2024 Air Quality Annual Status Report (ASR)

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

Date: May, 2024

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Executive Summary: Air Quality in Our Area

Air Quality in East Devon

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. In the UK, it is estimated that the reduction in healthy life expectancy caused by air pollution is equivalent to 29,000 to 43,000 deaths a year[1].

Air pollution particularly affects the most vulnerable in society, children, the elderly, and those with existing heart and lung conditions. Additionally, people living in less affluent areas are most exposed to dangerous levels of air pollution[2].

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.

[1] UK Health Security Agency. Chemical Hazards and Poisons Report, Issue 28, 2022.

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

This ASR presents the monitoring results for 2023 within East Devon District Council.

East Devon District encompasses urban and urban fringe areas as well as market towns and villages, seaside towns and remoter rural and coastal areas. The vast majority of the district is undeveloped countryside with land uses mainly being agricultural. In recent years there has been significant growth in the western side of the district due to the urban extension of Exeter and the growth of a new town, Cranbrook. The M5 motorway runs through the west of the district, and the area is bisected east to west by the A35 and A30 major trunk roads. Smaller main roads serving the main towns and commercial areas feed into the strategic network. It is envisaged that there will be further development on the western side of the district, including a new town, and it is likely that vehicle flows will increase as a result of this.

NO_2 is the main pollutant of concern within East Devon District Council (EDDC) which predominantly is sourced from road traffic, particularly in areas with higher levels of congestion. As such EDDC have continued to focus on monitoring NO_2 and managing the effects. EDDC have 54 passive monitoring sites including 1 triplicate tube location. There is one Automatic Urban and Rural Network (AURN) continuous monitoring station within EDDC.

Air quality across East Devon is considered to be good overall. In 2023, there were no sites across the district which have reported annual NO_2 concentration levels above the air quality objective of 40µg/m^3. The highest annual mean concentration was reported to be 33.0 µg/m^3 and was recorded at diffusion tube N46 which is located at Honiton (High Street) - Windmill Court on the A35.

There has been a predominantly downward trend in NO_2 concentration in East Devon, with 40 diffusion tubes across the district in 2023 reporting a decrease in NO_2 concentration in comparison to 2022. There has been a slight increase in concentration reported at 10 diffusion tube monitoring locations during 2023 in comparison to the 2022 monitoring data. The highest increase for this reporting year in comparison to 2022 was recorded at site N20 in Clyst Honiton where there was an increase of 12.24 % from 9.8 µg/m^3 to 11 µg/m^3.

The Honiton AURN continuous monitoring data has a reported increase of 44.8 % from 6.7 µg/m^3 to 9.7 µg/m^3. The AURN monitor is located within a residential area; increased levels were mostly seen during the early morning and evening and could therefore correspond to vehicle movements for people commuting to and from work. Despite the increase, the continuous monitoring data did not exceed the annual mean air quality objective for 2023, or for the previous five year period.

East Devon District Council revoked their only Air Quality Management Area (AQMA) in April 2018 as a result of monitored improvements in air quality in the designated area, in addition to the 2017 detailed air quality report, which concluded that no exceedances were likely to be observed at locations of relevant exposure within the district.

East Devon District Council have continued to work with other local authorities such as Devon District Council, Exeter City Council and Teignbridge District Council on larger schemes across the wider Devon area. These schemes include the Devon Low-Carbon Energy & Transport Technology Innovator (DELETTI) programme.

Actions to Improve Air Quality

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

The Environmental Improvement Plan[3] sets out actions that will drive continued improvements to air quality and to meet the new national interim and long-term targets for fine particulate matter ($PM_{2.5}$), the pollutant most harmful to human health. The Air Quality Strategy[4] provides more information on local authorities' responsibilities to work towards these new targets and reduce fine particulate matter in their areas.

The Road to Zero[5] details the Government's approach to reduce exhaust emissions from road transport through a number of mechanisms, in balance with the needs of the local community. This is extremely important given that cars are the most popular mode of personal travel and the majority of Air Quality Management Areas (AQMAs) are designated due to elevated concentrations heavily influenced by transport emissions.

There are no designated AQMAs within the district; therefore, the Council has no active Air Quality Action Plans (AQAPs). The Council however continue to progress a number of measures in order to ensure that the district regularly improves on its local air quality.

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

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

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

- The Council continue to recommend that all major new developments across the district incorporate measures to discourage car use with the provision of cycle and walking routes, subsidise new bus services, and install electric vehicle charging points across the area.
- There has been collaboration with other local Councils, such as Devon Country Council, with the aim to deliver project plans for cycling and walking infrastructure in future. For example, the Clyst Valley and New Communities Infrastructure Plan.
- The Devon Low-Carbon Energy & Transport Technology Innovator (DELETTI) programme is ongoing, this programme aims to help reduce emissions with the installation of electric vehicle charging points for public use across Devon. Currently there are 42 electric charging bays within East Devon District Council owned car parks and plans to install a further 24 electric charging bays.

Conclusions and Priorities

Monitoring in EDDC during 2023 showed no exceedances of the annual mean air quality objective for NO_2 (40µg/m3). It is likely that continued home-working; rising fuel prices; fuel shortages earlier in 2022; and the current cost of living crisis may all be contributing to lower than normal traffic levels.

The Honiton AURN automatic urban background monitoring site continued to monitor no exceedances for both the annual mean and hourly mean objective limits in 2023, with the NO_2 annual mean concentration continuing to report significantly below the air quality objective.

Local Engagement and How to get Involved

Local residents of East Devon can help to improve air quality in the district by using alternative methods of sustainable transport such as walking, running, cycling, public transport or replacing petrol/diesel cars with an electric vehicle. Car sharing is also a simple way to reduce private car use. Further information regarding East Devon District Council's Local Air Quality Management strategy, including access to the Council's LAQM reports, can be found on the Council's website.

Local Responsibilities and Commitment

This ASR was prepared by the Environmental Protection Team within the Environmental Health Department of East Devon District Council with the support and agreement of the following officers and departments:

- Private Sector Housing, East Devon District Council
- Planning Department, East Devon District Council
- Climate Change Officers, East Devon District Council

This ASR has been approved by:

Matt Blythe - Assistant Director, Environmental Health

Cllr Geoff Jung - Portfolio Holder Coast, Country and Environment

This ASR has been signed off by Steve Brown, Director of Public Health and Communities.

If you have any comments on this ASR please send them to Alice Gill at:

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1 Local Air Quality Management

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

The LAQM process places an obligation on all local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where an exceedance is considered likely the local authority must declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan (AQAP) setting out the measures it intends to put in place in order to achieve and maintain the objectives and the dates by which each measure will be carried out. This Annual Status Report (ASR) is an annual requirement showing the strategies employed by East Devon District 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.

East Devon District Council currently does not have any declared AQMAs. However, a local Air Quality Strategy is under development to prevent and reduce polluting activities.

2.2 Progress and Impact of Measures to address Air Quality in East Devon

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

1. *Good quality graphs have been produced for Figures A.1 to A.11 which shows the trends in Annual Mean NO_2 concentrations. This allows the reader to compare up to 5 years' worth of results for any site. This approach is encouraged for future reports.*
2. *Good quality maps have been produced for Figures D.1 – D.10 which shows the locations of each monitoring site. This allows the reader to see the locations of each monitoring site in relation to each other and in relation to major/main roads, and this allows the reader to see if the monitoring network is still fit for purpose or if changes need to be made. This approach is encouraged for future reports.*
3. *Good discussion is provided on the measures that EDDC are implementing to reduce $PM_{2.5}$ emissions. This allows the reader to see that the council are taking a proactive approach to reduce $PM_{2.5}$ emissions and is encouraged for future reports.*
4. *A Local Air Quality Strategy should be developed and published as soon as possible. This should be rectified for future reports.*

   It is expected that the Local Air Quality Strategy will be published in 2024.
5. *There is no text, explaining the reasons for using the national bias adjustment factor as part of the QA/QC process. In future reports, this text should be included.*

6. *There are several points in the reports that refer to the years '2020' and '2021' whereas the report should be about the year '2022'. In future reports, the report should be about the current reporting year.*

7. *In the figures showing the trends in annual mean NO_2 concentrations, a line should be included that shows the NO_2 annual mean AQO which would allow the reader to easily compare the recorded NO_2 annual mean concentrations to the NO_2 annual mean AQO which would allow the reader to easily see if any exceedances of the NO_2 annual mean AQO have been recorded.*

East Devon District Council has taken forward a number of direct measures during the current reporting year of 2023 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.1.

Measures are included within Table 2.1, with the type of measure and the progress East Devon District Council have made during the reporting year of 2023 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.1.

Key completed measures are:

- In 2023 the Environmental Protection team worked with partners to help reduce the number of children who travelled to school by car. The team produced a survey which was sent to parents of children attending all schools within East Devon. The survey aimed to understand barriers to walking to school. The results were shared within partners including travel officers within Devon County Council and Active Devon.
- A campaign was set up for 'Walk to School' week in May 2023 to engage with parents, encourage active travel to school and raise awareness of the impact of air pollution. Promotional material was sent to the school, within the Council's resident's newsletter and the Council's social media accounts.

East Devon District Council have continued to progress the following measures:

- East Devon District Council has continued to work on the Devon Low-Carbon Energy & Transport Technology Innovator (DELETTI) programme, which aims to help reduce emissions with the installation of electric vehicle charging points for public use across Devon.

  In 2023 there were 42 charging bays within East Devon District Council carparks and plans to install a further 24 electric charging bays. As an incentive, electric vehicle owners are not required to purchase a parking ticket whilst their electric vehicle is

charging. The Council is also part of a Devon County LEVI bid to increase numbers of charging bays to meet the target of 2000 across the whole of Devon.

- East Devon District Council is in the process of transitioning its own vehicles fleet and currently it is made up of 33 % electric vehicles. It is planned that this will increase to 50 % electric vehicles by 2024/25.
- East Devon District Council are committed to becoming carbon neutral by 2040. Ensuring development is in line with current Council policies which promote active travel e.g. through '15- 20 minute neighbourhoods', bicycle parking, electric vehicle charging, and also renewable energy. Any new developments must also meet the requirements of planning policies and guidance in relation to air quality. The East Devon Local Plan 2013- 2031 can be found here: Local Plan 2013-2031 - East Devon and the new settlement Cranbrook has its own specific plan which can be found here: cranbrook-plan-dpd-adopted.pdf (eastdevon.gov.uk) . More details on the Carbon Neutral strategy can be found here: Climate Emergency - East Devon.
- East Devon District Council have plans to improve cycling and walking infrastructure across the district. This includes the Clyst Valley and New Communities Local Cycling and Walking Infrastructure Plan and the 'Destination Exmouth' project.
- The Private Sector Housing team aim promote home energy efficiency through private home inspections; interventions; grant and home improvements and adaptations. The Council has acquired a range of grants including ECO4 and HUG2 for retrofit projects. The Council works in partnership with Exeter Community Energy and the Councils Loan company to promote energy efficiency measures within the housing sector.

East Devon District Council's priorities for the coming year are as follows:

- The Environmental Protection team are planning to carry out a survey to find out prevalence of burning solid fuels for home heating across the district. This will allow us to find out about different types of stoves and fuels used, burning behaviour and then provide targeted advice and information about how to improve indoor and outdoor air quality.
- The Environmental Protection team are planning to complete a project about non-idling of vehicles around schools in East Devon.
- Review of the current East Devon Constructions Site Code of Practice including dust control measures to deal with dust from construction sites across East Devon.

- The Environmental Protection team are raising awareness of air pollution by ensuring that up to date information is available on the Council website, social media to promote campaigns such as National Clean Air Day, provision of advice to members of the public and businesses about domestic burning of solid fuels and waste.
- The Council will continue to review of the diffusion tube network across the district to effectively monitor nitrogen dioxide across the district.
- The Council will complete the Air Quality Strategy 2024 – 2029.

East Devon District Council worked to implement these measures in partnership with the following stakeholders during 2023:

- Devon County Council
- Devon Local Education Authority
- Town and Parish Councils e.g. Exmouth Town Council
- Internal departments at East Devon District Council including Private Sector Housing, Parking Services, Planning.

Table 2.1 – Progress on Measures to Improve Air Quality

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	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	Devon Low Carbon Energy and Transport Technology Innovator (DELETTI) program	Promoting Low Emission Transport	Infrastructure to promote Low Emission Vehicles	N/A	Part of Devon wide Strategy to provide 2000 chargepoints by 2030	East Devon District Council Parking Services, Devon County Council	Part funded through European Regional Development Fund. Local contributions from Devon County Council and district Councils. LEVI fund allocated by central government.	No	Partially funded	Information not available	Implementation	Reduced vehicle emissions	Number of electric vehicles charging bays across district	42 installed in 2023	
2	Solid fuel survey/public consultation and targeted advice	Public information	Via the internet, targeted information to residents who burn solid fuels	N/A	2026	East Devon District Council	Internal corporate funding	No	Funded through internal corporate funding	Information not available	Planning	Reduced particulate matter emissions	Targeted advice to residents with solid fuels e.g. campaigns in GP surgeries	Planning stage	
3	Council Green Travel Plan	Promoting Travel Alternatives	Encourage homeworking; workplace Travel Planning	N/A	Reviewed annually	East Devon District Council	Internal corporate funding	No	Funded through internal corporate funding	Information not available	Implementation	Reduced vehicle emissions from Council employee.	Number of employees transferred from private car to public transport, bike or walking	Adopted by the Council. Reviewed annually	

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
												The Council is committed to becoming carbon neutral by 2040.			
4	Free parking for electric vehicles in Council owned carparks	Promoting Low Emission Transport	Priority parking for LEVs	N/A	30 June 2024	East Devon District Council Parking Services	Internal corporate funding	No	Funded through internal corporate funding	Information not available	Implementation	Reduced vehicle emissions	Encouraging use of electric vehicles; number of electric vehicles parked	Free parking offered until June 2024	
5	Ensuring development in line with Council Local Plan and other local plans e.g. Cranbrook Plan	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	N/A	Ongoing	East Devon District Council	Internal corporate funding	No	Funded through internal corporate funding	Information not available	Implementation	Unknown	Planning applications consider air quality impacts	Ongoing	
6	Clyst Valley and New Communities Local Cycling and Walking Infrastructure Plan	Cycling and walking infrastructure improvements	Cycle and walking network	N/A	2044	East Devon District Council, Devon County Council, Parish Councils	Unknown as funding not yet secured	No	Unknown as funding not yet secured	Information not available	Planning stage	Reduced vehicle emissions	Audit of infrastructure completed	Public consultation completed April 2024. Results to be published June 2024.	

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
7	'Destination Exmouth' project	Cycling and walking infrastructure improvements	Cycle and walking network	N/A	Unknown	East Devon District Council, Devon County Council, Parish Councils	Levelling Up funding and also coming from Devon County Council, East Devon District Council and Exmouth Town Council	No	Funded	Information not available	Planning stage	Reduced vehicle emissions	Audit of infrastructure completed	Planning stage	
8	Promoting air quality on Council website and through social media	Public information	Via the internet	N/A	Ongoing	East Devon District Council	Internal corporate funding	No	Funded through internal corporate funding	Information not available	Implementation	Unknown	Number of visits to website	Air quality webpages updated. To be reviewed annually	
9	Air quality campaigns e.g. National Clean Air Day	Public information	Via the internet, social media	N/A	Ongoing	East Devon District Council	Internal corporate funding	No	Funded through internal corporate funding	Information not available	Planning	Unknown	Number of visits to website	Planned air quality campaigns throughout the year	
10	Anti-idling outside schools project	Traffic management	Anti-idling project	N/A	2026	East Devon District Council	Internal corporate funding	No	Funded through internal corpor	Information not available	Planning	Reduced vehicle emissions, especiall	Reduced idling of vehicles outside schools	Planning stage	

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Defra AQ Grant Funding	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
									ate funding			y outside schools			
11	Council owned ELVs	Vehicle Fleet efficiency	Transition to Electric Vehicle Networks for Council owned vehicle	N/A	2028	East Devon District Council	Revenue and Capital budget	No	Funded	Information not available	Implementation	Reduced vehicle emissions	Number of Council owned ELVs; Planned 50% by end of 2024/25	33 % electric vehicle transition	Dependent upon technology available for larger vehicles

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[6], 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.

