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: August 2025

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Local Responsibilities and Commitment

This ASR was prepared by the Environmental Health Department of Hertsmere Borough Council with the support and agreement of the following officers and departments:

Craig Gent (Senior Scientific Officer) – Environmental Health

This ASR has been approved by:

Councillor Paul Richards: Leader of the Liberal Democrat Group, Deputy Leader of the Council: Responsible for Environmental Sustainability and Net Zero and Public Health

Paul Sawyer: Head of Environmental Health, Licensing and Resilience

This ASR has been welcomed by Sarah Perman who is the Director of Public Health at Hertfordshire County Council.

If you have any comments on this ASR please send them to Craig Gent at:

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Executive Summary: Air Quality in Our Area

Air Quality in Hertsmere Borough 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.

Hertsmere Borough Council is located in South East England, within the County of Hertfordshire. To the south lie the London Boroughs of Harrow and Barnet, to the east the London Borough of Enfield, to the northeast Welwyn Hatfield District, to the north St Albans District and to the west Watford District and Three Rivers District. The M25, M1 and A1 either border or run through Hertsmere. The main air quality issues are related to emissions from traffic, particularly within the town of Potters Bar and the village of Elstree, and close to major roads of the M25 and M1.

Historically the main Air Quality pollutant of concern within Hertsmere has been nitrogen dioxide (NO_2) (Annual Mean).

Six AQMAs of varying size were previously declared by Hertsmere Borough Council for nitrogen dioxide:

- Two AQMAs have were declared in the town of Potters Bar, one in the High Street and one on the periphery close to the M25;
- One AQMA was declared within the village of Elstree;
- Three AQMAs were declared in the vicinity of motorways, one close to junction 1 of the M1, and two in proximity of junction 23 of the M25.

Annual Mean Concentrations decreased at all monitoring locations within Hertsmere Borough Council during 2020, which coincided with a decrease in vehicles using the highway network in the wake of the Covid 19 epidemic. However despite the lifting of lockdown restrictions during 2021 and a reopening of the economy, a sustained decrease in all monitoring locations was observed at all monitoring locations. Following 2021, sustained compliance with the Annual Mean National Air Quality Objective for nitrogen dioxide was again observed during the 2022, 2023 and during the 2024 monitoring years, at all monitoring locations throughout Hertsmere Borough Council's administrative area, including within all previously declared Air Quality Management Areas.

Following sustained compliance with the Annual Mean National Air Quality Objective for nitrogen dioxide at all six Air Quality Management Areas (AQMAs), Hertsmere Borough Council reviewed the feasibility of revoking all six AQMAs, during 2023. Subsequently Hertsmere Borough Council revoked all six of its AQMAs on the 2nd May 2024. Further discussion around the revocation of AQMAs 1-6, will take place within Section 2 of this report.

Hertsmere Borough Council has actively worked to improve air quality in its area through the previous implementation of an Air Quality Action Plan. Hertsmere Borough Council is

also working in partnership with Hertfordshire County Council on their Air Quality Strategy and Implementation Plan 2019 and through the Hertfordshire Local Transport Plan (LTP4 2018 - 2031), which was developed in partnership with Transport, Planning and Public Health colleagues.

Hertsmere Borough Council belongs to the Herts & Beds & Neighbouring Authorities Air Quality Forum; which involves other local authorities within Hertfordshire, Bedfordshire and Buckinghamshire. The group meets and discusses Air Quality, which encourages a consistent approach to dealing with Air Quality related matters, in close connection with the County Councils.

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.

Conclusions and Priorities

Hertsmere Borough Council saw decreases of the nitrogen dioxide annual mean concentration at the vast majority of its Diffusion Tube monitoring locations, during 2024. There was one marginal increase of 0.4 µg/m^3, observed at Diffusion Tube Monitoring Location HM61 located at 31 Blanche Lane, South Mimms, during 2024, compared to the 2023 Annual mean concentration of 25.1 µg/m^3, resulting in an Annual Mean concentration of 25.5 µg/m^3. All Diffusion Tube locations also sustained compliance with the nitrogen dioxide annual mean Air Quality objective, prior to the application of a Bias Adjustment correction factor and where necessary Annualisation. Therefore as summarised above Hertsmere Borough Council successfully revoked of all six of its AQMAs, during 2024.

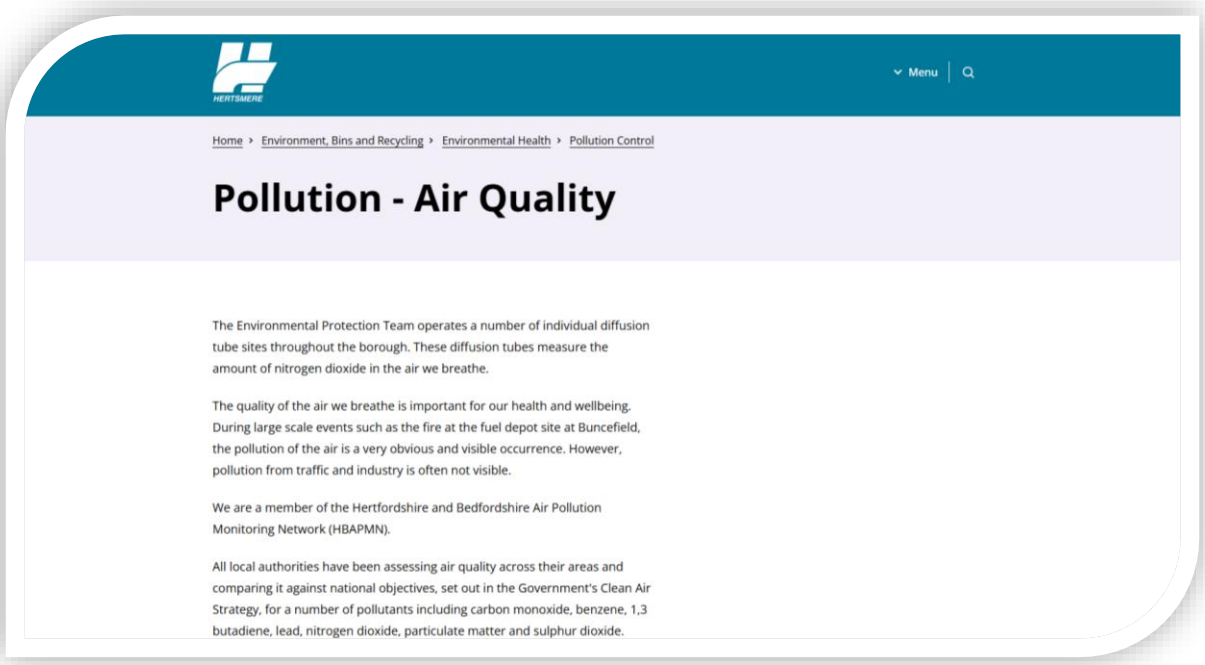
Following the revocation of all AQMAs within Hertsmere, Hertsmere Borough Council will develop a Local Air Quality Strategy, to ensure air quality remains a high profile issue and to ensure that it is able to respond quickly, in the event of a deterioration of Air Quality.

How to get Involved Hertsmere

Members of the public can help improve air quality in Hertsmere by reducing travel where possible and travelling using sustainable transport options such as walking, cycling and using public transport. Further information regarding Hertsmere's air quality and past reports can be found on the website www.hertsmere.gov.uk/Home.aspx

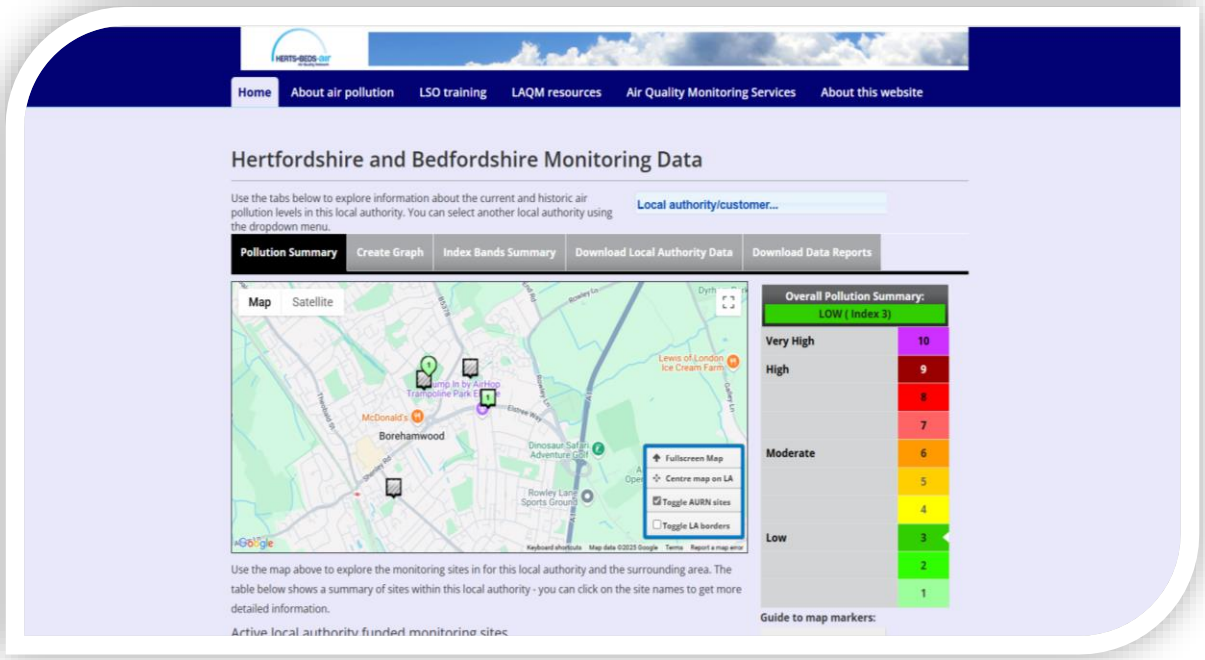
Borough Council's Air Quality Webpage

https://www.hertsmere.gov.uk/environment-bins-and-recycling/environmental-health/pollution-control/pollution-air-quality



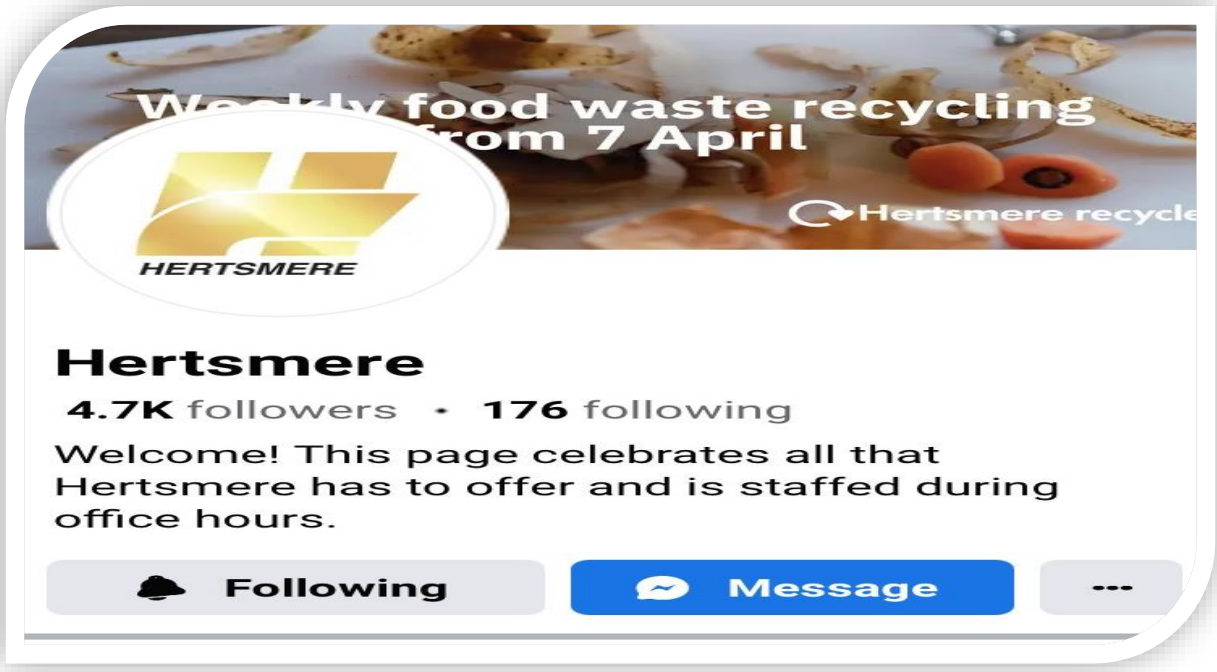
Hertfordshire and Bedfordshire Monitoring Data

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



Facebook

https://en-gb.facebook.com/login.php/



There are numerous simple measures which the public may adopt in order to improve the Air Quality around them. Such measures include,

- Making short trips and journeys on foot or by bike instead of by car, or using public transport.

- Car sharing with colleagues, or with other parents on the school run.

- Avoid Idling whilst your vehicle is stationary, particularly near schools, hospitals and care homes.

- Purchasing low-emission electric and/or hybrid vehicles, with government funding and grants available. Please see,

  https://www.gov.uk/plug-in-vehicle-grants

- Conserving fuel efficiency of vehicles through ensuring correct tyre pressure is maintained.

- Upgrading boilers to newest and most efficient gas condensing boilers with lowest NOx (and carbon) emissions, or consider installing an Air Source Heat Pump which is a renewable way of heating your home, by absorbing heat from the air outside and releasing it inside.

- Ensuring your home is sufficiently insulated.

- Installing sources of renewable energy such as solar panel electricity systems, also known as solar photovoltaics, wind turbines or Air Source Heat Pumps.

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1 Local Air Quality Management

This report provides an overview of air quality in Hertsmere Borough 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 Hertsmere Borough 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.

A summary of AQMAs declared by Hertsmere Borough Council can be found in Table 2.1. The table presents a description of the Six AQMAs which were previously designated within Hertsmere Borough Council. 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

All six of Hertsmere Borough Council's Air Quality Management Areas (AQMAs) remained active up to their revocation on the 2nd May 2024 and subsequently are reported within the 2025 Annual Status Report. A copy of the Revocation Order may be viewed online via;

Pollution - Air Quality - Hertsmere Borough Council

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
Hertsmere AQMA 1	08/04/2003	NO_2 Annual Mean	Domestic properties 23-27 Dove Lane and caravan site off A1000 Barnet Road	YES	46 µg/m^3	17.4 µg/m^3	7 years	N.A (Hertsmere AQMA 1 was revoked on the 02/05/2024)	N.A
Hertsmere AQMA 2	08/04/2003	NO_2 Annual Mean	One domestic property known as Charleston Paddocks, St Albans Road	YES	48 µg/m^3	23.2 µg/m^3	7 years	N.A (Hertsmere AQMA 2 was revoked on the 02/05/2024)	N.A
Hertsmere AQMA 3	08/04/2003	NO_2 Annual Mean	Domestic properties 31-39 Blanch Lane, South Mimms	YES	80 µg/m^3	25.5 µg/m^3	7 years	N.A (Hertsmere AQMA 3 was revoked on the 02/05/2024)	N.A

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
Hertsmere AQMA 4	08/04/2003	NO_2 Annual Mean	Area comprising the domestic properties 12 Grove Pace, Hartspring Lane, Aldenham and caravans numbered 1,2,3,4,7,8,55,56,57,58,59 & 60 within Winfield Caravan site, Hartspring Lane	YES	42 µg/m^3	25.5 µg/m^3	7 years	N.A (Hertsmere AQMA 4 was revoked on the 02/05/2024)	N.A
Hertsmere AQMA 5	22/12/2004	NO_2 Annual Mean	Comprising domestic dwellings within eight properties on the east side of the A5183 High Street, Elstree either side of the junction with the A411	NO	No concentrations available	24.7 µg/m^3	7 years	N.A (Hertsmere AQMA 5 was revoked on the 02/05/2024)	N.A
Hertsmere AQMA 6	22/12/2004	NO_2 Annual Mean	Properties 133-167 High Street consisting of commercial and residential	NO	No concentrations available	19.0 µg/m^3	7 years	N.A (Hertsmere AQMA 6 was revoked on the 02/05/2024)	N.A

☒ **Hertsmere Borough Council confirm the information on UK-Air regarding their AQMA(s) is up to date.**

☐ **Hertsmere Borough Council confirm that all current AQAPs have been submitted to Defra.**

Note: The date each Air Quality Management Order was signed/sealed is considered the date of declaration, as opposed to the dates in which the Orders came in to operation, which were the 1st May 2003 for AQMAs 1, 2, 3 & 4 and 1st January 2005 for AQMAs 5 & 6. The date in which the Air Quality Management Order for Hertsmere AQMAs 1, 2, 3 and 4 was signed/sealed was the 8th April 2003, whereas the date in which the Air Quality Management Order for Hertsmere AQMAs 5 & 6 was signed/sealed was the 22nd December 2004.

2.2 Progress and Impact of Measures to address Air Quality in Hertsmere Borough Council

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 following formatting and grammatical errors need to be corrected prior to publication:*
    a. *Subscripts for pollutants and superscripts for µg/m^3 should be included throughout, these are missing in sections 2.3 and 3.2;*
    b. *No consistent notation has been used to indicate data is missing for a month in Table B.1, currently there is a mix of N.A, X and "missing". One of these should be chosen and used consistently;*
    c. *There are multiple gaps in Table C.3, all relevant cells should be filled in; and*
    d. *The text in Appendix C does not state which site was used for calculating the local bias adjustment factor. This should be added for clarity.*
2. *It is encouraging to see that HBC have included all AQMAs within Table 2.1 despite revoking them prior to the publication of this report. This should be continued in the 2025 ASR as the AQMAs were still active for part of the future year of reporting.*
3. *Clarification has been provided in Section 2.2 as to why the AQMA declaration dates in Table 2.1 do not match those on the portal. In future ASRs, this information should be included alongside Table 2.1 for clarity.*
4. *HBC have included comments from last year's appraisal. This is welcomed and should be continued in future ASRs.*
5. *There is limited discussion of trends observed in the monitoring data throughout the ASR. Additionally, the results have been clearly presented in figures for all sites which have been operational for five years, however these figures are missing a comparison to the AQO.*
6. *It should be stated around Table A.1 that site H3 was relocated throughout the year, and both sets of X Y grid references should have been provided. A similar note should be added to the results tables.*

7. *HBC have included a clear statement of adherence to the Defra diffusion tube changeover calendar.*
8. *Clear figures have been provided showing the location of monitoring sites and AQMA boundaries. This should be continued in future reports.*

- With respect to Comment 1 points a and b, all subscripts for pollutants and superscripts for µg/m^3 have been included throughout the 2024 ASR, whereas X will be used as a consistent notation, in indicating missing data within future ASRs.
- With respect to Comment 1 points c and d, the data gaps within Table C.3's cells have been populated, whilst the local bias adjustment factor was derived from a colocation study carried out at the Hertsmere Borehamwood Manor Way (H1) Roadside Automatic Monitoring site.
- A note has been added beneath Table 2.1 above with respect to Comment 3 above.
- A more detailed discussion of trends observed within the monitoring data is made within this ASR, whereas all charts/figures now feature an Air Quality Objective line for comparing the monitored results against, re Comment 5 above.
- With respect to Comment 6 above, a note providing both sets of X and Y Grid References for the Hertsmere Borehamwood Meadow Park (H3) Automatic Monitoring Site prior to its relocation in 2023 is included beneath all NO_2, PM_{10} and $PM_{2.5}$ automatic monitoring tables within the 2024 ASR.

Hertsmere Borough 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 2.2. 16 measures are included within Table 2.2, with the type of measure and the progress Hertsmere Borough Council have made during the reporting year of 2024 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.2.

Updates with respect to measures and actions completed/aborted over the course of the 2024 reporting year, are shown below/over:

- Purchase a second fully Electric Van for use by the Environmental Health & Licensing Department.
- Expansion of the office renovation program at the Civic Offices to include the lower floors, which will facilitate additional hot desking and encourage working from home/flexible working arrangement.
- Continued promotion of working from home/flexible working arrangements.
- Continued participation with the bike and e-bike share scheme, in partnership with Beryl via the Beryl app.
- Review and update the contents within the Council's Air Quality webpage.
- Continued participation of the Hertfordshire and Bedfordshire Air Pollution Alert System.
- Continued participation with the Hertfordshire & Bedfordshire & Neighbouring Authorities Air Quality Forum Meetings.
- Continued promotion of alternative modes of transport for Hertsmere Borough Council employees via the Cycle to work scheme.
- Environmental Health continued to review and or amend its model Air Quality Planning Conditions during 2024.
- Hertsmere Borough Council responded to several Air Quality related consultations/surveys raised by Defra during 2024, including the Local Authority Air Quality Survey.

- Hertsmere Borough Council in partnership with Hertfordshire County Council purchased a new Fidas 200 Particulate Matter Automatic monitor for continuous and simultaneous monitoring of $PM_{2.5}$ and PM_{10} at the Hertsmere Borehamwood Manor Way, Roadside site (H1) during 2024.

- Following the completion of the 2024 ASR, a new Local Plan timeline was introduced with respect to future actions, further consultation and adoption date for the new Local Plan. Subsequently the ratification and adoption the new Local Plan did not take place during 2024.

- Environmental Health at Hertsmere Borough Council completed an Anti-Idling day towards the end of 2024. For further details please see Table 2.2 below.

- Following sustained high demand upon Environmental Health's services during 2024, it was not possible to commence with the drafting of a Local Air Quality Strategy following the revocation of AQMAs 1-6.

Hertsmere Borough Council expects the following measures to be completed over the course of the 2025 reporting year:

- Installation of public access electric vehicle charging points across surface car parks managed by Hertsmere Borough Council.
- Continue to promote working from home/flexible working arrangements amongst office based staff at Hertsmere Borough Council.
- Continue with participation of the bike and e-bike share scheme, in partnership with Beryl via the Beryl app.
- Continue to review and update the contents within the Council's Air Quality webpage.
- Continued participation of the Hertfordshire and Bedfordshire Air Pollution Alert System.
- Participate with the Hertfordshire & Bedfordshire & Neighbouring Authorities Air Quality Forum Meetings.
- Continue to promote alternative modes of transport for Hertsmere Borough Council employees via the Cycle to work scheme.
- Environmental Health will continue to review and or amend its model Air Quality Planning Conditions.
- Respond to any Air Quality related consultations/surveys raised by Defra.
- Complete an Anti-Idling campaign in cooperation with Schools located either near a major highway or within the vicinity of a previously declared AQMA.
- Draft Local Plan: In March 2025 Hertsmere Borough Council published its "HERTSMERE" Local Development Scheme document which may be accessed online via Local Development Scheme (2025) - Hertsmere Borough Council . The Local Development Scheme document outlines the next steps for the emerging Hertsmere Local Plan and elaborates upon the change with the Draft Local Plan's timeline for completion and adoption by Hertsmere Borough Council. Whilst the Council previously intended for the Draft Local Plan to be adopted during 2025, the new intended date for adoption will now be September 2027, with ongoing engagement and evidence based development scheduled to take place throughout 2025 and up to March 2026. The Draft Local Plan, includes Policies related to Climate Change, Air Quality, Sustainable Travel including the requirement for all new homes with their own curtilage parking to include individual provision for electric vehicle charging points.

- Participate with the Clean Air Day & Clean Air Night events coordinated by Global Action Plan, via publishing messages on the Council's social feeds, such as Facebook & X/Twitter.
- Commence with drafting a Local Air Quality Strategy following the revocation of AQMAs 1-6.
- Continued participation with the Air Quality Strategy Meeting chaired by Hertfordshire County Council.

Whilst the measures stated above and in Table 2.2 will help to contribute towards sustained compliance, Hertsmere Borough Council anticipates that further additional measures not yet prescribed will be required in subsequent years to continue sustained compliance with the Air Quality Objectives.

Table 2.2 – Progress on Measures to Improve Air Quality

Measure No.	Measure Title	Category	Classification	Year Measure Introduced	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	Purchase of a second fully Electric Van for use by the Environmental Health & Licensing Department	Promoting Low Emission Transport	Other	2023	2024	Hertsmere Borough Council	Hertsmere Borough Council	Funded	£10k - 50k	Implementation	Subject to review	Number of annual vehicle charges & number of miles travelled	Implementation on-going	N.A.
2	Beryl Bikes: From 20 October 2022, a new fleet of 25 bikes and 20 e-bikes were available to hire via the Beryl app.	Promoting Travel Alternatives	Promotion of cycling	2022	Ongoing	Hertsmere Borough Council and Beryl	Hertsmere Borough Council via funding from the Strategic Community Infrastructure Levy, Section 106 contribution from SKY Studios and Neighbourhood Community Infrastructure Levy from Elstree and Borehamwood Town Council.	Funded	£10k - 50k	Implementation	Subject to review	Number of journeys made and the number Kilometres covered	As of 18 October 2024 more than 25,000 journeys were made, covering nearly 50,000 km.	N.A.
3	Installation of public access electric vehicle charging points across surface car parks managed by Hertsmere Borough Council	Promoting Low Emission Transport	Other	2024	January 2026	Hertsmere Borough Council and EON Drive Infrastructure Limited	Hertsmere Borough Council. The project is delivered through a concession contract with EON Drive Infrastructure Limited. Hertsmere has allocated £250,000 capital to support the project if it wishes to install charge points that are not considered economically viable.	Funded	£100k - £500k	Implementation	N.A.	Estimated 80 new charge points will be delivered.	Project on track for completion by January 2026	N.A.
4	Expansion of the office renovation program at the Civic Offices to include the lower floors, which will facilitate additional hot desking and encourage working from home.	Alternatives to private vehicle use	Other	2023	2024	Hertsmere Borough Council	Hertsmere Borough Council	Funded	£500k - £1 million	Implementation	N.A.	Number of staff working from home	Staff are encouraged to work from home, for up to two days per week	N.A.
5	Require developers to submit construction management plans (CMPs), for the control of dust associated with large scale excavation, demolition and construction.	Promoting Low Emission Plant	Other Policy	2019	Ongoing	Hertsmere Borough Council	Hertsmere Borough Council	Funded	< £10k	Implementation	Subject to review	Number of Planning decisions stipulating CMP Conditions	Planning produce supplementary planning guides which contain guidance on odour smoke and dust	N.A.
6	Adoption of a new Hackney Carriage and Private Hire Licensing Policy 2022-2027, which introduced a maximum first age limit based upon the Euro 6 Emissions Standards, with respect to Air Quality.	Promoting Low Emission Transport	Taxi Licensing conditions	2022	Ongoing	Hertsmere Borough Council	Hertsmere Borough Council	Funded	£10k - 50k	Implementation	Subject to review	Number of Successful Taxi Licence Applications	Approximately 321 Taxi Licenses were issued in 2024	N.A.

