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: July 2024

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Report Reference Number	0057A
Date	July 2024

Executive Summary: Air Quality in Our Area

Air Quality in Mid Devon District 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. 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

The key pollutants of concern in Mid Devon District Council are nitrogen dioxide (NO_2) and fine particulates ($PM_{2.5}$ and PM_{10}), with road traffic emissions being the principal local emission source. There are several major roads within Mid Devon District Council's jurisdiction including the M5, A373, A361, A377, A396 and A3126 which influence air quality across large areas. Mid Devon District Council is however a largely rural authority, and industry and domestic sources also contribute to pollution concentrations.

Mid Devon District Council operates a network of air quality monitoring across the district, including and 20 passive NO_2 diffusion tubes. Mid Devon District Council previously operated four AQMesh sensors, which continuously measured NO_2, PM_{10} and $PM_{2.5}$, however these were subsequently decommissioned in 2023 due to ongoing service and breakdown issues. Air quality in the District of Mid Devon District Council is generally good and in 2023 there were no exceedances of the UK Air Quality Objectives.

Furthermore, there is a long-term trend showing a decline in measured concentrations of NO_2. For example, in 2023, measured annual mean concentrations of NO_2 were lower than 2019, 2021 and 2022 at all sites, and many have fallen below concentrations recorded in 2020 during the height of the Covid-19 Pandemic. Air quality is improving across much of the UK, where road traffic is the major source of emissions, due to the replacement of older, “dirtier” vehicles with those with “cleaner” engines, including electric vehicles. As such, these results are in line with national trends.

The national trend for PM_{10} and $PM_{2.5}$ is more complicated than the trend for NO_2, with decreases in PM_{10} and $PM_{2.5}$ emissions from vehicle exhausts and industry somewhat offset by increases in emissions from domestic sources (emissions of $PM_{2.5}$ from domestic wood burning increased by 124% between 2011 and 2021[3]).

Due to past exceedances of the UK Air Quality Objectives, Mid Devon District Council declared two Air Quality Management Areas (AQMAs); Crediton AQMA in 2004 and Cullompton AQMA in 2006.

Mid Devon District Council has implemented an Air Quality Action Plan (AQAP) that details the actions Mid Devon District Council are taking to reduce pollution concentrations in the

[3] Defra. Emissions of air pollutants in the UK – Particulate matter (PM_{10} and $PM_{2.5}$), February 2023: https://www.gov.uk/government/statistics/emissions-of-air-pollutants/emissions-of-air-pollutants-in-the-uk-particulate-matter-pm10-and-pm25

AQMAs and across the district. The delivery of the AQAP is led by the Community Team within the Public Health and Housing Options service supported by Community Safety, the Planning Department, Licensing, Transport Officers and the Climate Change Officer. This AQAP is to be subject to an annual review, appraisal of progress and reporting to the Mid Devon District Council Community, People & Equalities Policy Development Group.

There have been no exceedances of the PM_{10} AQS objective for the past ten years, and no exceedances of the annual mean AQS for NO_2 in Cullompton and Crediton AQMAs since 2018 (at locations of relevant exposure). Nonetheless, significant development pressures remain in place for Cullompton with challenges to unlock key infrastructure. The Council are therefore exploring the options of revoking only the Crediton AQMA and plan to undertake a review in 2024.

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[4] sets out actions that will drive continued improvements to air quality and to meet the new national interim and long-term targets for fine particulate matter ($PM_{2.5}$), the pollutant of most harmful to human health. The Air Quality Strategy[5] 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[6] 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.

Actions in 2023 to improve air quality in the district include:

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

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

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

- The adoption of an air quality low emission supplementary planning document, which was adopted in April 2023.
- Progress key funding submissions, technical documents and business cases to support infrastructure delivery

Unfortunately, barriers remain with regard to the delivery of key infrastructure in Cullompton to support air quality improvements. However, significant residential and commercial development allocations are identified in the Mid Devon Local Plan (2013-33) which include the Culm Garden Village (East Cullompton) and the major NW Cullompton Urban Extension:

- >4,000 housing (dwellings)
- >60,000 commercial (floorspace sq.m)

This represents a significant pressure with potential to reverse the downward trend in measured concentrations of NO_2. More information on progress to deliver key infrastructure to mitigate this risk is set out in Section 2.2.