East Devon District Council undertakes monitoring of $PM_{2.5}$ through the use of Zephyr® air quality sensors. There were are 4 monitors in operation in 2023, and are detailed as follows:

- Site 43, located at Dove Close in Honiton;
- Site 50, located just off of the roundabout connecting the A376 and A3052 in Clyst St Mary;
- Site 55, located along the A378 in Ebford;
- Site 395, located along the A3052 in Clyst St Mary

Unfortunately there was a considerable amount of $PM_{2.5}$ data missing during 2023. Data was only available for months September, October, November and December. Data is also not MCERTs certified and so can only be used to measure short-term pollution events.

The Honiton AURN continuous monitor has monitored $PM_{2.5}$ during 2022 and 2023. As shown in Table A.8, the monitoring site has reported an annual mean of 6.6µg/m^3 in 2022 and 6.2µg/m^3 in 2023. This is a 6.06 % decrease.

The air pollution background concentration maps published by DEFRA (with 2018 reference year) provide estimates of background concentration levels for $PM_{2.5}$.

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

The highest concentration for 2023 was 6.91µg/m^3 and found within the 1km x 1km grid square with the centroid grid reference of 296500, 90500. This grid is located within Clyst St. George, Clyst St Mary and is very closely located next to a section of the M5 motorway.

The Public Health Outcomes Framework data tool compiled by Public Heath England quantifies the mortality attributable to particulate air pollution using data from the year 2022 within England and on a local authority level. The mortality attributable to particulate air pollution within East Devon is 3.0 %. This is lower than average within the region and England as a whole, which are 4.6 % and 5.8 % respectively.

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

- Continued promotion and work along with Devon Low-Carbon Energy & Transport Technology Innovator (DELETTI) programme on the promotion of E-vehicles while still recognising that there are non-exhaust $PM_{2.5}$ emissions from electric vehicles including tyre-wear.
- East Devon District Council is in the process of transitioning its own vehicles fleet and currently it is made up of 33 % electric vehicles. There are plans to continue to transition fleet to electric vehicles.
- The Environmental Protection team are planning to carry out a survey to find out prevalence of burning solid fuels for home heating across the district. This will allow us to find out about different types of stoves and fuels used, burning behaviour and then provide targeted advice and information about how to improve indoor and outdoor air quality.
- Due to construction of residential developments across East Devon, particularly new settlement Cranbrook, the Environmental Protection team will carry out a review of the current East Devon Constructions Site Code of Practice including dust control measures to deal with dust from construction sites across East Devon.
- The Councils website has been updated to provide up to date information about home heating using coal and wood on open fires and stoves, and also burning of waste. In addition, 44 enquiries about burning of waste and 15 enquiries about smoke from chimneys were received by the Council and subsequent advice was given by Officers from Environmental Health.

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

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

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

East Devon District Council do not undertake automatic (continuous) monitoring, however, there is one automatic monitoring site in East Devon (Honiton AURN).

Table A.1 in Appendix A shows the details of the automatic monitoring sites.

The site monitors hourly NO_2 concentrations and is part of the Automatic, Urban and Rural Network (AURN) in the UK. 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

East Devon District Council undertook non- automatic (i.e. passive) monitoring of NO_2 at 54 sites during 2023. 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 national bias adjustment (0.81) and annualisation, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment).

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

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

During 2023 there were no exceedances of the annual mean air quality objective for NO_2 at any of the non-automatic monitoring locations. Additionally, no monitoring results were within 10 % of the air quality objective (36µg/m^3) and as such no fall-off with distance calculations were required.

The diffusion tube results indicate that an exceedance of the 1 hour mean objective is unlikely to have occurred at any of the locations as there were no concentrations reported to be above 200 µg/m^3.

The highest annual mean concentration was reported to be 33.0 µg/m^3 and was recorded at diffusion tube N46 which is located at Honiton (High Street) - Windmill Court on the A35. There is predominantly a downward trend in NO_2 concentration in East Devon, with 40 diffusion tubes across the district in 2023 reporting a decrease in NO_2 concentration in comparison to 2022.

There is a slight increase in concentration reported at 10 diffusion tube monitoring locations during 2023 in comparison to the 2022 monitoring data. The highest increase for

this reporting year in comparison to 2022 was recorded at site N20 in Clyst Honiton where there was an increase of 12.24 % from 9.8 µg/m^3 to 11 µg/m^3.

The AURN monitoring site in Honiton reported a NO_2 annual mean of 9.7 µg/m^3. This was a 44.8 % increase in NO_2 concentration in comparison to 2022. The Honiton AURN continuous monitoring data did not exceed the annual mean air quality objective for 2023, or for the previous five year period. The continuous monitoring data did not exceed the 1 hour mean objective during 2023, or for the previous five year period, as there were no concentrations reported to be above 200 µg/m^3.

Overall, the data indicates that the Council does not need to establish an AQMA anywhere in the District at this time.

Appendix A: Monitoring Results

Table A.1 – Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Monitoring Technique	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Inlet Height (m)
UKA00566	Dove Close, Honiton	Urban Background	315749	99874	O_3, NO, NO_2, PM_{10}, $PM_{2.5}$	No	FDMS	20	N/A	2

Notes:

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

(2) N/A if not applicable

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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
N01	Exmouth - library	Kerbside	300267	81193	NO_2	No	N/A	2.5	No	2.5
N02	Exmouth - Salterton Road - opp Tesco entrance	Roadside	302163	81724	NO_2	No	31.1	2.0	No	2.5
N06	Clyst St George - outside St George & Dragon	Kerbside	298062	88425	NO_2	No	1.4	4.0	No	2.5
N07	Exmouth - The Strand	Kerbside	300087	80955	NO_2	No	N/A	1.0	No	2.7
N09	Honiton (High Street) - High St/Dowell St junction	Kerbside	316062	100596	NO_2	No	0.1	1.0	No	2.5
N10	Ottery St Mary - Bank/Gold St	Roadside	309882	95449	NO_2	No	1.5	2.0	No	2.5
N11	Axminster - outside Swans	Roadside	329584	98464	NO_2	No	0.1	1.0	No	2.5
N13	Clyst St Mary - opp P.O.	Roadside	297314	91056	NO_2	No	6.7	2.0	No	2.5
N14	Seaton - 6 Marine Crescent	Roadside	324479	89930	NO_2	No	0.1	3.0	No	2.5
N16	Sidmouth - opp Travelwise	Roadside	312665	87432	NO_2	No	N/A	8.0	No	2.5
N19	Sidford - School Street - opp P.O.	Roadside	313403	90074	NO_2	No	N/A	3.0	No	2.5
N20	Clyst Honiton - outside Wimple Farm (lamp post)	Roadside	300345	94860	NO_2	No	9.6	8.0	No	2.5
N22	Rockbeare - Jack in the Green (car park)	Industrial	301876	95558	NO_2	No	53.4	12.0	No	2.5
N24	Honiton (West) - opp 4 Exeter Road	Roadside	315097	100182	NO_2	No	12.7	2.0	No	2.5

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
N25	Honiton (West) - 4 Exeter Road (garden)	Roadside	315087	100165	NO_2	No	26.0	1.0	No	2.3
N26	Exeter Airport - Little Orchard - airport junction	Roadside	299102	93198	NO_2	No	N/A	3.0	No	2.5
N27	Honiton (West) - Byways, Exeter Road	Roadside	314875	100097	NO_2	No	0.0	12.0	No	2.5
N29	Honiton (West) - West Mede, Exeter Road	Roadside	315114	100201	NO_2	No	0.0	10.0	No	2.5
N36	Honiton (High Street) - 10 Dowell Street	Kerbside	316012	100653	NO_2	No	0.1	2.0	No	2.5
N37	Honiton (High Street) - 153 High Street	Kerbside	316102	100607	NO_2	No	3.1	0.0	No	2.5
N44	Honiton (High Street) - 9 High Street	Kerbside	316629	100837	NO_2	No	2.2	1.0	No	2.5
N45	Honiton (High Street) - Holyshute Cottage - opp Langford Road	Kerbside	316816	100934	NO_2	No	17.2	2.0	No	2.5
N46	Honiton (High Street) - Windmill Court, A35	Kerbside	316796	100856	NO_2	No	19.8	2.0	No	2.5
N56	New Site Axminster - Trinity Square crossing	Roadside	329680	98550	NO_2	No	N/A	0.5	No	2.5
N57	New Site Axminster - George Hotel - opp Lawsons	Kerbside	329765	98554	NO_2	No	N/A	1.0	No	2.5
N58	New Site Axminster - near Homelea, Grand Road - opp Scot Rowe	Roadside	329789	98613	NO_2	No	N/A	2.0	No	2.5
N59	Clyst St George - outside Clyst Dene	Roadside	298083	88337	NO_2	No	26.0	2.0	No	2.5
N60	Sowton - Sowton Lodge (on downpipe - nearest to rear garden)	Roadside	297029	93140	NO_2	No	0.1	4.0	No	2.0

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
N62a	DEFRA AURN AQ SITE - Dove Close (tri-location)	Urban Background	315745	99875	NO_2	No	N/A	N/A	Yes	
N62b	DEFRA AURN AQ SITE - Dove Close (tri-location)	Urban Background	315745	99875	NO_2	No	N/A	N/A	Yes	
N62c	DEFRA AURN AQ SITE - Dove Close (tri-location)	Urban Background	315745	99875	NO_2	No	N/A	N/A	Yes	
N63_EB	Clyst St George - 40mph - Old Forge, Ebford Lane	Roadside	298088	88161	NO_2	No	0.2	3.0	No	2.5
N63_LODGE	Clyst St Mary - telegraph pole, entrance to Lodge - Clyst St Mary, A3052	Roadside	297633	90927	NO_2	No	2.0	0.0	No	2.5
N64_GP	Clyst St Mary - grey pole - entrance to Crealy, A3052	Roadside	300259	90712	NO_2	No	N/A	8.0	No	1.9
N64_AX	Axminster - Morgan York Estate Agents, Victoria Place	Roadside	329743	98589	NO_2	No	N/A	1.0	No	2.5
N65	Farringdon - grey pole on grass verge (telephone box) - entrance to Farringdon, A3052	Kerbside	300735	90555	NO_2	No	N/A	3.0	No	2.5
N66	Farringdon - telegraph pole - entrance to Vineyard, A3052	Roadside	302491	90461	NO_2	No	N/A	4.0	No	2.5
N67	Farringdon - telegraph pole - opp Perkins, B3184	Kerbside	302420	90750	NO_2	No	N/A	1.0	No	2.5
N68	Clyst St George - telegraph pole - outside Marsh Barton Cottage	Roadside	298079	88521	NO_2	No	N/A	3.0	No	2.5
N71	Middle Wilmington - outside Higher Gatehouse, EX14 9JR	Kerbside	321135	99875	NO_2	No	0.7	2.0	No	3.0
N72	Newton-Poppleford - Westhayes High Street	Kerbside	308004	89533	NO_2	No	0.0	2.0	No	2.3
N73	Exmouth - 369 Exeter Road	Kerbside	300294	83265	NO_2	No	0.0	2.0	No	2.4

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)
N74	Lympstone - opp 6 Jubilee Grove	Kerbside	299931	84157	NO_2	No	0.0	2.0	No	2.4
N75	Exton - 4 Iddesleigh Terrace, Exmouth Road	Kerbside	298425	86472	NO_2	No	0.0	2.0	No	2.4
N76	Cranbrook - St Martin's School	Roadside	300283	95200	NO_2	No	0.0	10.0	No	2.4
N77	Cranbrook - opp junction Court Royal	Roadside	301228	95665	NO_2	No	N/A	5.0	No	2.4
N78	Broadclyst - Beare House, Beare	Industrial	299763	102177	NO_2	No	N/A	4.0	No	2.5
N80	Clyst St George - near 21 to 23 Exmouth Road, EX3 0NS	Roadside	297941	89437	NO_2	No	13.0	5.0	No	1.9
N81	Clyst St Mary - rear of Lammorric, EX5 1BR - on 20mph sign, roundabout A3052/A376	Roadside	297327	90998	NO_2	No	9.0	1.0	No	2.1
N82	Clyst St Mary - near 1 Poplars Walk, Cat and Fiddle, EX5 1QT (lamp post outside)	Roadside	298923	90859	NO_2	No	20.0	2.0	No	1.9
N83	Clyst St Mary - near 44 Sidmouth Road, EX5 1DR - opp Crealy, A3052	Roadside	299997	90722	NO_2	No	66.0	4.0	No	1.8
N84	Newton-Poppleford - School Lane junction, A3052	Roadside	308632	89742	NO_2	No	9.0	1.0	No	2.4
N85	East Wilmington	Roadside	321401	99949	NO_2	No	24.3	3.0	No	2.1
N86	West Wilmington	Roadside	320914	99950	NO_2	No	41.4	2.0	No	2.4

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 2023 (%) (2)	2019	2020	2021	2022	2023
Dove Close, Honiton UKA00566	315749	99874	Urban Background	70.7	70.7	8.1	6.5	6.9	6.7	9.7

☒ **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 2023.**

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)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2023 (%) [2]	2019	2020	2021	2022	2023
Exmouth, Exton, Lympstone										
N01	300267	81193	Kerbside	93	93	19.2	15.4	17.3	15.0	14.8
N02	302163	81724	Roadside	100	100	16.9	14.7	14.4	12.5	13.8
N07	300087	80955	Kerbside	100	100	21.3	16.0	18.1	18.1	17.1
N73	300294	83265	Kerbside	100	100	29.8	25.9	26.0	25.6	22.2
N74	299931	84157	Kerbside	100	100	25.9	19.8	20.8	20.5	22.6
N75	298425	86472	Kerbside	100	100	34.5	28.2	29.8	26.2	27.6
Newton Pop, Sidford. Sidmouth										
N16	312665	87432	Roadside	100	100	12.2	9.7	9.8	8.9	8.4
N19	313403	90074	Roadside	100	100	19.0	16.0	17.4	15.6	14.7
N72	308004	89533	Kerbside	100	100	18.5	14.7	15.0	15.0	13.6
N84	308632	89742	Roadside	100	100	19.3	16.4	16.3	16.5	15.6
Clyst St George										
N06	298062	88425	Kerbside	100	100	28.3	24.0	25.1	24.6	22.7
N68	298079	88521	Roadside	100	100	38.5	22.6	23.0	23.1	21.4
N59	298083	88337	Roadside	100	100	28.3	31.9	33.1	32.2	30.2
N63_EB	298088	88161	Roadside	100	100	31.6	26.8	26.6	24.4	23.7
N80	297941	89437	Roadside	100	100	19.5	15.2	15.7	15.2	14.8
East of Exeter - Beare, Broadclyst										
N26	299102	93198	Roadside	91.4	91.4	18.8	12.3	12.2	12.6	12.2
N60	297029	93140	Roadside	64.4	64.4	31.7	25.3	25.8	25.0	23.8
N20	300345	94860	Roadside	100	100	13.3	10.7	9.8	9.8	11.0
N22	301876	95558	Industrial	100	100	10.3	7.7	7.7	7.7	7.1
N76	300283	95200	Roadside	83.1	83.1	11.2	10.5	13.4	10.4	9.9
N77	301228	95665	Roadside	84.4	84.4	11.7	9.5	9.6	10.0	8.5
N78	299763	102177	Industrial	100	100	21.3	17.8	12.9	13.7	11.3
Clyst St Mary, Farringdon										
N13	297314	91056	Roadside	91.4	91.4	21.2	17.6	17.8	17.5	17.0

