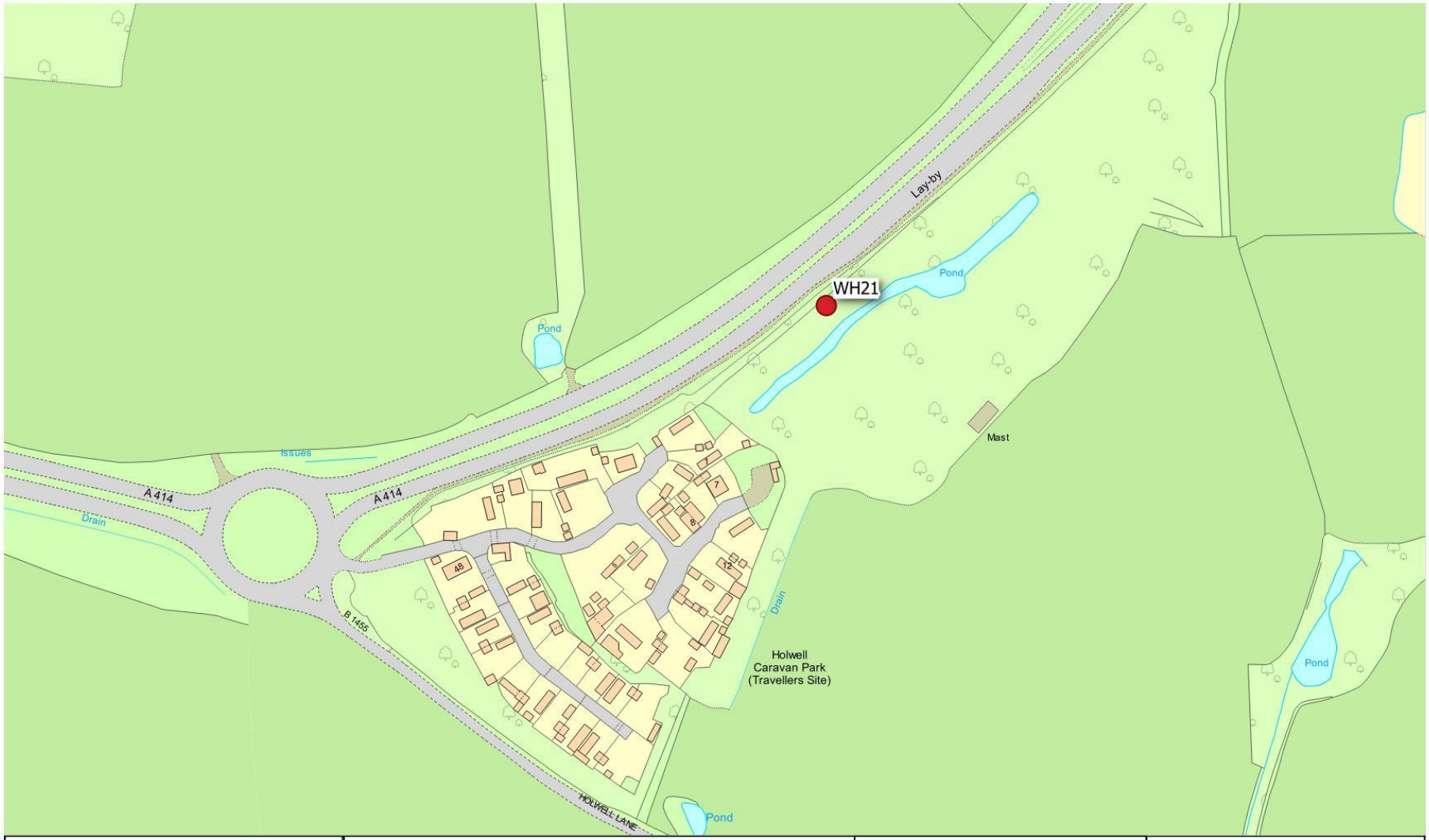
QA/QC of Automatic Monitoring

The council are supported with data management by Ricardo Energy and Environment. The council are also supported by Enviro Technology who regularly service and maintain the automatic analysers and respond to breakdowns when required. Where equipment requires calibration, this is done remotely.

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

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

In order to ensure that all of the monitoring location maps are presented in a good scale, this page has been intentionally left blank as the titles would reduce the size of the first location map, making it harder to view.



WELWYN HATFIELD

Council Offices, The Campus
Welwyn Garden City, Herts, AL8 6AE

Title:	Scale:	Notes:
	Date: 25-04-2025	
Project:	Drawn:	


Attimore Veterinary Hospital
ED & Ward Boy
HALL BARNS
BLACK FAN ROAD
WH8
LATIMER GARDENS
El Sub Sta
Shelter
Birchwood House
Ppg Sta
ED & Ward Boy
WELWYN HATFIELD
Council Offices, The Campus
Welwyn Garden City, Herts, AL8 6AE
Title:
Scale:
Notes:
Date:
25-04-2025
Project:
Drawn:
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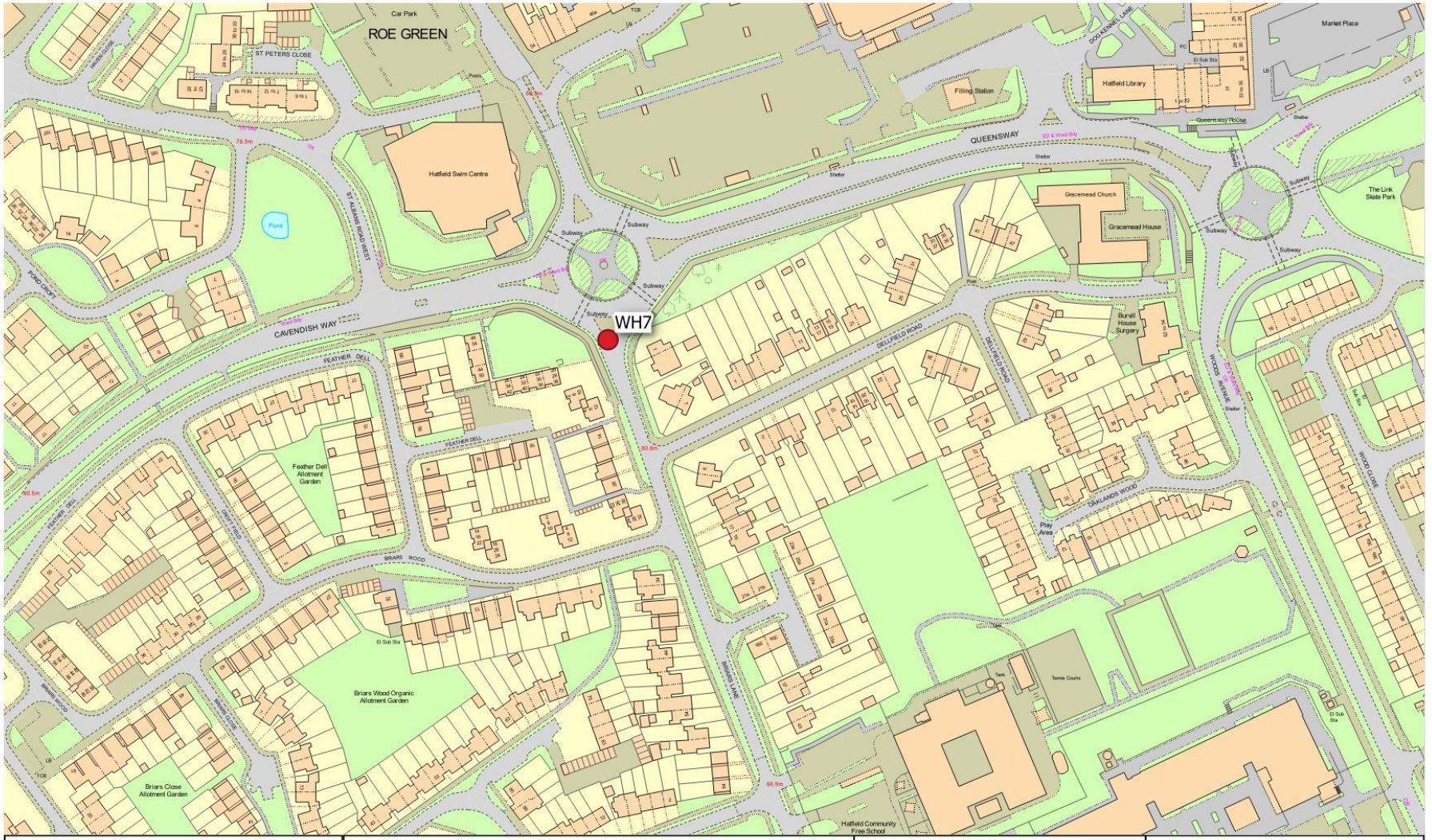