The strategic transport interventions outlined in 2.2 are critical to the delivery of the District's local plan aspirations as well as AQAP delivery and the enhancement of the quality of life of local residents.

On this basis Mid Devon District Council have assessed that the Cullompton AQMA should remain in place to enable and support the ongoing infrastructure delivery requirements and wider AQAP and low emission approaches.

Conclusions and Priorities

Across Mid Devon District Council there is a long-term downward trend in concentrations of NO_2 and PM_{10} and there were no exceedances of the AQS Objectives in 2023, at locations of relevant exposure. However, pressures remain in place regarding Cullompton in particular. Furthermore, there are no safe levels of some pollutants and as such, Mid Devon District Council is committed to minimising pollution concentrations across the district.

The following actions are considered to be key priorities for Mid Devon District Council in 2024:

- Carry out further assessment as to whether the Crediton AQMA could be revoked.

- Continue steps to deliver key infrastructure in Cullompton (Relief Road, J28 SOBC and Railway station RNEP process)
- Continue to review the monitoring locations across the Mid Devon, particularly in vicinity of a major new development.
- Continue to deliver measures set out in the Mid Devon Council AQAP (2021) alongside the additional measures that were added following the recent review of the AQAP.
- Review opportunities to implement Automatic (continuous) Monitors following decommissioning of AQMesh monitors.
- Update the website to provide information on how the public can get involved and reduce their emissions.

Local Engagement and How to get Involved

Due to the main source of air pollution within Mid Devon District Council being from transport sources, the public can get involved in reducing air pollution by taking alternative means of travel. The following are possible alternatives to private travel that would contribute to improving air quality within the Mid Devon District Council:

Walk or cycle:

- Replacing a car journey by walking or cycling helps reduce traffic and traffic emissions. It has proven health and mental health benefits too. Walking or cycling to school can improve a child's concentration and makes children more alert, fit and healthy.

Take public transport or car share:

- For longer journeys, why not use public transport or car share? Car sharing can help combat congestion and help reduce pollution within urban areas, as well as save you money.

And if you have to use your car:

- Make sure your tyre pressures are correct (low tyre pressure increases fuel use and emissions).
- Think about whether you need to use the air conditioning. Using it increases fuel consumption by up to 30%, whereas driving with windows open only increases it by 5%.

- Using a roof rack on your car can increase fuel consumption by up to 30%. Bicycles are better attached to the back of the car.
- If you need to buy a car, check its fuel economy. With an ultra-low emission vehicle (ULEV) you will use less fuel and produce less exhaust emissions.
- Drive smoothly. You'll save fuel (and money), and your engine will also pollute less;
- Don't rev your engine unnecessarily; and,
- Turn off the engine when your car is stationary.

Nationally there has been an increase in emissions of fine particulates ($PM_{2.5}$ and PM_{10}) from domestic sources. At home, you should:

- Avoid burning solid fuels, if possible;
- Avoid lighting bonfires, but if you must, don't light them when pollution levels are high or while the weather is still and cold;
- Only burn dry material and never burn household waste, especially plastic, rubber, foam or paint;
- Levels of pollution can be quite high on bonfire night and other events/festivals with bonfires, and sensitive people, including people with respiratory conditions, may notice some effects; and,
- However, exposure can be considerably reduced by remaining indoors and keeping windows closed.

To minimise exposure to air pollution in your home, you can buy water-based or low-solvent paints, varnishes, glues and wood preservatives and make sure that your home is sufficiently ventilated when using candles, cooking and cleaning.

Further information on the health effects of air pollution can be found on the Government's website.

Local Responsibilities and Commitment

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

- Joanne Pope - Community Team Lead (Chartered Environmental Health Practitioner)
- Alex Crayton (Syntegra Group)

This ASR has been approved by Simon Newcombe, Head of Housing and Health and will be approved by the Community PDG once it has been signed off by Defra.

If you have any comments on this ASR please send them to Joanne Pope at:

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1 Local Air Quality Management

This report provides an overview of air quality in Mid Devon District 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 Mid 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.