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) [1]	Valid Data Capture 2023 (%) [2]	2019	2020	2021	2022	2023
N63_LODGE	297633	90927	Roadside	74.2	74.2	30.9	24.9	26.5	23.0	23.9
N64_GP	300259	90712	Roadside	91.4	91.4	19.6	16.3	18.3	17.4	16.7
N65	300735	90555	Kerbside	100	100	28.0	22.9	24.1	22.6	22.9
N66	302491	90461	Roadside	100	100	12.1	10.5	10.5	9.6	9.4
N67	302420	90750	Kerbside	91.4	91.4	8.9	6.7	6.6	8.0	6.1
N81	297327	90998	Roadside	100	100	24.1	15.2	20.0	19.8	20.1
N82	298923	90859	Roadside	100	100	25.8	18.5	21.2	21.0	17.4
N83	299997	90722	Roadside	83.1	83.1	22.9	19.3	19.7	20.1	22.8
Axminster										
N11	329584	98464	Roadside	100	100	33.0	27.2	28.1	27.9	26.2
N56	329680	98550	Roadside	100	100	30.3	24.3	26.4	25.4	23.4
N57	329765	98554	Kerbside	100	100	22.2	17.7	19.2	18.4	17.4
N58	329789	98613	Roadside	100	100	31.1	26.0	28.2	26.5	25.5
N64_AX	329743	98589	Roadside	100	100	22.4	18.5	21.6	19.8	18.9
Ottery, Seaton										
N14	324479	89930	Roadside	100	100	12.4	10.8	12.5	10.4	9.0
N10	309882	95449	Roadside	100	100	23.4	19.4	19.6	18.3	17.7
Honiton - West (Near Turks Head Junction)										
N24	315097	100182	Roadside	83.1	83.1	30.1	25.1	25.3	25.9	25.5
N25	315087	100165	Roadside	83.1	83.1	29.4	24.5	26.1	24.6	25.4
N27	314875	100097	Roadside	83.1	83.1	17.3	13.3	14.6	14.3	13.4
N29	315114	100201	Roadside	83.1	83.1	18.0	14.7	15.7	15.3	16.7
Honiton - CENTRAL & EAST HONITON (High Street)										
N09	316062	100596	Kerbside	92.2	92.2	29.2	23.7	23.4	23.8	22.0
N36	316012	100653	Kerbside	100	100	31.4	24.3	25.4	25.9	25.0
N37	316102	100607	Kerbside	100	100	34.7	29.4	32.2	29.4	27.9
N44	316629	100837	Kerbside	100	100	26.4	22.1	21.7	22.9	20.5
N45	316816	100934	Kerbside	91.4	91.4	33.1	26.4	26.5	27.8	25.2
N46	316796	100856	Kerbside	100	100	**41.5**	33.3	35.2	32.3	33.0
DEFRA AURN SITE - HONITON, DOVE CLOSE										

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
N62a,b,c	315745	99875	Urban Background			8.1	6.6	7.0	6.4	6.2
Wilmington										
N71	321135	99875	Kerbside	90.6	90.6	38.6	27.9	29.8	28.3	30.6
N85	321401	99949	Roadside	100	100	-	22.1	23.0	22.5	21.2
N86	320914	99950	Roadside	100	100	-	20.5	22.0	21.5	19.8

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

☒ **Diffusion tube data has been bias adjusted.**

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

Notes:

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

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

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

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

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

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

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

Figure A.1 – Trends in Annual Mean NO_2 Concentrations - Exmouth, Exton, Lympstone

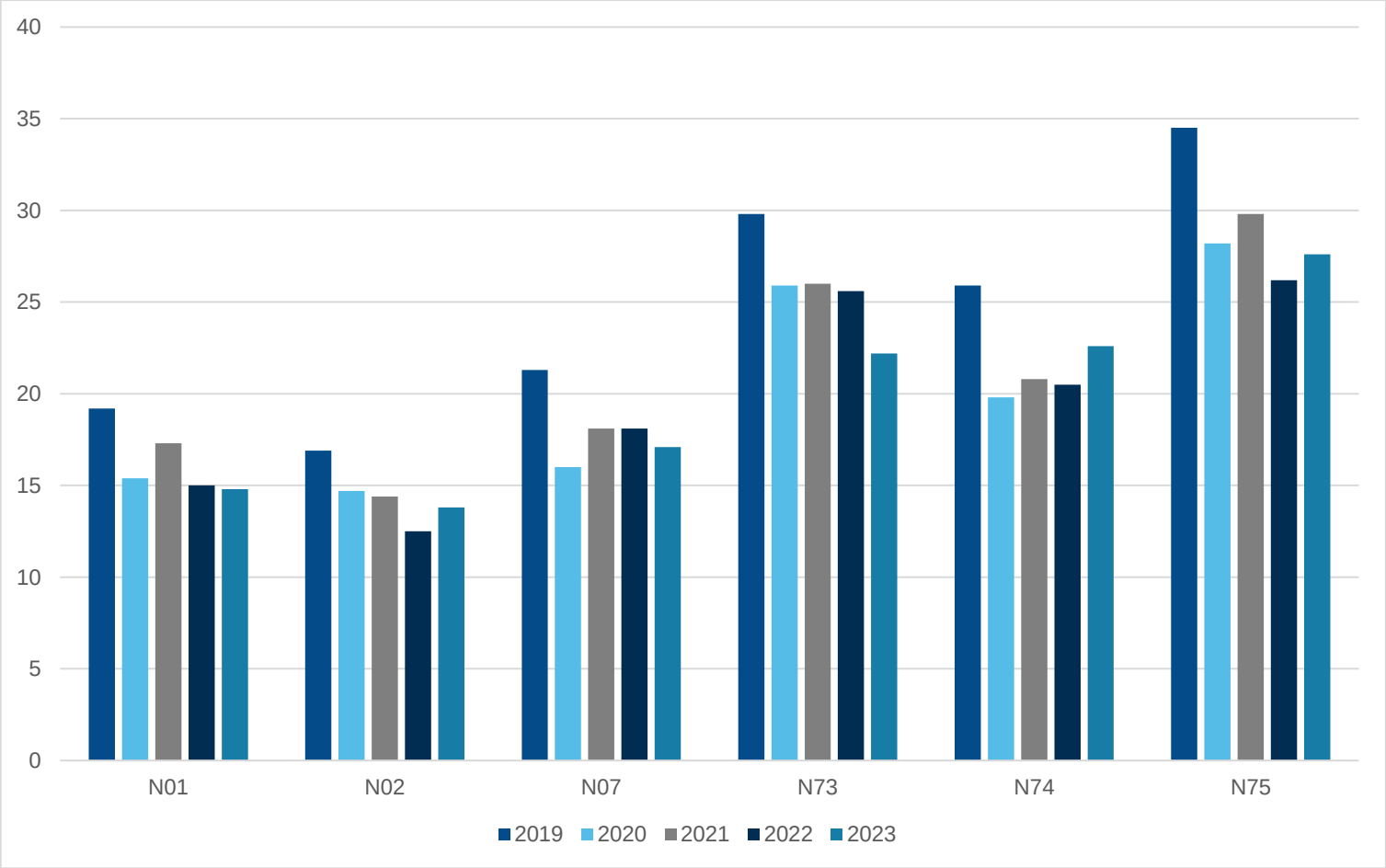


Figure A.2 – Trends in Annual Mean NO_2 Concentrations – Newton Poppleford, Sidford and Sidmouth

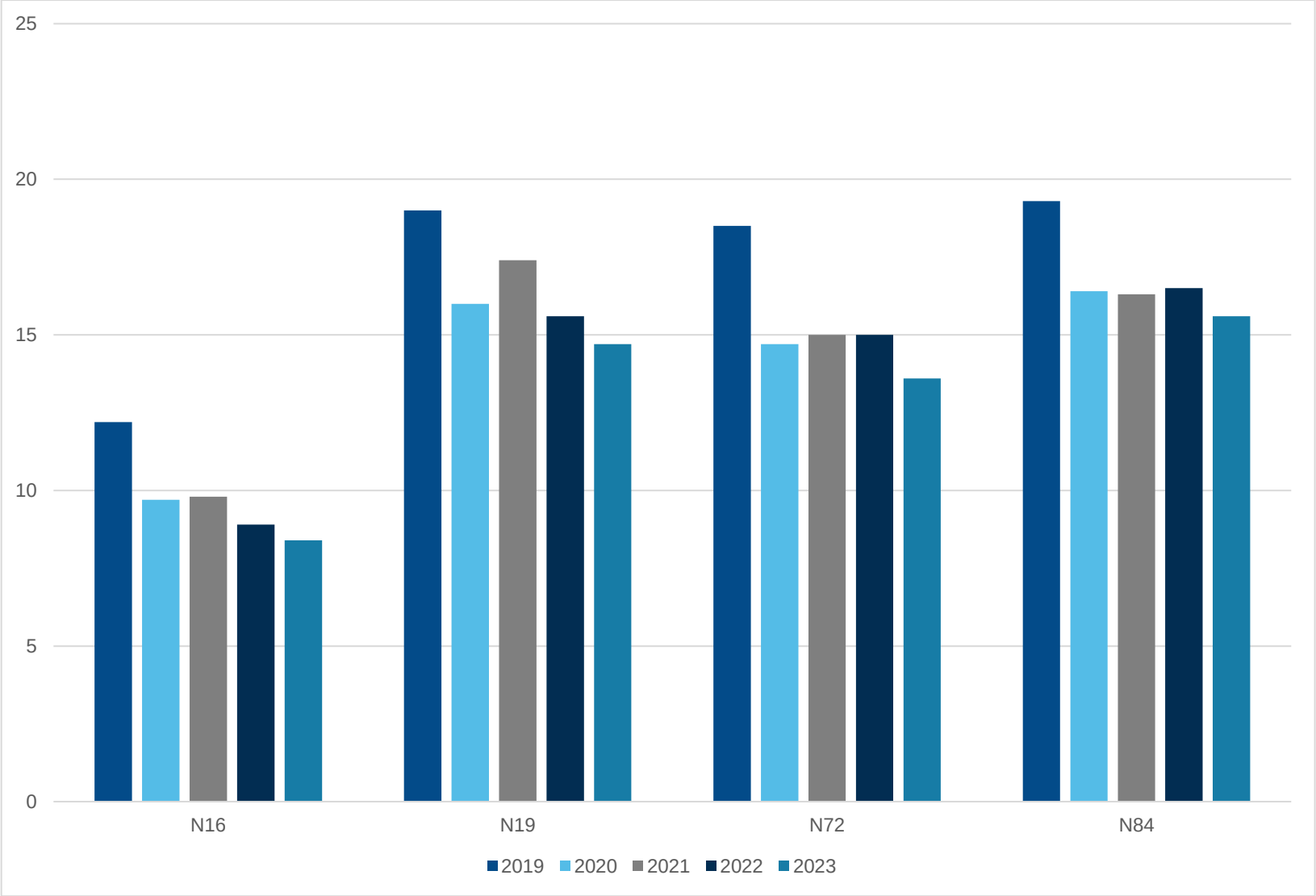


Figure A.3 – Trends in Annual Mean NO_2 Concentrations – Clyst St. George

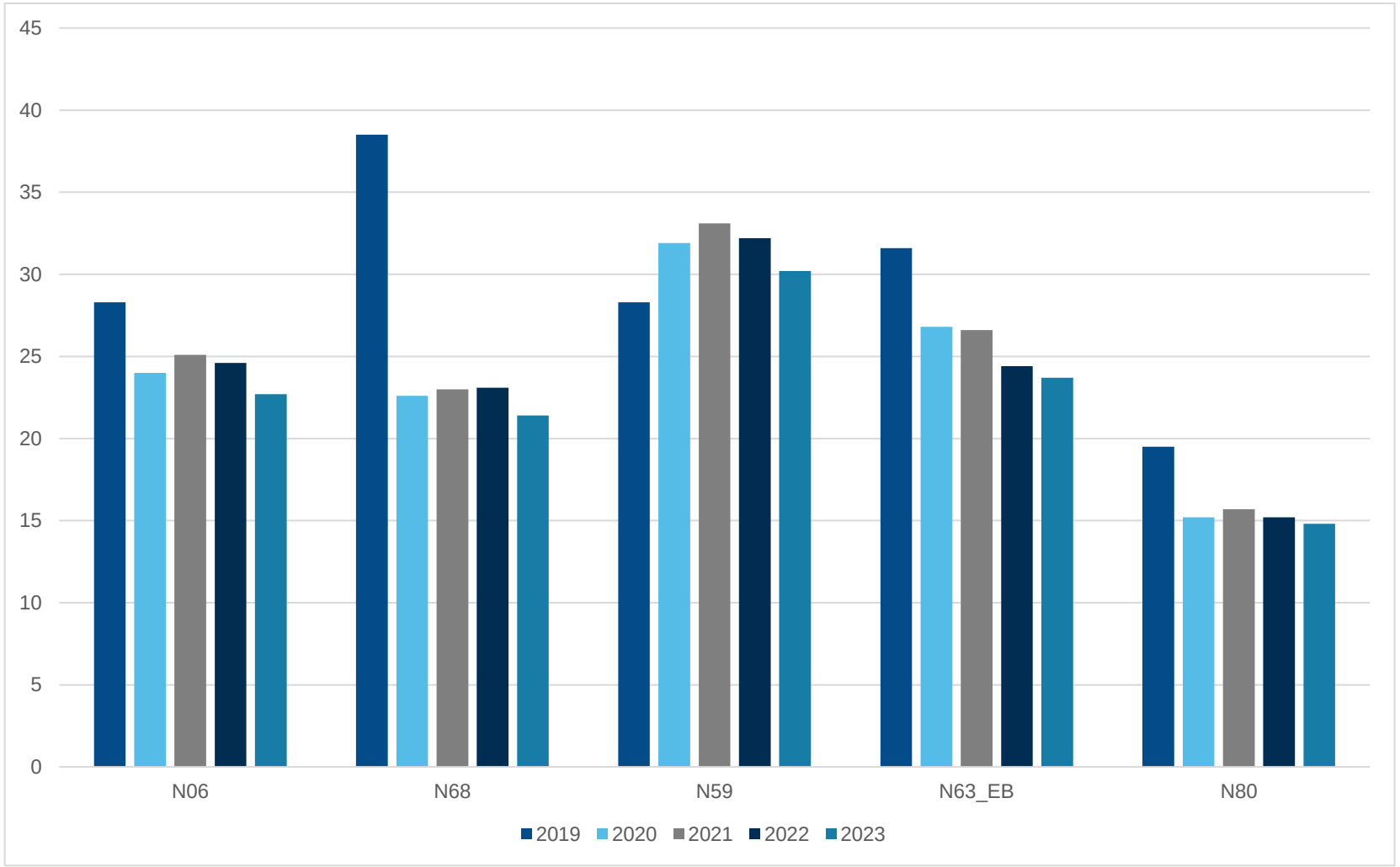


Figure A.4 – Trends in Annual Mean NO_2 Concentrations – East of Exeter, Beare and Broadclyst

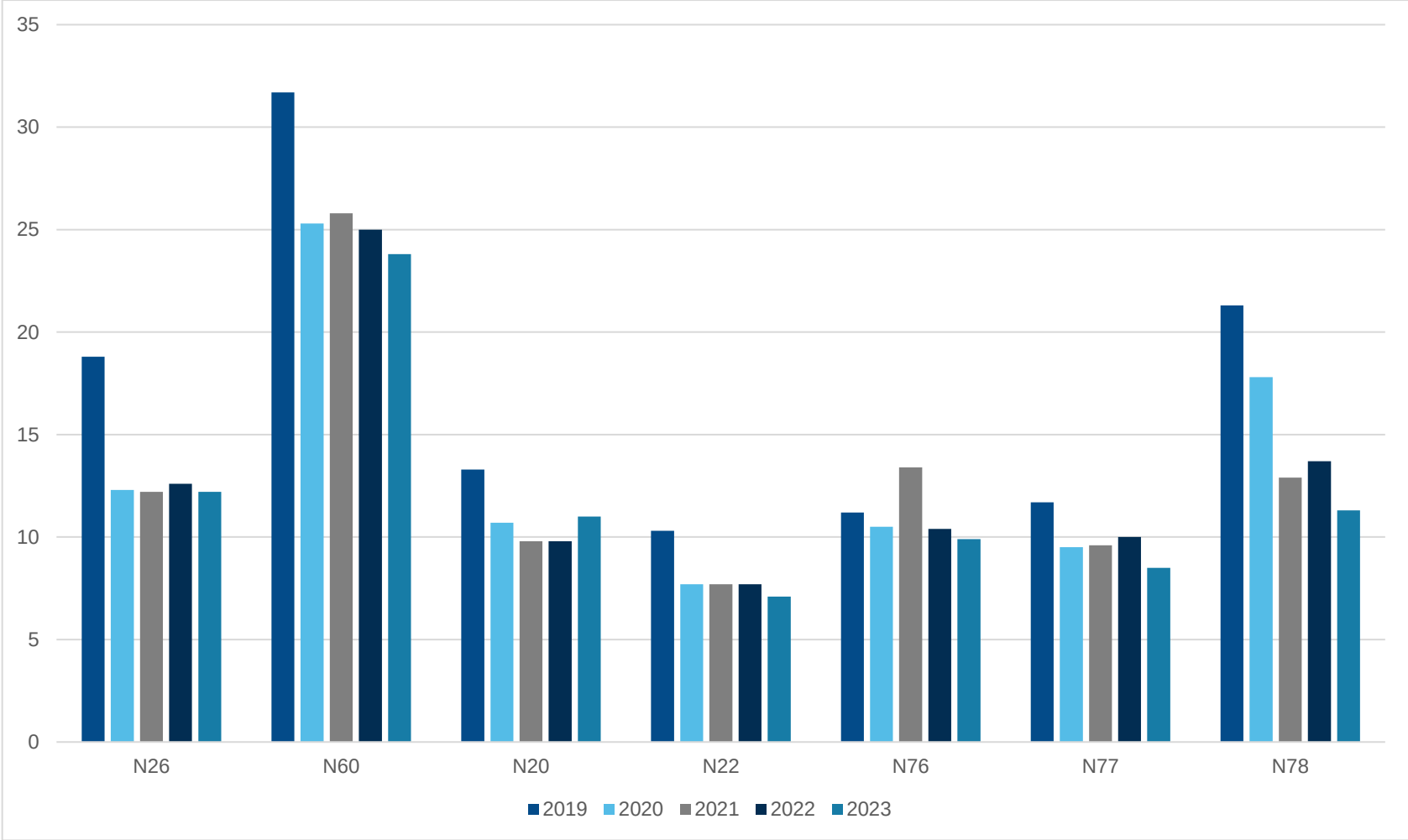


Figure A.5 – Trends in Annual Mean NO_2 Concentrations – Clyst St. Mary, Farringdon