Measure No.	Measure Title	Category	Classification	Year Measure Introduced	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
7	The Council continues to inspect all of its authorised processes to ensure compliance. Authorisations will be updated as and when appropriate so that operation conditions are up to date.	Environmental Permits	Measures to reduce pollution through IPPC Permits going beyond BAT	2010	Ongoing	Hertsmere Borough Council	Hertsmere Borough Council	Funded	£10k - £50k	Implementation	Subject to review	Number of Environmental Permits issued	All inspections have been carried out with a satisfactory outcome	N.A.
8	Review and update the information and advice within Council's Website, for residents and companies re: problems caused by bonfires. Encourage residents to compost waste	Public Information	Via the Internet	2018	Ongoing	Hertsmere Borough Council	Hertsmere Borough Council	Funded	< £10k	Implementation	N.A.	Number of smoke complaints received / investigated	Hertsmere Borough Council dealt with 70 complaints regarding bonfires/smoke in 2024.	N.A.
9	The Council continues to monitor Air Quality and manages two Automatic Monitoring Stations located at Manor Way, (Roadside) and Meadow Park (Background)	Public Information	Other	2017	Ongoing	Hertsmere Borough Council	Hertsmere Borough Council	Funded	£10k - £50k	Implementation	N.A.	Annual & Hourly Mean concentrations	Hertsmere also use Diffusion Tubes for data which are reviewed every year	Funding and maintenance
10	Purchase and Installation of a new Fidas 200 Particulate Matter Automatic monitor for continuous and simultaneous monitoring of $PM_{2.5}$ and PM_{10} at the Hertsmere Borehamwood Manor Way, Roadside site (H1)	Public Information	Other	2024	2024	Hertsmere Borough Council & Hertfordshire County Council	Hertsmere Borough Council & Hertfordshire County Council	Funded	£10k - £50k	Completed	N.A.	Annual & Hourly Mean concentrations	The Fidas 200 Particulate Matter Automatic monitor was successfully installed within the Hertsmere Borehamwood Manor Way, Roadside site (H1) on the 10/09/2024	N.A.
11	Hertsmere Borough Council continues to support the Watling Chase Community Forest: The Greenways Project	Promoting Travel Alternatives	Promotion of walking	1999	Ongoing	Hertsmere Borough Council, Natural England and Hertfordshire County Council	Hertsmere Borough Council	Subject to review	Subject to review	Subject to review	Subject to review	Subject to review	N.A.	Several cycle, pedestrian and horse routes (Greenways) are open in Hertsmere
12	Anti Idling Day	Public Information	Via other mechanisms	2024	2024	Hertsmere Borough Council	Hertfordshire Climate Change and Sustainability Partnership & East Herts Council	Funded	< £10k	Completed	N.A.	Number of motorists switching their engines off	On the 18/12/2024 Officers targeted the Meadow Park Car Park during school drop off and pick up times during the morning and afternoon. A majority of the motorists observed within the car park switched their engines off when stationary. One motorist was observed idling and did not switch their engine off, whereas one idling motorist switched their engine off and agreed to take an anti-idling pledge.	N.A.

Measure No.	Measure Title	Category	Classification	Year Measure Introduced	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	Cycle to Work Scheme	Alternatives to private vehicle use	Other	2019	Ongoing	Hertsmere Borough Council	Hertsmere Borough Council	Funded	Funded via salary sacrifice	Implementation	N.A.	Number of staff purchasing a bicycle	Ongoing	N.A.
14	Review and update of Air Quality Planning Conditions with respect to reducing emissions to below 40 mg NOx/kWh from the installation of boiler(s) or Combined Heat and Power (CHP).	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2022	Ongoing	Hertsmere Borough Council	Hertsmere Borough Council	Funded	< £10k	Implementation	N.A.	Number of Planning decisions stipulating that, no boiler(s) or Combined Heat and Power (CHP) shall be installed within the development hereby approved, other than one(s) which incorporate abatement technology to reduce emissions to below 40 mg NOx/kWh.	Implementation on-going	N.A.
15	Hertfordshire and Bedfordshire Air Pollution Alert System, the free air pollution alert messaging system	Public Information	Via other mechanisms	2019	Ongoing	Hertsmere Borough Council & its partners within the Herts & Beds & Neighbouring Authorities Air Quality Forum	Hertsmere Borough Council & its partners within the Herts & Beds & Neighbouring Authorities Air Quality Forum	Funded	< £10k	Implementation	N.A.	Number of new subscriptions	Up to the end of 2024 102 users had subscribed to the Air Pollution Alert System	N.A.
16	The Hertfordshire County Council Air Quality Strategy	Public Information	Via other mechanisms	2024	2026	Hertfordshire County Council, including Hertsmere Borough Council and the other 9 Borough/District Councils within Hertfordshire	Hertfordshire County Council, including Hertsmere Borough Council and the other 9 Borough/District Councils within Hertfordshire	Funded	< £10k	Planning	N.A.	Draft Air Quality Strategy produced	Steering Group meetings continued throughout 2024 with an Air Quality Public Engagement exercise carried out by Hertfordshire County Council up to the 20th October 2024.	N.A.

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[1], 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.

Hertsmere Borough Council is a member of the Herts & Beds & Neighbouring Authorities Air Quality Forum, which work closely with Hertfordshire County Council Public Health. Public Health monitors $PM_{2.5}$ as a health outcome and has previously funded monitors for the local authorities in the Hertfordshire area. Hertsmere Borough Council currently monitors $PM_{2.5}$ at two Air Quality Monitoring Stations, situated within roadside and background locations, with the latter site being incorporated on the Automatic Urban and Rural Network (AURN). Results from monitoring show that $PM_{2.5}$ is not a significant issue within Hertsmere.

Towards the latter part of 2022 Hertsmere Borough Council liaised with Hertfordshire County Council, who purchased 11 monitors from Iknaia, which will capture nitrogen dioxide, PM_{10} & $PM_{2.5}$. Hertsmere Borough Council was successful in securing one of the new monitors, which was installed within the vicinity of AQMA 5 during August 2023 and provides supplemental data with respect to PM_{10} and $PM_{2.5}$ near this location.

Contained within the Hertfordshire Local Transport Plan (LTP4 2018- 2031) is a variety of measures aimed at managing emissions from road traffic on local roads and motorways. Measures intended to tackle road traffic pollutant emissions (including $PM_{2.5}$ emissions) include a variety of traffic management actions (strategic highway improvements to improve traffic flow and measures intended to reduce idling) and the promotion of low emission travel alternatives (e.g. cycling, walking, electric vehicles). See Table 2.2 for further information.

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

The Public Health Outcomes Framework examines indicators which helps us understand trends in public health. The graph below displays the fraction of mortality attributable to particulate air pollution ($PM_{2.5}$) for Hertsmere compared to the national average for England. The fraction of mortality attributable to ($PM_{2.5}$) has consistently remained above the national and regional averages within Hertsmere, therefore justifying the escalation in the number of actions in dealing with this particular air pollutant.

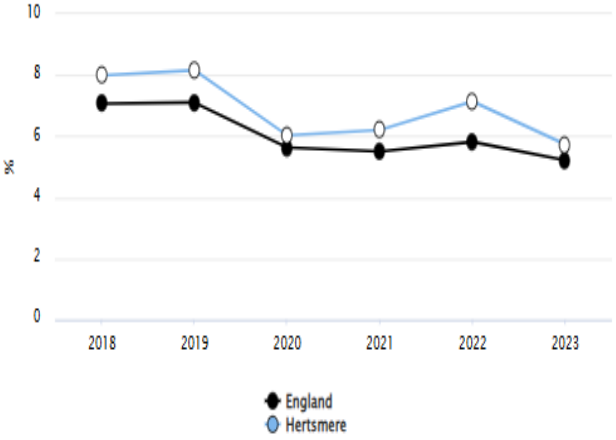
Public Health Outcomes Framework data may be accessed via the following link;

[Public Health Outcomes Framework - Data | Fingertips | Department of Health and Social Care]

D01 - Fraction of mortality attributable to particulate air pollution (new method) New data

Proportion - %

Show confidence intervals Show 99.8% CI values More options



Recent trend: Could not be calculated

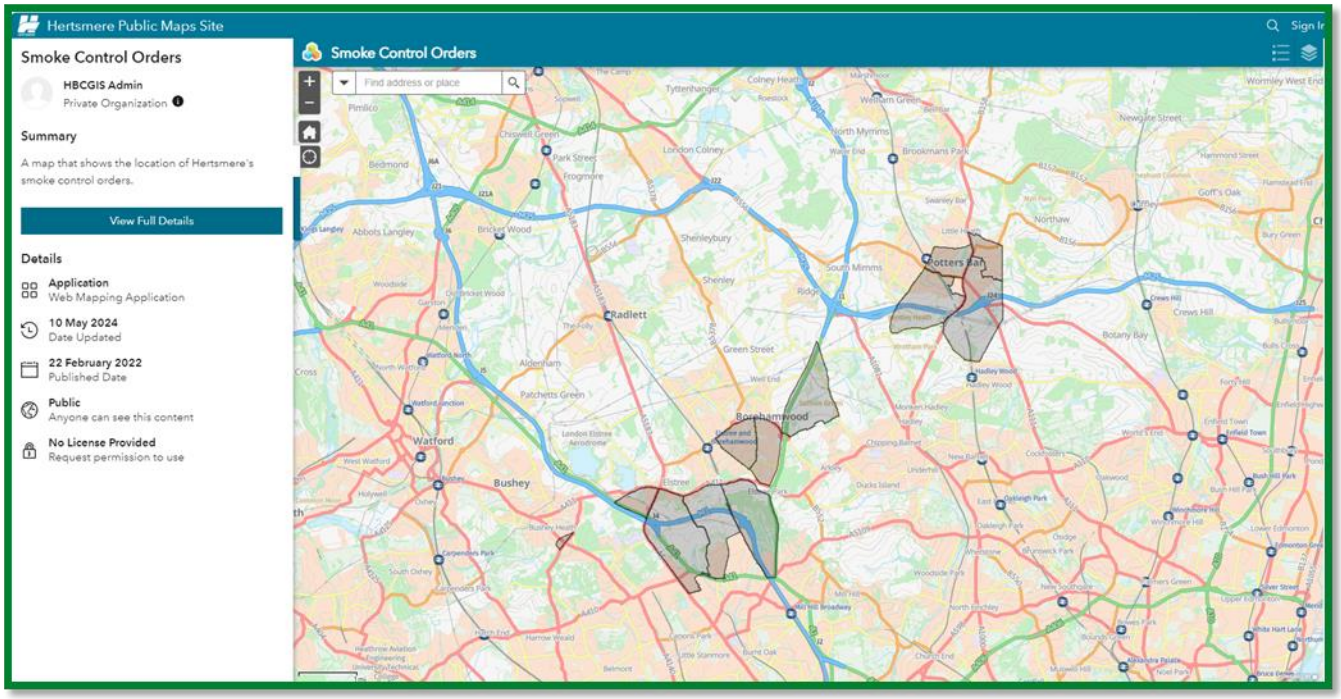
Period		Hertsmere Count	Value	95% Lower CI	95% Upper CI	East of England	England
2018		-	8.0%	-	-	7.6%	7.1%
2019		-	8.2%	-	-	7.6%	7.1%
2020		-	6.0%	-	-	5.8%	5.6%
2021		-	6.2%	-	-	5.5%	5.5%
2022		-	7.1%	-	-	6.2%	5.8%
2023		-	5.7%	-	-	5.4%	5.2%

Source: Department for Environment, Food and Rural Affairs

Indicator Definitions and Supporting Information

There are currently 12 active Smoke Control Areas within Hertsmere, which means that it is an offence to emit smoke from a chimney of a building or a chimney which serves the furnace of any fixed boiler or industrial plant within a smoke control, area unless burning an **Authorised/Certified Fuel** or using an **Exempted Appliance**. Hertsmere Borough Council has published an online interactive map, which shows the boundaries of the Smoke Control Areas which may be accessed via;

https://hertsmere-public-maps-site-hertsmere.hub.arcgis.com/



Further details on these Smoke Control Areas may be obtained by contacting Environmental Health via; Environmental.Health@hertsmere.gov.uk

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

This section sets out the monitoring undertaken within 2024 by Hertsmere Borough 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.

Hertsmere Borough Council's monitoring strategy saw a minor change during the first half of 2024 with respect to Diffusion Tube monitoring location HM63 located at 27 Dove Lane, Potters Bar, which was decommissioned due to repeatedly being targeted/removed by an unknown assailant. The Diffusion Tube was subsequently relocated within close proximity to monitoring location HM162.

Following sustained compliance of the NO_2 Annual Mean Air Quality Objective at HM50, HM57, HM61, HM63, HM67, HM86 and HM135, Air Quality Management Areas (AQMAs) 1-6 were subsequently revoked on the 2nd May 2024.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

Hertsmere Borough Council undertook automatic (continuous) monitoring at two 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 Hertsmere Borough 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.

3.1.2 Non-Automatic Monitoring Sites

Hertsmere Borough Council undertook non-automatic (i.e. passive) monitoring of NO_2 at 53 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.

None of the Diffusion Tube or Automatic Monitoring Locations saw any exceedances of the 1-hour mean nitrogen dioxide air quality objective during 2024. None of the Diffusion Tube locations had an annual mean concentration of 36 µg/m^3 or greater and therefore fall off with distance calculations were not required. A Combined Local Bias Adjustment Factor was applied to the 2024 NO_2 Diffusion Tube data and all monitoring results within Hertsmere were compliant with the annual mean nitrogen dioxide air quality objective at the nearest relevant exposure/receptor.

Discussion in to any notable trends is made beneth Figures A.1.A to A.1.D. and Figure A.2.

3.2.2 Particulate Matter (PM_{10})

Table A.6 in Appendix A: Monitoring Results compares the ratified and adjusted monitored PM_{10} annual mean concentrations for the past five years with the air quality objective of 40µg/m^3.

Table A.7 in Appendix A compares the ratified continuous monitored PM_{10} daily mean concentrations for the past five years with the air quality objective of 50µg/m^3, not to be exceeded more than 35 times per year.

The measured concentrations at both the roadside and background automatic monitoring sites during 2024, were below the annual mean air quality objective of 40 µg/m^3, whereas the 24 hour mean air quality objective was also met at both sites.

Measured annual mean concentrations for the past five years are presented in Figure A3.

Discussions in to trends within the PM_{10} data between the 2020 and 2024 monitoring years for the Hertsmere Manor Way (Roadside) H1 and the Hertsmere Meadow Park (Background) H3 Automatic Monitoring Sites are made beneath Figures A.3 and A.4.

3.2.3 Particulate Matter ($PM_{2.5}$)

Table A.8 in Appendix A presents the ratified and adjusted monitored $PM_{2.5}$ annual mean concentrations for the past five years.

The measured concentrations were below the annual mean concentration target of 20 µg/m3 at both the roadside and the background automatic monitoring sites in 2024.

Discussions in to trends within the $PM_{2.5}$ annual mean data between the 2020 and 2024 monitoring years for the Hertsmere Manor Way (Roadside) H1 and the Hertsmere Meadow Park (Background) H3 Automatic Monitoring Sites is made beneath Figures A.5.

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)
H1	Hertsmere Borehamwood Manor Way	Roadside	520317	197099	NO_2, PM_{10}, $PM_{2.5}$	No	N/A	Chemiluminescent; FIDAS	8.6	6.0	2.5
H3	Hertsmere Borehamwood Meadow Park	Urban Background	519751	197358	NO_2, PM_{10}, $PM_{2.5}$	No	N/A	Chemiluminescent; FIDAS	88.0	N/A	2.5

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)
HM39	117 Shenley Road, Borehamwood	Roadside	519421	196682	NO_2	No	7.0	1.3	No	2.1

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)
HM40	17 Essex Road, Borehamwood	Roadside	519283	196779	NO_2	No	5.3	2.1	No	2.1
HM48	Liberal Synagogue Nursery, High Street, Elstree	Roadside	517846.49	195346.3	NO_2	No	4.4	1.9	No	2.0
HM49	The Haven, Barnet Lane, Elstree	Kerbside	517861.15	195225.71	NO_2	No	5.9	1.1	No	2.0
HM50	High Street/Barnet Lane, Elstree	Roadside	517805	195249	NO_2	Yes (AQMA 5)	9.5	1.2	No	2.0
HM52	7 Walton Terrace, Watford Road, Elstree	Roadside	517746	195247	NO_2	No	1.8	1.8	No	2.0
HM53	Farm View, Caldecote Lane, Bushey Heath	Suburban	515584	195096	NO_2	No	0.2	0.0	No	1.8
HM55	Highwood Avenue Garages, Bushey	Urban Background	512773	197838	NO_2	No	29.0	N.A	No	2.0
HM57	11 Grove Place, Hartspring Lane, Patchetts Green	Roadside	513520	197821	NO_2	Yes (AQMA 4)	9.2	1.8	No	1.9
HM61	31 Blanche Lane, South Mimms	Other (Motorway)	522042	200671	NO_2	Yes (AQMA 3)	14.6	14.6	No	1.9

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)
HM62	24 The Broadway, Mutton Lane/Darkes Lane, Potters Bar	Roadside	524946	201156	NO_2	No	12.5	3.1	No	1.9
HM64	Hollies House, 230 High Street, Potters Bar	Roadside	526229	201506	NO_2	No	23.3	2.1	No	1.8
HM65	250-252- High Street, Potters Bar	Roadside	526255	201595	NO_2	No	7.7	2.8	No	1.8
HM66	169-171 High Street, Potters Bar (Oakmere Lane)	Roadside	526236	201462	NO_2	No	5.9	3.0	No	2.1
HM67	149 High Street, Potters Bar	Roadside	526210.96	201401.62	NO_2	Yes (AQMA 6)	0.5	11.3	No	2.0
HM69	Rear of Flats 8-12 St Johns Close, Potters Bar (Near Abbey House, Southgate Road)	Roadside	526032	200837	NO_2	No	15.0	3.1	No	2.0
HM70	9 Park Avenue, Potters Bar	Roadside	526406	200459	NO_2	No	9.2	1.5	No	2.0
HM71	2 Park Road, Radlett	Kerbside	516288	200030	NO_2	No	4.3	1.5	No	1.9
HM74	301 Watling Street, Radlett	Roadside	516460	199624	NO_2	No	9.2	6.6	No	1.8

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)
HM79	223/225 Mutton Lane, Potters Bar	Roadside	524988	201120	NO_2	No	12.2	1.7	No	1.6
HM82	10 Baker Street, Potters Bar	Kerbside	524925	201089	NO_2	No	9.6	0.6	No	2.0
HM85	16 Andrew Close, Shenley	Urban Background	518597	200952	NO_2	No	2.3	1.0	No	2.1
HM86	Charleston Paddocks, St Albans Road, South Mimms	Other (Motorway)	522970.04	199958.81	NO_2	Yes (AQMA 2)	32.8	10.5	No	1.8
HM93	103 Baker Street, Potters Bar	Roadside	524575	200632	NO_2	No	12.9	1.4	No	2.2
HM99	84 High Street, Bushey	Roadside	513212	195257	NO_2	No	1.9	2.4	No	2.1
HM102	Red Lion Pub, 78-80 Watling Street, Radlett	Kerbside	516387	199763	NO_2	No	4.0	0.5	No	1.9
HM105	Elstree Park, Barnet Lane	Urban Background	520740	195268	NO_2	No	10.7	36.1	No	2.0
HM108, HM109 & HM110	Far End 1, 2 & 3, Hartspring Lane, Bushey	Kerbside	513423	197729	NO_2	No	11.1	0.5	No	1.8
HM114	Parkside Flats, High Street, Potters Bar	Roadside	526163.55	201362.78	NO_2	No	16.3	9.5	No	1.9
HM117	44 High Street, Bushey	Roadside	513103	195287	NO_2	No	4.3	2.3	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)
HM126	63 Elstree Hill North, Elstree	Roadside	517903.13	195552.06	NO_2	No	13.8	2.4	No	2.1
HM132	Watling Mansions, Watling Street/Theobald Street, Radlett	Roadside	516522	199450	NO_2	No	13.8	8.3	No	2.0
HM135	Winfield Park, Hartspring Lane	Other	513758	197597	NO_2	Yes (AQMA 4)	4.7	20.8	No	2.0
HM136	Baker Court, Shenley Road	Roadside	519802	197039	NO_2	No	7.3	2.0	No	1.8
HM138	209 Shenley Road, Borehamwood	Kerbside	519647	196865	NO_2	No	3.1	0.8	No	2.0
HM139	142 Shenley Road, Borehamwood	Roadside	519589	196794	NO_2	No	4.0	2.0	No	1.8
HM140	Shenley Road/Furzehill Road Junction, Borehamwood	Kerbside	519312	196574	NO_2	No	2.5	0.9	No	1.9
HM141	42 Shenley Road, Borehamwood	Kerbside	519233	196502	NO_2	No	4.5	0.8	No	1.9
HM142	2 Hillfield Lane, Patchetts Green	Roadside	513592	197887	NO_2	No	13.0	5.7	No	1.8
HM143	12 Watling Street, Radlett	Roadside	516231	200196	NO_2	No	8.2	1.4	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)
HM144	Hatfield Road/Hertford Mews, Potters Bar	Roadside	526213	201749	NO_2	No	7.5	3.4	No	1.9
HM146	The Old School House, London Road, Shenley	Roadside	518991	200401	NO_2	No	10.0	3.0	No	1.9
HM148, HM149 & HM150	Hertsmere Borehamwood Manor Way, Roadside (H1) (1, 2 & 3)	Roadside	520317	197099	NO_2	No	8.6	5.5	Yes	2.0
HM151	19 High Road, Bushey	Roadside	514610	194356	NO_2	No	15.0	2.6	No	1.9
HM152	Franklin Court, Brook Road, Borehamwood	Roadside	519731	197003	NO_2	No	8.0	1.6	No	2.0
HM153	5 Bell Lane, London Colney	Roadside	518551	202915	NO_2	No	7.8	12.1	No	2.1
HM154	54 Hilfield Lane, Aldenham	Roadside	513879	197724	NO_2	No	12.0	1.5	No	1.8
HM155	35/37 Newark Green, Borehamwood	Roadside	521039	196673	NO_2	No	8.0	3.2	No	1.9
HM156	59 Shenley Road/Furzehill Road Junction, Borehamwood	Kerbside	519285	196570	NO_2	No	7.3	0.6	No	1.9
HM157	135 Watling Street, Radlett	Roadside	516258	200153	NO_2	No	6.8	2.2	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)
HM158, HM159 & HM160	Hertsmere Borehamwood Meadow Park, Background (H3) (1, 2 & 3)	Urban Background	519751	197358	NO_2	No	89.9	N/A	Yes	2.0
HM161	Elton House, Hartspring Lane Roundabout, Bushey	Roadside	513325	197567	NO_2	No	5.6	2.7	No	1.9
HM162	27 Dove Lane, Potters Bar	Other	526083	200022	NO_2	Yes (AQMA 1)	7.0	41.0	No	1.8

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
Hertsmere Borehamwood Manor Way (H1)	520317	197099	Roadside	100.0	100.0	23	23	22.5	18	15.6
Hertsmere Borehamwood Meadow Park (H3)	519751	197358	Urban Background	100.0	100.0	15	14	15	12	10.3