WELWYN HATFIELD Council Offices, The Campus Welwyn Garden City, Herts, AL8 6AE	Title:	Scale:	Notes:
		Date: 25-04-2025	
	Project:	Drawn:	
	© Crown Copyright. All rights reserved Welwyn Hatfield Borough Council LA100019547 2019		

WELWYN HATFIELD

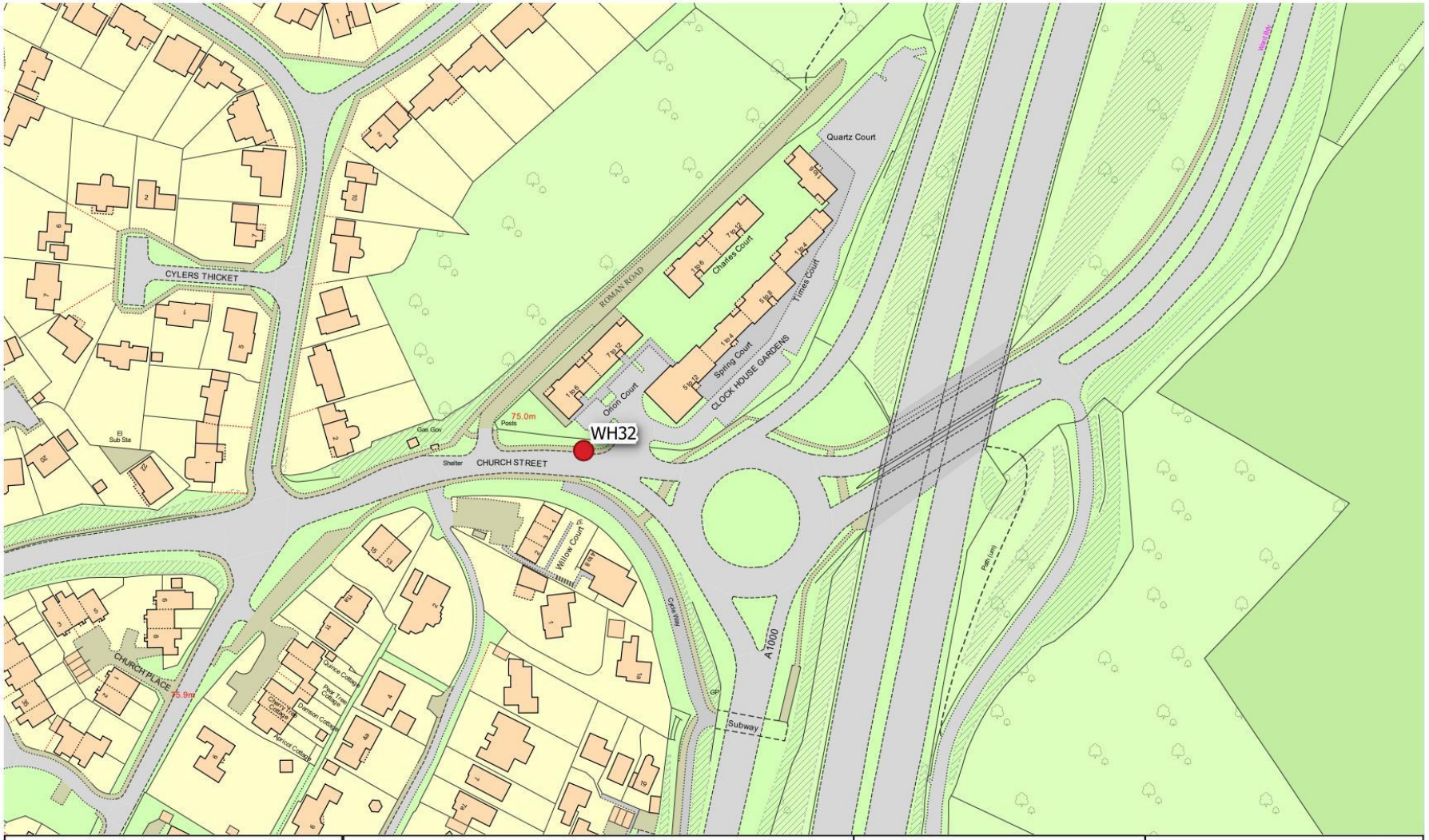
Council Offices, The Campus
Welwyn Garden City, Herts, AL8 6AE

Title:	Scale:	Notes:
	Date: 25-04-2025	
Project:	Drawn:	

WELWYN HATFIELD

Council Offices, The Campus
Welwyn Garden City, Herts, AL8 6AE

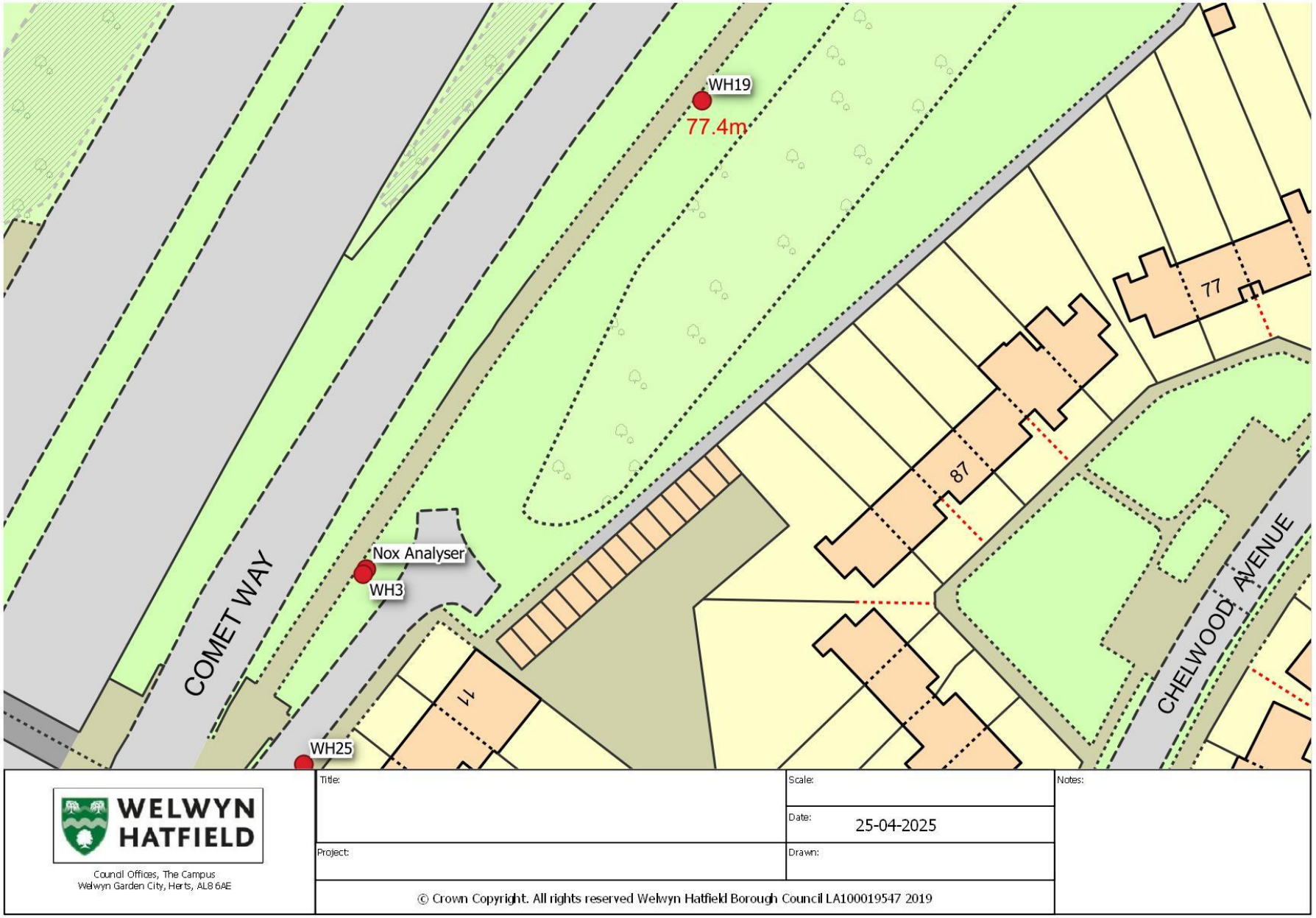
Title:	Scale:	Notes:
	Date: 25-04-2025	
Project:	Drawn:	