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

- NO_2 annual mean; and,
- PM_{10} 24-hour mean.

There have been no exceedances of either air quality objectives in either AQMA in recent years. As such, Mid Devon has explored the possibility of revoking both AQMAs. With ongoing significant development pressures and key infrastructure challenges it has been determined that the Cullompton AQMA should remain in place with a further assessment planned to be carried out in 2024 with regard to the Crediton AQMA.

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
Crediton AQMA	08/11/2014	NO_2 Annual Mean	The majority of the built-up area of Crediton.	NO	52.7 µg/m^3	28.7 µg/m^3	5	Mid Devon District Council Air Quality Action Plan (2019)	Air Quality Action Plan
Crediton AQMA	08/11/2014	PM_{10} 24 Hour Mean	The majority of the built-up area of Crediton.	NO	>35 exceedances	N/A	11	Mid Devon District Council Air Quality Action Plan (2019)	Air Quality Action Plan
Cullompton AQMA	11/12/2006	NO_2 Annual Mean	An area encompassing the entire built-up area of the town of Cullompton.	YES	55.8 µg/m^3	28.7 µg/m^3	5	Mid Devon District Council Air Quality Action Plan (2019)	Air Quality Action Plan

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

☒ **Mid Devon District Council confirm that all current AQAPs have been submitted to Defra.**

2.2 Progress and Impact of Measures to address Air Quality in Mid Devon District Council

Defra's appraisal of last year's ASR set out in the July 2023 Appraisal Report concluded that the report was well structured, detailed, and provides the information specified in the Guidance. The following comments were made, designed to help inform future reports. Points 1 and 3 have been addressed in the current report. Point 2 is no longer valid as AQ Mesh automatic monitoring was decommissioned in 2023.

1. *The AQAP table should be filled in completely, if it is not possible to fill in some sections of the table, please justify why this is.*
2. *Add AQ Mesh data to the appendix of the report and omit from the main body of the report.*
3. *When stating which laboratory has been used for the analysis of the diffusion tubes, ensure that the correct methodology has been stated within the report.*

On the basis of the evidence provided by the local authority the conclusions reached are accepted for all sources and pollutants.

Mid 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 2.2. 23 measures are included within Table 2.2, with the type of measure and the progress Mid Devon District Council have made during the reporting year of 2023 presented. The focus during 2023 to date has been progression of key infrastructure for Cullompton. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.2 and in more detail below.

More detail on these measures can be found in Mid Devon's Air Quality Action Plan.

Key infrastructure

Town Centre Relief Road

Since inception, the relief road scheme has become more technically complex and the latest construct cost estimate provided by Devon County Council's consultants (WSP) is now £37m.

The District Council submitted bids to the Government's Levelling Up Fund tranches 1 and 2 to secure the balance of funding required to deliver the Relief Road (beyond the level of Housing Infrastructure Fund (HIF) monies previously secured), but were unfortunately unsuccessful. The third round of Levelling Up Fund was not a bidding process but funding was instead distributed by allocation. Devon County Council did not receive any allocation through this process.

Concurrent with these discussions, officers have also been identifying and considering additional funding options most notably with Homes England in relation to both the Housing Infrastructure Fund (HIF) and the Brownfield Infrastructure Fund (BIL). In December 2023, officers secured £77k of additional capacity funding from Homes England to update the existing business case, construction programme/costs and property cost estimate in order to inform ongoing conversations in relation to HIF as best fit. This has enabled the Council to submit a formal request to Homes England for additional funding to support delivery of the relief road via the HIF programme. A cross-agency Board including representatives of DLUHC, Treasury, Homes England and the Department for Transport (DfT) will consider this request, although the exact date of communication of any decision taken by the Board has not been confirmed and has been put on hold at date of writing due to the UK general election.

Strategic Improvements to Junction 28 of the M5 Motorway

Congestion occurs regularly in and around Cullompton with queues extending outbound (from the M5) in the morning and inbound (towards the town) in the evening along the length of Station Road between the High Street and M5 Junction 28. Queuing on the northbound motorway off-slip (traffic heading towards Cullompton from Exeter) occurs regularly in the evening peak. Cullompton High Street remains congested as a result, which impacts on bus journey time reliability and the pollution from congestion.