☒ **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
HM39	519421	196682	Roadside	100.0	100.0	38.3	35.5	38.7	27.6	23.6
HM40	519283	196779	Roadside	100.0	100.0	18.1	16.3	18.2	14.9	13.1
HM48	517846.49	195346.3	Roadside	100.0	100.0	29.6	28.5	37.1	22.1	18.5
HM49	517861.15	195225.71	Kerbside	100.0	100.0	35.5	31.8	37.3	27.6	24.6
HM50	517805	195249	Roadside	100.0	100.0	40.0	35.6	**41.6**	29.0	24.7
HM52	517746	195247	Roadside	100.0	100.0	28.5	26.0	31.7	22.6	20.5
HM53	515584	195096	Suburban	100.0	100.0	15.4	14.4	16.2	12.6	11.5
HM55	512773	197838	Urban Background	100.0	100.0	16.2	15.1	17.8	13.8	11.9
HM57	513520	197821	Roadside	100.0	100.0	33.5	29.6	33.9	28.2	25.5
HM61	522042	200671	Other (Motorway)	100.0	100.0	32.2	29.2	33.8	25.1	25.5
HM62	524946	201156	Roadside	100.0	100.0	29.1	26.8	30.7	25.8	23.5
HM64	526229	201506	Roadside	100.0	100.0	36.2	31.0	35.4	28.7	26.5
HM65	526255	201595	Roadside	75.0	75.0	36.8	33.9	35.3	27.6	26.1
HM66	526236	201462	Roadside	83.3	81.1	31.3	28.4	30.8	24.6	23.2
HM67	526210.96	201401.62	Roadside	58.3	54.7	29.5	27.0	28.9	21.6	19.0
HM69	526032	200837	Roadside	100.0	100.0	**40.7**	34.0	**40.2**	32.2	28.9
HM70	526406	200459	Roadside	91.7	92.5	23.8	22.3	25.3	21.0	17.5
HM71	516288	200030	Kerbside	100.0	100.0	32.5	29.3	33.2	25.4	24.2
HM74	516460	199624	Roadside	100.0	100.0	24.6	22.2	25.7	19.9	17.6
HM79	524988	201120	Roadside	83.3	84.9	27.8	23.0	28.0	23.6	20.7
HM82	524925	201089	Kerbside	83.3	84.9	26.1	22.5	25.7	21.4	20.8
HM85	518597	200952	Urban Background	91.7	92.5	17.4	15.4	18.1	13.4	11.5

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
HM86	522970.04	199958.81	Other (Motorway)	91.7	90.6	-	21.9	32.6	27.3	23.2
HM93	524575	200632	Roadside	100.0	100.0	21.3	20.0	20.7	17.1	16.1
HM99	513212	195257	Roadside	58.3	56.6	30.4	29.1	33.2	28.4	25.9
HM102	516387	199763	Kerbside	100.0	100.0	35.3	29.2	35.2	26.6	24.2
HM105	520740	195268	Urban Background	91.7	90.6	21.6	18.9	22.0	16.1	14.2
HM108, HM109 & HM110	513423	197729	Kerbside	97.2	100.0	39.9	34.8	39.2	31.7	27.0
HM114	526163.55	201362.78	Roadside	83.3	83.0	27.2	26.6	29.7	24.5	21.1
HM117	513103	195287	Roadside	75.0	75.0	27.1	26.5	32.4	26.0	22.7
HM126	517903.13	195552.06	Roadside	100.0	100.0	26.6	24.1	29.6	20.0	17.5
HM132	516522	199450	Roadside	91.7	92.5	20.6	20.4	23.0	18.0	15.6
HM135	513758	197597	Other	100.0	100.0	25.5	22.2	26.6	20.4	19.0
HM136	519802	197039	Roadside	83.3	84.9	22.8	21.5	27.5	19.3	17.3
HM138	519647	196865	Kerbside	100.0	100.0	27.4	26.4	27.9	21.0	18.9
HM139	519589	196794	Roadside	83.3	83.0	31.5	29.8	33.5	25.5	20.7
HM140	519312	196574	Kerbside	100.0	100.0	36.8	33.3	38.3	27.6	24.1
HM141	519233	196502	Kerbside	100.0	100.0	33.9	28.9	35.1	27.3	23.5
HM142	513592	197887	Roadside	91.7	92.5	24.0	21.3	26.0	20.4	18.7
HM143	516231	200196	Roadside	91.7	92.5	35.6	32.3	**40.8**	31.9	28.4
HM144	526213	201749	Roadside	100.0	100.0	23.1	21.0	25.6	17.7	16.0
HM146	518991	200401	Roadside	83.3	83.0	22.5	18.6	22.6	17.8	16.3
HM148, HM149 & HM150	520317	197099	Roadside	94.5	100.0	N.A	N.A	N.A	18.2	15.3

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
HM151	514610	194356	Roadside	75.0	75.0	N.A	N.A	N.A	17.6	14.6
HM152	519731	197003	Roadside	91.7	92.5	N.A	N.A	N.A	22.4	20.7
HM153	518551	202915	Roadside	100.0	100.0	N.A	N.A	N.A	17.7	16.0
HM154	513879	197724	Roadside	91.7	92.5	N.A	N.A	N.A	15.9	15.0
HM155	521039	196673	Roadside	100.0	100.0	N.A	N.A	N.A	22.3	19.9
HM156	519285	196570	Kerbside	83.3	84.9	N.A	N.A	N.A	32.3	26.7
HM157	516258	200153	Roadside	100.0	100.0	N.A	N.A	N.A	23.6	21.1
HM158, HM159 & HM160	519751	197358	Urban Background	100.0	100.0	N.A	N.A	N.A	12.2	10.9
HM161	513325	197567	Roadside	91.7	90.6	N.A	N.A	N.A	20.1	23.6
HM162	526083	200022	Other	87.5	60.4	N.A	N.A	N.A	N.A	17.4

☒ **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.

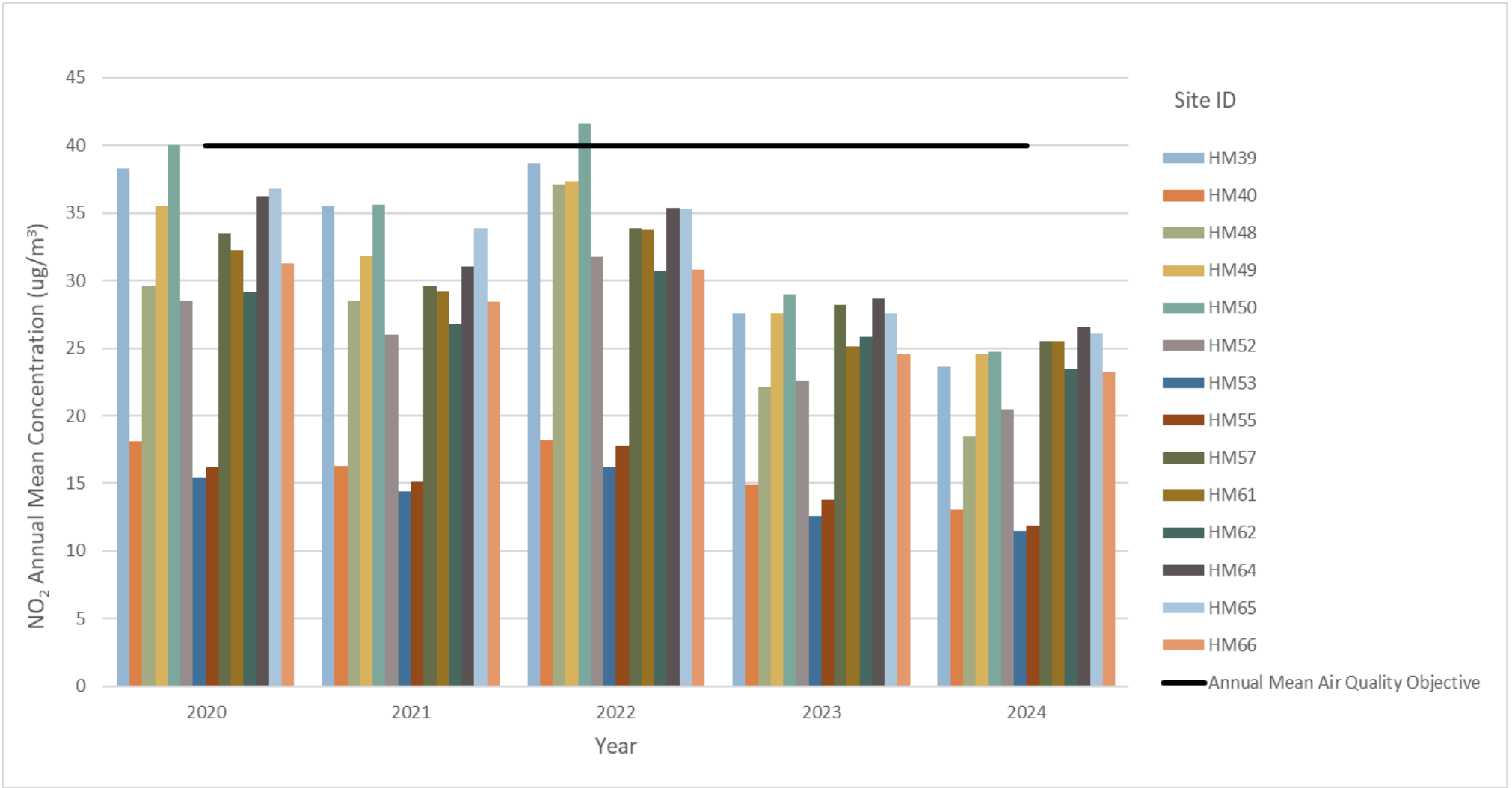
Concentrations are those at the location of monitoring and not those following any fall-off with distance adjustment.

(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%).

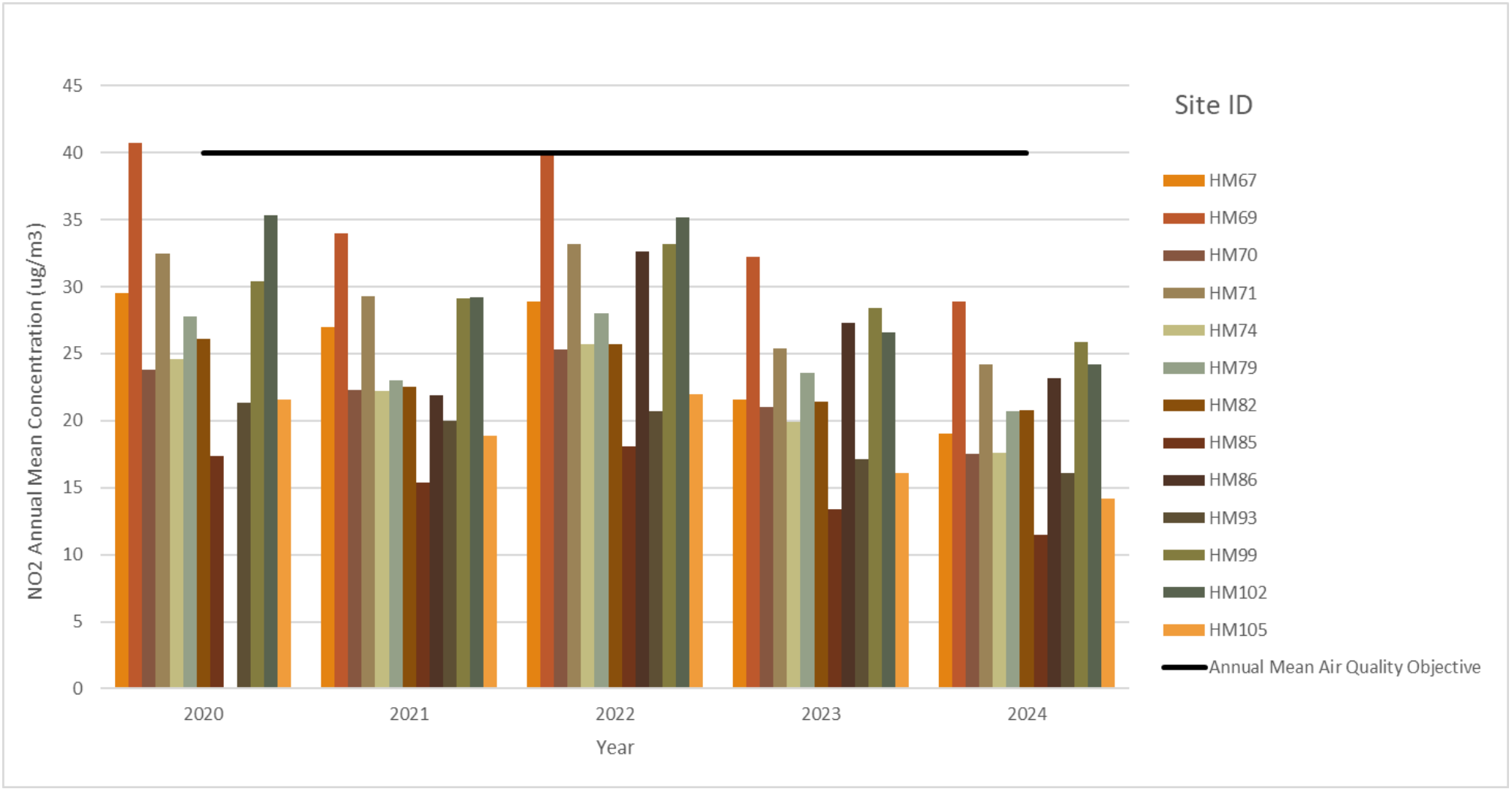
Figures A.1.A –A.1.D – Trends in Annual Mean NO_2 Concentrations

Figure A.2.A – NO_2 Annual Mean Concentrations for Non – Automatic Monitoring Sites HM39 to HM66 between years 2020 and 2024



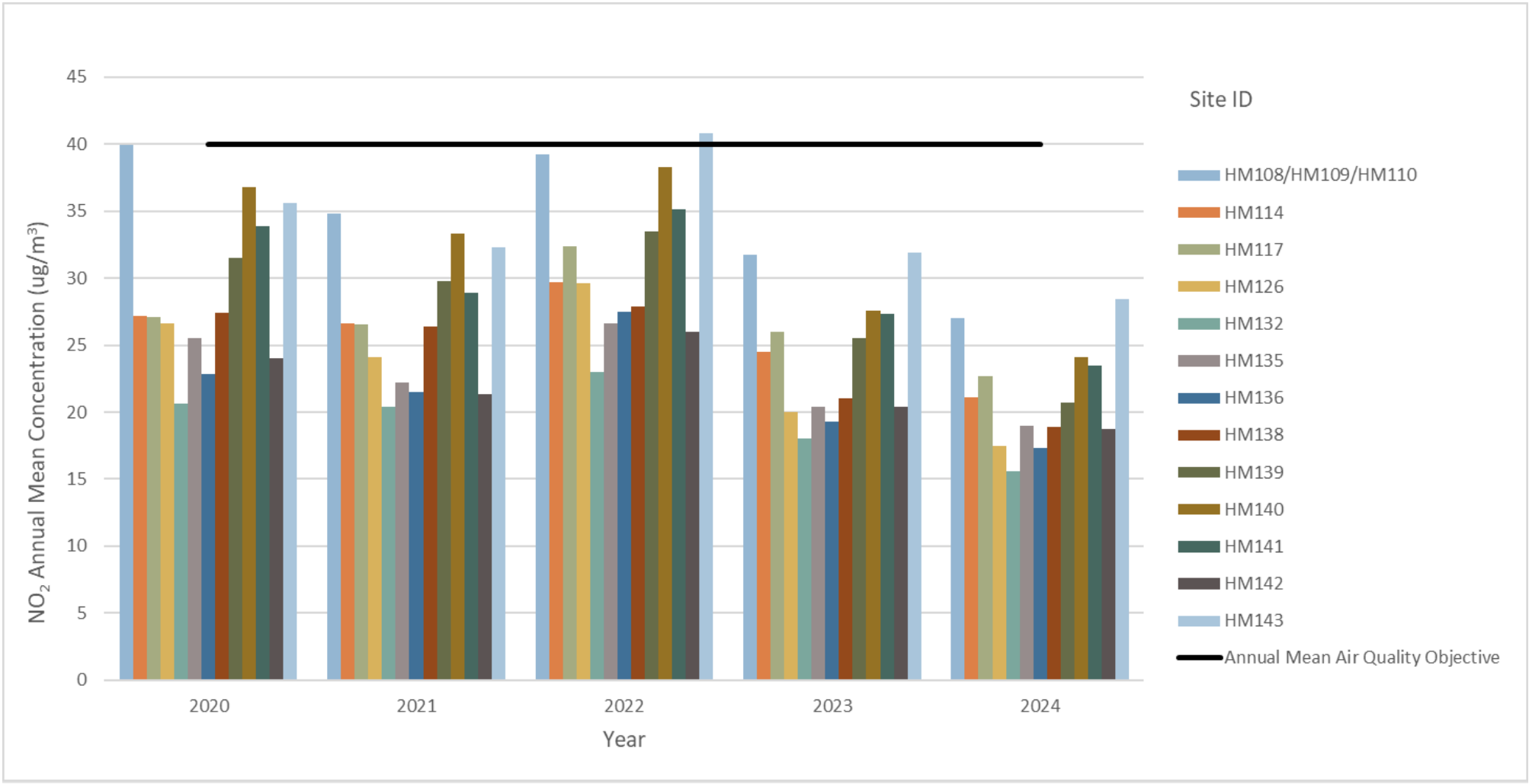
Diffusion Tube monitoring locations HM39 to HM66 followed a similar trend to the majority of the NO_2 Diffusion Tube monitoring network as there were marked decreases with their Annual Mean concentrations during 2020 and 2021 which coincided with the Covid 19 pandemic. The NO_2 Annual Mean concentrations at Diffusion Tube monitoring locations HM39 to HM66 all rose during 2022, with one exceedance above the 40 µg/m^3 Annual Mean Air Quality Objective being observed at Diffusion Tube monitoring location HM50 prior to a fall-off with distance correction. NO_2 Annual Mean concentrations decreased at Diffusion Tube monitoring locations HM39 to HM66 during 2023 and decreased again during 2024 and were compliant with the NO_2 Annual Mean Air Quality Objective throughout the 2020-2024 monitoring years.

Figure A.3.B – NO_2 Annual Mean Concentrations for Non – Automatic Monitoring Sites HM67 to HM105 between years 2020 and 2024



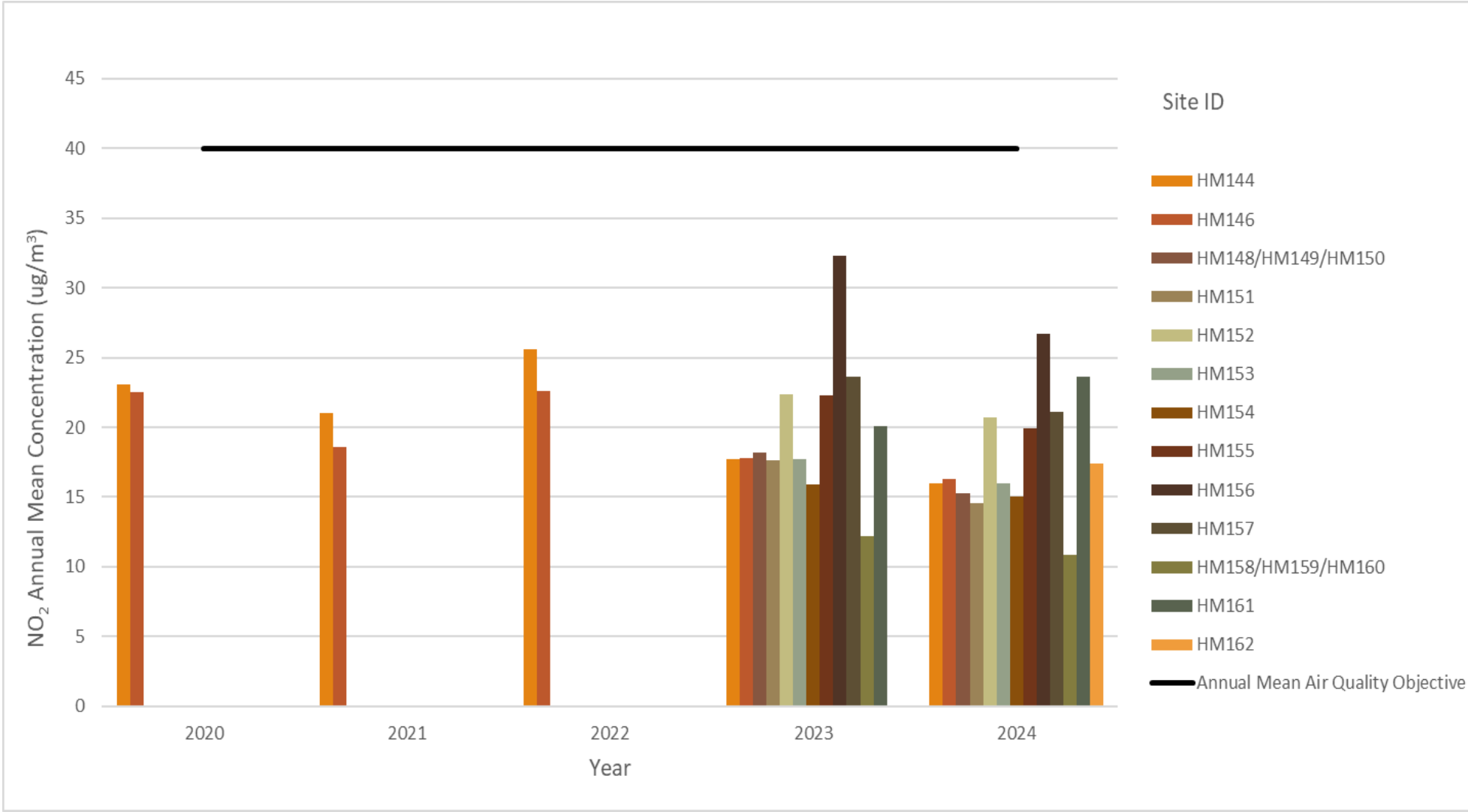
Note: There was no data available for Diffusion Tube monitoring location HM86 during the 2020 monitoring year. Diffusion Tube monitoring locations HM67 to HM105 followed a similar trend to the majority of the NO_2 Diffusion Tube monitoring network as there were marked decreases with their Annual Mean concentrations during 2020 and 2021 which coincided with the Covid 19 pandemic. However in 2020 there was one exceedance above the 40 µg/m^3 Annual Mean Air Quality Objective being observed at Diffusion Tube monitoring location HM69 prior to a fall-off with distance correction. The NO_2 Annual Mean concentrations at Diffusion Tube monitoring locations HM67 to HM105 rose during 2022, with one marginal exceedance above the 40 µg/m^3 Annual Mean Air Quality Objective being observed at Diffusion Tube monitoring location HM69 prior to a fall-off with distance correction. NO_2 Annual Mean concentrations decreased at Diffusion Tube monitoring locations HM67 to HM105 during 2023 and decreased again during 2024 and were compliant with the NO_2 Annual Mean Air Quality Objective throughout the 2020-2024 monitoring years.

Figure A.4.C – NO_2 Annual Mean Concentrations for Non – Automatic Monitoring Sites HM108 – HM143 between years 2020 and 2024



Diffusion Tube monitoring locations HM108 to HM143 followed a similar trend to the majority of the NO_2 Diffusion Tube monitoring network as there were marked decreases with their Annual Mean concentrations during 2020 and 2021 which coincided with the Covid 19 pandemic. The NO_2 Annual Mean concentrations at Diffusion Tube monitoring locations HM108 to HM143 rose during 2022, with one exceedance above the 40 µg/m^3 Annual Mean Air Quality Objective being observed at Diffusion Tube monitoring location HM143 prior to a fall-off with distance correction. NO_2 Annual Mean concentrations decreased at Diffusion Tube monitoring locations HM108 to HM143 during 2023 and decreased again during 2024 and were compliant with the NO_2 Annual Mean Air Quality Objective throughout the 2020-2024 monitoring years.

Figure A.5.D – NO_2 Annual Mean Concentrations for Non – Automatic Monitoring Sites HM144 – HM162 between years 2020 and 2024



Diffusion Tube monitoring locations HM144 and HM146 followed a similar trend to the majority of the NO_2 Diffusion Tube monitoring network as there were marked decreases with their Annual Mean concentrations during 2020 and 2021 which coincided with the Covid 19 pandemic. The NO_2 Annual Mean concentrations at Diffusion Tube monitoring locations HM144 and HM146, rose during 2022 but were still compliant with the NO_2 Annual Mean Air Quality Objective and saw a continued decrease in the following 2023 and 2024 monitoring years.