WELWYN HATFIELD

Council Offices, The Campus
Welwyn Garden City, Herts, AL8 6AE

Title:	Scale:	Notes:
	Date: 25-04-2025	
Project:	Drawn:	


WH19
77.4m
COMET WAY
Nox Analyser
WH3
WH25
77
87
71
CHELWOOD AVENUE
WELWYN HATFIELD
Council Offices, The Campus
Welwyn Garden City, Herts, AL8 6AE
Title:
Scale:
Notes:
Date:
25-04-2025
Project:
Drawn:
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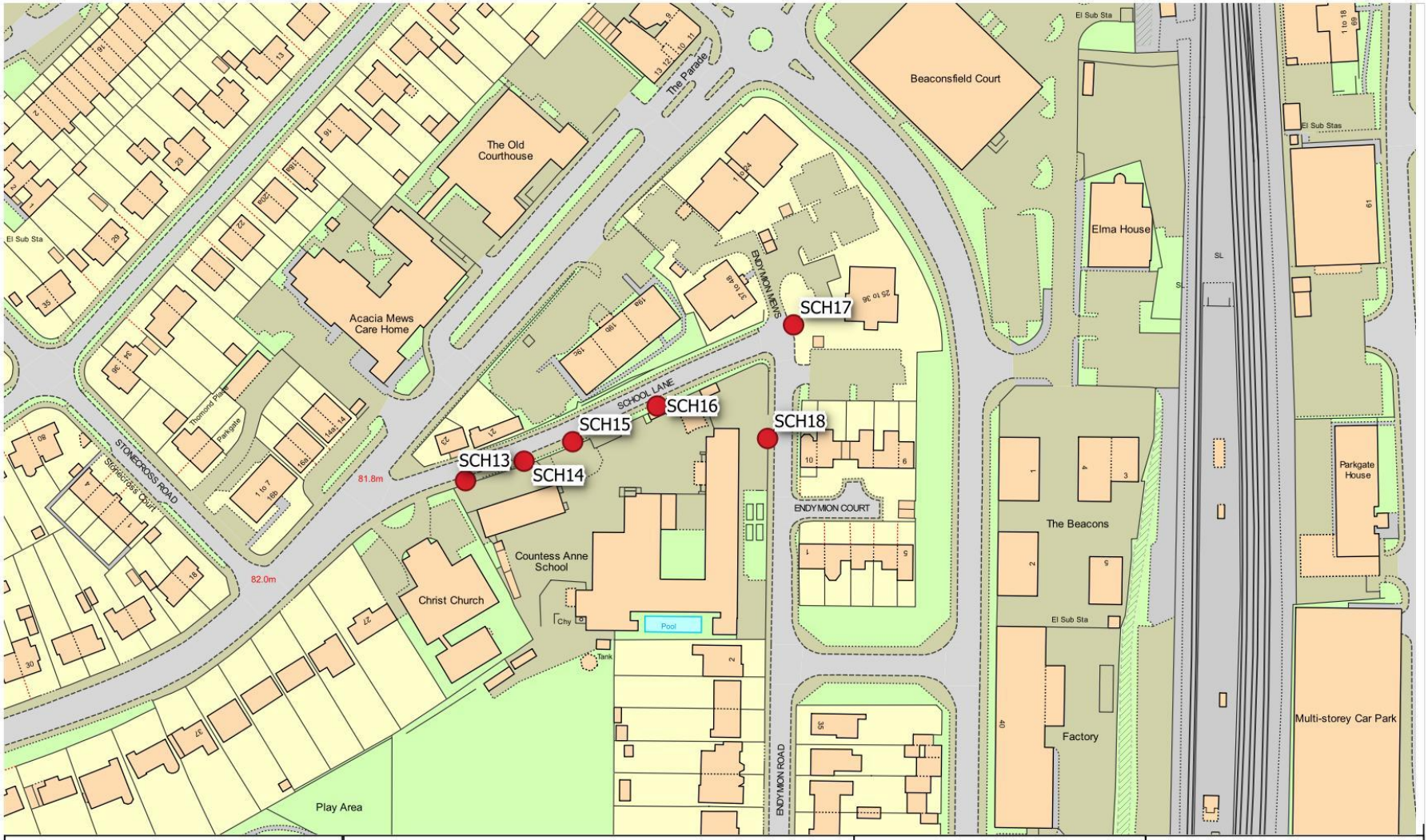
SCH13
SCH14
SCH15
SCH16
SCH17
SCH18
The Old Courthouse
Acacia Mews Care Home
Beaconsfield Court
Elma House
Countess Anne School
Christ Church
Play Area
The Beacons
Factory
Parkgate House
Multi-storey Car Park
ENDYMION COURT
ENDYMION ROAD
ENDYMION MEWS
SCHOOL LANE
STONECROSS ROAD
The Parade
81.8m
82.0m
WELWYN HATFIELD
Council Offices, The Campus
Welwyn Garden City, Herts, AL8 6AE
Title:
Scale:
Notes:
Date:
25-04-2025
Project:
Drawn:
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Library
MAYNARD PLACE
B157
El
Sub Sta
St
Andrews
Church
GP
LB
Tel Ex
73.7m
63.1m
WH5
WH6
WH15
17
to
23
25
27
29
31
33 to 43
45 to 55
6 to 9
7
6
5
15
14
12
22
21
20
2
2d
2a
1a
3
1
8
16
5
2
4
6
16
18
20
22
26
28
1
2
1
2
14
WELWYN
HATFIELD
Council Offices, The Campus
Welwyn Garden City, Herts, AL8 6AE
Title:
Scale:
Notes:
Date:
25-04-2025
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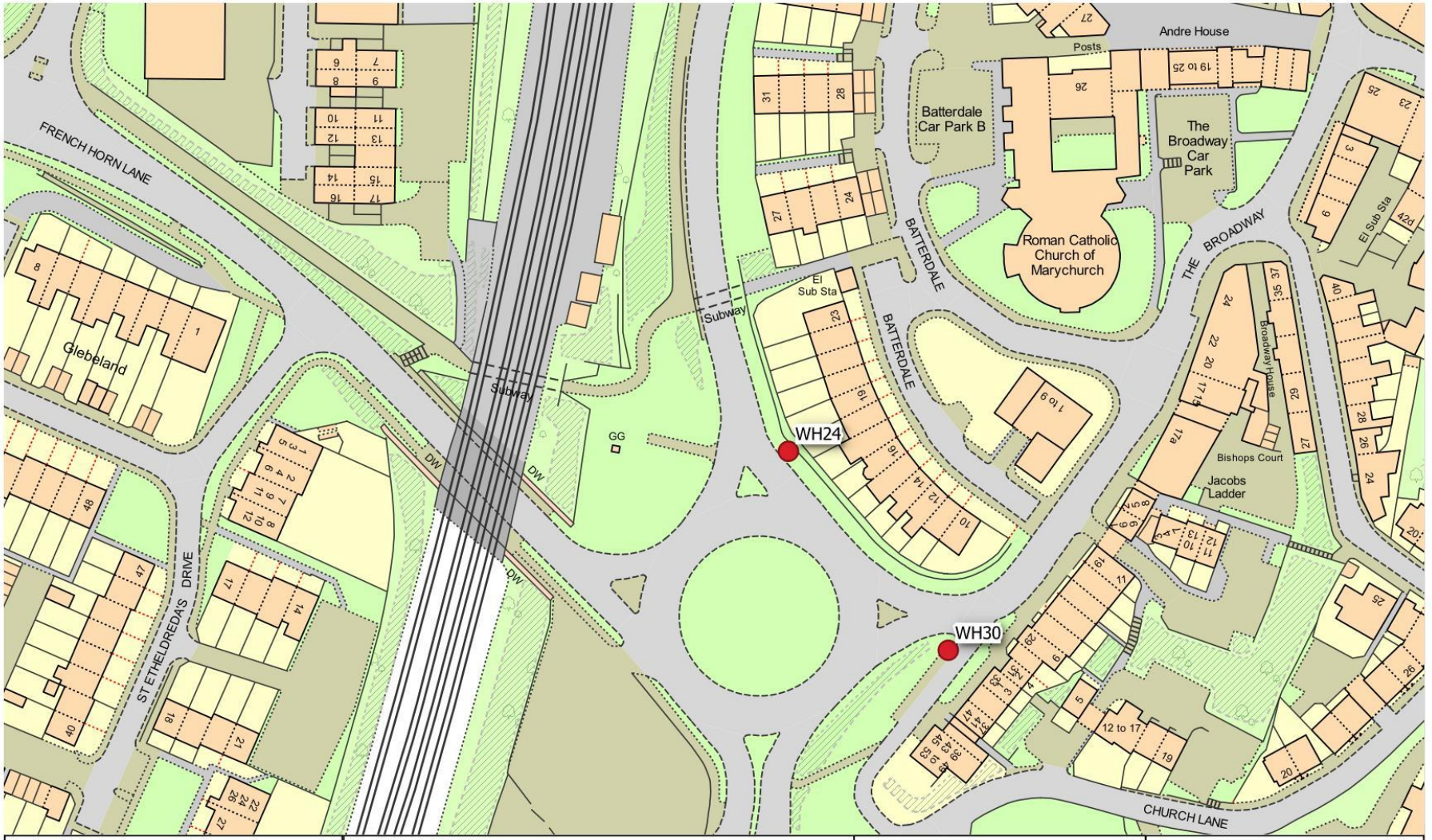
FRENCH HORN LANE
Glebeland
Subway
Subway
DW
DW
DW
GG
WH24
WH30
ST ETHELDREDAS DRIVE
Batterdale Car Park B
Andre House
Posts
The Broadway Car Park
Roman Catholic Church of Marychurch
BATTERDALE
BATTERDALE
THE BROADWAY
El Sub Sta
El Sub Sta
Broadway House
Bishops Court
Jacobs Ladder
12 to 17
CHURCH LANE
WELWYN HATFIELD
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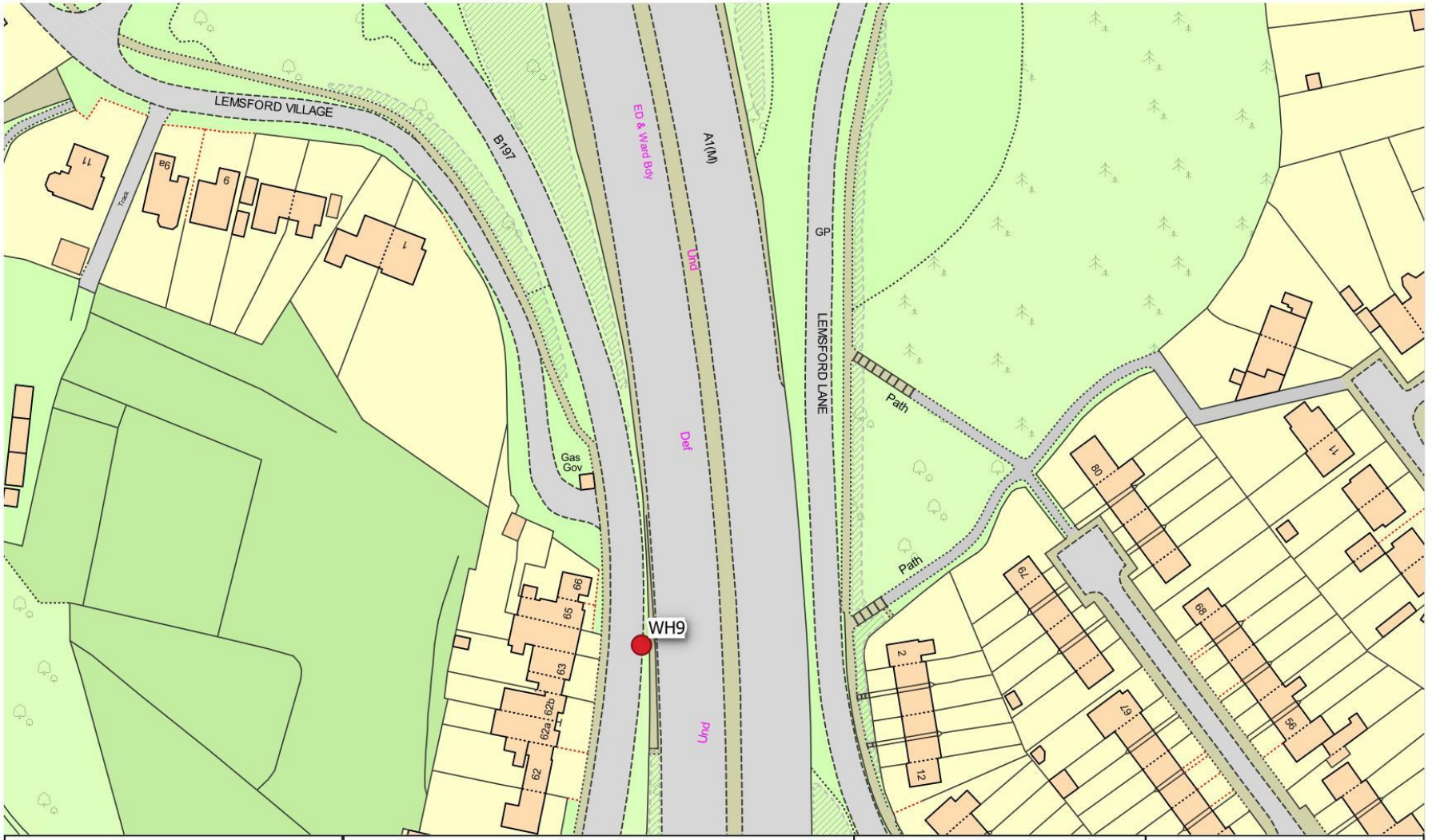
LEMSFORD VILLAGE
B197
A1(M)
ED & Ward Bdy
Und
Def
GP
LEMSFORD LANE
Path
Path
Gas Gov
WH9
Track
11
9a
9
1
66
65
63
62b
62a
62
2
12
67
79
80
68
56
11
Title:
Scale:
Date:
25-04-2025
Notes:
Project:
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Title:	Scale:	Notes:
	Date: 25-04-2025	
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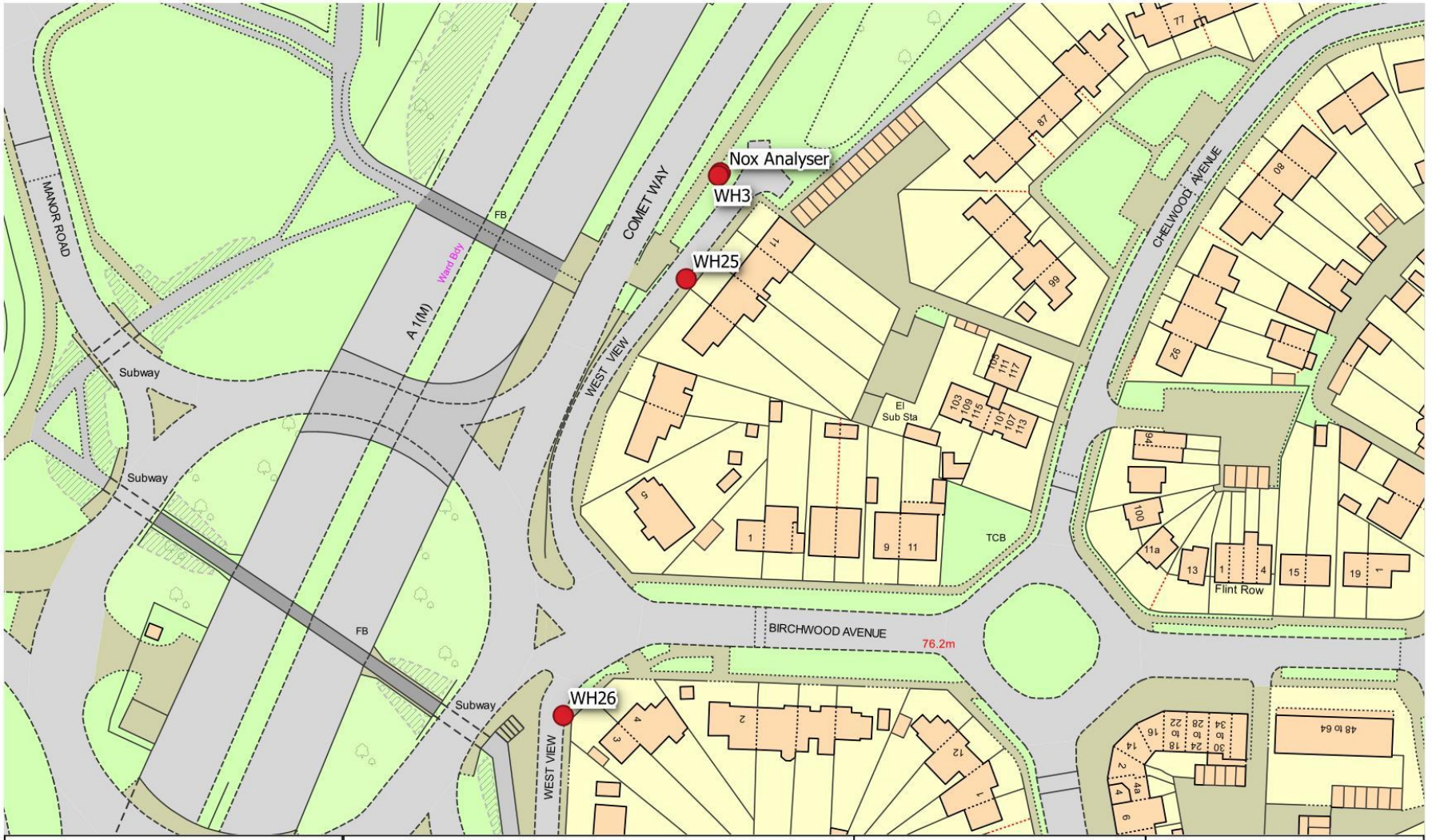
Nox Analyser
WH3
WH25
WH26
COMET WAY
WEST VIEW
MANOR ROAD
A 1(M)
Ward Bdy
FB
Subway
Subway
Subway
FB
El Sub Sta
TCB
BIRCHWOOD AVENUE
76.2m
CHELWOOD AVENUE
Flint Row
WELWYN HATFIELD
Council Offices, The Campus
Welwyn Garden City, Herts, AL8 6AE
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Welwyn Garden City, Herts, AL8 6AE