The first stage of mitigation to reduce congestion is the Cullompton Town Centre Relief Road, which aims to provide an alternative route bypassing the town. The second stage of mitigation is junction improvements to M5 Junction 28, for which a number of options have been considered and assessed. The Government's recent Network North announcement, which proposed reallocating HS2 funds to other schemes across the country, identifies M5 Junction 28 as a recipient scheme of released funding.

Devon County Council has been working closely with the District Council to identify options to improve M5 Junction 28 and draft the Strategic Outline Business Case (SOBC) with funding from Homes England secured by the District Council. The SOBC has been

finalised, approved by Devon County Council's Cabinet (March 2024) and has now been submitted to the Department for Transport (DfT).

Anticipating that the SOBC is accepted (in light of the previous Network North announcement), it would enable the drawdown of further funding to develop the scheme and progress an Outline Business Case through the Large Local Majors Fund process prior to progressing to construction stages.

Reopening Cullompton Station

There have been long established aspirations to reinstate stations at Cullompton and Wellington, with associated enhancements to the rail services along the Bristol – Exeter corridor. Both stations closed in 1964 with the loss of a stopping train service. A key driver for delivering these projects is that both areas are proximate to significant planned growth with existing air quality pressures. The reopening of new stations is an important part of the multimodal approach to meeting the travel needs of the region.

In 2019, Mid Devon District Council and Somerset West and Taunton Council (now Somerset Council) became the Project Sponsors, working in partnership to develop the business case for re-opening both stations. The partnership was successful in securing funding of up to £50k from the Department for Transport's "Restoring your Railway" Ideas Fund. This funding was used to support the development of the Strategic Outline Business Case (SOBC). In 2021, the joint project was successful in securing £5 million from the Department for Transport to fund the next stage of both stations development through to the preparation and submission of a Full Business Case.

In 2022, after significant progress and success under the oversight of the local authorities, the project lead transferred to Network Rail in light of the fact that the project was transitioning into a delivery phase and that design, delivery and cost certainty was necessarily required by Network Rail and the Department for Transport (DfT) given the stage of the projects.

This transfer of project oversight also reflects the RNEP (Rail Network Enhancement Pipeline) process and guidance around 'A New Approach for Rail Enhancements' (RNEP). This process sets out the key stages that rail enhancement projects (including the provision of new stations) will need to undertake to be successful. There are five stages of activity separated by formal investment decision gateways as set out below.

Following a considerable amount of work the Cullompton and Wellington Railway Stations Re-instatement project is currently at stage 3. A Full Business Case has been submitted to the Department for Transport and the Council await a decision on whether the scheme passes through the Decision to Deliver Gateway. The Government will need to agree and endorse this Full Business Case before engaging in a 'Decision to Deliver' with all the relevant parties. Funding for the next stage of work (Delivery) will be agreed as part of this decision. It should be noted however, as part of the Government's Network North announcement in October 2023, a funding-in-principle announcement has been made regarding these two stations. It is hoped that the project can now gain the necessary Government/Ministerial approvals to pass through the 'Decision to Deliver' gateway.

At the time of writing a Prior Approval application for the Cullompton Railway Scheme is being considered by the Council's Development Management team. The current planned opening date for passenger use at the new Cullompton Station is May 2026.

Mid Devon District Council's priorities for the coming year are to:

- Carry out further assessment as to whether the Crediton AQMA could be revoked.
- Continue steps to deliver key infrastructure in Cullompton (Relief Road, J28 SOBC and Railway station RNEP process)
- Continue to review the monitoring locations across the Mid Devon, particularly in vicinity of a major new development.
- Continue to deliver measures set out in the Mid Devon Council AQAP (2021) alongside the additional measures that were added following the recent review of the AQAP.
- Review opportunities to implement Automatic (continuous) Monitors following decommissioning of AQMesh monitors.
- Update the website to provide information on how the public can get involved and reduce their emissions.

Whilst the measures stated above and in Table 2.2 will help to contribute towards compliance, Mid Devon District Council anticipates that further additional measures not yet prescribed will be required in subsequent years to achieve compliance and enable the revocation of the Crediton and Cullompton AQMAs.