There is limited trend data available for Diffusion Tube monitoring locations HM148 to HM161, as these locations were only established in 2023. With the exception of HM161, Diffusion Tubes HM148 to HM160 saw a decrease in their NO_2 Annual Mean concentrations in 2024 compared to 2023. There are no current trends for Diffusion Tube HM162 as this site was commissioned in 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
Hertsmere Borehamwood Manor Way (H1)	520317	197099	Roadside	100.0	100.0	0	0	**0 (116)**	0	0
Hertsmere Borehamwood Meadow Park (H3)	519751	197358	Urban Background	100.0	100.0	0	**0 (57)**	0	0	0

Notes:

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

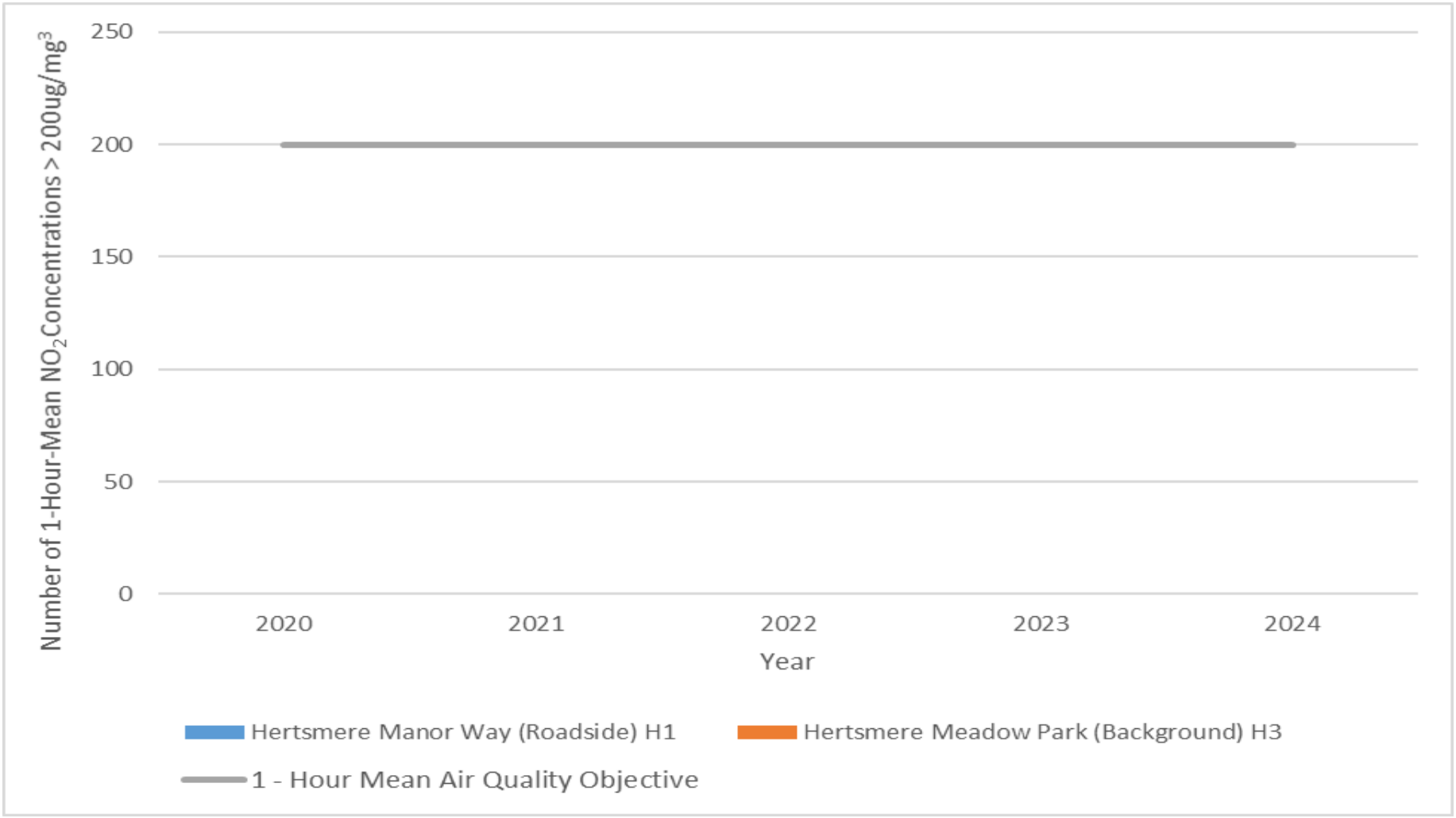
Exceedances of the NO_2 1-hour mean objective (200µg/m^3 not to be exceeded more than 18 times/year) are shown in **bold**.

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%).

Figure A.6 – Trends in Number of NO_2 1-Hour Means > 200µg/m^3



There were no exceedances of the 1 Hour – Mean NO_2 Air Quality Objective during 2024 at both Hertsmere Manor Way (Roadside) H1 and Hertsmere Meadow Park (Background) Automatic Monitoring sites, therefore continuing a sustained trend of compliance with the 1 Hour – Mean NO_2 Air Quality Objective, observed over the past five monitoring years.

Table A.6 – Annual Mean PM_{10} Monitoring Results ($\mu g/m^3$)

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
Hertsmere Borehamwood Manor Way (H1)	520317	197099	Roadside	99.9	30.7	15	16	16.2	12.8	11.3
Hertsmere Borehamwood Meadow Park (H3)	519751	197358	Urban Background	100.0	100.0	14	9	12.3	11	10.3

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

Notes:

The annual mean concentrations are presented as $\mu g/m^3$.

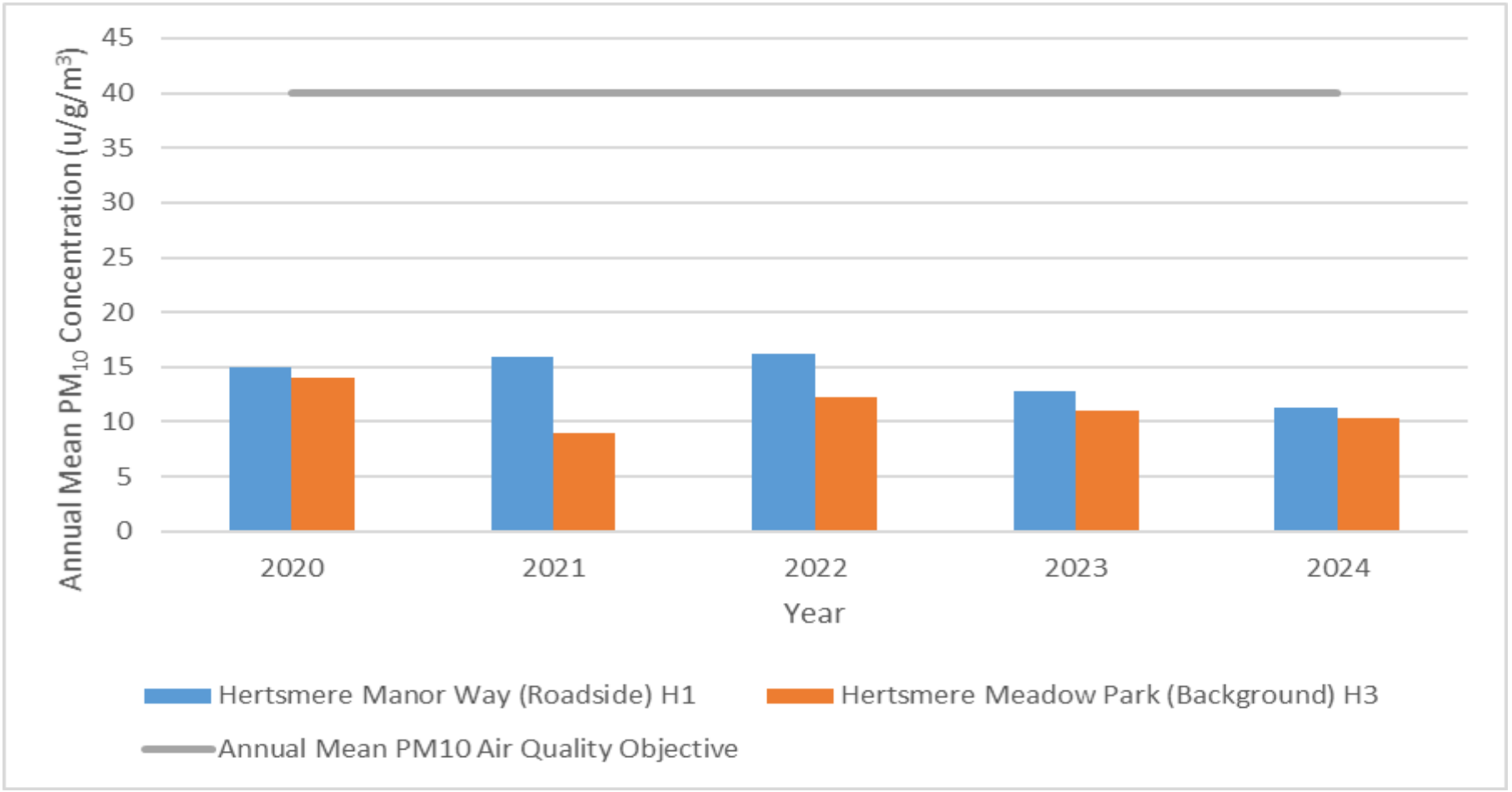
Exceedances of the PM_{10} annual mean objective of 40$\mu g/m^3$ are shown in **bold**.

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.

(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.7 – Trends in Annual Mean PM_{10} Concentrations



The PM_{10} Annual Mean concentrations at Hertsmere Manor Way (Roadside) H1 Automatic Monitoring Site followed an upwards trend and gradually increased between the 2020 and 2022 monitoring years. However since 2023 the PM_{10} Annual Mean concentration at Hertsmere Manor Way (Roadside) H1 has seen a downward trend, following a year on year decrease during 2023 and 2024.

The PM_{10} Annual Mean concentrations at Hertsmere Meadow Park (Background) H3 Automatic Monitoring Site decreased during 2021 compared to 2020. However after the decrease observed during 2021, the PM_{10} Annual Mean concentration increased during the 2022 monitoring year. Since 2023 the PM_{10} Annual Mean concentration at Hertsmere Meadow Park (Background) H3 has seen a downward trend, following a year on year decrease during 2023 and 2024.

Table A.7 – 24-Hour Mean PM_{10} Monitoring Results, Number of PM_{10} 24-Hour Means > 50µg/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
Hertsmere Borehamwood Manor Way (H1)	520317	197099	Roadside	99.9	30.7	0	**0 (25)**	**0 (26)**	**0 (22)**	**0 (24)**
Hertsmere Borehamwood Meadow Park (H3)	519751	197358	Urban Background	100.0	100.0	0	0	**0 (20)**	0	0

Notes:

Results are presented as the number of 24-hour periods where daily mean concentrations greater than 50µg/m^3 have been recorded.

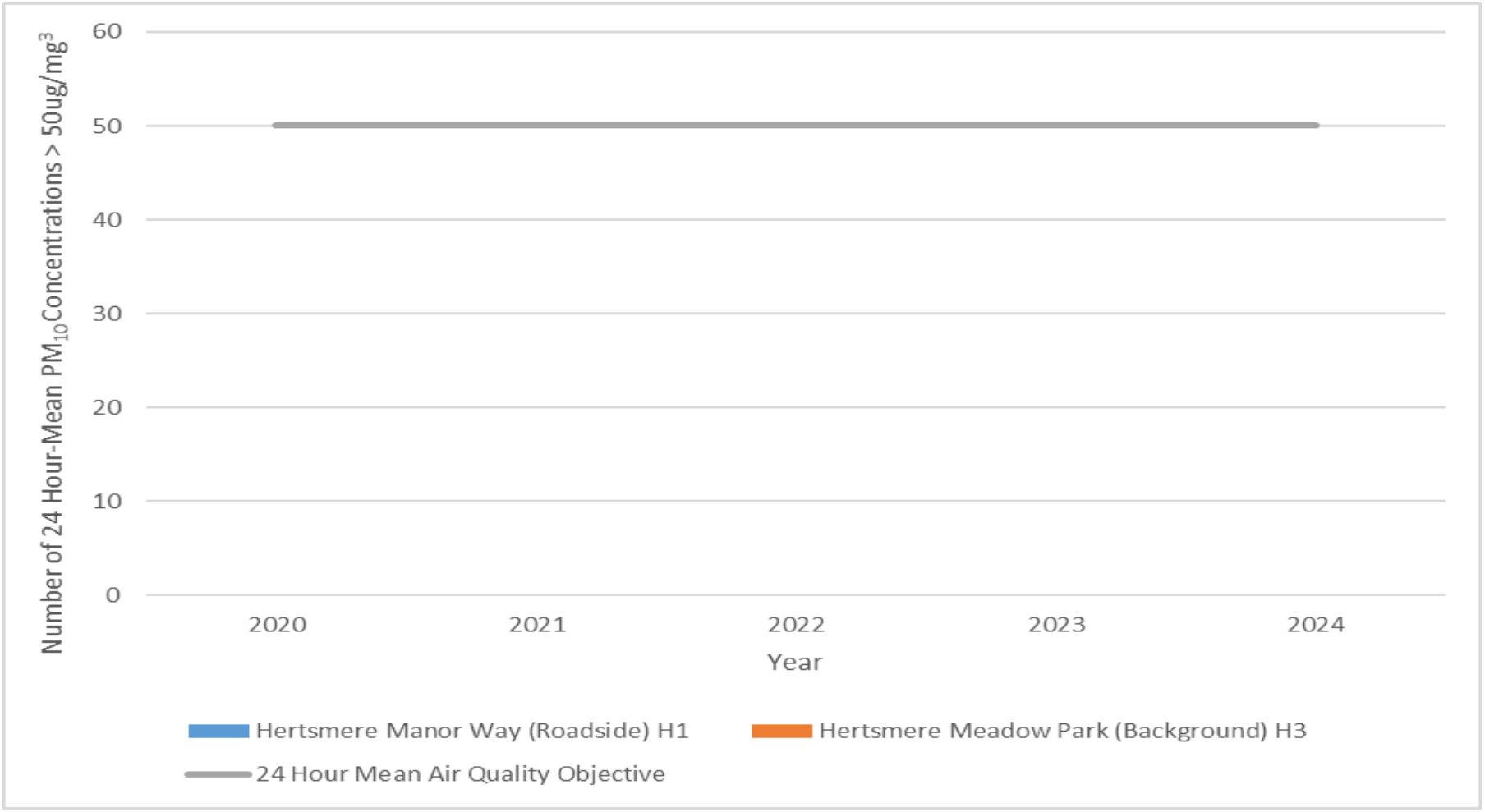
Exceedances of the PM_{10} 24-hour mean objective (50µg/m^3 not to be exceeded more than 35 times/year) are shown in **bold**.

If the period of valid data is less than 85%, the 90.4th percentile of 24-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%).

Figure A.8 – Trends in Number of 24-Hour Mean PM_{10} Results > 50µg/m³



There were no exceedances of the 24 Hour – Mean PM_{10} Air Quality Objective during 2024 at both Hertsmere Manor Way (Roadside) H1 and Hertsmere Meadow Park (Background) Automatic Monitoring sites, therefore continuing a sustained trend of compliance with the 24 Hour – Mean PM_{10} Air Quality Objective, observed over the past five monitoring years.

Table A.8 – Annual Mean $PM_{2.5}$ Monitoring Results ($\mu g/m^3$)

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
Hertsmere Borehamwood Manor Way (H1)	520317	197099	Roadside	99.9	30.7	9	9	9.6	7.5	7.1
Hertsmere Borehamwood Meadow Park (H3)	519751	197358	Urban Background	95.8	95.8	8	9	7.1	7	6.9

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

Notes:

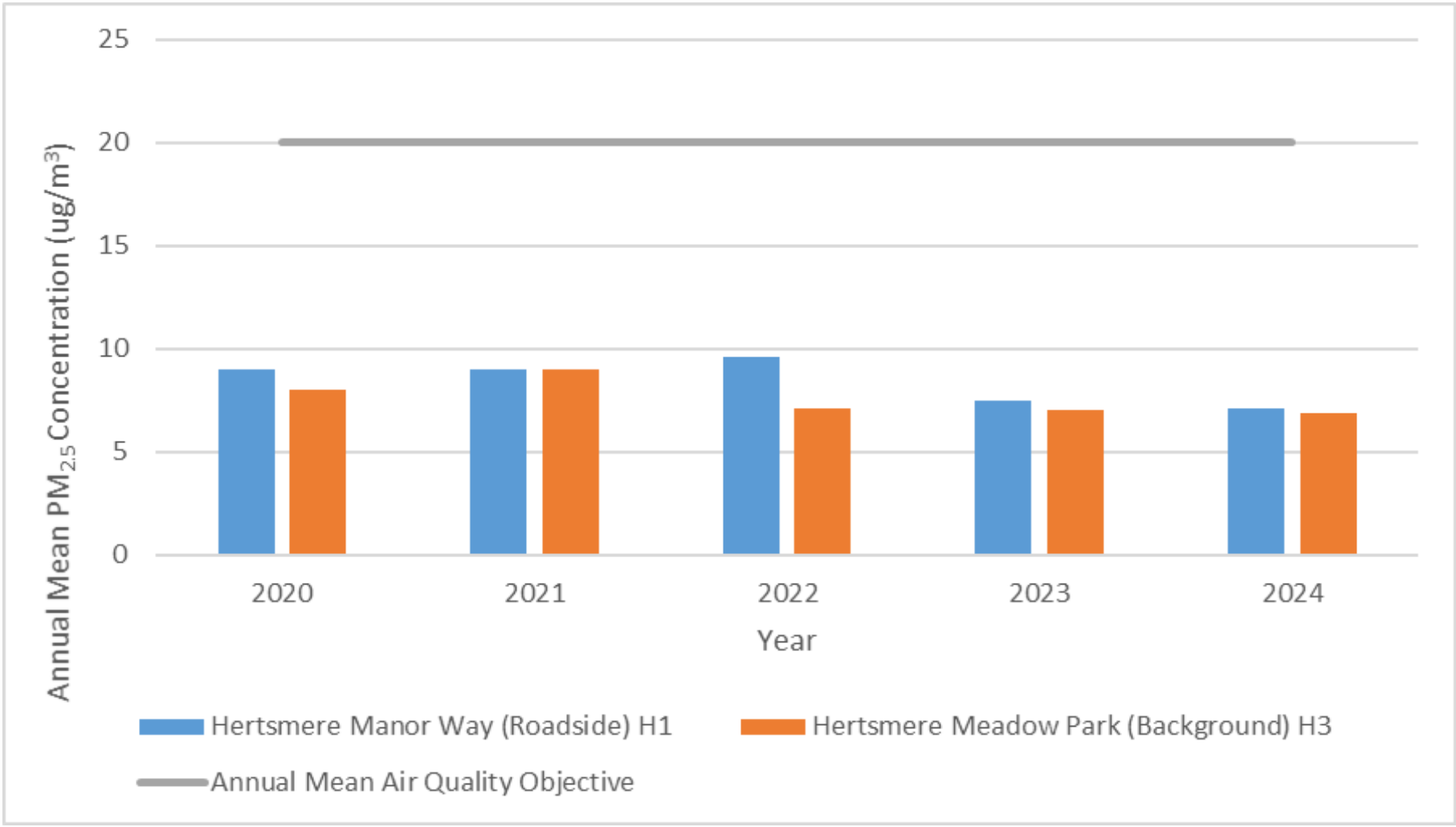
The annual mean concentrations are presented as $\mu g/m^3$.

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.9 – Trends in Annual Mean $PM_{2.5}$ Concentrations



The $PM_{2.5}$ Annual Mean concentrations at the Hertsmere Manor Way (Roadside) H1 Automatic Monitoring Site did not fluctuate between the 2020 and 2021 monitoring years, before rising marginally during 2022. However since 2023 the $PM_{2.5}$ Annual Mean concentration at Hertsmere Manor Way (Roadside) H1 has seen a downward trend, following a year on year decrease during 2023 and 2024.

The PM_{10} Annual Mean concentration at the Hertsmere Meadow Park (Background) H3 Automatic Monitoring Site increased during 2021 compared to 2020. A downward trend has been observed during the 2022, 2023 and 2024 monitoring years at the Hertsmere Meadow Park (Background) H3, due to a year on year decrease of 0.1 $\mu g/m^3$ of the $PM_{2.5}$ Annual Mean concentration.

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 <0.87>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
HM39	519421	196682	30.3	31.1	27.2	22.5	23.8	24.2	23.7	25.2	26.4	30.0	34.1	26.4	27.1	23.6	N.A	
HM40	519283	196779	20.0	18.4	16.8	9.9	10.8	8.7	11.6	11.5	12.5	20.6	22.7	15.9	15.0	13.1	N.A	
HM48	517846	195346	23.6	24.0	25.1	13.4	19.2	17.1	19.7	18.1	20.0	22.0	30.4	21.6	21.2	18.5	N.A	
HM49	517861	195226	27.0	31.3	28.5	26.5	26.0	27.2	28.2	26.0	23.8	31.7	35.7	26.1	28.2	24.6	N.A	
HM50	517805	195249	27.4	34.6	30.0	22.7	27.4	27.2	28.3	25.0	26.6	29.5	34.8	25.7	28.3	24.7	N.A	
HM52	517746	195247	25.5	28.7	24.3	17.7	19.2	20.7	22.7	20.2	21.1	27.4	30.7	23.7	23.5	20.5	N.A	
HM53	515584	195096	18.7	15.7	14.5	8.8	10.3	7.9	10.0	9.8	11.8	18.8	19.4	12.8	13.2	11.5	N.A	
HM55	512773	197838	18.7	15.4	13.2	10.5	12.2	9.7	11.0	10.5	12.5	15.2	20.8	14.1	13.7	11.9	N.A	
HM57	513520	197821	28.7	33.4	31.2	28.4	25.0	26.9	30.3	28.8	27.6	30.2	30.6	29.0	29.2	25.5	N.A	
HM61	522042	200671	37.7	34.5	30.0	25.3	23.1	25.4	30.0	28.1	25.1	33.8	31.7	25.8	29.2	25.5	N.A	
HM62	524946	201156	32.6	31.4	25.9	24.5	26.6	24.7	26.2	24.6	16.5	30.7	34.2	24.8	26.9	23.5	N.A	
HM64	526229	201506	34.8	36.2	28.3	27.1	24.3	29.9	27.5	27.4	27.1	32.5	36.9	31.7	30.3	26.5	N.A	
HM65	526255	201595	33.5	31.8	31.9	26.2	24.3	25.4	X	X	X	32.6	35.4	27.9	29.9	26.1	N.A	
HM66	526236	201462	32.6	X	24.9	23.0	21.8	24.2	22.0	X	24.7	27.8	34.7	30.4	26.6	23.2	N.A	
HM67	526211	201402	26.9	X	23.2	20.0	18.8	18.0	X	X	21.1	X	24.5	X	21.8	19.0	N.A	
HM69	526032	200837	35.2	37.9	32.9	30.4	31.5	28.6	31.1	28.4	29.1	37.4	42.1	32.5	33.1	28.9	N.A	
HM70	526406	200459	26.6	27.0	X	14.7	15.9	15.3	18.2	17.9	17.9	22.8	25.0	19.8	20.1	17.5	N.A	
HM71	516288	200030	32.7	30.6	26.0	27.8	27.2	27.0	25.8	22.9	28.0	27.8	34.1	22.9	27.7	24.2	N.A	
HM74	516460	199624	24.9	19.7	19.4	16.8	20.7	16.5	17.1	16.0	19.8	24.4	27.7	18.5	20.1	17.6	N.A	
HM79	524988	201120	27.6	26.4	X	X	23.3	22.5	17.6	17.2	20.1	28.9	29.6	24.4	23.7	20.7	N.A	
HM82	524925	201089	29.5	23.7	21.9	X	20.4	17.6	X	19.5	28.2	25.1	29.7	22.2	23.8	20.8	N.A	
HM85	518597	200952	18.7	15.8	X	9.4	10.2	8.1	9.6	9.4	11.7	18.1	20.3	13.3	13.1	11.5	N.A	
HM86	522970	199959	30.4	35.7	31.6	27.0	22.2	22.6	25.1	24.5	18.1	25.4	29.0	X	26.5	23.2	N.A	
HM93	524575	200632	22.7	22.8	19.6	13.6	13.4	11.9	13.1	14.7	22.7	23.2	25.7	17.6	18.4	16.1	N.A	
HM99	513212	195257	X	X	25.8	25.0	26.6	23.8	X	23.6	28.4	X	35.2	X	26.9	25.9	N.A	
HM102	516387	199763	29.3	32.7	28.0	25.1	25.9	24.7	24.1	23.5	24.2	31.0	36.3	27.2	27.7	24.2	N.A	
HM105	520740	195268	20.9	18.5	18.5	12.3	14.3	9.2	12.3	X	15.0	18.8	22.8	16.2	16.2	14.2	N.A	

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 <0.87>	Annual Mean: Distance Corrected to Nearest Exposure	Comment
HM108, HM109 & HM110	513423	197729	33.8	34.2	29.9	27.0	30.8	29.0	24.9	26.7	33.8	35.7	37.2	28.7	31.0	27.0	N.A	
HM114	526164	201363	29.2	26.2	X	20.6	X	19.8	19.5	19.3	23.5	27.2	31.9	24.5	24.2	21.1	N.A	
HM117	513103	195287	27.3	X	24.8	X	24.2	23.6	24.1	X	25.8	28.1	32.7	24.0	26.0	22.7	N.A	
HM126	517903	195552	23.2	23.8	19.9	11.7	19.2	18.2	19.5	17.2	18.7	24.5	26.5	18.5	20.1	17.5	N.A	
HM132	516522	199450	23.7	19.5	X	13.8	17.9	14.5	14.2	14.4	17.6	20.7	22.8	17.2	17.9	15.6	N.A	
HM135	513758	197597	25.4	25.9	19.2	17.5	16.2	20.0	21.3	22.0	19.2	24.7	26.4	23.2	21.7	19.0	N.A	
HM136	519802	197039	23.2	25.4	23.0	15.9	16.8	13.3	16.7	17.5	X	25.9	X	20.5	19.8	17.3	N.A	
HM138	519647	196865	26.6	24.4	23.4	17.4	19.1	17.5	18.6	18.5	20.2	25.3	27.0	21.4	21.6	18.9	N.A	
HM139	519589	196794	26.3	27.5	27.9	19.7	24.2	19.7	22.7	21.9	22.9	23.9	X	X	23.7	20.7	N.A	
HM140	519312	196574	31.6	30.3	31.4	23.3	25.3	22.9	24.2	23.2	26.0	31.7	35.0	26.8	27.6	24.1	N.A	
HM141	519233	196502	29.4	31.4	29.9	23.6	23.4	22.3	25.0	24.8	24.8	31.3	33.0	24.8	27.0	23.5	N.A	
HM142	513592	197887	25.1	22.5	X	24.0	17.8	17.7	18.5	19.1	17.4	22.6	27.2	23.7	21.4	18.7	N.A	
HM143	516231	200196	35.6	35.8	33.8	31.5	32.3	32.8	X	27.5	30.4	27.2	40.2	31.0	32.5	28.4	N.A	
HM144	526213	201749	21.7	22.5	19.3	14.1	14.6	15.0	16.3	13.3	15.6	24.1	24.4	18.7	18.3	16.0	N.A	
HM146	518991	200401	22.1	21.7	19.2	13.5	15.2	14.8	17.0	16.2	X	22.4	24.1	X	18.6	16.3	N.A	
HM148, HM149 & HM150	520317	197099	22.0	21.2	17.4	13.5	14.4	14.0	13.8	15.1	16.0	20.9	23.3	18.6	17.5	15.3	N.A	
HM151	514610	194356	20.3	X	20.6	13.8	15.7	X	11.4	13.9	15.3	22.1	X	17.1	16.7	14.6	N.A	
HM152	519731	197003	26.2	27.2	25.4	19.1	19.0	19.7	22.1	20.9	X	25.9	30.8	24.8	23.7	20.7	N.A	
HM153	518551	202915	23.4	18.3	18.0	15.0	17.3	15.9	14.9	16.0	17.8	20.5	23.5	18.9	18.3	16.0	N.A	
HM154	513879	197724	21.9	20.2	17.6	13.9	13.5	12.4	11.3	14.8	X	20.6	23.4	19.2	17.2	15.0	N.A	
HM155	521039	196673	28.0	24.6	22.7	20.3	20.8	17.3	17.4	17.9	24.0	28.6	30.0	21.3	22.7	19.9	N.A	
HM156	519285	196570	32.4	35.6	X	27.7	26.8	28.5	26.9	28.4	X	30.6	37.1	31.8	30.6	26.7	N.A	
HM157	516258	200153	28.1	26.3	22.7	21.2	24.0	20.8	19.3	19.5	21.9	28.7	33.2	24.0	24.2	21.1	N.A	
HM158, HM159 & HM160	519751	197358	16.6	15.8	14.2	8.4	9.2	7.0	9.5	9.0	10.2	17.7	18.4	13.2	12.4	10.9	N.A	
HM161	513325	197567	27.8	30.4	28.3	20.9	27.2	23.3	26.1	X	26.5	33.0	33.2	21.2	27.1	23.6	N.A	
HM162	526083	200022	X	X	X	X	18.0	14.9	18.3	19.5	14.8	22.4	X	19.1	18.1	17.4	N.A	

☒ **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.**

☒ **Hertsmere Borough 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

New or Changed Sources Identified Within Hertsmere Borough Council During 2024

New sources with a potential to impact air quality, identified within Hertsmere Borough Council during the 2024 reporting year include but are not limited to the following.