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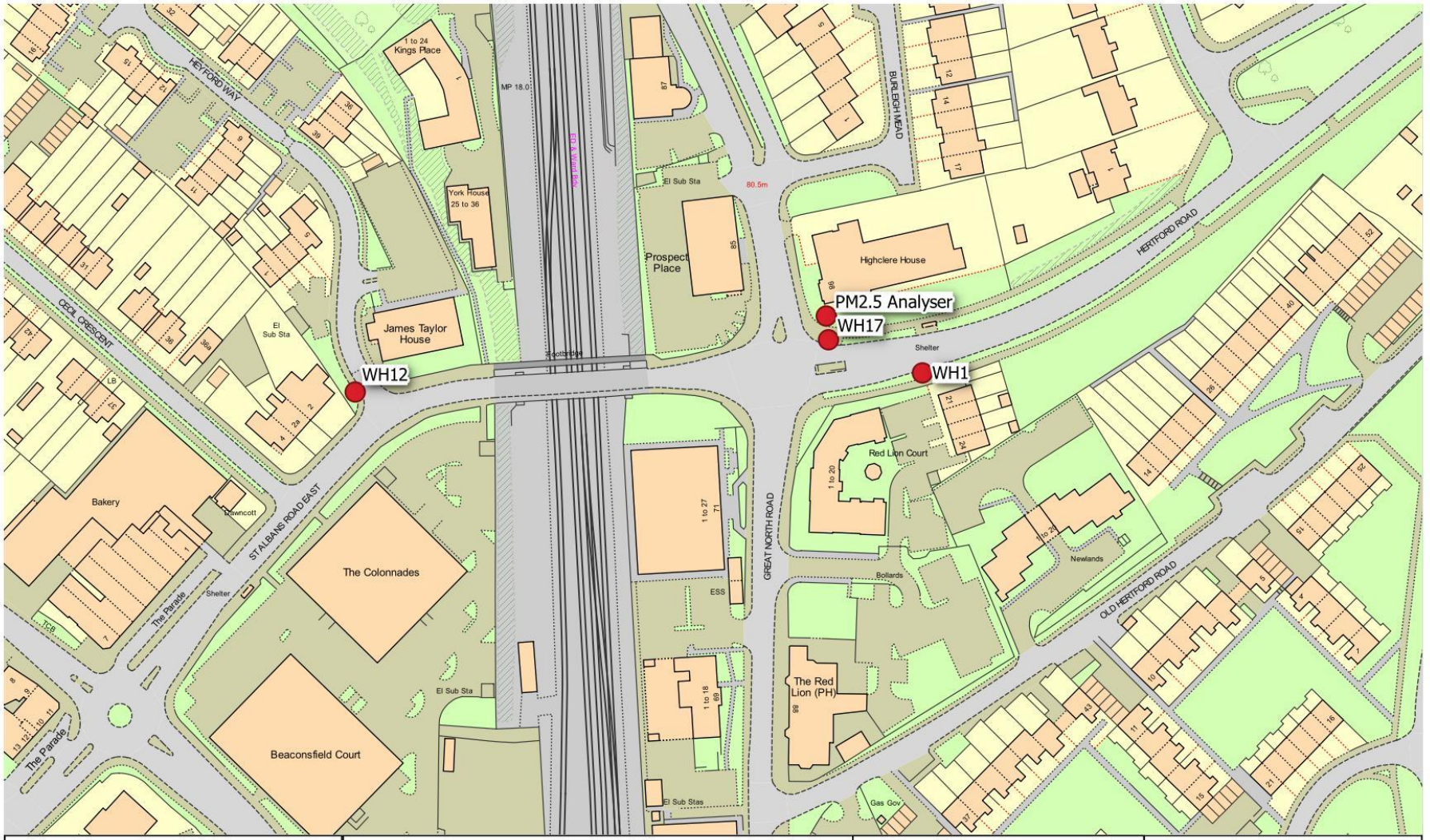