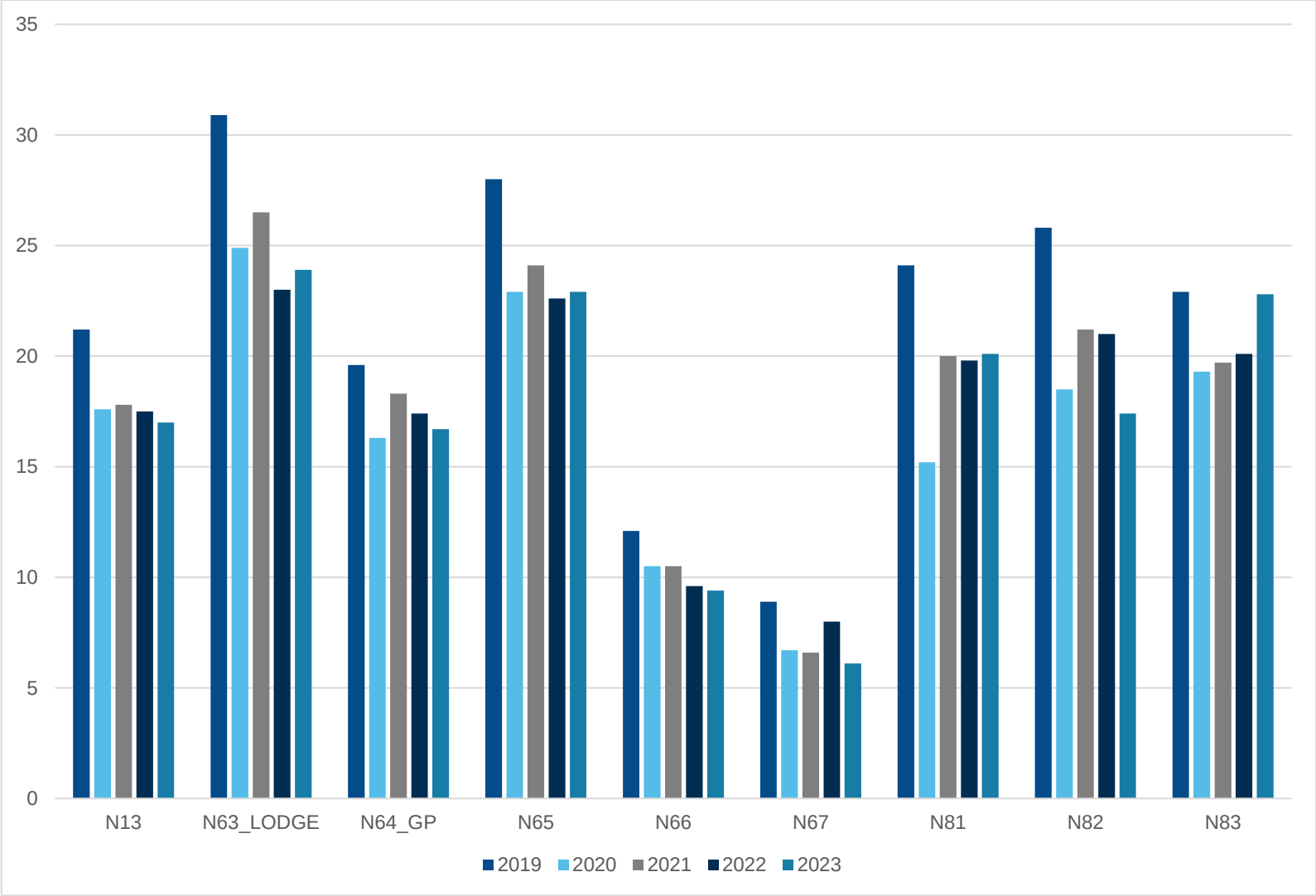


Figure A.6 – Trends in Annual Mean NO_2 Concentrations – Axminster

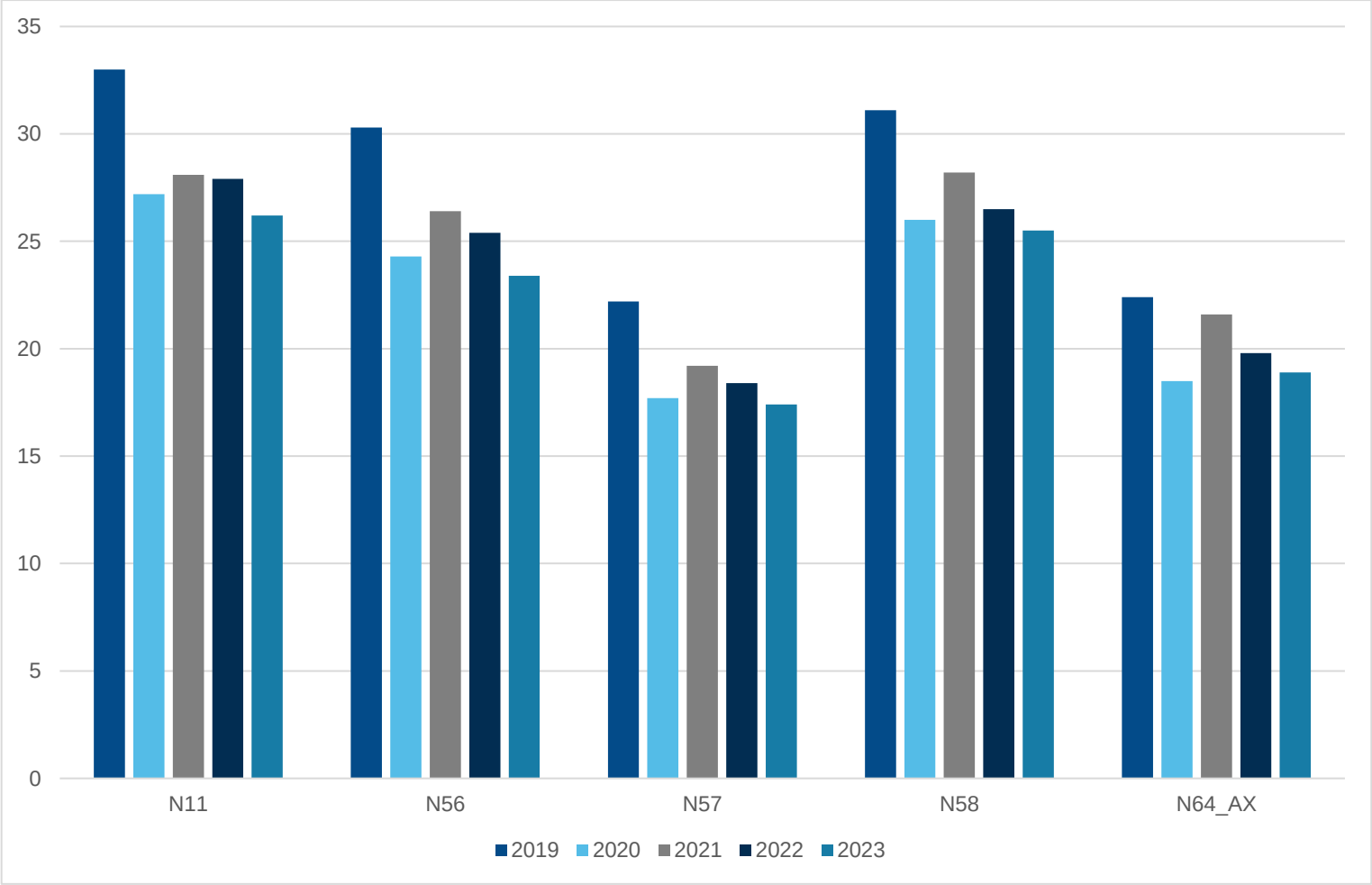


Figure A.7 – Trends in Annual Mean NO_2 Concentrations – Ottery, Seaton

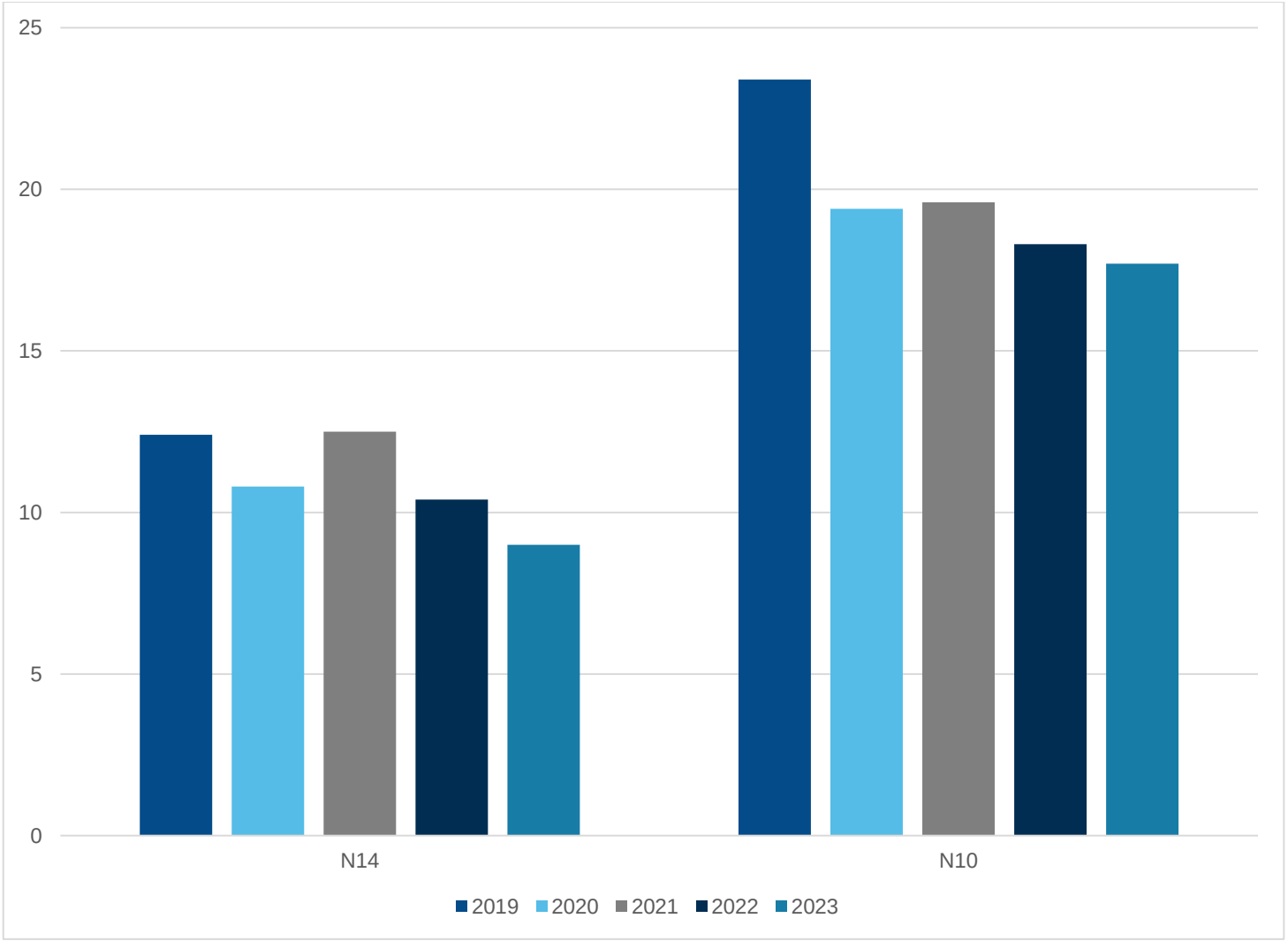


Figure A.8 – Trends in Annual Mean NO_2 Concentrations – Honiton - West (Near Turks Head Junction)

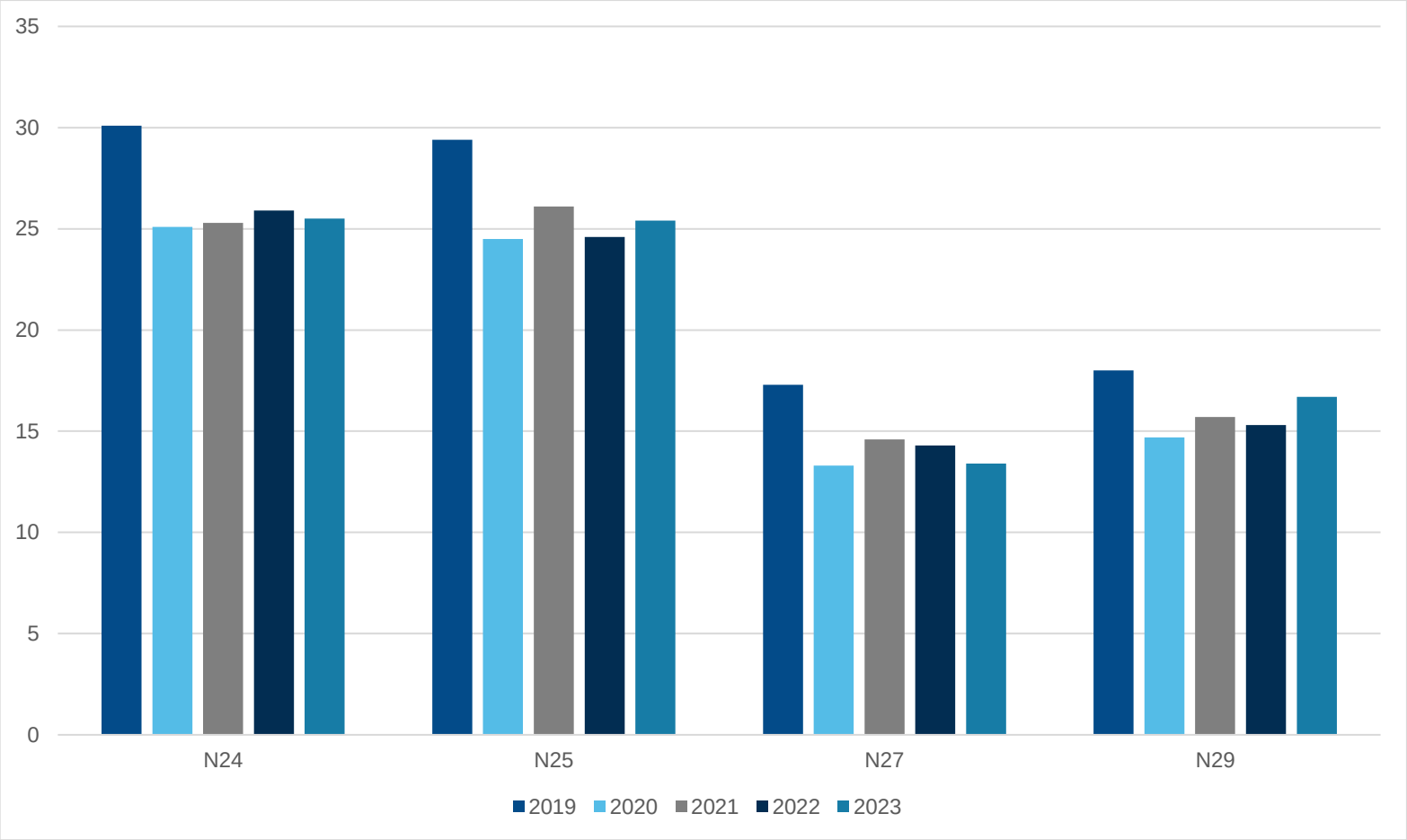


Figure A.9 – Trends in Annual Mean NO_2 Concentrations – Central and East Honiton (High Street)