Table 2.2 – Progress on Measures to Improve Air Quality

Measure No.	Measure	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	Community Car sharing schemes	Alternatives to private vehicle use	Car and lift sharing schemes	2017/2018	Pending full release of funds and commencement of development	MDDC	S106 Contributions / MDDC	NO	Partially Funded	£10k - 50k	Planning	Low	Number of car share schemes delivered in new developments.	Limited. s106 have been prioritised towards key infrastructure measure	Lengthy Timescale
2	Community run and/or private E-bikes schemes	Alternatives to private vehicle use	Other	2017/2018	Pending securing funding from s106 or other funding source	MDDC in partnership with Town Councils and Communities	S106 Contributions / MDDC/ Town Councils	NO	Partially Funded	< £10k	Planning	Low	E-Bikes accepted and utilised as an alternative mode of transport by residents	Limited. No suitable private partners identified. Potential partner operating in Exeter area in administration	Funding
3	Secure cycle parking facilities in Town Centres and at key transport hubs	Promoting Travel Alternatives	Promotion of cycling	2018/2019	Pending securing funding from s106 or other funding source	MDDC, Network Rail, Devon County Council	MDDC, Network Rail, Devon County Council	NO	Partially Funded	£10k - 50k	Implementation	Low	Number of facilities	Facility installed in Crediton	Funding
4	Marketing campaign to reduce high street parking/promote car parks/raise awareness	Public Information	Leaflets, social media, internet, street posters	2017/2018	Ongoing	MDDC and Town Councils	MDDC and Town Councils	NO	Funded	< £10k	Implementation	Low	Increase in level of awareness of local air quality issues/change in behaviour	Will be completed post-completion of Cullompton Heritage Action Zone town-centre works later in 2024	Consultation with DCC and Town Councils required
5	Develop EV charging network	Promoting Low Emission Transport	Refuelling infrastructure	2017/2018	Ongoing	MDDC	MDDC / S106 Contributions	NO	Partially Funded	£10k - 50k	Implementation	Low	7 units to be installed across the district in the first phase	2 EV charging units installed at each Leisure centre across the district Further units to be installed pending release of s106 funds – a number of Council owned parking areas are suitable for further installations Included in Local Plan strategic developments	
6	Taxi Licensing conditions	Promoting Low Emission Transport	Refuelling infrastructure	2017/2018	Ongoing	MDDC	MDDC	NO	Not Funded	£10k - 50k	Planning	Low	Policy review undertaken to develop ULEV taxi fleet and infrastructure	Existing EURO engine standard emission/vehicle age requirements remain in place. Licensing policy is under review and will include provision of any enhancements.	
7	Eastern Relief Road Cullompton and additional M5 junction	Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	2017/2018	Pending funding and adoption of Local Plan	MDDC DCC Highways	MDDC DCC Highways	NO	Not Funded	> £10 million	Planning	High	% reduction in traffic flows through Cullompton Reduction in congestion on minor roads	See Section 2.2	Major infrastructure funding required