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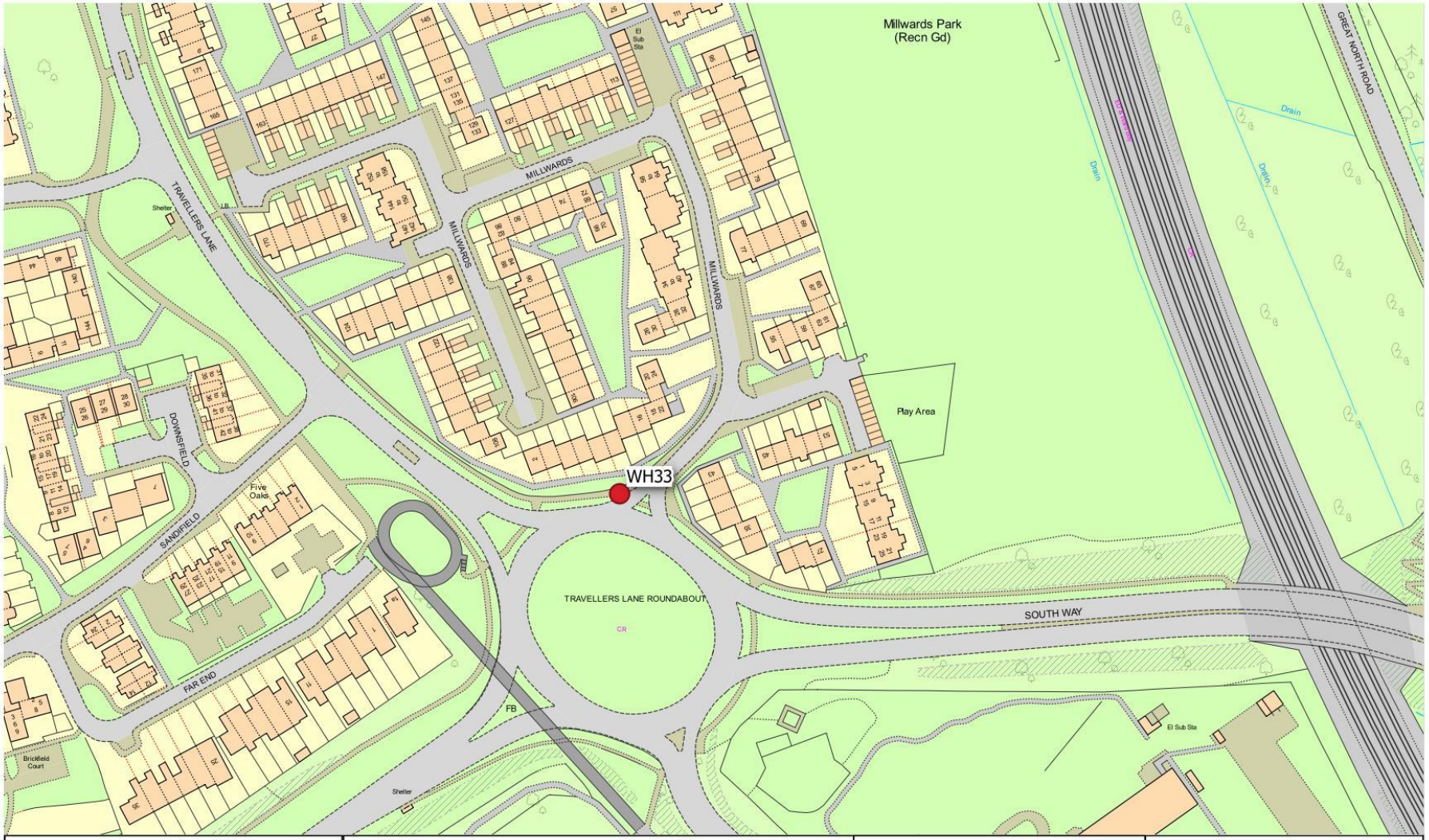
Millwards Park
(Recn Gd)
GREAT NORTH ROAD
Drain
Drain
Drain
MILLWARDS
MILLWARDS
MILLWARDS
TRAVELLERS LANE
Shelter
LB
Play Area
WH33
DOWNSFIELD
SANDFIELD
Five Oaks
TRAVELLERS LANE ROUNDABOUT
SOUTH WAY
FAR END
FB
El Sub Sta
Brickfield Court
Shelter
WELWYN HATFIELD
Council Offices, The Campus
Welwyn Garden City, Herts, AL8 6AE
Title:
Scale:
Notes:
Date: 25-04-2025
Project:
Drawn:
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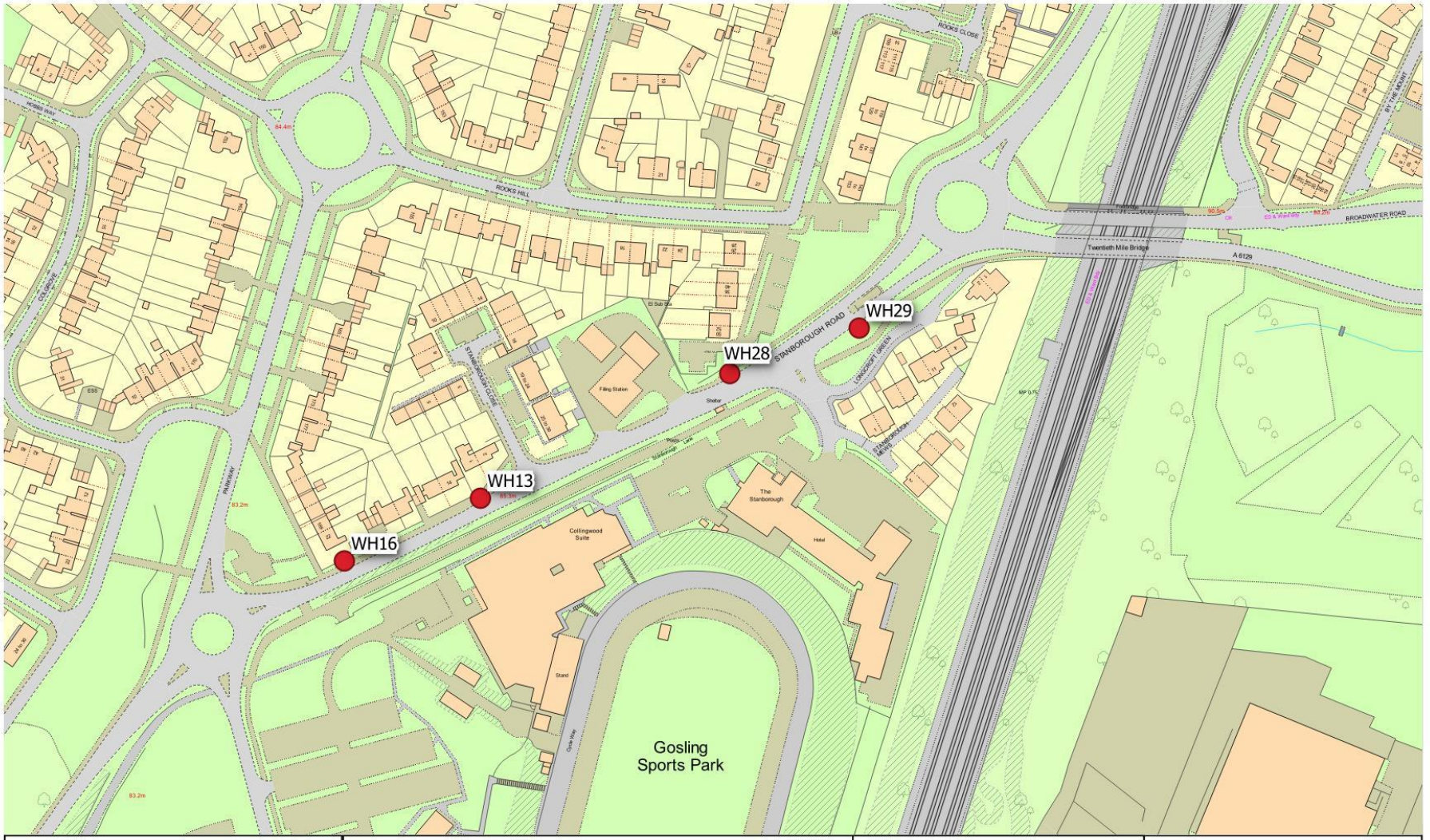