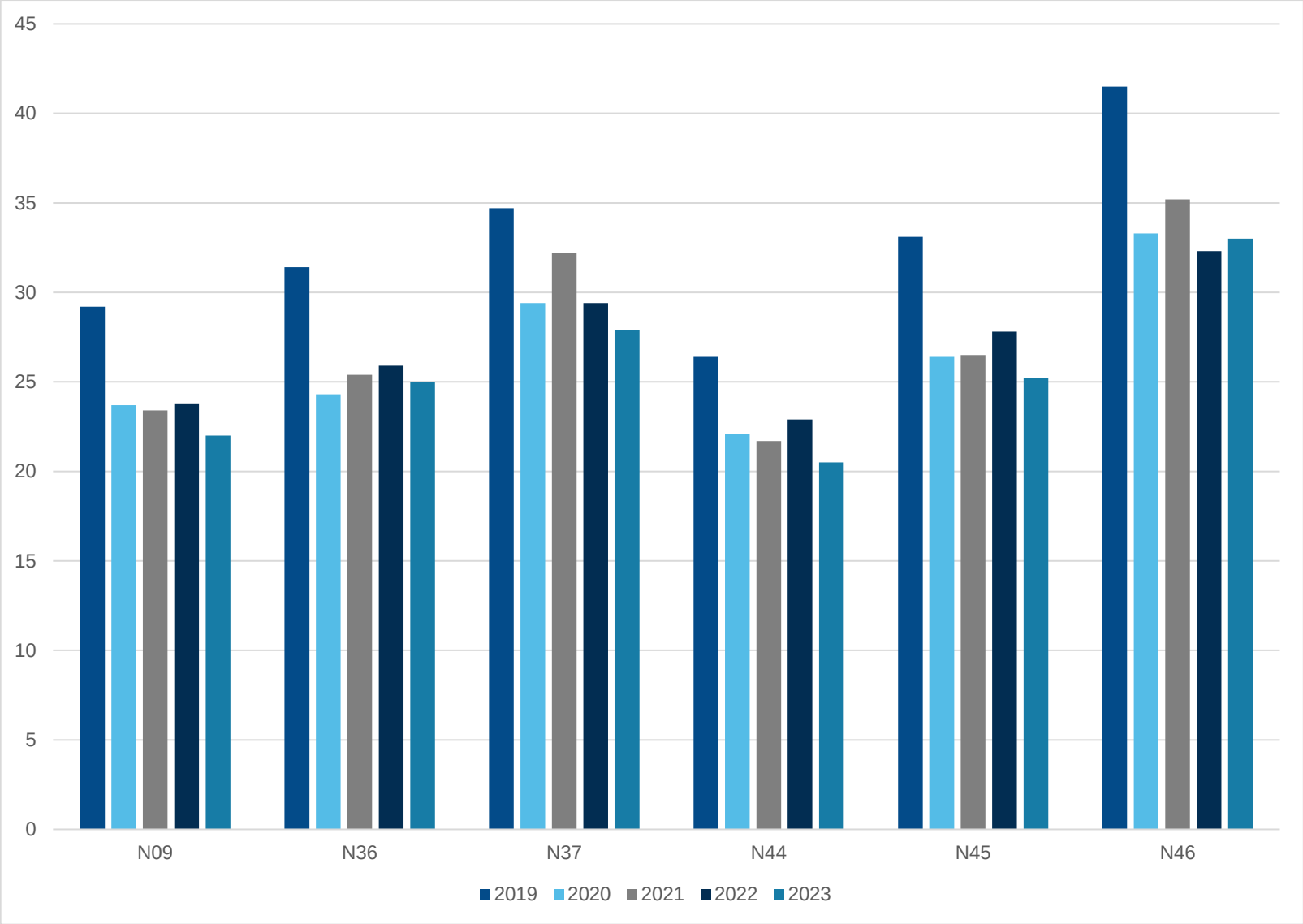


Figure A.10 – Trends in Annual Mean NO_2 Concentrations – DEFRA AURN Site: Honiton, Dove Close

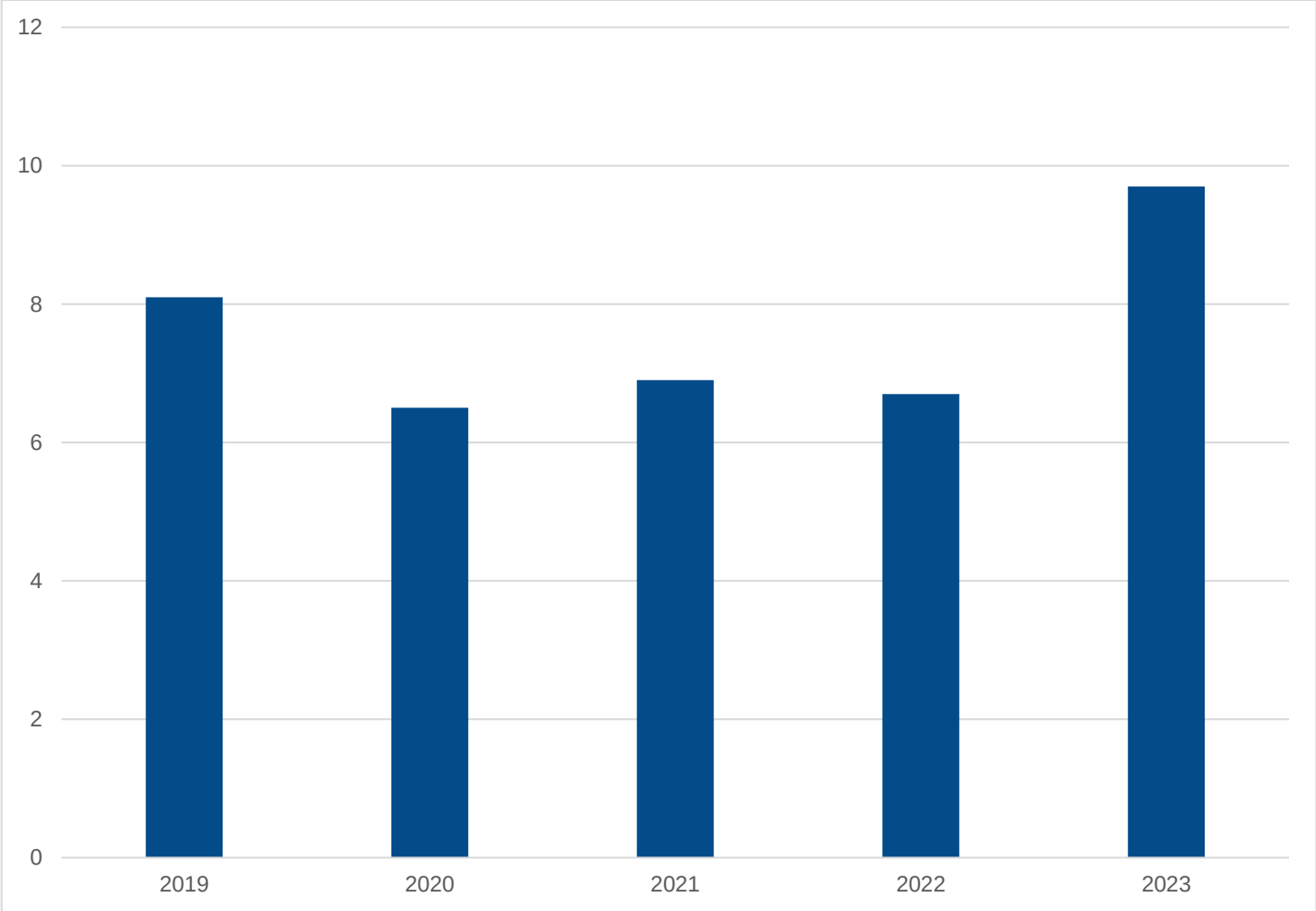


Figure A.11 – Trends in Annual Mean NO_2 Concentrations – Wilmington

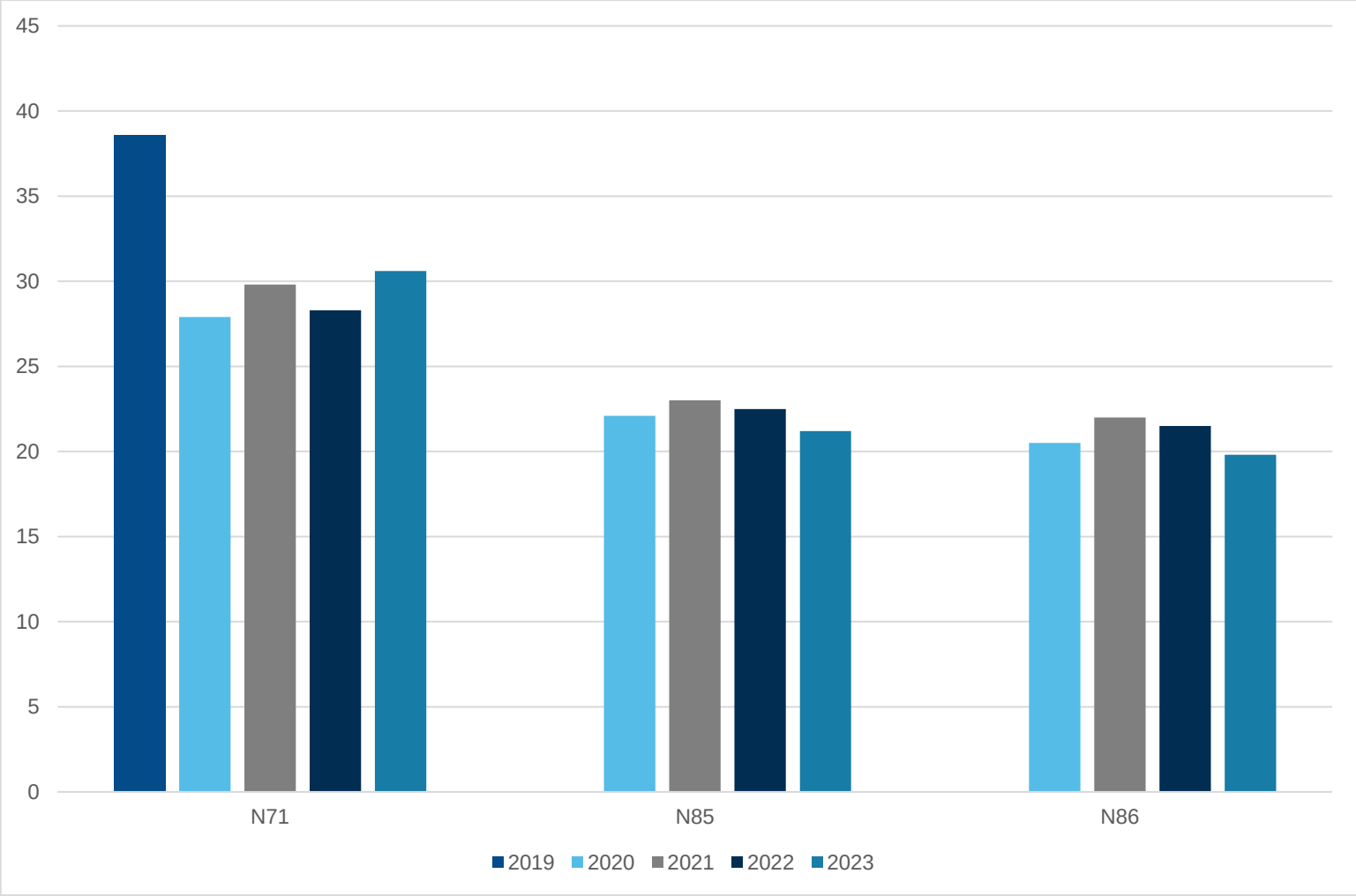


Table A.5 – 1-Hour Mean NO_2 Monitoring Results, Number of 1-Hour Means > 200µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
Dove Close, Honiton UKA00566	315749	99874	Urban Background	70.7	70.7	0	0	0	0	0

Notes:

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

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

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

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

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

Table A.6 – Annual Mean PM_{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 2023 (%) (2)	2019	2020	2021	2022	2023
Dove Close, Honiton UKA00566	315749	99874	Urban Background	99.4	99.4	-	-	-	10.9	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%).

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 2023 (%) (2)	2019	2020	2021	2022	2023
Dove Close, Honiton UKA00566	315749	99874	Urban Background	99.4	99.4	-	-	-	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%).

Table A.8 – Annual Mean $PM_{2.5}$ Monitoring Results (µg/m³)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
Dove Close, Honiton UKA00566	315749	99874	Urban Background	99.4	99.4	-	-	-	6.6	6.2

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

Notes:

The annual mean concentrations are presented as µg/m³.

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%).

Appendix B: Full Monthly Diffusion Tube Results for 2023

Table B.1 – NO_2 2023 Diffusion Tube Results ($\mu g/m^3$)

Site ID	X OS Grid Reference	Y OS Grid Reference	Bias Adjustment Factor	1	2	3	4	5	6	7	8	9	10	11	12	Raw Annual Mean (µg/m3)	Bias Adjusted and Annualised Annual Mean (µg/m3)	Distance Corrected Annual Mean (µg/m3)
N01	300267	81193	0.81		26.0	19.9	17.6	17.5	18.3	12.9	14.9	20.6	18.1	21.1	14.1	18.3	14.8	-
N02	302163	81724	0.81	26.8	23.2	22.4	13.4	13.3	12.7	12.0	12.5	15.4	14.7	22.6	14.9	17.0	13.8	
N06	298062	88425	0.81	36.7	37.2	26.2	27.9	31.7	28.0	20.3	23.0	29.6	28.7	28.6	18.2	28.0	22.7	
N07	300087	80955	0.81	26.3	26.4	15.3	22.2	23.3	21.9	17.1	19.5	23.3	22.2	21.3	14.1	21.1	17.1	
N09	316062	100596	0.81	37.1		26.0	26.4	20.4	29.2	22.5	25.6	29.0	33.0	28.2	21.5	27.2	22.0	
N10	309882	95449	0.81	30.1	26.9	21.5	18.0	16.6	21.2	17.3	18.2	24.2	28.8	21.1	18.9	21.9	17.7	
N11	329584	98464	0.81	37.7	37.8	30.1	34.4	28.7	36.2	29.0	27.4	34.9	35.7	34.0	21.9	32.3	26.2	
N13	297314	91056	0.81	26.5	24.6	25.5	18.4	14.5	19.5	17.0	17.6	24.7		24.0	18.4	21.0	17.0	
N14	324479	89930	0.81	18.8	16.1	9.2	10.6	8.3	9.8	8.2	8.9	11.0	11.2	12.7	8.5	11.1	9.0	
N16	312665	87432	0.81	15.6	14.3	10.4	9.8	8.4	8.3	7.6	8.4	10.0	9.8	12.9	9.1	10.4	8.4	
N19	313403	90074	0.81	24.1	22.5	18.4	17.3	15.3	17.0	15.2	15.9	19.5	18.0		16.1	18.1	14.7	
N20	300345	94860	0.81	18.1	16.7	13.5	12.0	7.8	12.6	10.6	10.8	15.5	18.3	13.9	12.8	13.6	11.0	
N22	301876	95558	0.81	14.0	12.3	7.9	8.1	5.4	5.8	5.9	6.9	9.6	11.6	9.9	7.8	8.8	7.1	
N24	315097	100182	0.81	32.5	35.0	30.4	32.1	26.2	31.2	24.5			25.6	16.7	23.1	27.7	22.5	
N25	315087	100165	0.81	40.2	36.3	28.4	28.5	37.0	29.2	22.0			38.4	30.6	23.5	31.4	25.4	
N26	299102	93198	0.81	21.5	19.6	13.3	14.6	10.3	13.6	11.7	14.5	17.3		16.2	13.3	15.1	12.2	
N27	314875	100097	0.81	23.1	21.7	13.6	16.2	12.1	14.5	11.8		<0.57	22.8	15.8	13.5	16.5	13.4	