Measure No.	Measure	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
8	Coordinated approach to enforcement of anti-idling, illegal parking	Traffic Management	Anti-idling enforcement	2017/2018	Ongoing	MDDC DCC	MDDC DCC	NO	Funded	< £10k	Implementation	Low	Improved traffic flow at key pinch points Delivery of awareness raising campaign with drivers	Update due as part of commissioned project to review barriers to progress existing AQAP measures – will include a review of approaches by other LAs	
9	Kingsmill Industrial site traffic management Cullompton Junction	Traffic management	Other	2017/2018	Ongoing	MDDC DCC Highways	MDDC DCC Highways	NO	Funded		Implementation	Low	Improved traffic flows to/from industrial site	See Section 2.2	
10	Parking and traffic flow measures	Traffic management	UTC, Congestion management, traffic reduction	2017/2018	Ongoing	MDDC DCC	MDDC DCC	NO	Funded	£10k - 50k	Implementation	Medium	Improved traffic flows. Decrease in main street parking. Increase use of MDDC car parks	Introduced resident car parking rates.	
11	Cullompton/Wellington Rail link feasibility study	Transport Planning and Infrastructure	Other	2017	Complete	MDDC and Somerset West and Taunton	MDDC and Somerset West and Taunton	NO	Funded	£10k - 50k	Completed	Medium	Building of rail infrastructure	Complete - see Section 2.2	
12	ECO Stars fleet management and recognition scheme	Transport Planning and Infrastructure	Public transport improvements interchanges stations and services	2017	Ongoing	MDDC	MDDC	NO	Funded	< £10k	Implementation	Low	% Increase in number of companies in the scheme	As of August 2019, there were 64 members in the scheme (16 local) covering a total of 2,809 vehicles.	ECO Stars fleet management and recognition scheme
13	Bus stop infrastructure	Transport Planning and Infrastructure	Public transport improvements-interchanges stations and services	2017/2018	Pending full release of funds	MDDC DCC	MDDC DCC / S106 Contributions	NO	Partially Funded	£10k - 50k	Planning	Medium	Change to mode of transport Increase in patronage	S106 contribution allocated. Early planning is considering a new bus interchange linking with a new railway station. Potential to move Falcon bus stop and incorporate into the Cullompton Relief Road Route.	
14	Review of bus stop locations and routes	Transport Planning and Infrastructure	Public transport improvements interchanges stations and services	2017/2018	Ongoing	MDDC DCC	MDDC DCC	NO	Funded	£10k - 50k	Planning	Low	Improved Traffic flow through centre of towns	Town Council consultation. Pending agreement with DCC and Bus operators.	
15	Improving footpath and cycling paths in major towns	Transport Planning and Infrastructure	Cycle and walking network	2017/2018	Ongoing	Town Councils MDDC DCC	Town Councils MDDC DCC / S106 Contributions	NO	Partially Funded	£50k - £100k	Planning	Low	Connected pathway network. Improved accessibility Reduction in short car journeys	Initial network improvements identified in Neighbourhood plans s106 projects and Crediton Feasibility Study	

Measure No.	Measure	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
16	Road surfacing	Transport Planning and Infrastructure	Consideration given to lower polluting road surfacing within AQMA areas as opportunities arise	2018/2019	Ongoing	DCC	DCC	NO	Funded	£50k - £100k	Planning	Low	Areas of existing or new road network resurfaced	A range of road surfaces have been put forward in the Crediton Feasibility study which will slow traffic and reduce pollutants	
17	Mid Devon Local Plan	Policy guidance and development control	Low Emissions Strategy	Development Management Policies	Complete	MDDC	MDDC	NO	Funded	< £10k	Completed	High	Local Plan adopted	Supplementary Planning Document on Air Quality and Development adopted 4 April 2023.	
18	Culm Valley Garden Village development and major infrastructure projects	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2017-21	Ongoing	MDDC DCC Highways	MDDC DCC Highways	NO	Funded	< £10k	Implementation	High	Public Health Consideration incorporated in Master planning cycle	Public Health Devon and MDDC Public Health and Regulatory Services are stakeholders in the consultation and are strongly lobbying for measures that will mitigate air pollution such as good walk and cycle infrastructure, good public transport connections to Cullompton/Exeter, open spaces and tree planting. Several key public health/planning documents have been forwarded to the Culm Valley Garden Village Project team.	
19	Planning Policy DM8 Parking	Policy Guidance and Development Control	Other Policy	2017	2020	MDDC	MDDC	NO	Funded	< £10k	Completed	Medium	Standards adopted for electric vehicle infrastructure	Local Plan Adopted in 2020	
20	Planning Policy DM6 Transport and Air Quality	Policy Guidance and Development Control	Other Policy	2017	2020	MDDC	MDDC	NO	Funded	< £10k	Implementation	Medium	Low Emission and Transport Assessments Completed Travel Plans	Local Plan Adopted in 2020	
21	Planning Conditions on Tiverton Eastern Urban Extension	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2017/2018	Ongoing	MDDC	MDDC	NO	Funded	< £10k	Implementation	N/A	Air Quality Noise Emissions	Complete	
22	Cullompton Rail station re-opening	Promoting Travel Alternatives	Promote use of rail and inland waterways		2025	MDDC/ DCC/ National Rail	MDDC/ DCC/ National Rail	NO	Funded	£100k - £500k	Planning	Low	Number of passengers using Cullompton Station	See Section 2.2	
23	Mid Devon Vehicle Fleet	Promoting Low Emission Transport	Public Vehicle Procurement - Prioritising uptake of low emission vehicles	2022	2025	MDDC	MDDC	NO	Funded	£100k - £500k	Implementation	Low	Percentage of MDDC Fleet which are EV or Low Emission.	MDDC have 10 electric vehicles (small vans) that have been delayed but are due imminently for Property Services and Street Scene. Further investments expected in 2024/2025.	