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Title:	Scale:	Notes:
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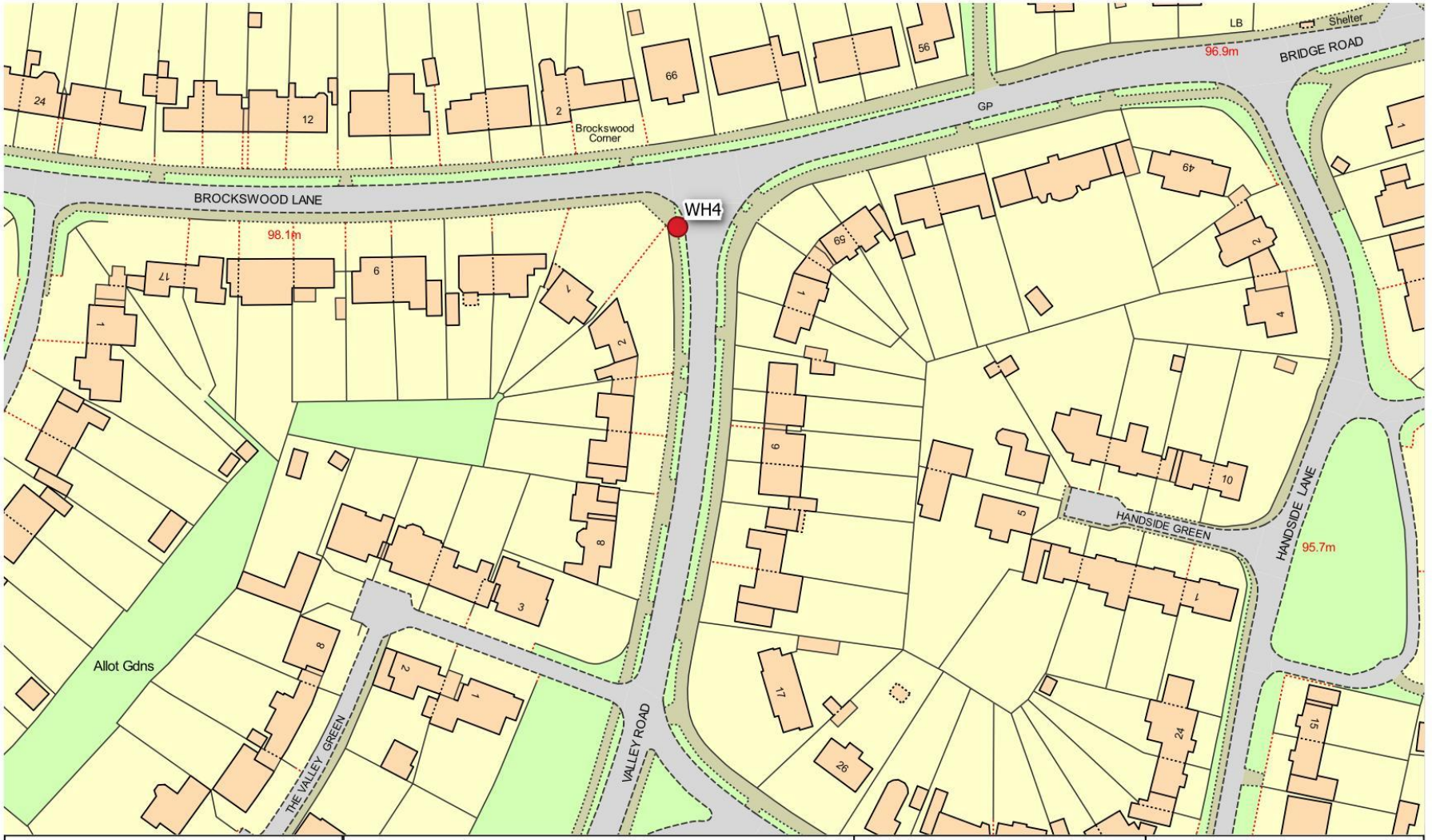
Project:	Drawn:	