N29	315114	100201	0.81	24.8	23.6	16.9	17.3	15.8	15.8	12.9		<0.57	39.9	25.5	13.6	20.6	16.7	
N36	316012	100653	0.81	42.5	34.6	29.0	29.6	21.3	30.2	24.8	27.3	33.9	39.7	32.6	24.7	30.9	25.0	
N37	316102	100607	0.81	41.9	45.1	30.7	31.3	37.6	37.5	24.8	31.3	35.3	36.9	37.0	23.8	34.4	27.9	
N44	316629	100837	0.81	37.3	32.2	22.9	24.1	23.3	22.2	19.2	20.6	23.8	29.6	28.3	19.9	25.3	20.5	
N45	316816	100934	0.81	40.0	35.6		30.1	27.7	31.3	27.7	26.8	28.1	38.4	32.0	24.7	31.1	25.2	
N46	316796	100856	0.81	45.8	42.8	35.8	39.4	33.5	46.6	37.6	38.5	48.1	48.2	36.9	35.6	40.7	33.0	
N56	329680	98550	0.81	39.9	36.0	25.7	29.4	30.1	31.5	21.6	22.8	26.8	25.5	34.3	22.5	28.8	23.4	
N57	329765	98554	0.81	27.7	26.2	20.8	21.2	15.7	21.7	17.6	18.3	23.2	22.1	25.1	18.7	21.5	17.4	
N58	329789	98613	0.81	39.9	39.0	29.4	32.6	35.4	33.0	23.1	26.2	30.9	31.9	34.6	21.4	31.4	25.5	
N59	298083	88337	0.81	42.8	42.3	33.7	34.1	39.8	44.4	35.5	34.7	42.3	44.8	31.5	21.8	37.3	30.2	
N60	297029	93140	0.81	40.9	36.7	27.6	27.5	25.8				31.6	41.5		21.0	31.6	23.8	
N63_EB	298088	88161	0.81	38.5	38.1	29.9	25.4	29.3	30.1	21.8	23.1	29.9	29.5	34.0	21.8	29.3	23.7	
N63_LODGE	297633	90927	0.81	44.1	38.3	21.3	29.2	28.7	28.5	23.3	23.8	28.0				29.5	23.9	
N64_GP	300259	90712	0.81	27.3	25.3	15.9	18.8	21.1	22.5	18.9	21.1	21.2		20.7	13.6	20.6	16.7	
N64_AX	329743	98589	0.81	30.8	32.9	20.5	24.3	26.2	23.5	14.2	18.4	22.7	25.2	24.4	16.4	23.3	18.9	
N65	300735	90555	0.81	36.5	32.2	23.9	28.4	26.8	31.9	26.0		31.5	31.9	24.5	17.3	28.3	22.9	
N66	302491	90461	0.81	18.3	16.3	9.8	10.6	12.8	11.5	8.0	11.0	9.9	11.3	11.8	8.3	11.6	9.4	
N67	302420	90750	0.81	11.3	10.3	6.9	7.3	5.7	6.2	5.6	7.4	8.9		7.9	5.1	7.5	6.1	
N68	298079	88521	0.81	31.5	31.5	23.1	28.7	25.2	28.6	23.9	23.8	30.1	30.4	23.6	17.1	26.5	21.4	
N71	321135	99875	0.81	40.1	38.1	34.2	37.4	30.4	37.4	30.0		72.7	35.6	33.9	25.4	37.7	30.6	
N72	308004	89533	0.81	24.8	20.3	16.8	16.4	11.6	14.6	14.2	13.8	16.4	18.2	19.1	14.8	16.7	13.6	
N73	300294	83265	0.81	37.1	35.4	18.5	30.3	28.7	28.2	22.1	24.0	28.0	26.8	29.4	19.9	27.4	22.2	
N74	299931	84157	0.81	28.8	29.2	26.3	23.7	24.3	27.6	22.6		52.5	26.8	26.0	18.9	27.9	22.6	

N75	298425	86472	0.81	37.1	38.3	24.8	35.9	38.7	42.5	32.6	30.9	37.4	35.6	34.5	20.1	34.0	27.6	
N76	300283	95200	0.81	17.4	14.3		9.9	7.8		9.6	10.1	12.5	16.5	13.4	11.1	12.3	9.9	
N77	301228	95665	0.81		13.8	10.5	11.8	6.4	9.5	8.2	9.2	13.0		12.0	10.3	10.5	8.5	
N78	299763	102177	0.81	18.8	18.1	13.6	11.0	13.1	12.7	10.8	14.1	13.1	15.5	14.3	12.8	14.0	11.3	
N80	297941	89437	0.81	24.1	22.3	18.2	14.9	13.1	16.6	15.0	16.4	21.7	21.7	19.5	15.5	18.2	14.8	
N81	297327	90998	0.81	28.9	27.7	34.7	24.7	14.3	22.2	20.4	19.9	28.2	28.0	26.6	21.7	24.8	20.1	
N82	298923	90859	0.81	31.7	29.0	28.1	24.6	15.7	21.0	16.1	17.4	24.4	23.1	7.4	19.0	21.5	17.4	
N83	299997	90722	0.81	33.1	28.4	24.2	29.0			24.7	25.4	34.9	34.1	27.1	20.2	28.1	22.8	
N84	308632	89742	0.81	27.4	23.5	19.0	18.5	13.5	17.9	15.8	16.1	19.5	20.5	22.1	16.8	19.2	15.6	
N85	321401	99949	0.81	33.9	32.2	22.8	26.2	22.5	26.1	21.5	23.8	26.5	29.4	29.5	19.4	26.1	21.2	
N86	320914	99950	0.81	32.8	30.2	21.5	24.6	22.7	23.8	18.0	23.6	26.4	24.6	26.2	19.3	24.5	19.8	

☒ **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.**

☒ **East Devon District Council confirm that all 2023 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System**.

Notes:

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

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 East Devon During 2023

East Devon District Council has not identified any new emission sources of significance in 2023.

Additional Air Quality Works Undertaken by East Devon District Council during 2023

East Devon District Council has not completed any additional works within the reporting year of 2023.

QA/QC of Diffusion Tube Monitoring

Gradko International Ltd is a UKAS accredited laboratory and participates in laboratory performance and proficiency testing schemes. These provide strict performance criteria for participating laboratories to meet, thereby ensuring NO_2 concentrations reported are of a high calibre. The laboratory follows the procedures set out in the Harmonisation Practical Guidance and participates in the AIR proficiency-testing (AIR-PT) scheme. Defra and the Devolved Administrations advise that diffusion tubes used for LAQM should be obtained from laboratories that have demonstrated satisfactory performance in the AIR-PT scheme. Laboratory performance in the AIR-PT is also assessed by the National Physical Laboratory (NPL), alongside laboratory data from the monthly NPL Field Inter-Comparison Exercise.

The method of preparation of the diffusion tubes for East Devon District Council was 20% TEA in water.

Diffusion Tube Annualisation

Diffusion tube annualization was required at two sites due to data capture being between 25 % and 75 %. The two sites were N60 Sowton Lodge and N63_Lodge at Clyst St Mary. The data capture at AURN site located at Dove Close Honiton in East Devon had less than 85 % data capture.

The continuous monitoring background data was therefore taken from AURN sites at Charlton Mackrell (rural background data) in South Somerset and Yarner Wood in Teignbridge (rural background data). Both Charlton Mackrell and Yarner Wood sites are located within 50 miles and have at least 85 % data capture for the year 2023.

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

Site ID	Annualisation Factor - Charlton Mackrell	Annualisation Factor - Yarner Wood	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean
N60	0.9221	0.9399	0.9310	31.6	29.4

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2024 ASR have been corrected for bias using an adjustment factor. Bias represents the overall tendency of the diffusion tubes to under or over-read relative to the reference chemiluminescence analyser. LAQM.TG22 provides guidance with regard to the application of a bias adjustment factor to correct diffusion tube monitoring. Triplicate co-location studies can be used to determine a local bias factor based on the comparison of diffusion tube results with data taken from NO_x/NO_2 continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

East Devon District Council have applied a national bias adjustment factor of 0.81 to the 2023 monitoring data.

A national bias adjustment factor was chosen because there was poor overall continuous monitor data capture. The national factor was taken from spreadsheet version 03/24 and there were 23 studies applicable to this factor.

National Diffusion Tube Bias Adjustment Factor Spreadsheet — Spreadsheet Version Number: 03/24

Follow the steps below **in the correct order** to show the results of **relevant** co-location studies
Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods
Whenever presenting adjusted data, you should state the adjustment factor used and the version of the spreadsheet
This spreadsheet will be updated every few months: the factors may therefore be subject to change. This should not discourage their immediate use.

This spreadsheet will be updated at the end of June 2024
LAQM Helpdesk Website

The LAQM Helpdesk is operated on behalf of Defra and the Devolved Administrations by Bureau Veritas, in conjunction with contract partners AECOM and the National Physical Laboratory.

Spreadsheet maintained by the National Physical Laboratory. Original compiled by Air Quality Consultants Ltd.

Step 1: Select the Laboratory that Analyses Your Tubes from the Drop-Down List
If a laboratory is not shown, we have no data for this laboratory.

Step 2: Select a Preparation Method from the Drop-Down List
If a preparation method is not shown, we have no data for this method at this laboratory.

Step 3: Select a Year from the Drop-Down List
If a year is not shown, we have no data

Step 4:
Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor shown in blue at the foot of the final column.
If you have your own co-location study then see footnote. If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@bureauveritas.com or 0800 0327953

Analysed By	Method	Year	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m³)	Automatic Monitor Mean Conc. (Cm) (µg/m³)	Bias (B)	Tube Precision	Bias Adjustment Factor (A) (Cm/Dm)
Gradko	20% TEA in Water	2023	R	Monmouthshire County Council	11	33	26	26.5%	G	**0.79**
Gradko	20% TEA in water	2023	R	Blackburn With Darwen Bc	12	23	16	43.8%	G	**0.70**
Gradko	20% TEA in water	2023	R	Lancaster City Council	10	35	27	28.6%	G	**0.78**
Gradko	20% TEA in water	2023	R	Eastleigh Borough Council	12	33	26	26.4%	G	**0.79**
Gradko	20% TEA in water	2023	R	Eastleigh Borough Council	12	22	19	12.5%	G	**0.89**
Gradko	20% TEA in water	2023	R	Plymouth City Council	12	35	26	38.3%	S	**0.72**
Gradko	20% TEA in water	2023	R	Plymouth City Council	10	39	31	24.2%	S	**0.80**
Gradko	20% TEA in water	2023	UC	Belfast City Council	10	26	19	38.3%	G	**0.72**
Gradko	20% TEA in water	2023	R	Cheshire West And Chester	12	35	32	10.0%	G	**0.91**
Gradko	20% TEA in water	2023	R	Cheshire West And Chester	10	32	28	14.6%	G	**0.87**
Gradko	20% TEA in water	2023	R	Dudley Mbc	12	27	23	17.1%	G	**0.85**
Gradko	20% TEA in water	2023	UB	Dudley Mbc	12	19	13	45.4%	G	**0.69**
Gradko	20% TEA in water	2023	R	Dudley Mbc	12	40	37	7.7%	G	**0.93**
Gradko	20% TEA in water	2023	R	Gateshead Council	12	23	20	17.7%	G	**0.85**
Gradko	20% TEA in water	2023	R	Gateshead Council	11	23	18	26.9%	G	**0.79**
Gradko	20% TEA in water	2023	R	Gateshead Council	12	27	22	20.7%	G	**0.83**
Gradko	20% TEA in water	2023	R	Gateshead Council	12	29	23	25.9%	G	**0.79**
Gradko	20% TEA in water	2023	R	Gateshead Council	12	30	33	-7.8%	G	**1.08**
Gradko	20% TEA in water	2023	KS	Marylebone Road intercomparison	11	45	38	20.3%	G	**0.83**
Gradko	20% TEA in water	2023	B	South Holland District Council	10	8	7	12.4%	G	**0.89**
Gradko	20% TEA in water	2023	R	Worcestershire	12	12	11	17.4%	G	**0.85**
Gradko	20% TEA in Water	2023	R	Ards And North Down Borough Council	12	33	21	60.2%	G	**0.62**
Gradko	20% TEA in Water	2023	R	Lisburn & Castlereagh City Council	11	24	20	22.1%	G	**0.82**
Gradko	20% TEA in water	2023		**Overall Factor (23 studies)**				Use		**0.81**

A summary of bias adjustment factors used by East Devon District Council over the past five years is presented in Table C.2.

Table C.2 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2023	National	03/24	0.81
2022	National	03/23	0.83
2021	National	04/22	0.84
2020	Local	-	0.84
2019	National	06/18	1.05

NO_2 Fall-off with Distance from the Road

No diffusion tube NO_2 monitoring locations within East Devon required distance correction during 2023.

QA/QC of Automatic Monitoring

The Automatic Monitoring site is located at Dove Close, Honiton. It is on a small recreation ground in a residential area in the south west of the town. The Environment Type is Urban

Background and the monitoring is part of the Automatic Urban Monitoring Network (AURN).

The UK Air ID is: UKA00566 and the EU Site ID is: GB1017A. The Operator of the site is Bureau Veritas. The site is calibrated once a month and servicing of the equipment is carried out twice a year.

Automatic Monitoring Annualisation

Site ID	Annualisation Factor - Charlton Mackrell	Annualisation Factor - Yarner Wood	Average Annualisation Factor	Raw Data Annual Mean	Annualised Annual Mean
Honiton AURN	1.0325	1.098214	1.065357	9.098327	9.689718

NO_2 Fall-off with Distance from the Road

No automatic NO_2 monitoring locations within East Devon required distance correction during 2023.