- Planning Ref: 23/1035/OUTEI - Land North East Of Elton Way, Bushey, Hertfordshire, WD25 8HB - Demolition and redevelopment to comprise B8 use of up to 30,000 sqm gross external, including ancillary offices. In addition to the above the development will include car parking, creation of servicing areas and provision of associated services, including waste, refuse, cycle storage, lighting and sub - station and for the laying out of the buildings, routes and open spaces within the development and all associated works and operations including but not limited to: demolition, earthworks, provision of attenuation infrastructure, engineering operations. This application is for a phased development capable of coming forward in distinct and separable phases and/or plots in a severable way. (Outline Application to include access with all other matters of appearance, landscaping, layout and scale reserved).

- Planning Ref: 23/0478/OUT - Land South Of Sky Studios Elstree Rowley Lane, Borehamwood, Hertfordshire - Application for a flexible (B2/B8) use including ancillary office floorspace, associated parking, loading docks, servicing, landscaping and substation. (Outline Application to include Access with all other matters Reserved).

- Planning Ref: 23/0937/OUT (Appeal Ref: (APP/N1920/W/24/3346928)) - Land Off Barnet Lane And Furzehill Road, Borehamwood, Hertfordshire - Outline planning application for the erection of up to 220 dwellings, including 50% affordable housing, self-build/custom-build plots, green infrastructure (including public open space, play area, landscape planting and sustainable drainage systems), ecological enhancements to Woodcock Hill Village Green, new multi-modal vehicular access from Furzehill Road, emergency, pedestrian and cycle access from Carrington

Avenue, and associated works and development. (Outline Application to include Access, with all other matters reserved).

- Planning Ref: 22/2149/OUT - Organ Hall Farm And Land Theobald Street, Borehamwood, Hertfordshire - Erection of up to 110 dwellings, a medical centre (Use Class E(e)), associated infrastructure, parking, landscaping, open space, earthworks and access from Theobald Street and a change of use of the land edged green on Drawing no. 221.1511.103 to provide landscaping and Public open space. (Outline Application to include Access, with all other matters Reserved) (Change of description; Amended plans and documents received 10.08.2023)

- Planning Ref: 22/2147/OUT - Land To The South Of Aldenham Reservoir, Watford Road, Elstree, Hertfordshire - Erection of industrial / distribution floorspace (Use Class E/ B2 / B8), a flexible office/hub building (Use Class E), new vehicular access, and associated provision of car and cycle parking and landscaping. (Outline Application to include Access, all other Matters Reserved)

Additional Air Quality Works Undertaken by Hertsmere Borough Council During 2024

Hertsmere Borough Council considered revoking all six of its Air Quality Management Areas, following more than five consecutive years of compliance with the Annual Mean Air Quality Objective of 40µg/m^3 for nitrogen dioxide (NO_2). Hertsmere Borough Council consulted Defra prior to drafting its Revocation Order and Committee Report for its elected members and also entered the monitoring data in to an AQMA Data Review Template provided via the LAQM Helpdesk. Hertsmere Borough Council received confirmation of Defra's approval for its plan to revoke all six of its AQMAs on the 30th April 2024, subsequently all six AQMAs were successfully revoked on the 2nd May 2024.

QA/QC of Diffusion Tube Monitoring

Nitrogen dioxide analysis procedures are compliant with the Diffusion Tubes for Ambient NO_2 Monitoring: Practical Guidance for users and laboratories (February 2008). The diffusion tubes are supplied and analysed by Gradko utilising the 20% TEA in water preparation method. Gradko maintains a UKAS accredited quality system with fully documented in house methods for all analysis procedures. The concentration of nitrogen dioxide is determined for exposed diffusion tubes using method GLM7. Gradko was assessed as part of the AIR PT Proficiency Scheme and was 100% satisfactory in all AIR-PT-Rounds, (AIR PT 62-1 to AIR PT 66-4) which were carried out between February 2024 and October 2024.

Diffusion Tube monitoring during 2024 was completed in adherence with the 2024 Diffusion Tube Monitoring Calendar.

Diffusion Tube Annualisation

Diffusion Tube monitoring location HM67, HM99 and HM162 required annualising as had a data capture less than 75% but greater than 25%. The Diffusion Tube data for the three locations was annualised using the Diffusion Tube Data Processing Tool v5.4, with the annualised results summarised in Table C.1.

Table C.1 – Annualisation Summary (concentrations presented in µg/m^3)

Site ID	Annualisation Factor Site 1 Hertsmere Borehamwood Meadow Park	Annualisation Factor Site 2 Southend-on-Sea (Site ID: SEND)	Annualisation Factor Site 3 Rochester Stoke (Site ID: ROCH)	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean
HM67	1.0414	0.9978	0.9581	0.9991	21.8	21.7
HM99	1.1695	1.1050	1.0249	1.0998	26.9	29.6
HM162	1.1447	1.0968	1.0481	1.0966	18.1	19.9

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.

Hertsmere Borough Council has applied a combined Local bias adjustment factor of 0.87 to the 2024 monitoring data. The combined Local bias adjustment factor was derived from two co-location studies completed at the Borehamwood, Manor Way (Roadside) Air Quality Monitoring Station (AQMS) (H1) and the Borehamwood Meadow Park, (Background) AQMS (H3). The co-location studies involved deploying three diffusion tubes (triplicates) close to the NO_2 chemiluminescent analyser's inlet. A summary of bias adjustment factors used by Hertsmere Borough Council over the past five years is presented in Table C.2. The Local Bias Adjustment factor was calculated via the Diffusion Tube Data Processing Tool v5.4. A summary of the results are shown within Table C.3.

Table C.2 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	Local	N.A	0.87
2023	Local	N.A	0.85
2022	Local	N.A	0.97
2021	National	09/22	0.84
2020	Local	N.A.	0.92

Table C.3 – Local Bias Adjustment Calculation

	Local Bias Adjustment Input 1	Local Bias Adjustment Input 2
Periods used to calculate bias	12	11
Bias Factor A	0.91 (0.87 - 0.95)	0.84 (0.78 - 0.92)
Bias Factor B	10% (5% - 16%)	19% (9% - 28%)
Diffusion Tube Mean (µg/m^3)	17.5	12.7
Mean CV (Precision)	3.2%	4.2%
Automatic Mean (µg/m^3)	15.9	10.7
Data Capture (for periods used to calculate bias)	100%	100%
Overall Data Capture	100%	98%
Adjusted Tube Mean (µg/m^3)	16 (15 - 17)	11 (10 - 12)
Overall Diffusion Tube Precision	**Good Overall Precision**	**Good Overall Precision**
Overall Continuous Monitor Data Capture	**Good Overall Data Capture**	**Good Overall Data Capture**

Combined Local Bias Adjustment Factor	**0.87**

Notes:

A combined local bias adjustment factor of 0.87 has been used to bias adjust the 2024 diffusion tube results.

NO_2 Fall-off with Distance from the Road

No diffusion tube NO_2 monitoring locations within Hertsmere Borough Council required distance correction during 2024.

QA/QC of Automatic Monitoring

- During the 2024 monitoring year Craig Gent (Senior Scientific Officer) completed the data management and undertook the Local Site Operator (LSO) duties for the two automatic monitoring sites within Hertsmere Borough Council's district. Karl Riahi (Environmental Health Manager) also participated within the Local Site Operator (LSO) duties. Paul Busz (Senior Environmental Health Officer) was trained to complete Local Site Operator (LSO) duties in 2024.
- The Hertsmere Borehamwood Manor Way, Roadside Automatic Monitoring Site (H1) is calibrated every two weeks, whereas the Hertsmere Borehamwood Meadow Park, Background Automatic Monitoring Site (H3) is calibrated monthly.
- Hertsmere Borough Council has an annual Service Contract with Acoem for both Background and Roadside Automatic Monitoring Sites, inclusive of 2 x 6 Monthly Routine Service Visits Per Annum.
- At the time of writing the Borehamwood, Manor Way (Roadside) Air Quality Monitoring Station (AQMS) is not audited. The Borehamwood Meadow Park, (Background) AQMS is part of the AURN network and was audited during July 2024 and again between December 2024 and February 2025. Certificates of Calibration were issued on the 9th October 2024 (Certificate Number: 07062) and 26th February 2025 (Certificate Number 07285).
- The monitoring data presented within the ASR has been ratified.
- Live/historic data is available on the HERTS + BEDS Air Quality Network's webpage via https://www.airqualityengland.co.uk/local-authority/?la_id=408

PM_{10} and $PM_{2.5}$ Monitoring Adjustment

PM_{10} and $PM_{2.5}$ monitoring is carried out by Hertsmere Borough Council at two locations. Both The Borehamwood, Manor Way (Roadside) & Borehamwood Meadow Park (Background) Air Quality Monitoring Stations (AQMS) use a Fidas 200, which processes both PM_{10} and $PM_{2.5}$ monitoring data via an inbuilt algorithm known as Method 11. In accordance with LAQM.TG (22) 7.174, Method 11 PM_{10} data can be used by Local Authorities without the need for correction. Method 11 $PM_{2.5}$ data can be used after correction for slope by dividing by 1.06.

Hertsmere Borough Council's PM_{10} and $PM_{2.5}$ monitoring data is handled/processed by Ricardo Energy & Environment and may be accessed online via the Air Quality England website.

Hertsmere Borough Council received confirmation from the LAQM Helpdesk that $PM_{2.5}$ monitoring data provided by either Air Quality England or UK AIR will have already been corrected (divided by 1.06), therefore the division of $PM_{2.5}$ monitoring data is not required, when being processed/reported by a Local Authority.

Therefore the $PM_{2.5}$ Annual Mean raw data for both the Borehamwood, Manor Way (Roadside) & Borehamwood Meadow Park (Background) AQMSs did not require any further correction for slope prior to or after using the Automatic Data Processing Tool V1.0.6, which calculated the Annual Mean $PM_{2.5}$ concentrations for both sites.

Subsequently the Annual Mean $PM_{2.5}$ monitoring data for the Borehamwood Meadow Park (Background) AQMS for the 2020, 2021, 2022 and 2023 monitoring years has been amended in order to reverse the application of a correction factor for slope which was applied incorrectly for these data years.

The updated Annual Mean $PM_{2.5}$ monitoring results are shown within Table A.8 above, whereas the updated Annual Mean Trends are shown within Figure A.5 above.

During the 2020, 2021, 2022 and 2023 monitoring years, the Borehamwood, Manor Way (Roadside) Air Quality Monitoring Station (AQMS), used a 1405-DF TEOM/FDMS, which has been declared equivalent to the reference method and in accordance with LAQM.TG (22) 7.164, Local Authorities can use this type of FDMS variant, without the need for correction for slope and/or intercept.

Automatic Monitoring Annualisation

Both automatic monitoring locations within Hertsmere Borough Council recorded a data capture of greater than 75% for NO_2, therefore it was not required to annualise any of the NO_2 monitoring data. In addition, any sites with a data capture below 25% do not require annualisation.

Hertsmere Borehamwood Meadow Park (H3) Automatic Monitoring Site also recorded a data capture of greater than 75% for PM_{10} and $PM_{2.5}$ and it was not required to annualise any this monitoring data. However the Hertsmere Borehamwood Manor Way (H1) Automatic Monitoring Site had a data capture of less that than 75% for PM_{10} and $PM_{2.5}$, with the data subsequently annualised via the Automatic Data Processing Tool v1.0.6.

Summaries of the Automatic PM_{10} Annualisation data and Automatic $PM_{2.5}$ Annualisation data are shown within Tables C.4 and C.5.

Table C.4 – Automatic PM_{10} Annualisation Summary (concentrations presented in µg/m³

Background Site	Annual Data Capture (%)	Annual Mean (A_m)	H1	
			Period Mean (P_m)	Ratio (A_m / P_m)
Hertsmere Borehamwood Meadow Park	100.0	10.3	11.3	0.909
Southend-on-Sea (Site ID: SEND	99.9	11.3	11.9	0.945
Rochester Stoke (Site ID: ROCH)	98.2	12.0	12.5	0.962
Average (R_a)			**0.939**	
Raw Data Annual Mean (M)			**12.1**	
Annualised Annual Mean (M x R_a)			**11.3**	

Table C.5 – Automatic $PM_{2.5}$ Annualisation Summary (concentrations presented in µg/m³

Background Site	Annual Data Capture (%)	Annual Mean (A_m)	H1	
			Period Mean (P_m)	Ratio (A_m / P_m)
Hertsmere Borehamwood Meadow Park	100.0	6.9	7.5	0.919
Southend-on-Sea (Site ID: SEND)	99.9	7.2	7.9	0.914
Rochester Stoke (Site ID: ROCH)	98.2	7.7	8.5	0.905
Average (R_a)			**0.913**	
Raw Data Annual Mean (M)			**7.8**	
Annualised Annual Mean (M x R_a)			**7.1**	

NO_2 Fall-off with Distance from the Road

No automatic NO_2 monitoring locations within Hertsmere Borough Council required distance correction during 2024.

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

Figure D.1 – Map of Automatic Monitoring Sites

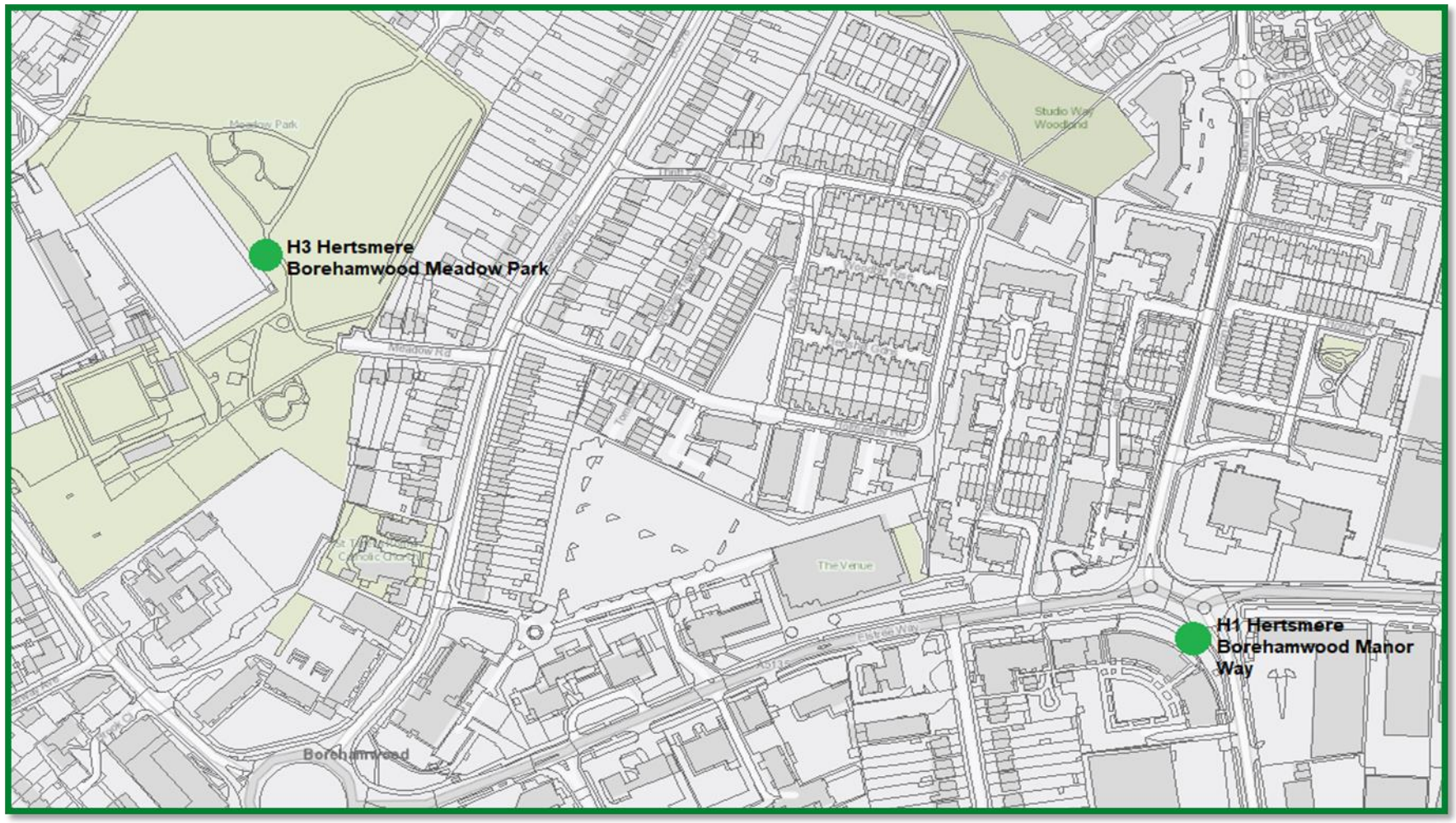


Figure D.2 – Hertsmere AQMA No.1 23-27 Dove Lane and caravan site off A1000 Barnet Road; Including Diffusion Tube monitoring location HM63

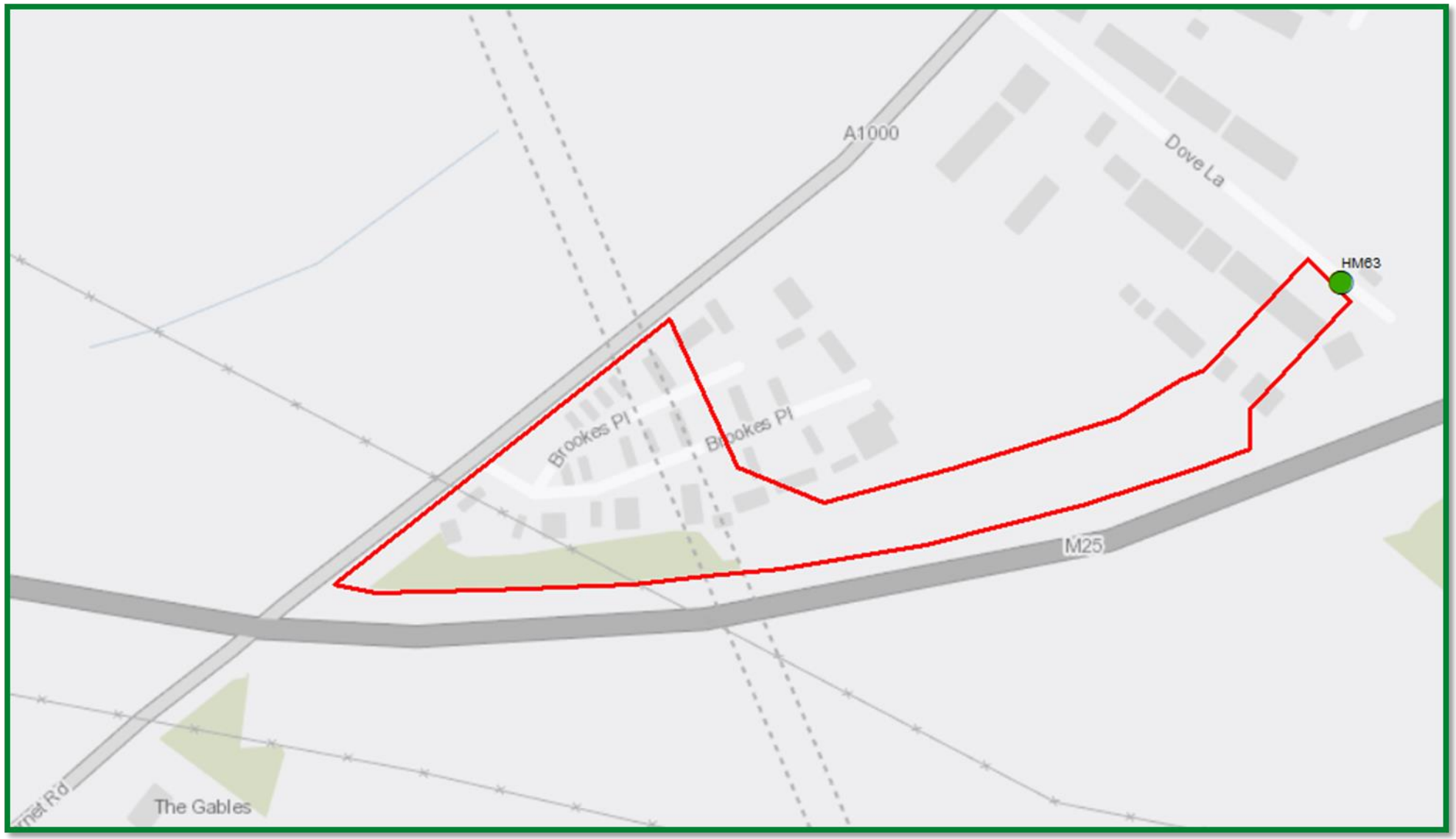


Figure D.3 – Hertsmere AQMA No.1 23-27 Dove Lane and caravan site off A1000 Barnet Road; Including Diffusion Tube monitoring location HM162