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[7], 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.

Mid Devon District Council decommissioned their $PM_{2.5}$ monitors in 2023 due to ongoing maintenance and breakdown issues. The highest $PM_{2.5}$ annual mean concentration recorded in the Mid Devon District Council in 2022, was 9.2 µg/m^3, well below annual mean $PM_{2.5}$ Interim Target. This was measured using an indicative AQMesh sensor at Haywood School, in Crediton. This indicative data is, however, provided by a sensor which is not a reference-equivalent and is coming towards the end of its operational lifetime. As such, it is not considered to be reliable for the purposes of comparing to Air Quality Objectives.

The Defra background mapping resource which for $PM_{2.5}$ in 2023 models a maximum annual mean concentration of 7.59µg/m^3 in the Local Authority area, well below annual mean $PM_{2.5}$ Interim Target.

A regional estimate of exposure to $PM_{2.5}$ can be derived from work carried out by Public Health England. Public Health England estimates that average $PM_{2.5}$ concentrations across the district were 6.2 µg.m^{-3} in 2020, with 4.8% of mortality associated with particulate air pollution in 2021. This information is available from Public Health England's Public Health Data webpage. The mortality calculated for Mid Devon district is slightly lower than that calculated for South West England (5.1%) and England (5.5%) as a whole.

LAQM.TG(22) Table A.1 Action toolbox presents a list of measures that can be implemented to help reduce concentrations of $PM_{2.5}$. The actions Mid Devon District Council have taken, and will continue to take, have invariably also included benefits for the reduction of $PM_{2.5}$ pollution. Although not designed specifically for the reduction of $PM_{2.5}$, improvements in NO_2 concentrations will lead to a net reduction of $PM_{2.5}$ concentrations

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

from combustion-based sources where both pollutants arise. This is apparent for the measures that are aimed at reducing car usage and also promoting the uptake of electric vehicles.

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

- The Council operates a comprehensive section of their website[8] dedicated to air quality where information surrounding the use of bonfires, including a step by-step guide to dealing with nuisances from persistent bonfire smoke, is accessible.

[8] Mid Devon District Council, Bonfires and smoke nuisance, available online at https://www.middevon.gov.uk/residents/environment/bonfires-andsmoke-nuisance/

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

This section sets out the monitoring undertaken within 2023 by Mid 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

Mid Devon District Council did not undertake automatic (continuous) monitoring during 2023. Continuous monitoring was previously undertaken at four locations utilising AQMesh Sensors. The monitors were classified as 'indicative' as they do not comply with the requirements of LAQM/Defra guidance. However, due to ongoing service and maintenance issues, the decision was made to decommission the monitors. Mid Devon District Council are currently undertaking a review of options to undertake continuous monitoring in the future.

3.1.2 Non-Automatic Monitoring Sites

Mid Devon District Council undertook non- automatic (i.e. passive) monitoring of NO_2 at 20 sites during 2023. Table A.1 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.2 in Appendix A compare the ratified and adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40µg/m^3. Note that the concentration data presented represents the concentration at the location of the monitoring site, following the application of bias adjustment and annualisation, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment).

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

In 2023, no exceedances of the air quality objectives have been measured. In addition, as no measured annual mean concentrations were greater than 60µg/m^3, it is considered unlikely that there has been an exceedance of the 1-hour mean objective. Furthermore, the data presented in Table A.2 in Appendix A shows no exceedance of either air quality objective in the past five years.