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

Figure D.1 – 2023 NO_2 Monitoring Locations - Exmouth, Exton and Lympstone

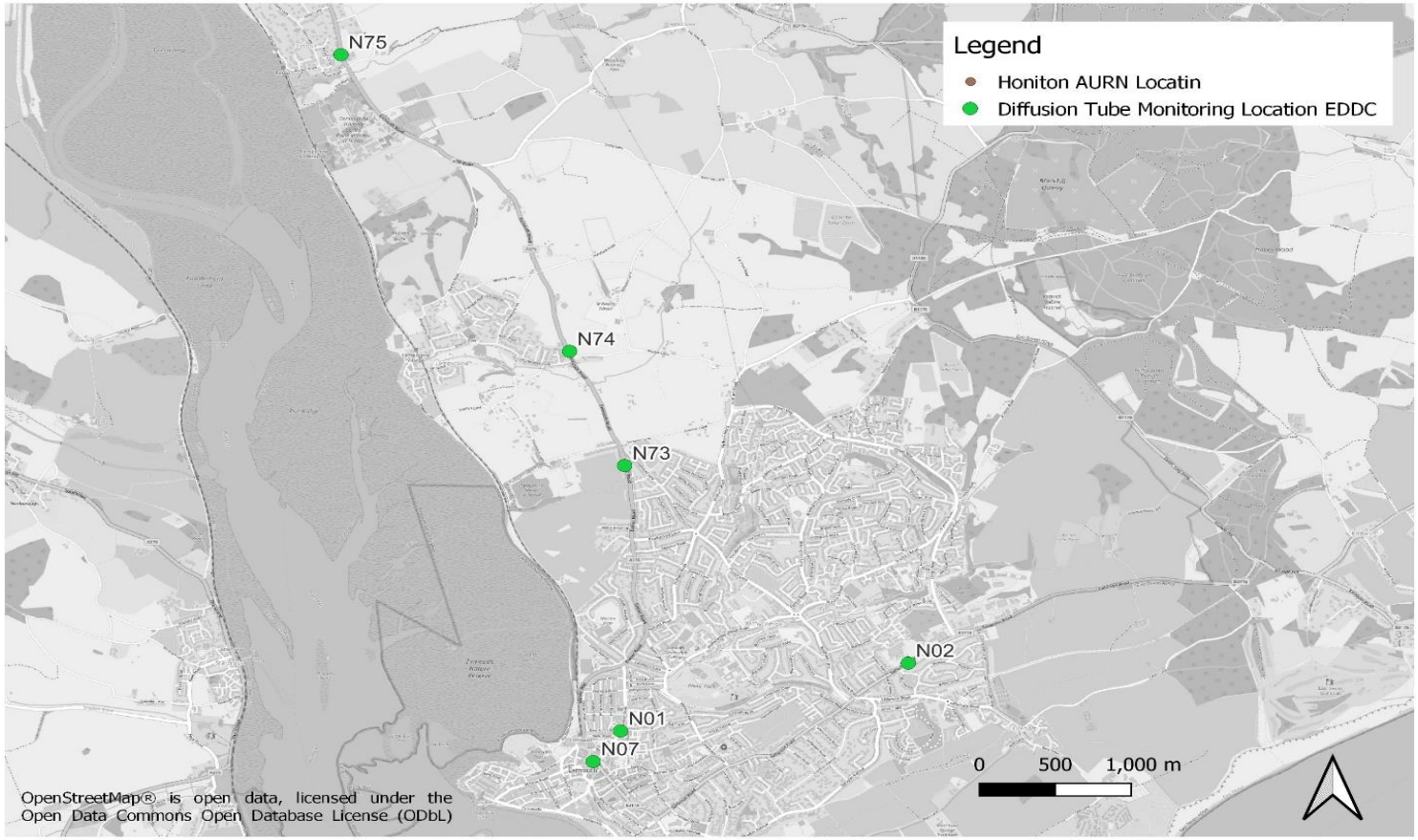


Figure D.1 – 2023 NO_2 Monitoring Locations - Newton Pop, Sidford. Sidmouth

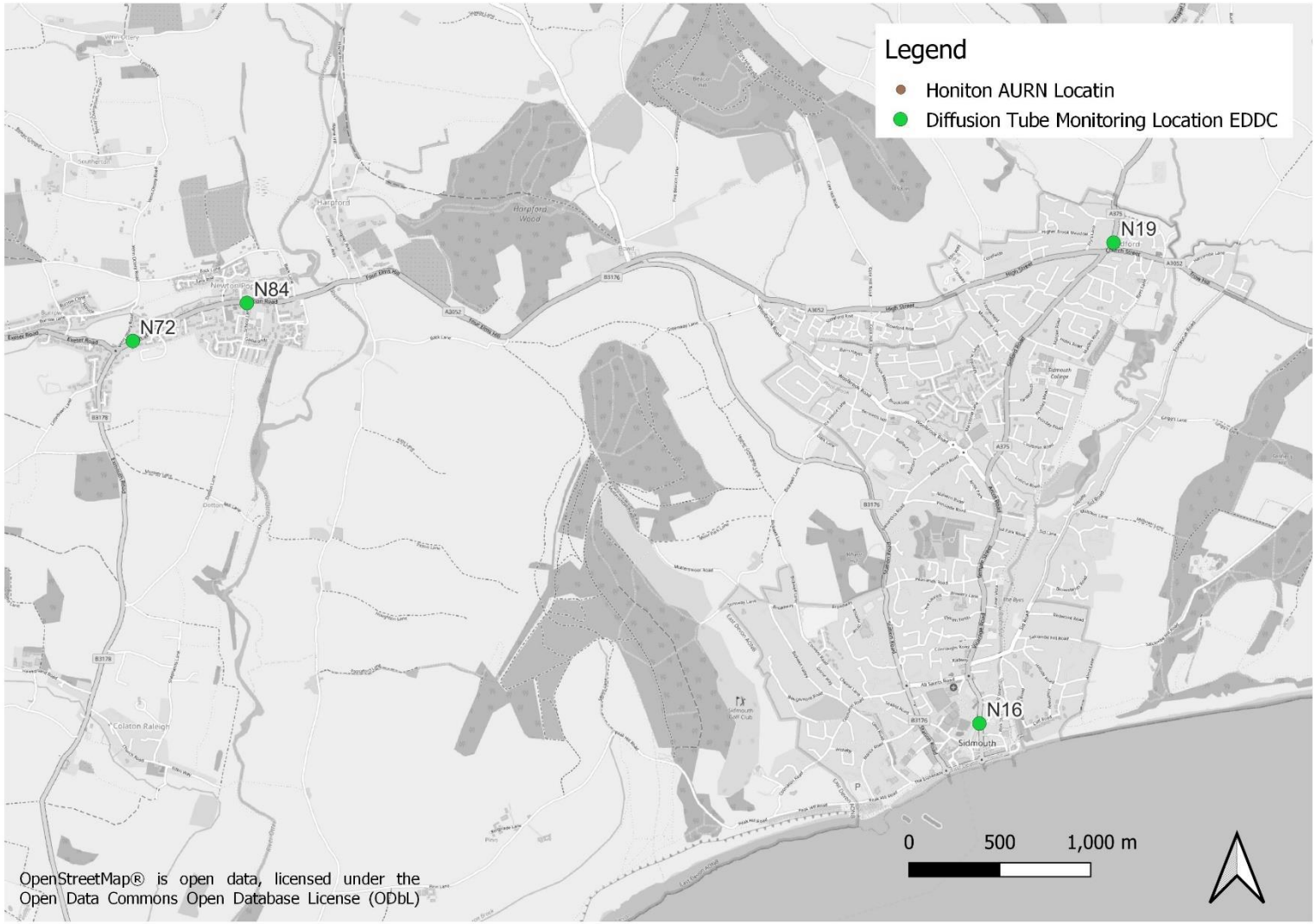


Figure D.2 – 2023 NO_2 Monitoring Locations - Clyst St George

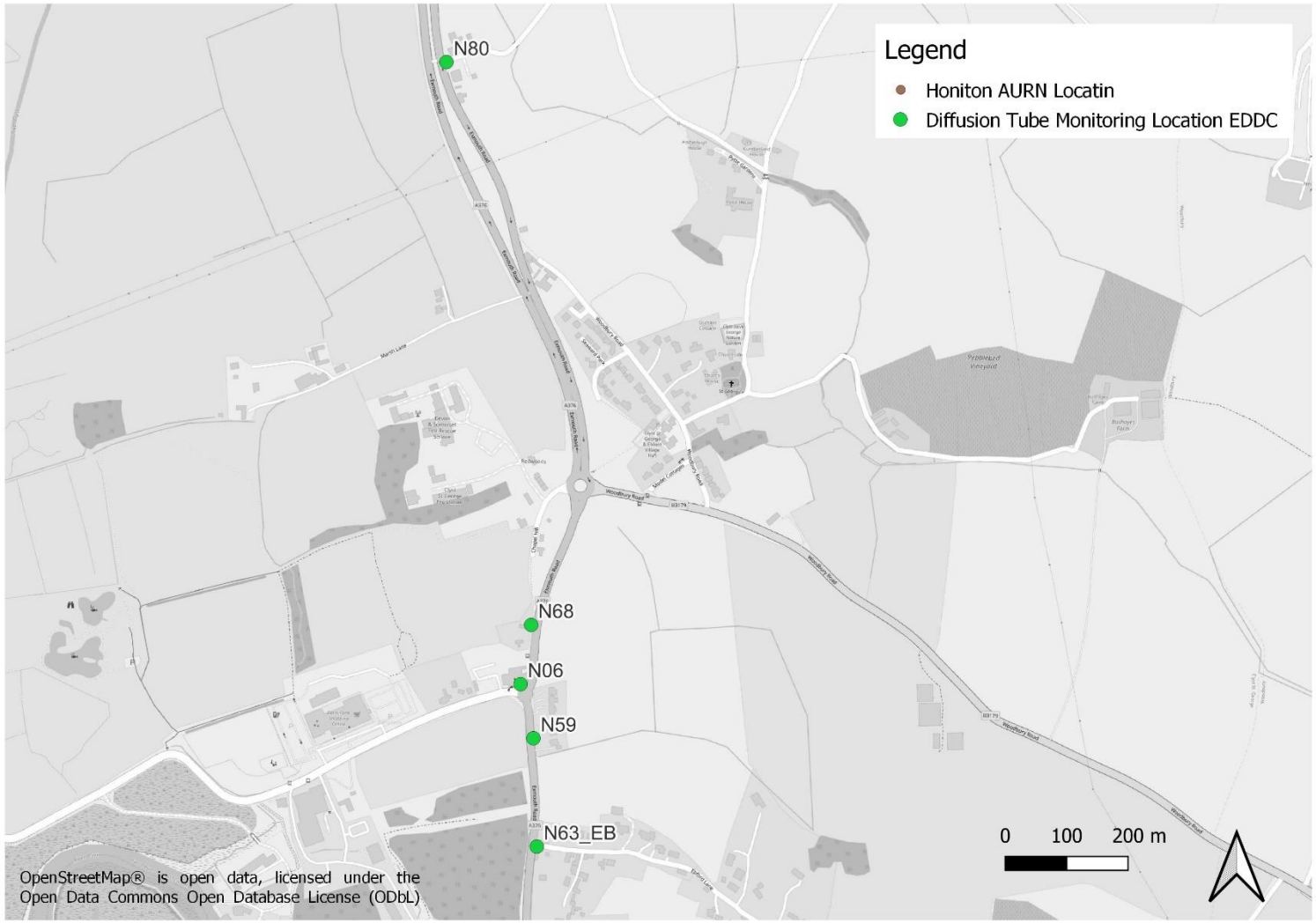


Figure D.3 – 2023 NO_2 Monitoring Locations - East of Exeter, Beare, Broadclyst

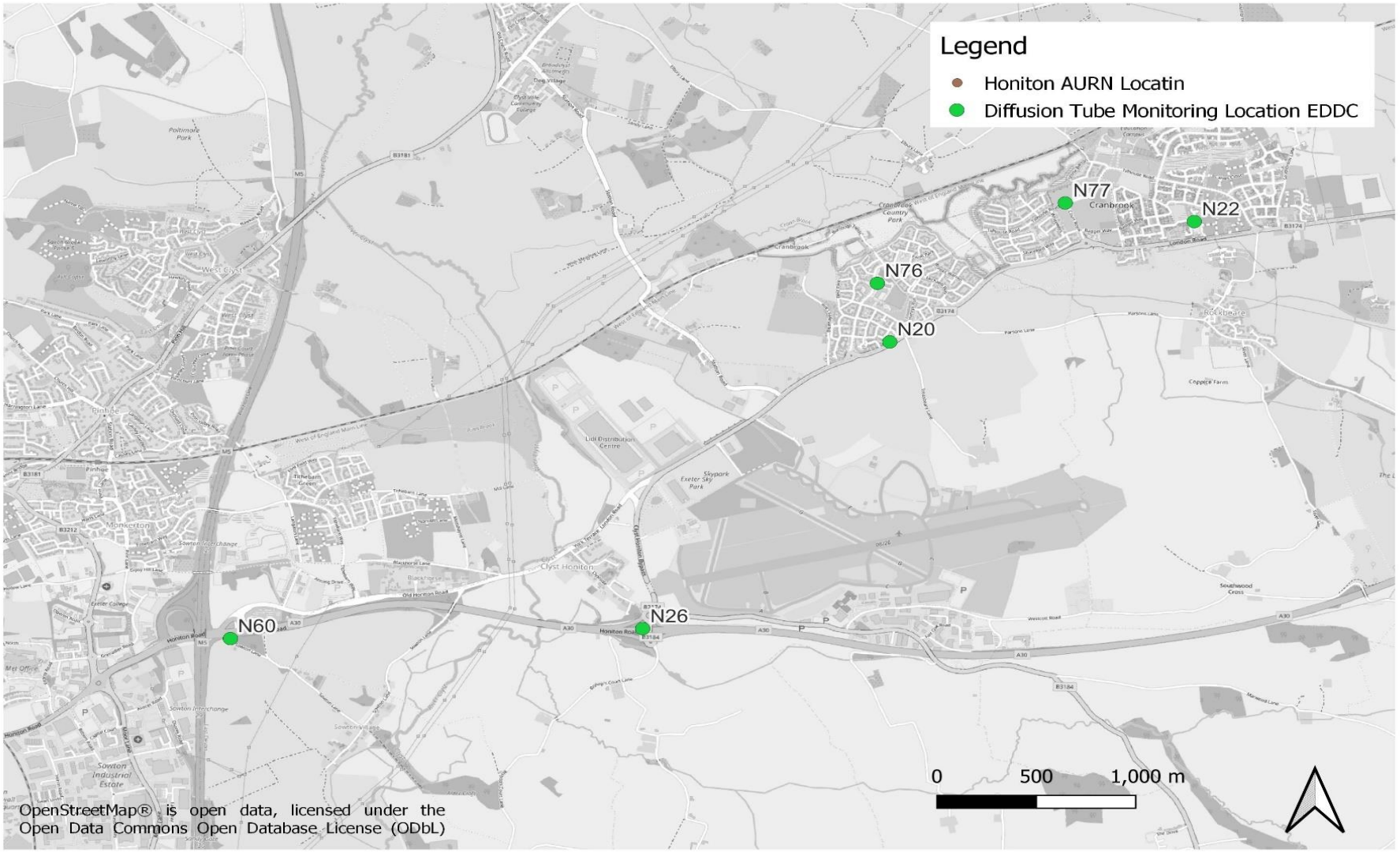


Figure D.4 – 2023 NO_2 Monitoring Locations - Clyst St Mary, Farringdon

Figure D.5 – 2023 NO_2 Monitoring Locations – Axminster

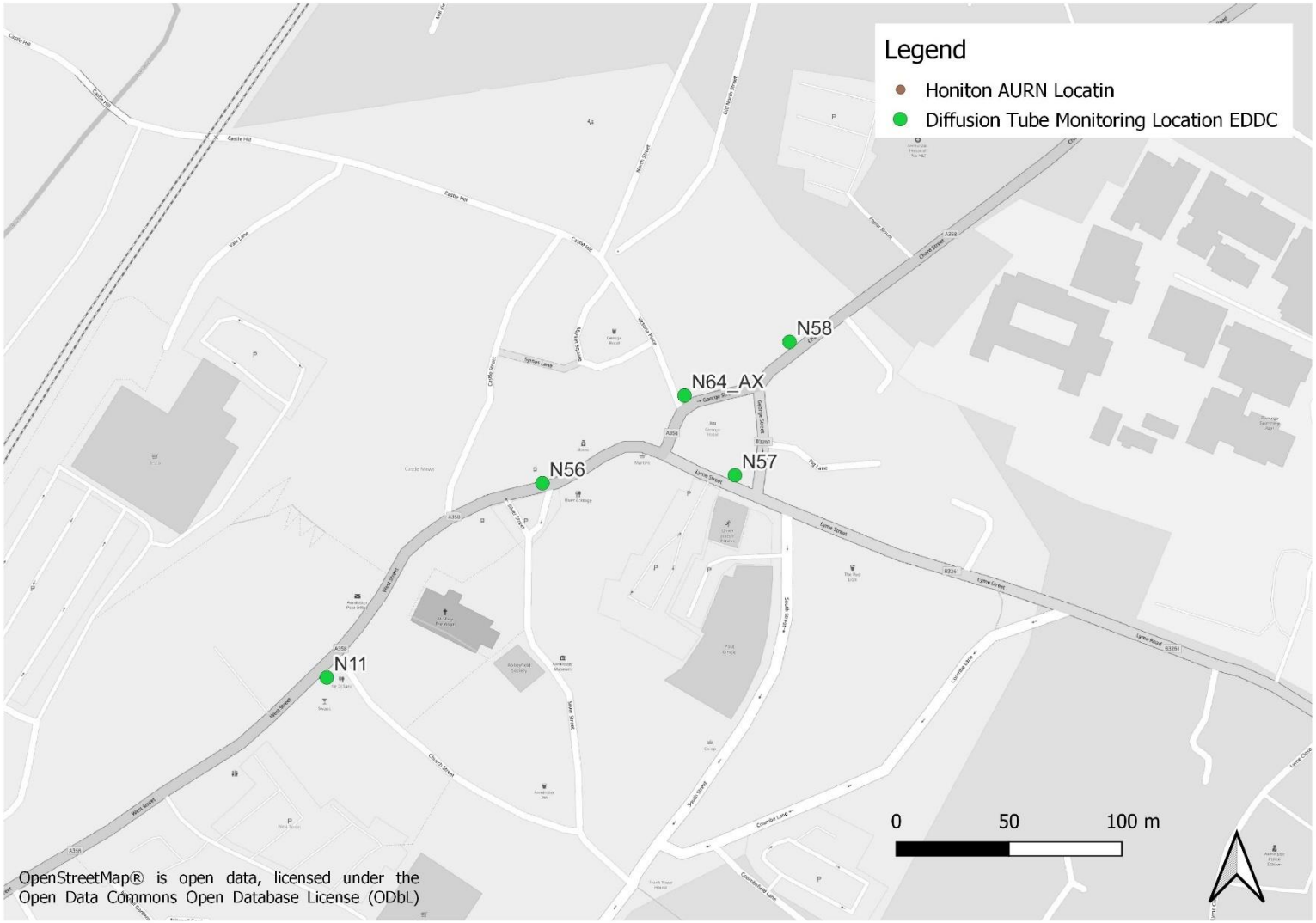


Figure D.6 – 2023 NO_2 Monitoring Locations – Seaton

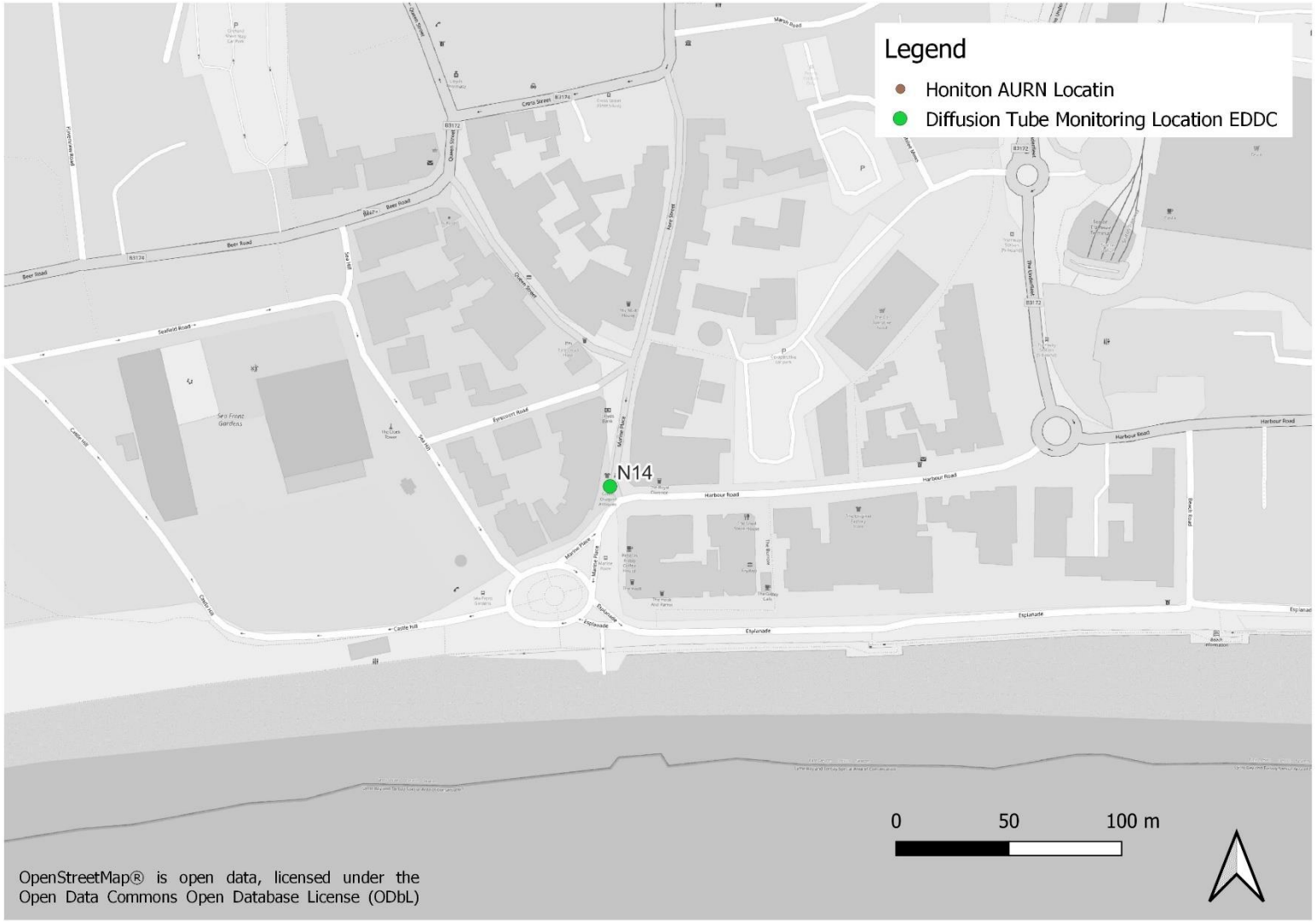


Figure D.7 – 2023 NO_2 Monitoring Locations – Ottery

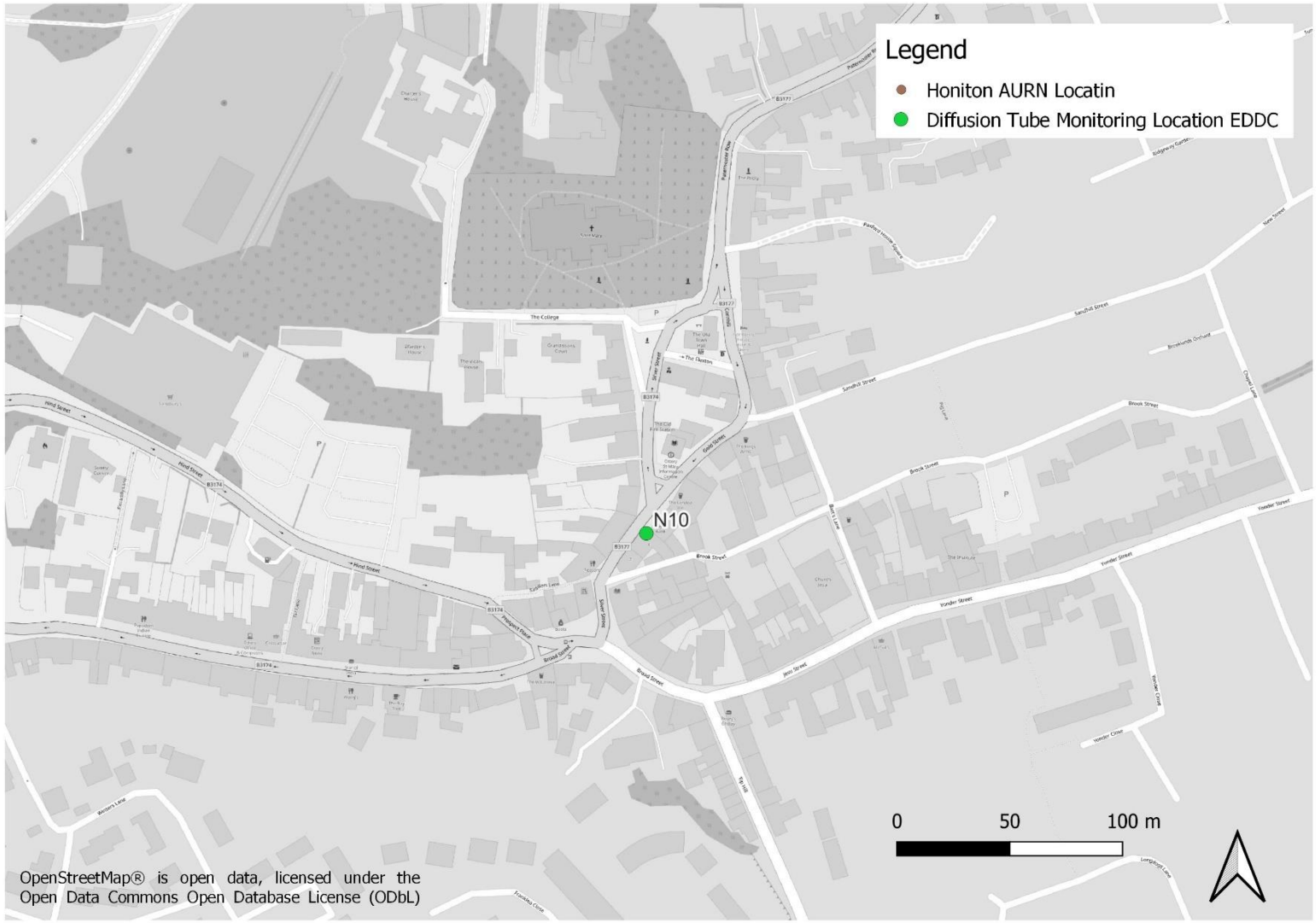


Figure D.8 – 2023 NO_2 Monitoring Locations – Honiton