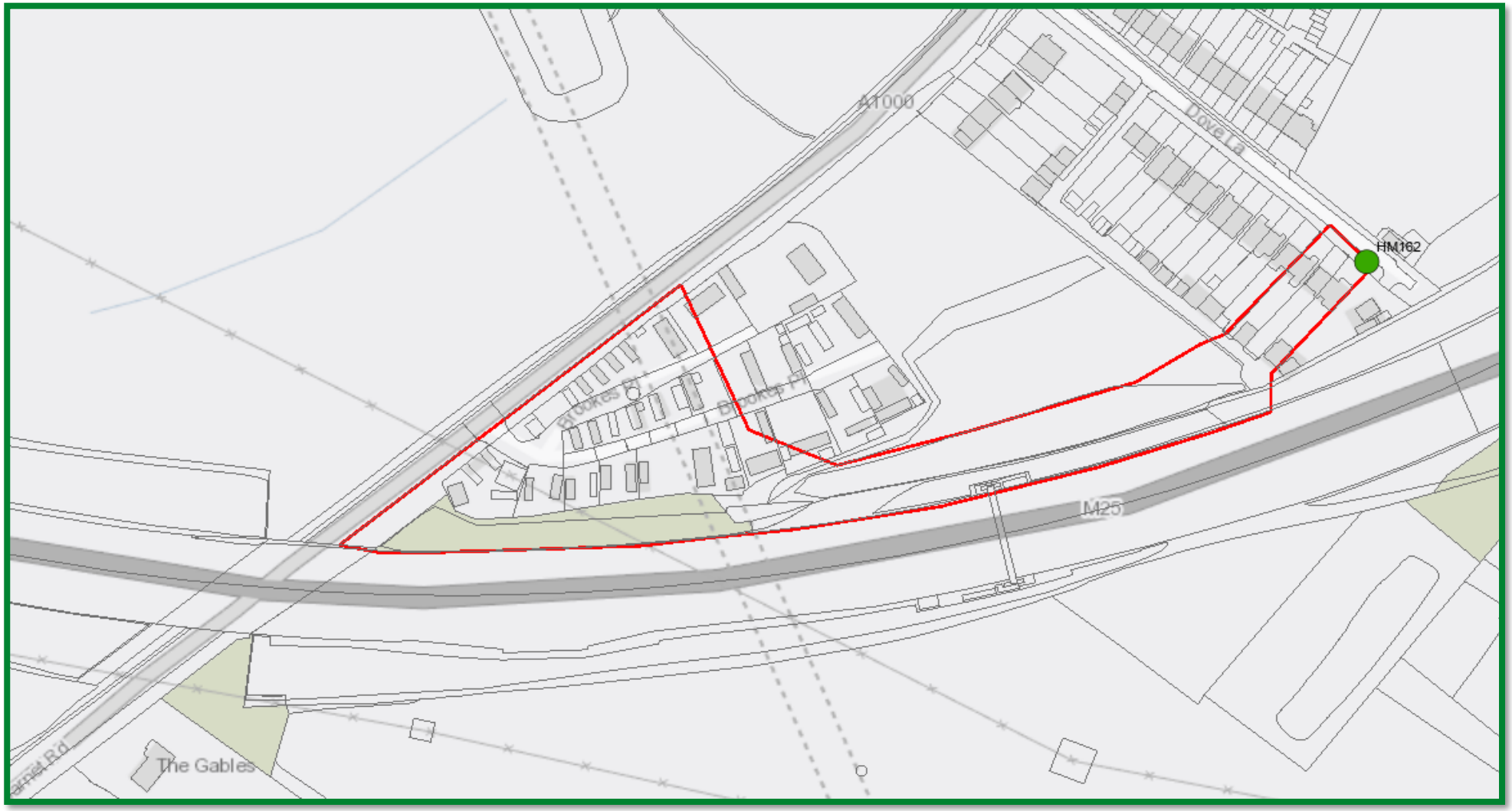


Figure D.4 – Hertsmere AQMA No. 2 Charleston Paddocks, St Albans Road; Including Diffusion Tube monitoring location HM86

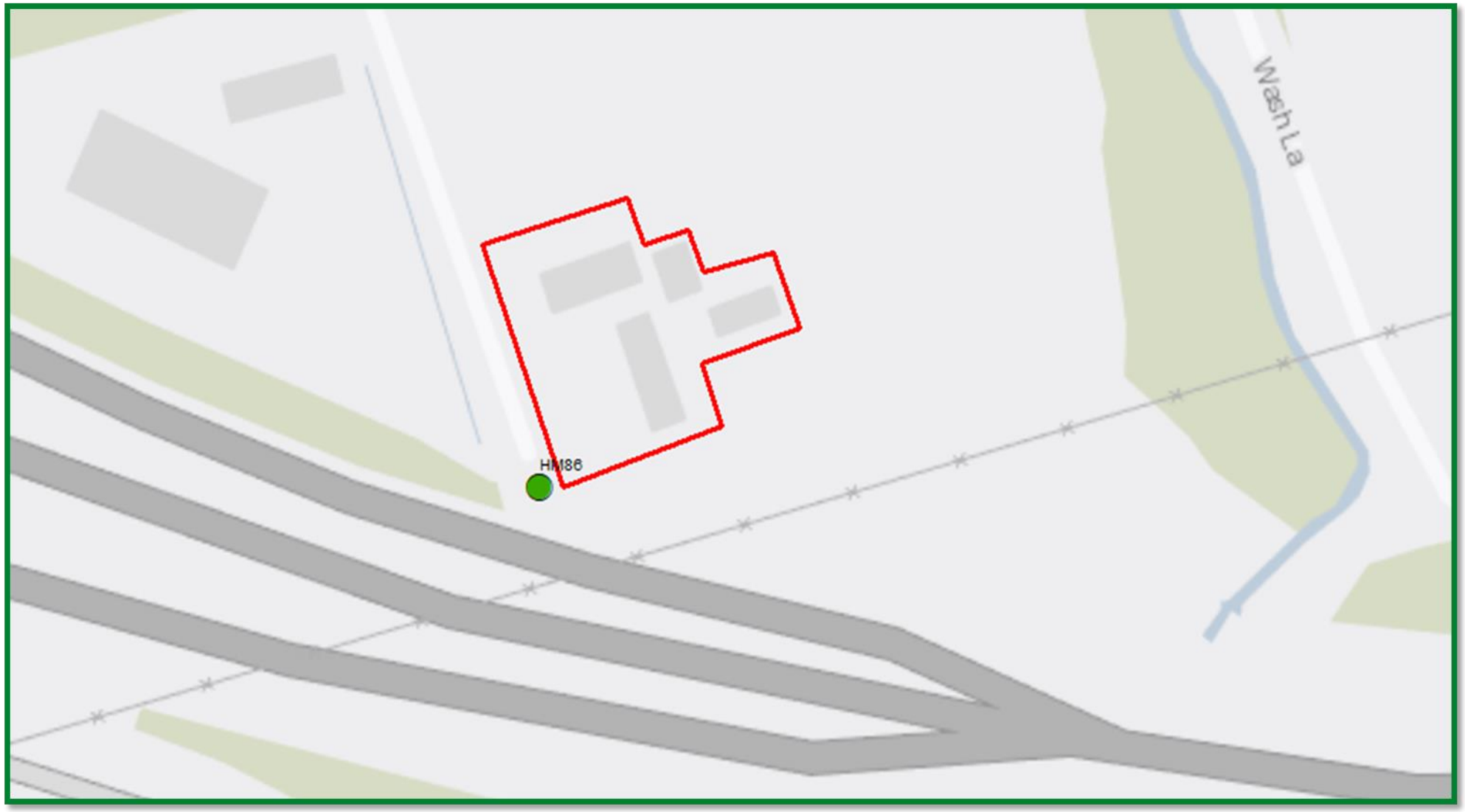


Figure D.5 – Hertsmere AQMA No. 3 31-39 Blanche Lane, South Mimms; Including Diffusion Tube monitoring location HM61

Figure D.6 – Hertsmere AQMA No. 4 Hartspring Lane; Including Diffusion Tube monitoring locations HM57, HM108, HM109, HM110, HM135, HM142, HM154 & HM161

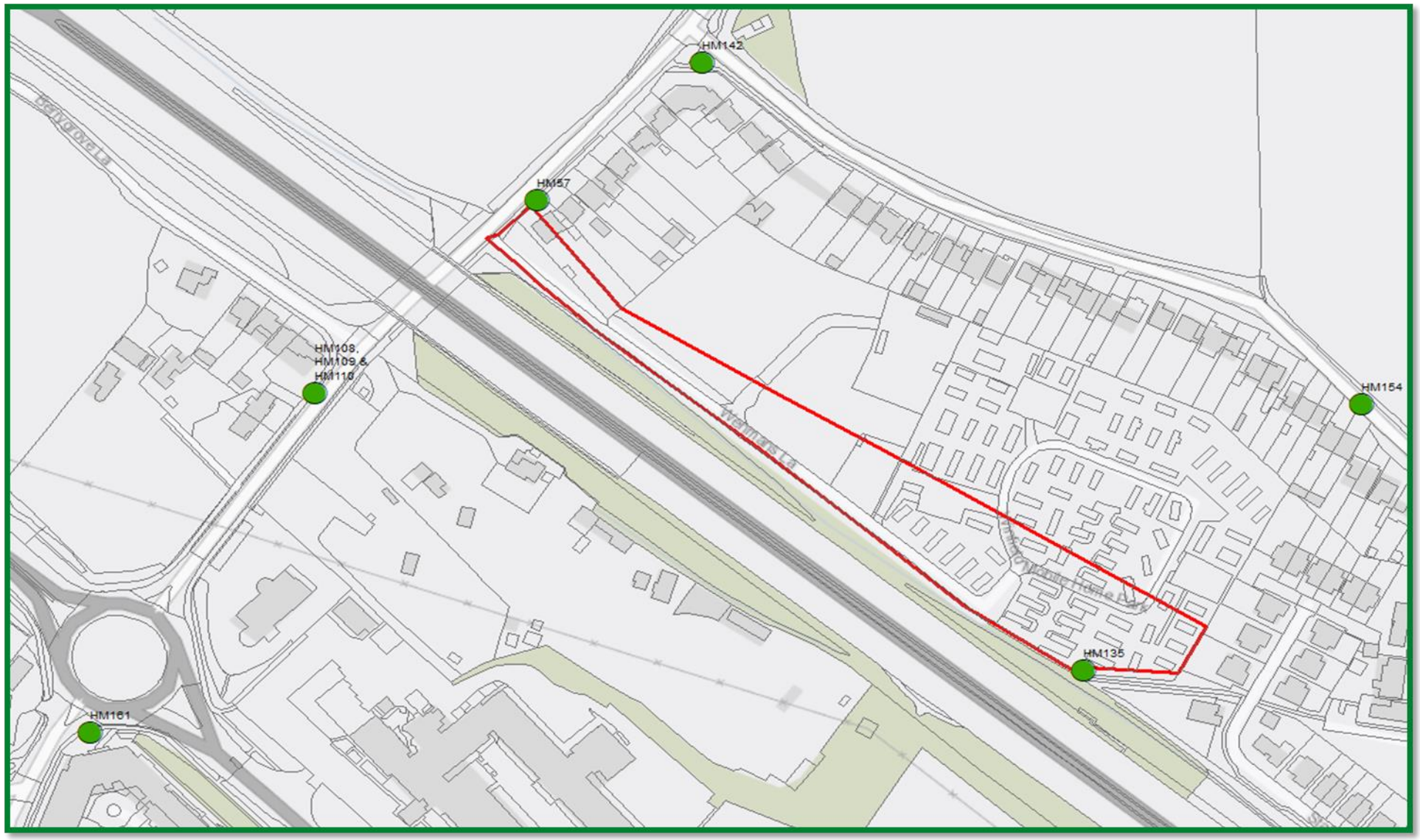


Figure D.7 – Hertsmere AQMA No. 5 Elstree Crossroads; Including Diffusion Tube monitoring locations HM48, HM49, HM50 & HM52

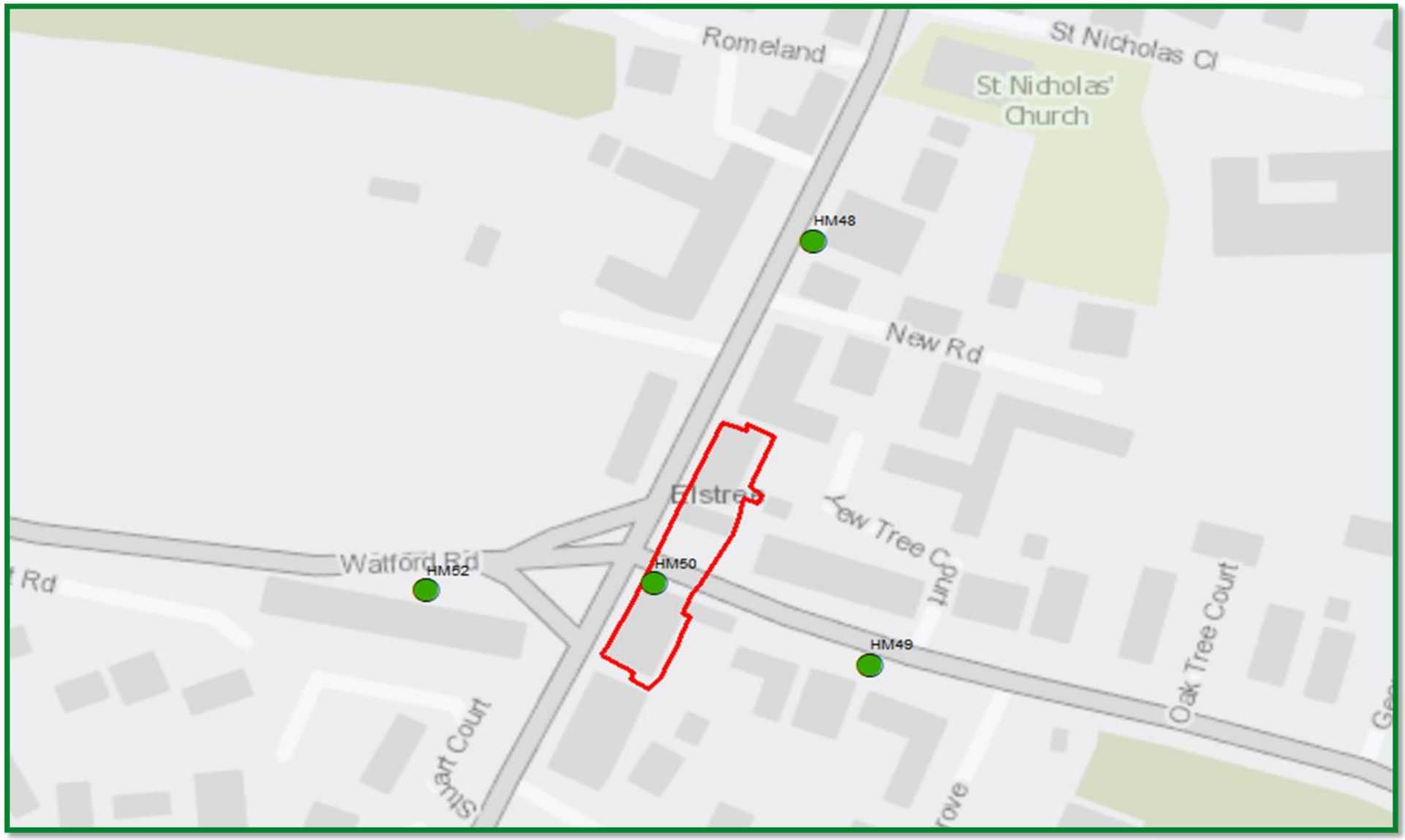


Figure D.8 – Hertsmere AQMA No. 6 133 to 167 High Street, Potters Bar; Including Diffusion Tube monitoring locations HM64, HM66, HM67 & HM114