BROCKSWOOD LANE
WH4
98.1m
BRIDGE ROAD
96.9m
GP
Brockswood Corner
LB
Shelter
HANDSIDE GREEN
HANDSIDE LANE
95.7m
VALLEY ROAD
THE VALLEY GREEN
Allot Gdns
WELWYN HATFIELD
Council Offices, The Campus
Welwyn Garden City, Herts, AL8 6AE
Title:
Scale:
Notes:
Date:
25-04-2025
Project:
Drawn:
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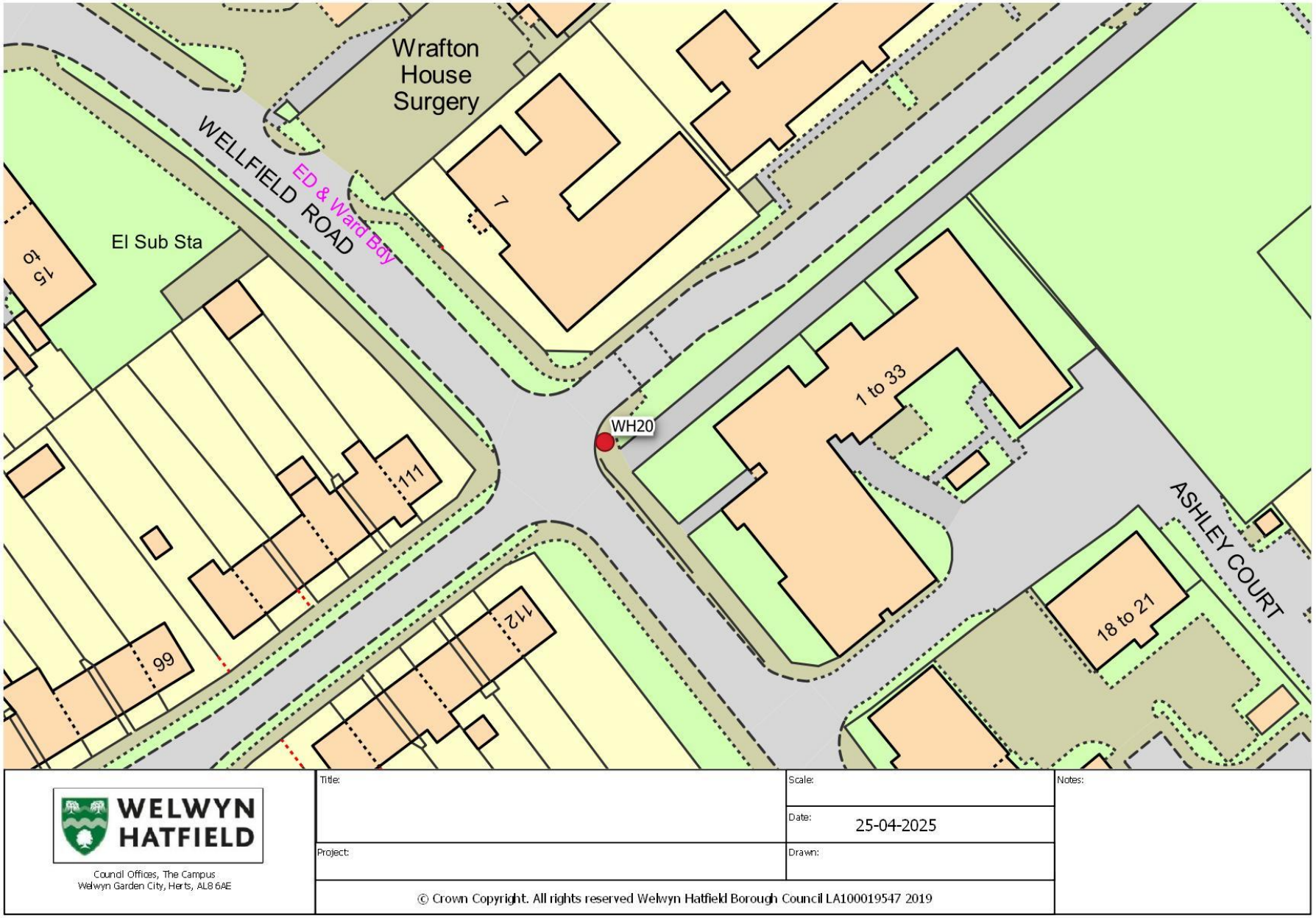
Wrafton
House
Surgery
WELLFIELD ROAD
ED & Ward Boy
7
El Sub Sta
15
10
WH20
1 to 33
111
99
112
ASHLEY COURT
18 to 21
WELWYN
HATFIELD
Council Offices, The Campus
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Title:
Scale:
Notes:
Date:
25-04-2025
Project:
Drawn:
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Title:	Scale:	Notes:
	Date: 25-04-2025	
Project:	Drawn:	


Subway
Cycle Way
Subway
FB
Subway
WEST
El Sub Sta
TCB
BIRCHWOOD AVENUE
76.2m
Flint Row
WH26
WH27
WEST VIEW
Hatfield Tunnel
PH
Hotel
LB
WELWYN HATFIELD
Council Offices, The Campus
Welwyn Garden City, Herts, AL8 6AE
Title:
Scale:
Notes:
Date:
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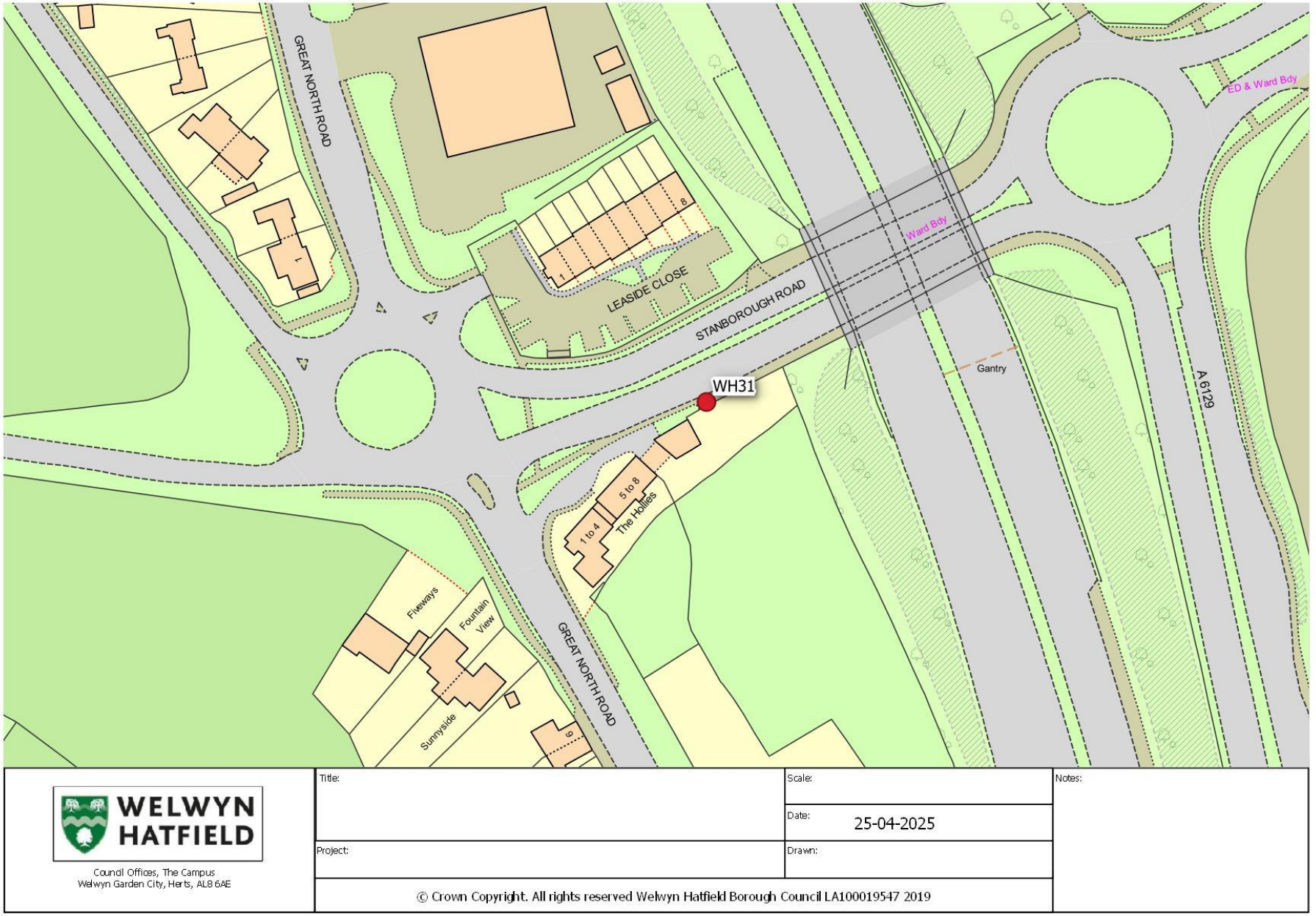
GREAT NORTH ROAD
LEASIDE CLOSE
STANBOROUGH ROAD
Ward Bdy
ED & Ward Bdy
Gantry
A 6129
WH31
5 to 8
The Hollies
1 to 4
Fiveways
Fountain View
Sunnyside
GREAT NORTH ROAD
WELWYN HATFIELD
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Title:
Scale:
Notes:
Date:
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Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[5]

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

[5] 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
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.
- Chemical hazards and poisons report: Issue 28. June 2022. Published by UK Health Security Agency
- Air Quality Strategy – Framework for Local Authority Delivery. August 2023. Published by Defra.