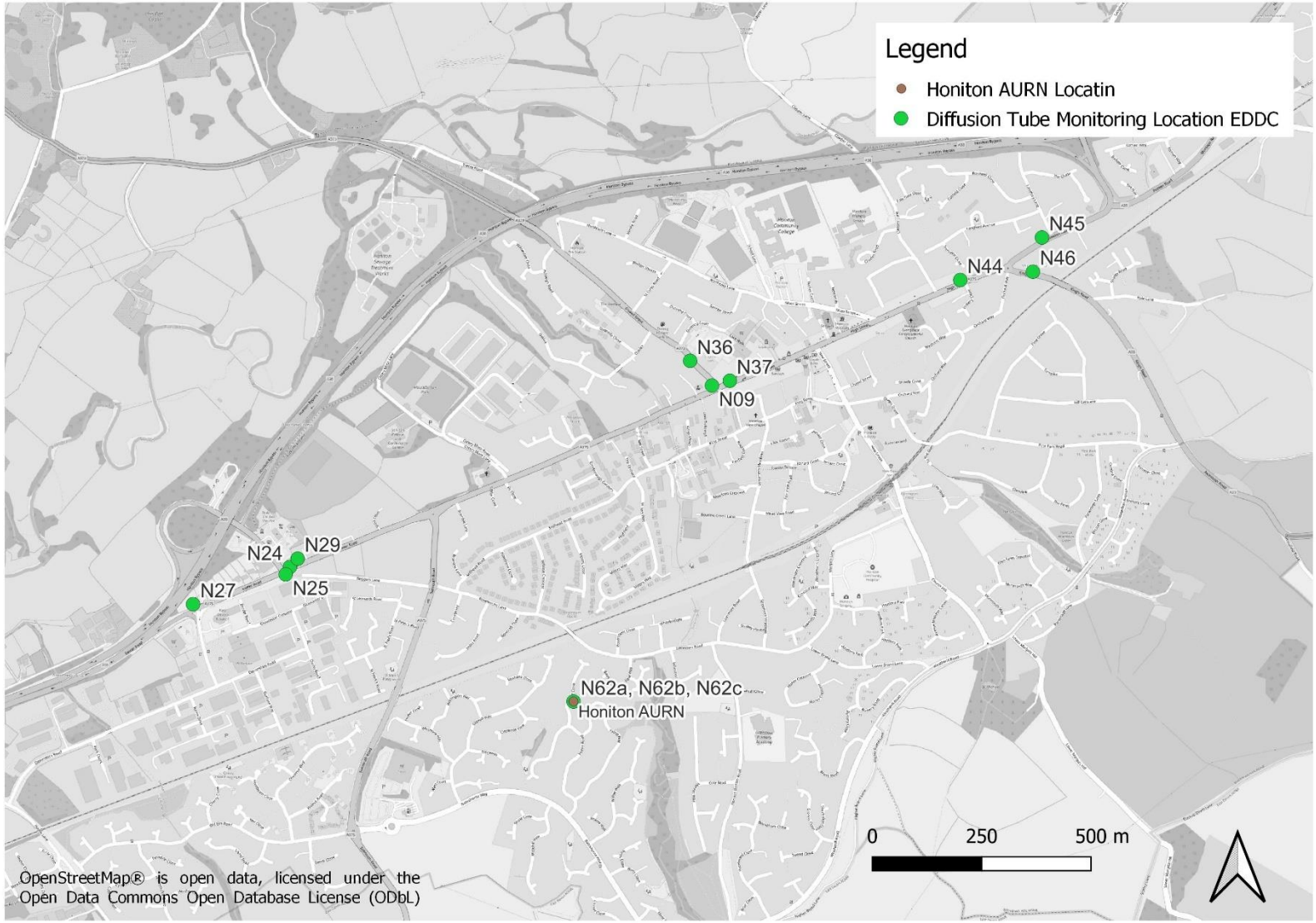
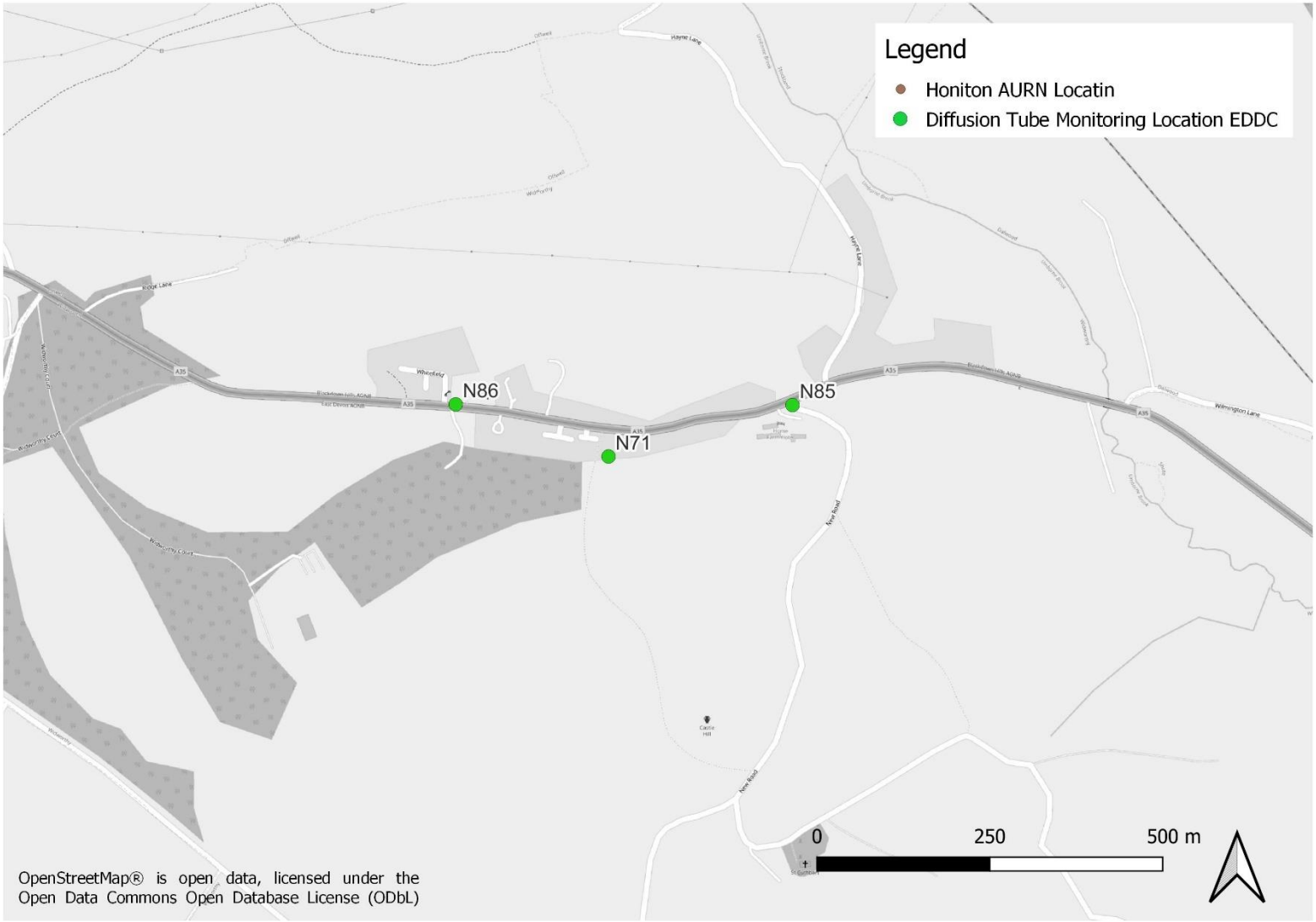


Figure D.9 – 2023 Monitoring Locations - Wilmington



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[7]

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

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

Glossary of Terms

Abbreviation	Description
AQAP	Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'
AQMA	Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives
ASR	Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways
EU	European Union
FDMS	Filter Dynamics Measurement System
LAQM	Local Air Quality Management
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
PM_{10}	Airborne particulate matter with an aerodynamic diameter of 10µm or less
$PM_{2.5}$	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less
QA/QC	Quality Assurance and Quality Control
SO_2	Sulphur Dioxide

References

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