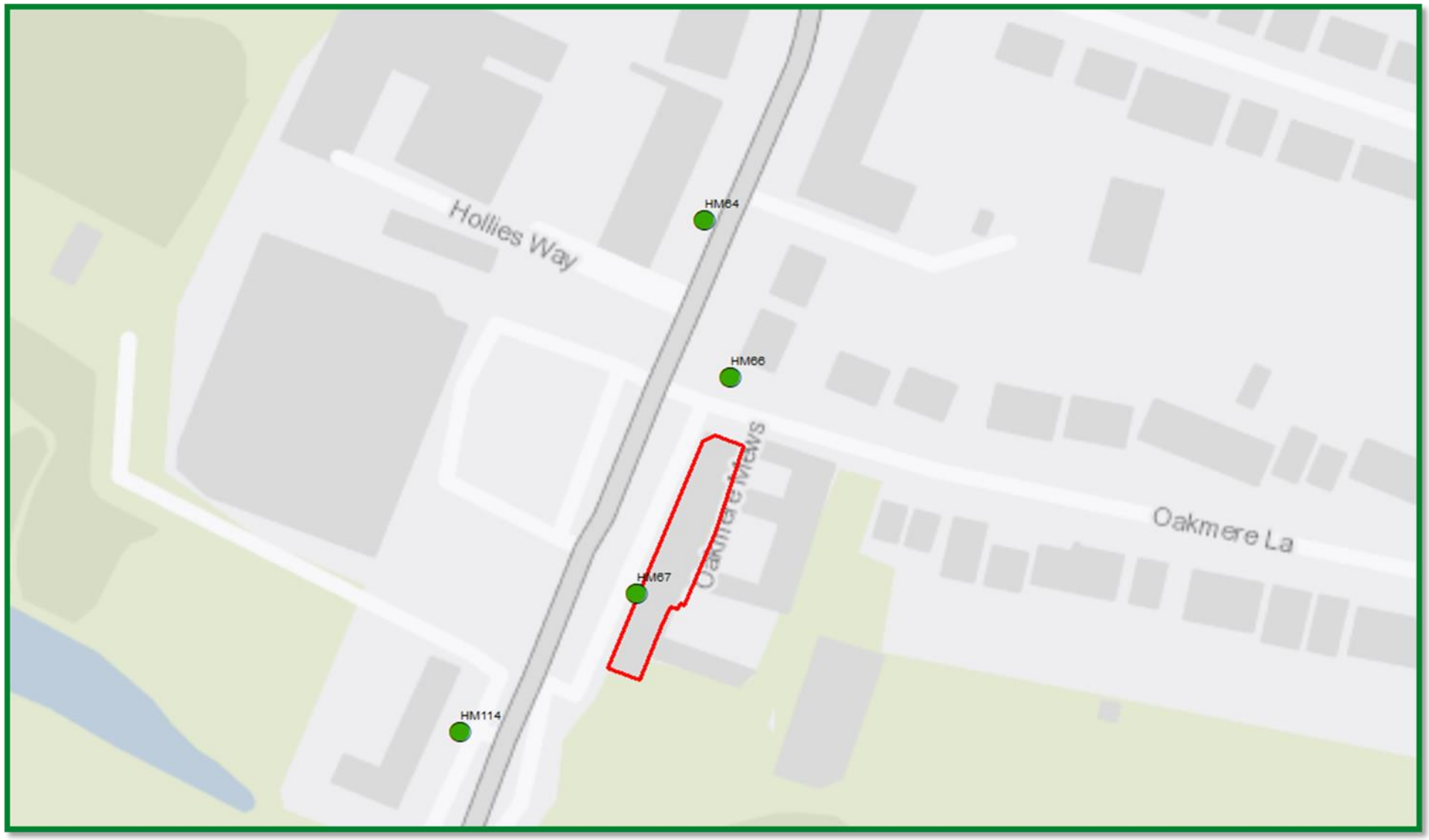


Figure D.9 – Diffusion Tube monitoring locations HM65, HM144 & HM145

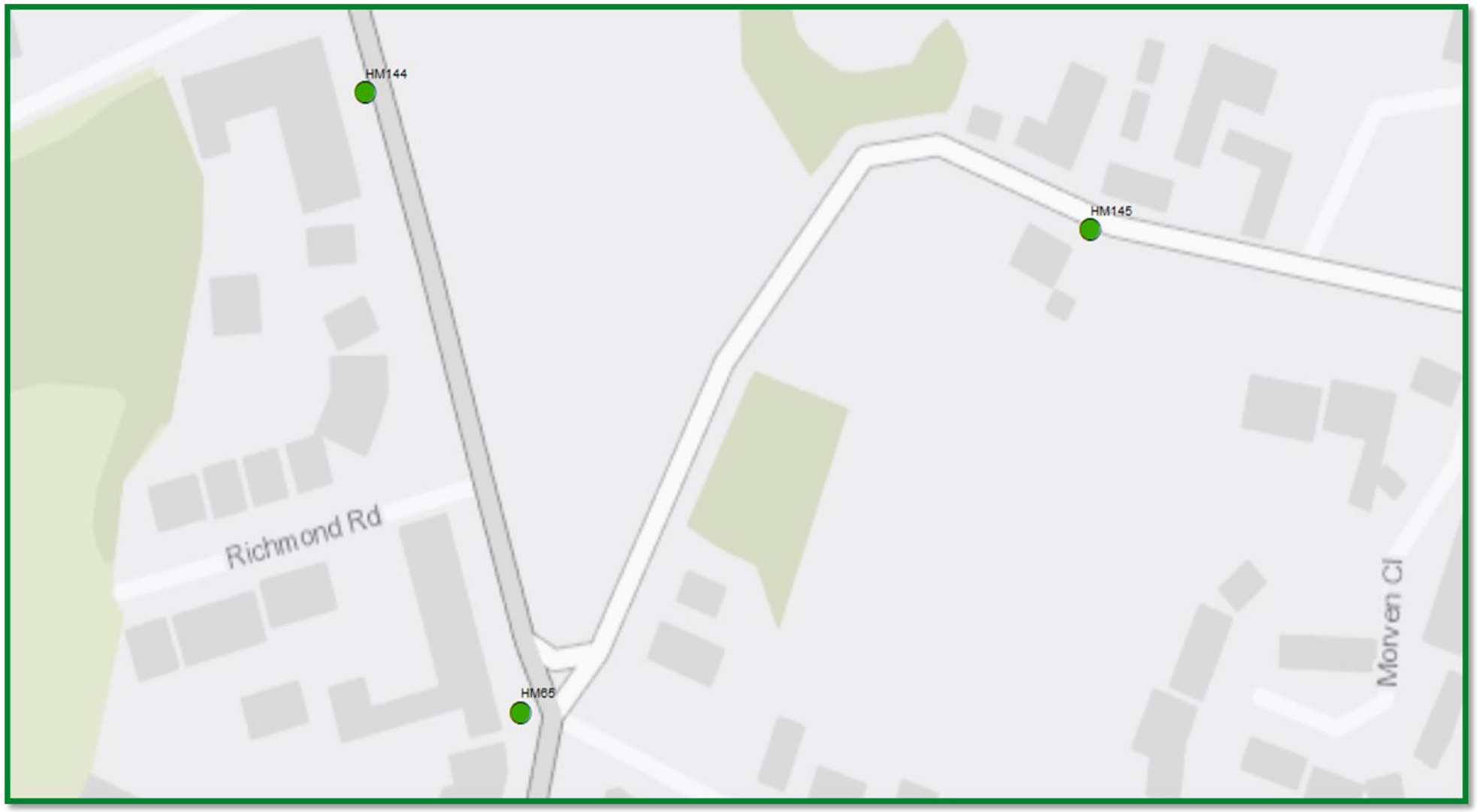


Figure D.10 – Diffusion Tube monitoring location HM69

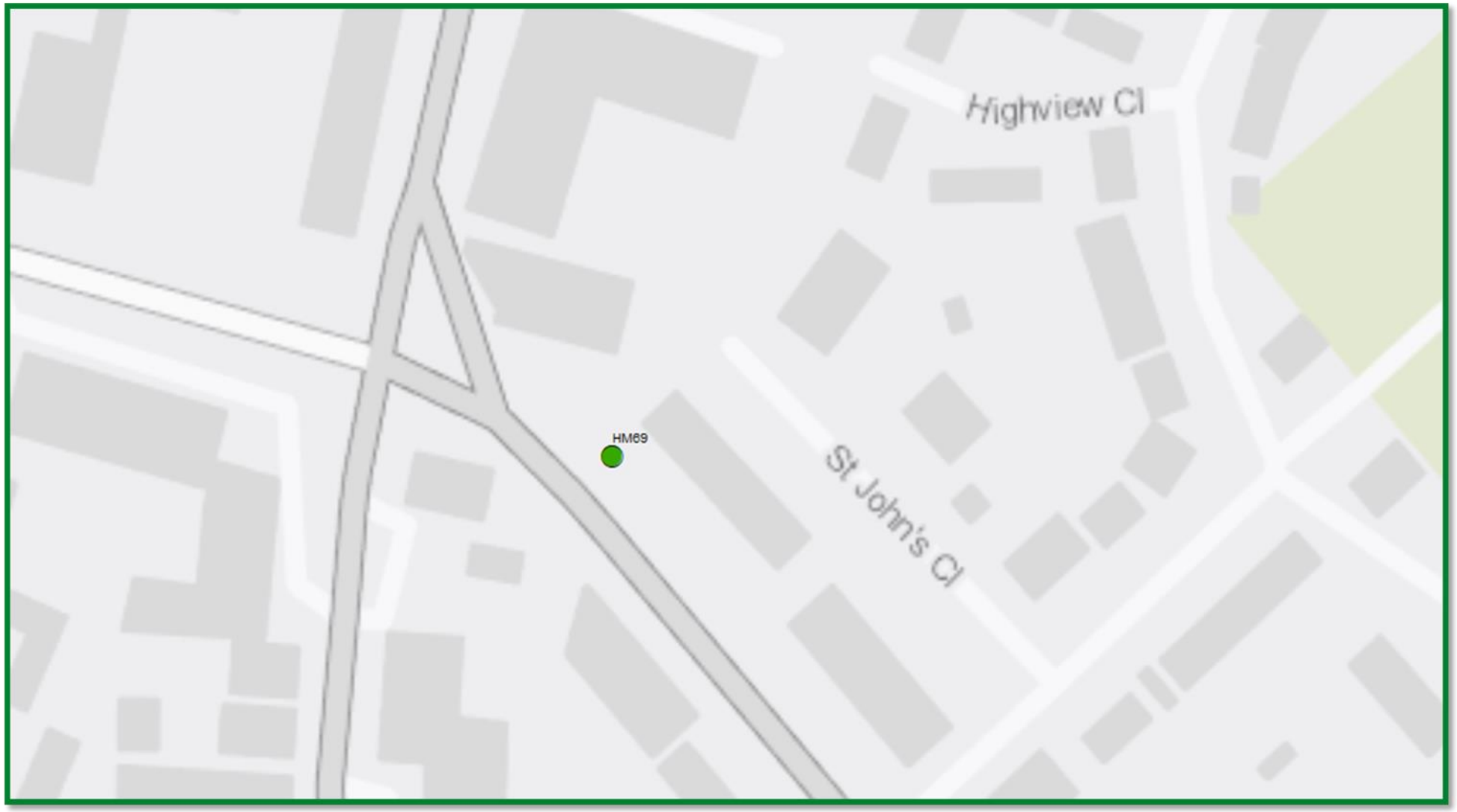


Figure D.11 – Diffusion Tube monitoring location HM70

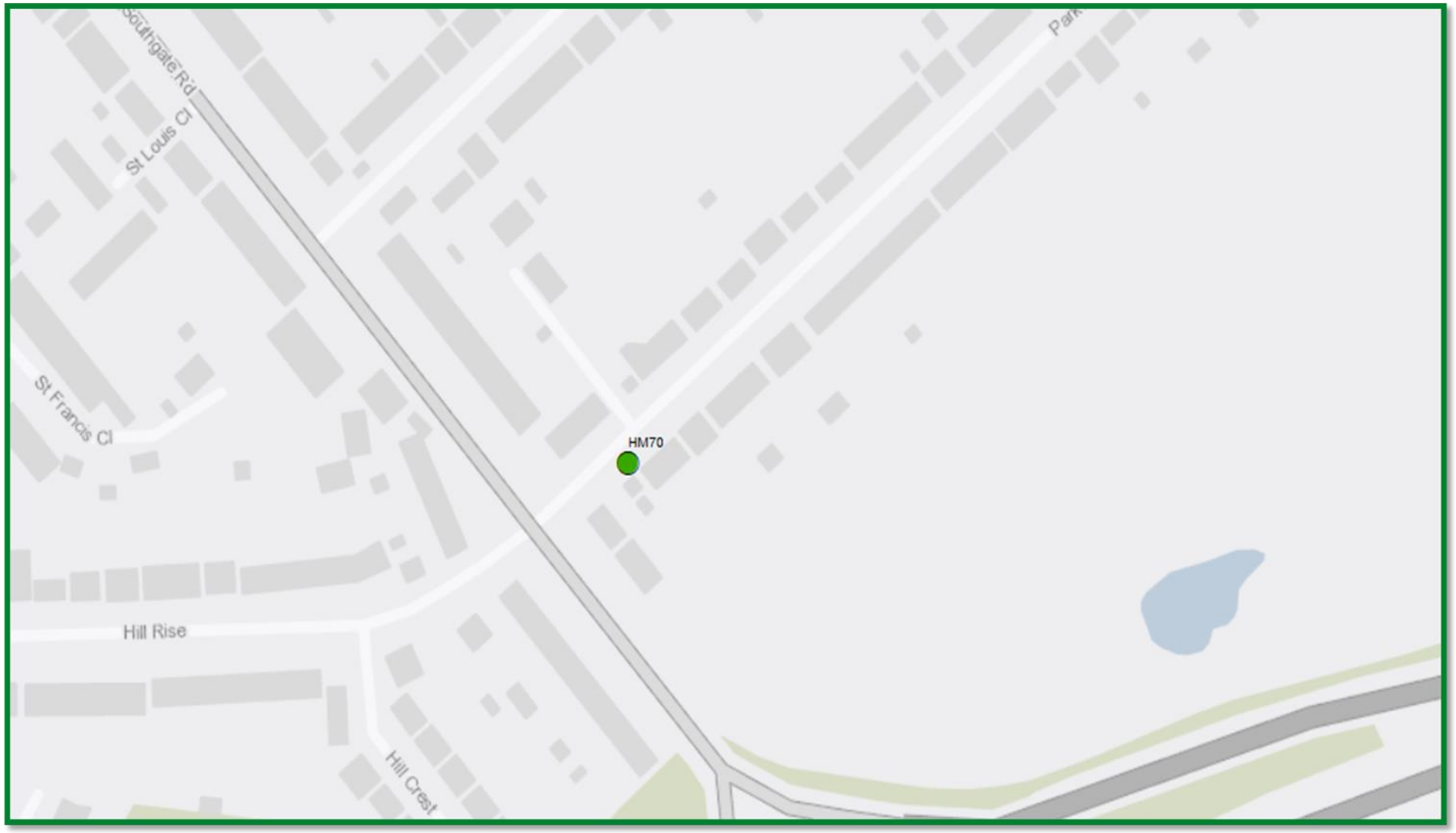


Figure D.12 – Diffusion Tube monitoring locations HM62, HM79 & HM82

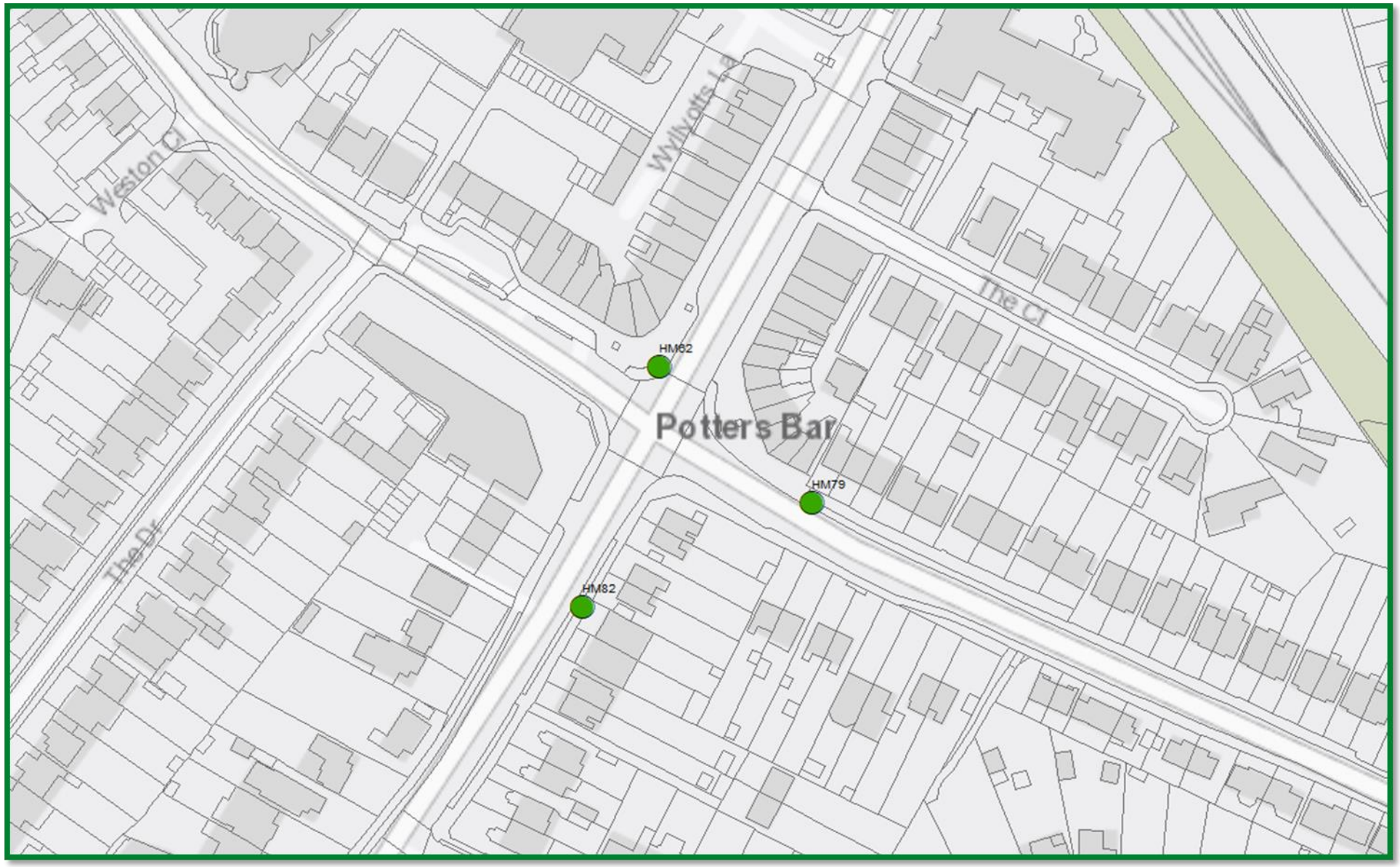


Figure D.13 – Diffusion Tube monitoring location HM93

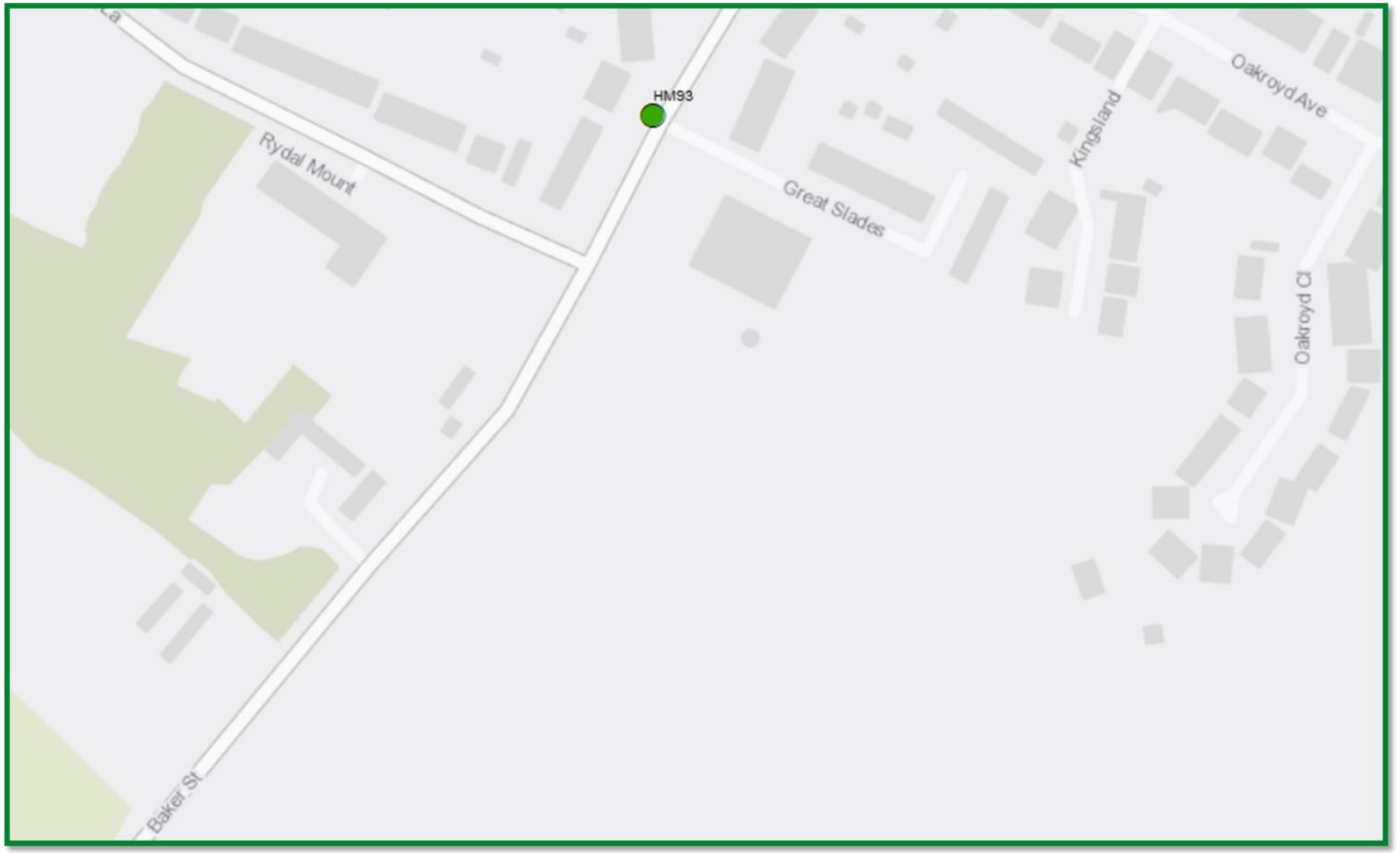


Figure D.14 – Diffusion Tube monitoring location HM153

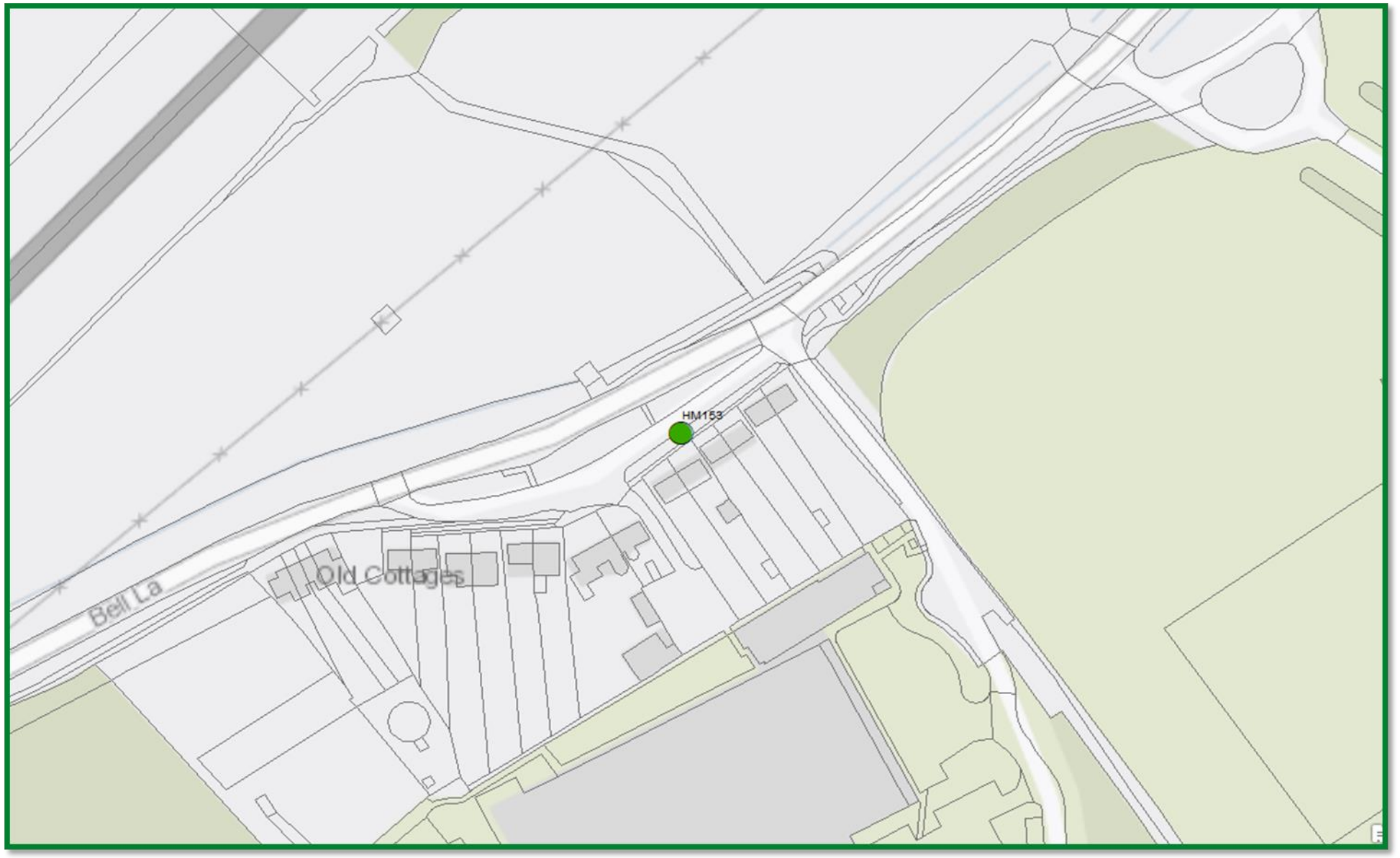


Figure D.15 – Diffusion Tube monitoring location HM146

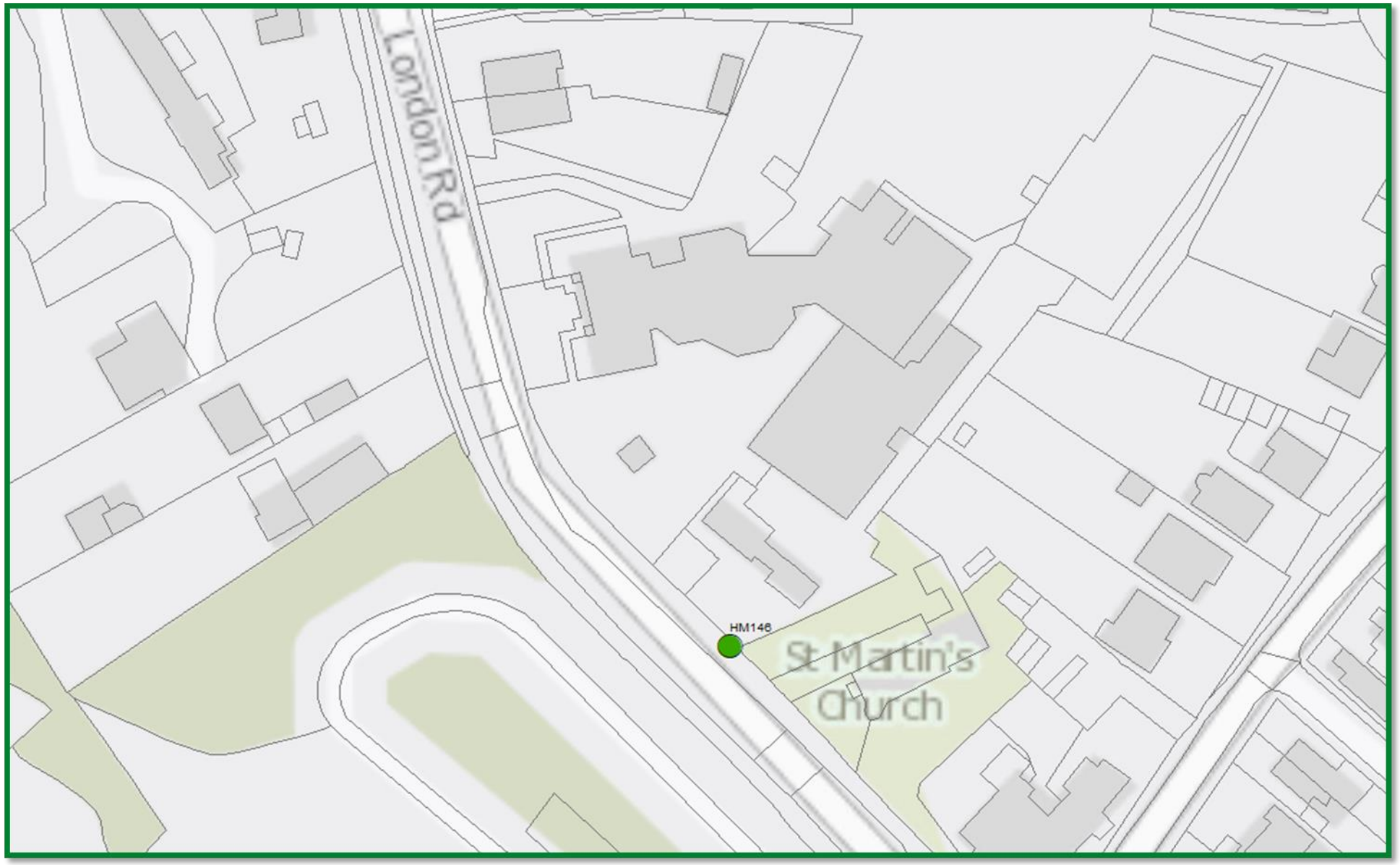


Figure D.16 – Diffusion Tube monitoring location HM85

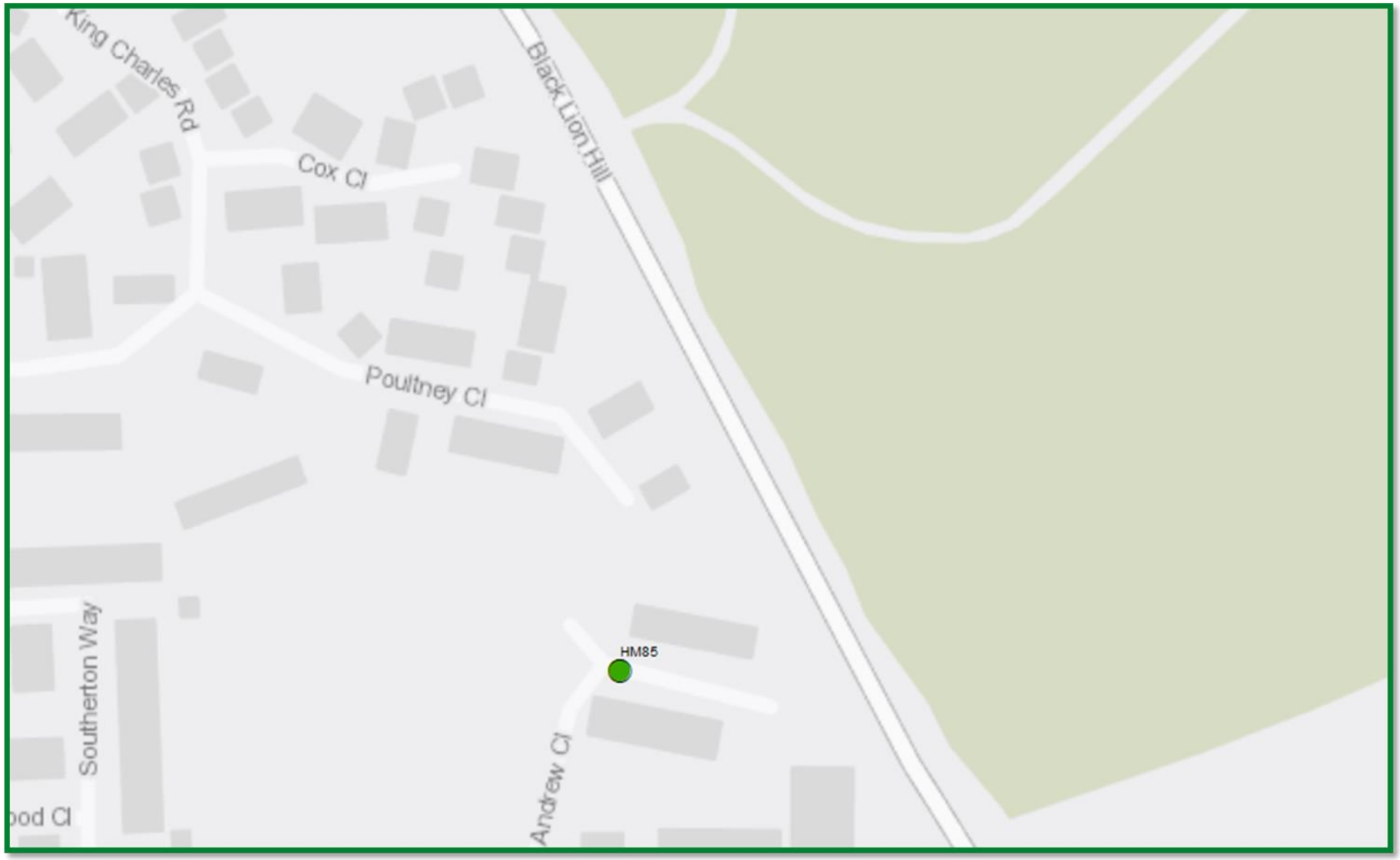


Figure D.17 – Diffusion Tube monitoring locations HM74, HM102 & HM132

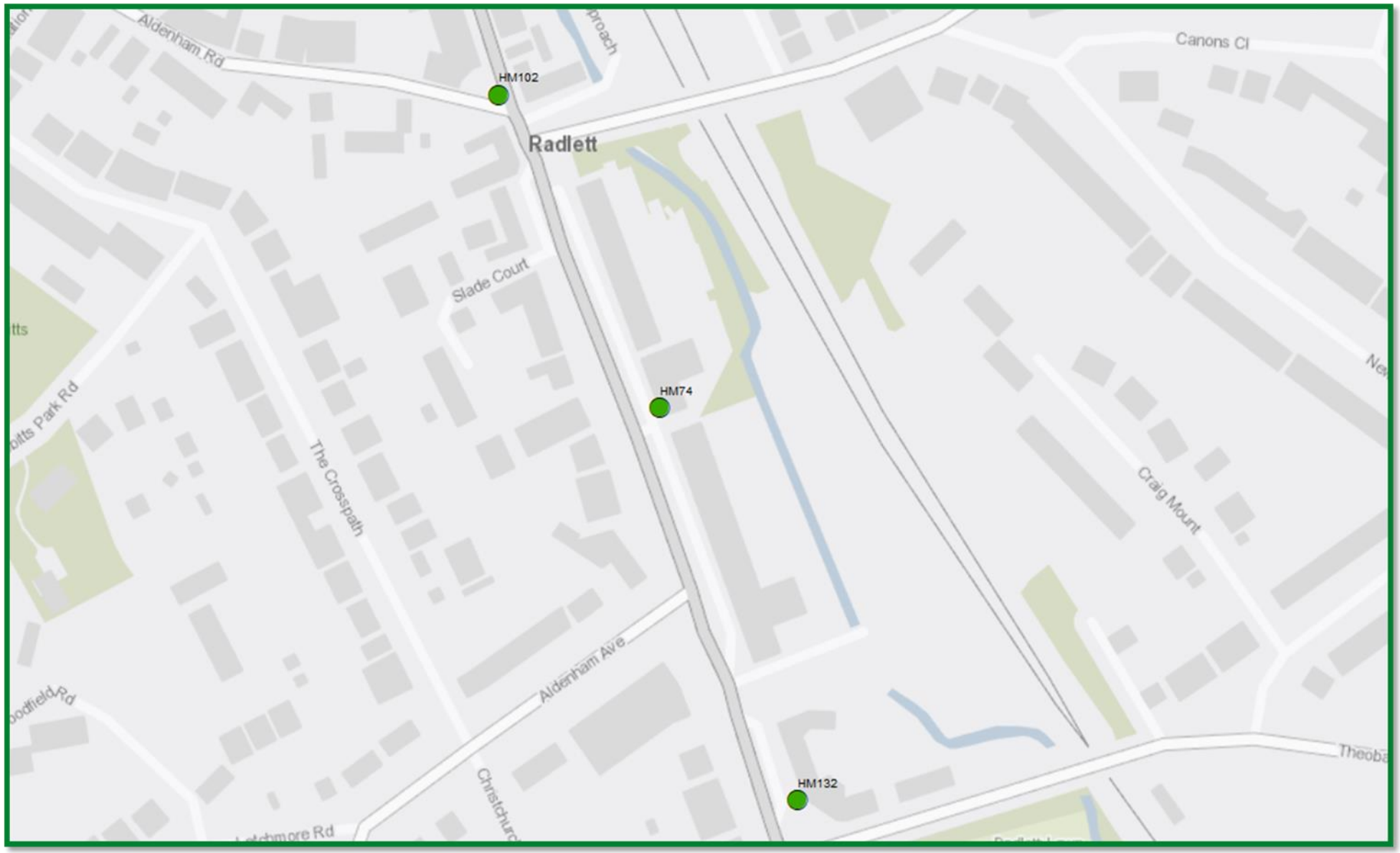


Figure D.18 – Diffusion Tube monitoring locations HM71, HM143 & HM157

Figure D.19 – Diffusion Tube monitoring location HM55

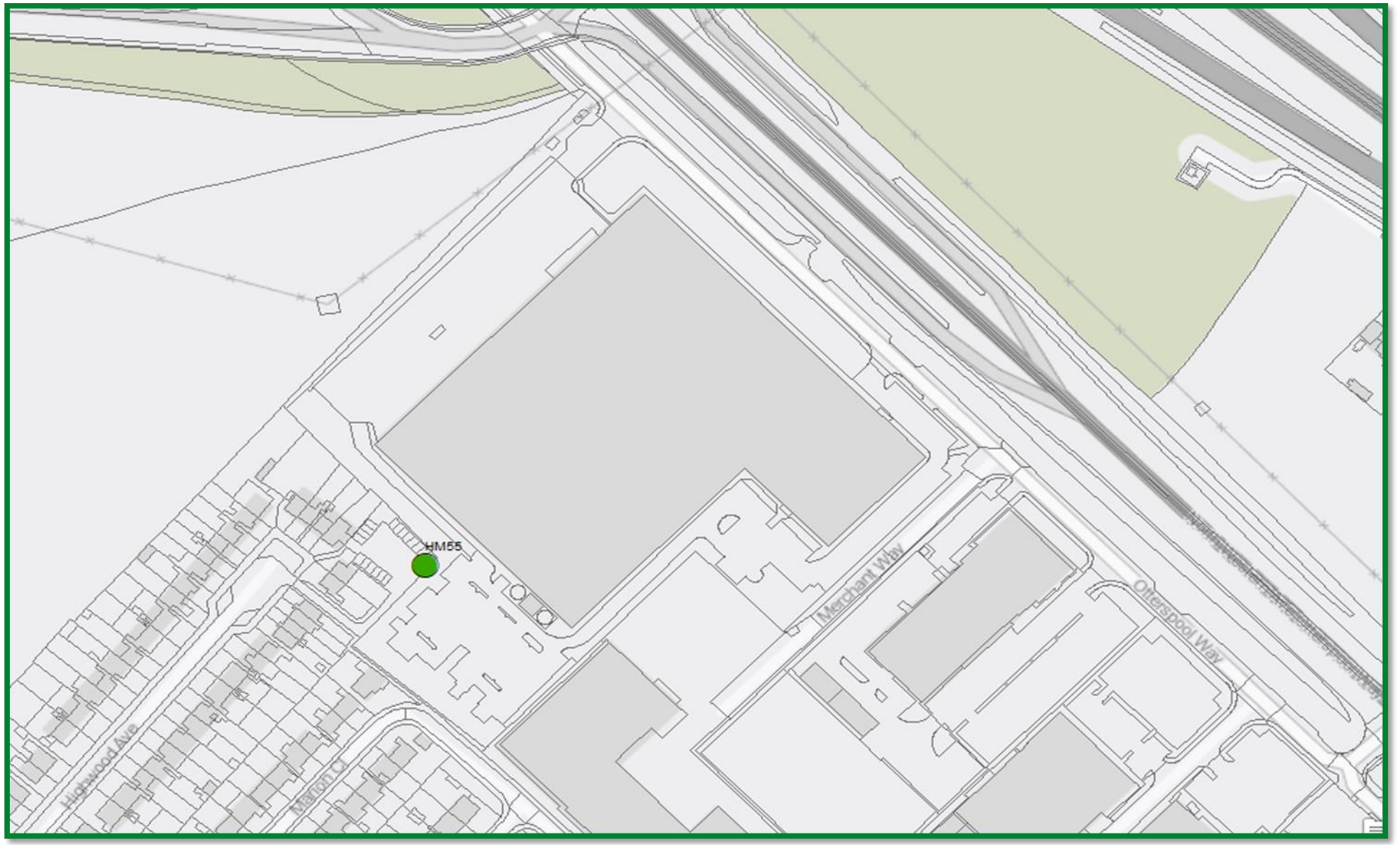


Figure D.20 – Diffusion Tube monitoring locations HM99 & HM117

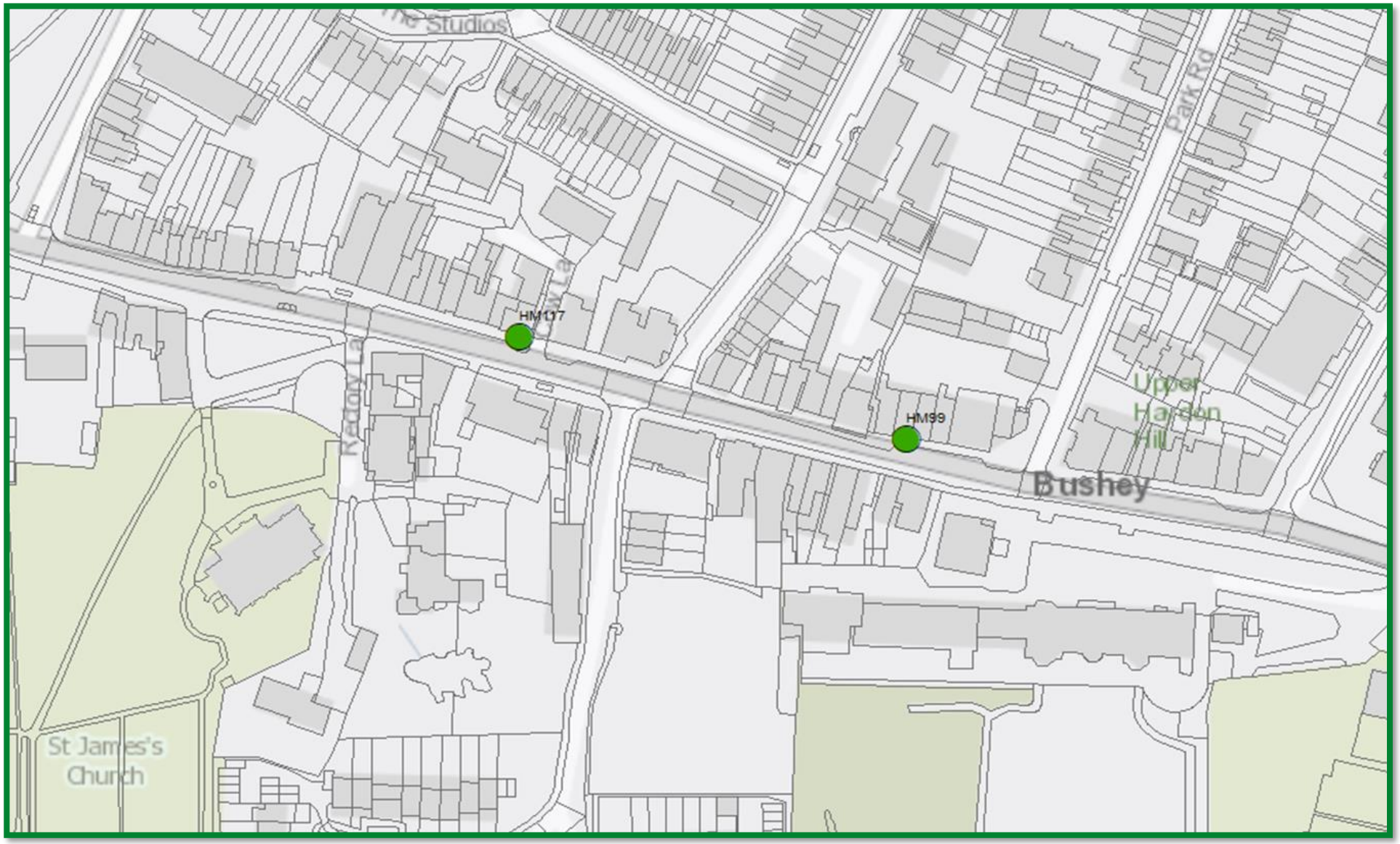


Figure D.21 – Diffusion Tube monitoring location HM151

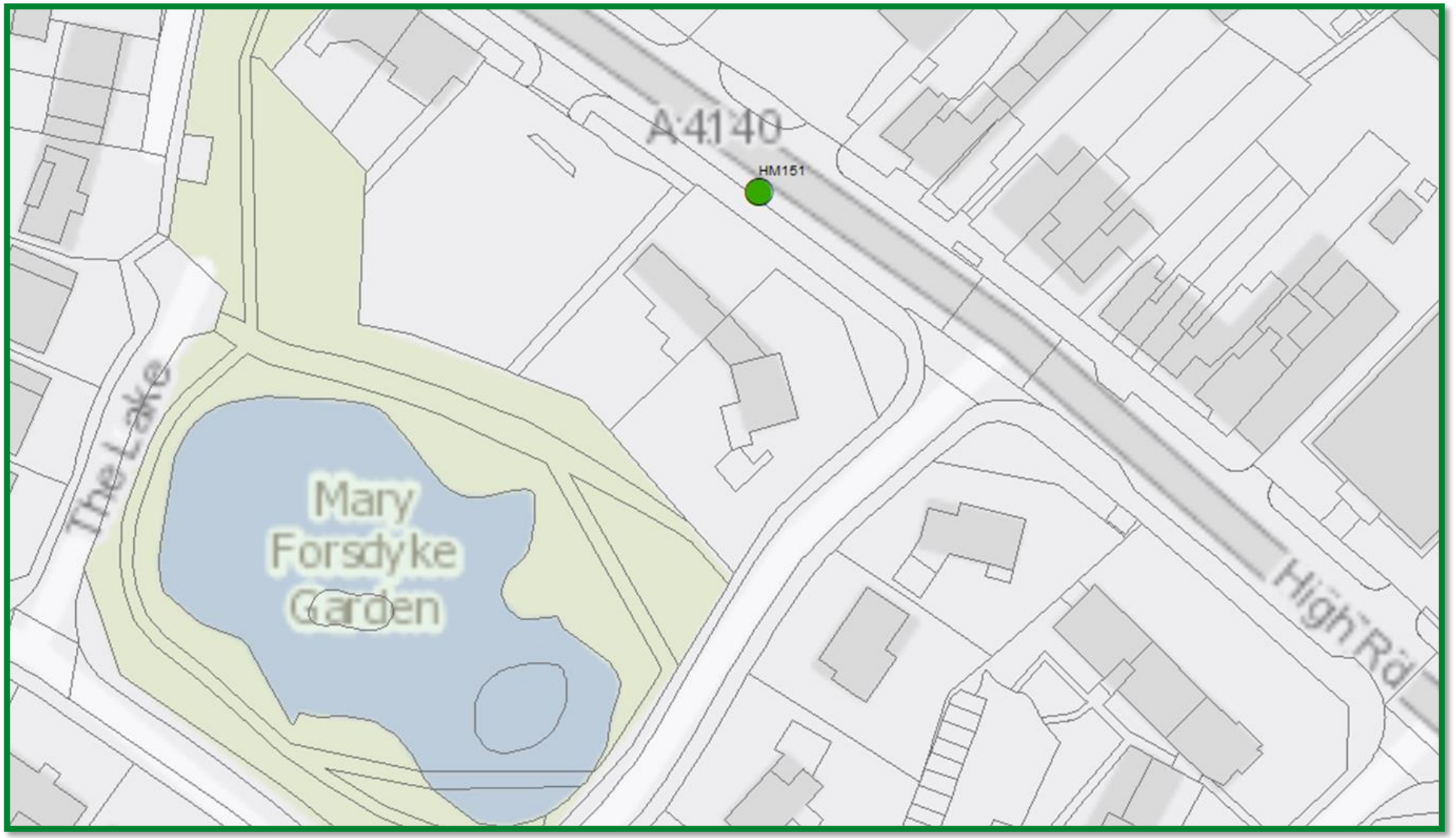


Figure D.22 – Diffusion Tube monitoring location HM53

Figure D.23 – Diffusion Tube monitoring location HM126

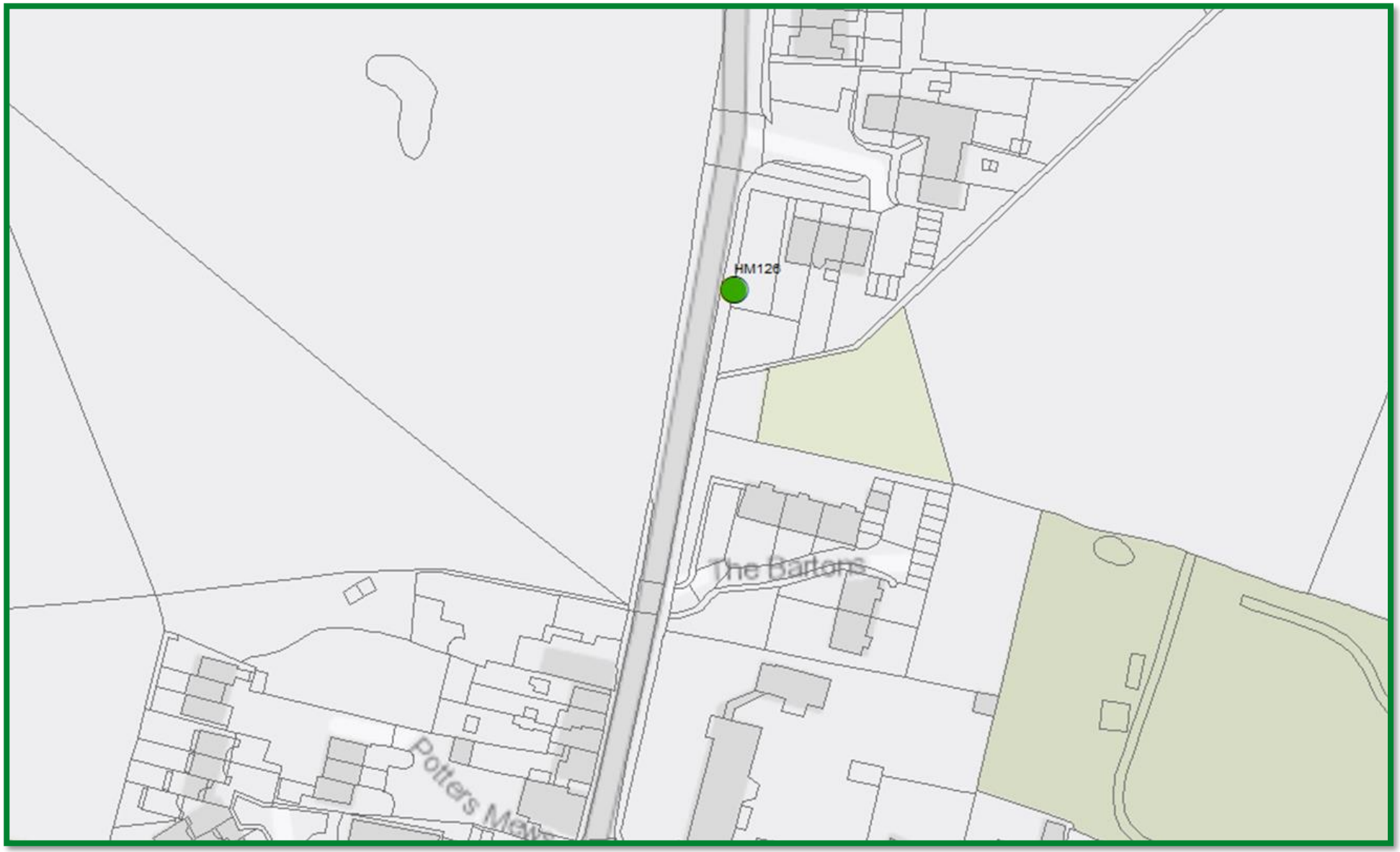


Figure D.24 – Diffusion Tube monitoring locations HM39, HM40, HM136, HM138, HM139, HM140, HM141, HM152 & HM156

Figure D.25 – Diffusion Tube triplicate monitoring location HM148, HM149 & HM150

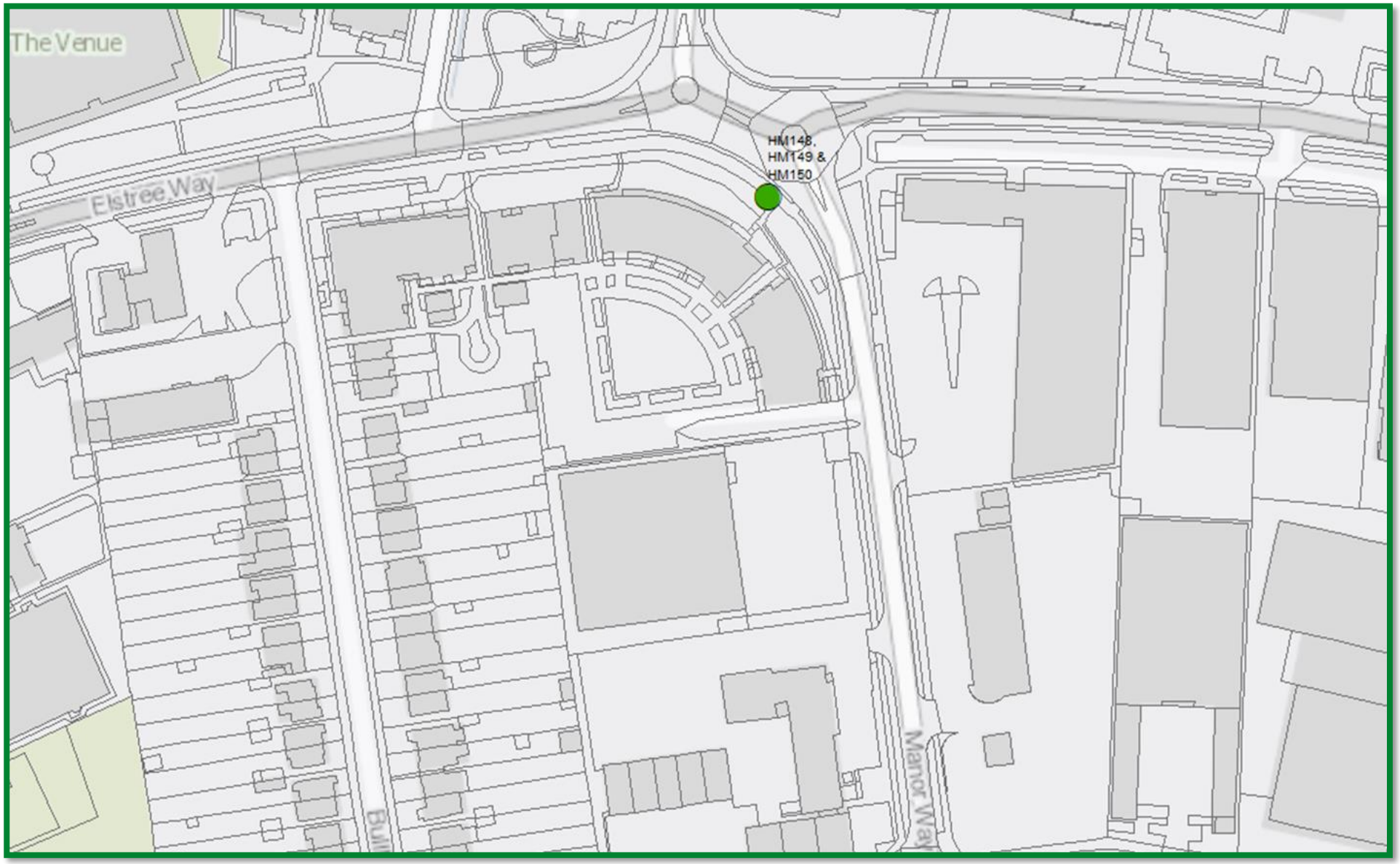
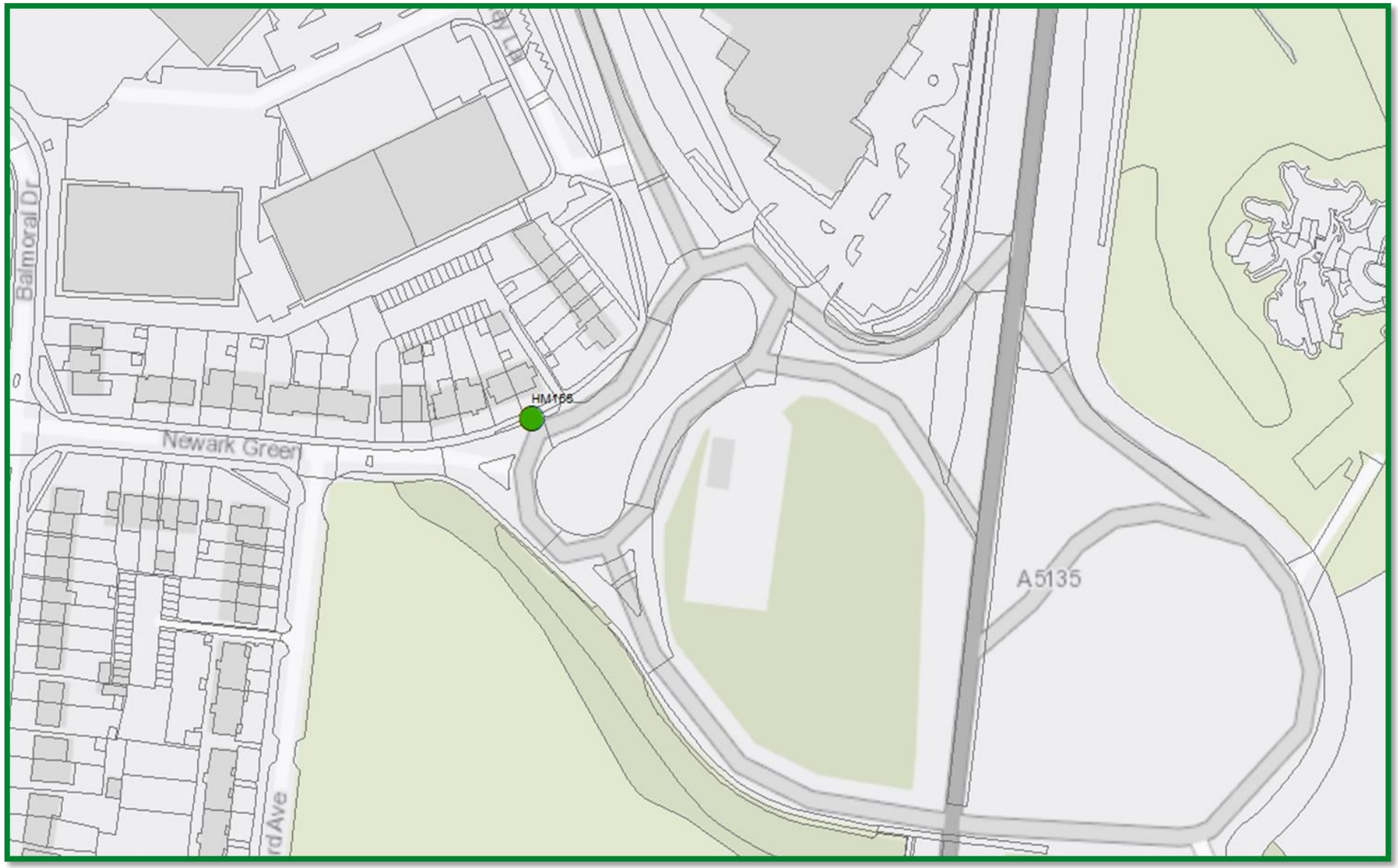


Figure D.26 – Diffusion Tube monitoring location HM105

Figure D.27 – Diffusion Tube monitoring location HM155



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[2]

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

[2] 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.