The trend graphs (Figure A.1 and A.2 in Appendix A) has shown that annual mean NO_2 concentrations within the Crediton and Cullompton AQMAs have decreased year on year. Many of the monitored concentrations are similar to, or have fallen below, concentrations recorded in 2020 during the height of the COVID-19 Pandemic.

The maximum annual mean NO_2 concentration recorded outside of an AQMA was 21.0µg/m^3 at DT15 located within Newton St. Cyres. The trend analysis for the last five years indicates a general reduction in annual mean NO_2 concentrations throughout Mid Devon District Council. This is most likely due to vehicle emission improvements

Appendix A: Monitoring Results

Table A.1 – 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)
DT1	Uplowman Road, Tiverton	Suburban	298374	113514	NO_2	No	0.0	140.0	No	2.5
DT2	Gornhay Orchard, Tiverton	Suburban	297404	113236	NO_2	No	0.0	165.0	No	2.5
DT3	Horsdon Terrace, Tiverton	Roadside	296568	112787	NO_2	No	0.0	6.9	No	1.8
DT4	Leat Street, Tiverton	Kerbside	295119	112725	NO_2	No	3.3	0.5	No	2.2
DT5	Market Place, Willand	Suburban	303360	111293	NO_2	No	0.0	23.0	No	2.5
DT6	Silver Street/B3181, Willand	Roadside	303373	110348	NO_2	No	2.3	2.0	No	2.8
DT7	Willand Road, Cullompton	Kerbside	302151	108329	NO_2	No	3.5	0.7	No	3.0
DT8	1 Culm Lea, Cullompton	Roadside	303005	107418	NO_2	Cullompton AQMA	0.1	3.0	No	2.2
DT9	Gerbera Way, Cullompton	Suburban	303040	107238	NO_2	Cullompton AQMA	0.0	180.0	No	2.5
DT10	Police Station, Cullompton	Roadside	302187	107549	NO_2	Cullompton AQMA	0.2	1.5	No	2.3

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)
DT11	HSBC, Cullompton	Kerbside	302050	107359	NO_2	Cullompton AQMA	0.0	0.7	No	2.0
DT12	8 Fore Street, Cullompton	Roadside	302056	107296	NO_2	Cullompton AQMA	0.0	1.6	No	2.2
DT13	45 Fore Street, Cullompton	Roadside	302071	107199	NO_2	Cullompton AQMA	0.0	2.4	No	3.0
DT14	Trumps Barn, Cullompton	Kerbside	301263	107560	NO_2	Cullompton AQMA	0.0	0.4	No	3.0
DT15	Newton St Cyres	Roadside	287900	98061	NO_2	No	0.0	8.0	No	2.4
DT16	Bottom Exeter Road, Crediton	Roadside	283986	99653	NO_2	Crediton AQMA	0.2	1.6	No	2.5
DT17	Top Exeter Road, Crediton	Roadside	283874	99943	NO_2	Crediton AQMA	0.0	0.4	No	3.0
DT18	Charlotte Street, Crediton	Roadside	283845	100043	NO_2	Crediton AQMA	0.0	2.3	No	2.4
DT19	HSBC High Street, Crediton	Roadside	283298	100285	NO_2	Crediton AQMA	0.0	2.0	No	3.0
DT20	Duke Of York, High Street, Crediton	Roadside	282738	100377	NO_2	Crediton AQMA	0.0	2.0	No	2.2

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 – 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 2023 (%) [2]	2019	2020	2021	2022	2023
DT1	298374	113514	Suburban	91.7	91.7	9.9	6.9	8.2	7.5	6.2
DT2	297404	113236	Suburban	83.3	83.3	8.7	6.3	7.9	7.7	6.3
DT3	296568	112787	Roadside	100.0	100.0	17.2	12.5	14.3	14.3	12.7
DT4	295119	112725	Kerbside	100.0	100.0	27.0	19.2	23.4	21.3	18.0
DT5	303360	111293	Suburban	100.0	100.0	22.6	16.7	19.3	18.2	15.1
DT6	303373	110348	Roadside	100.0	100.0	20.3	15.0	17.7	17.0	13.8
DT7	302151	108329	Kerbside	83.3	83.3	12.9	9.5	10.6	11.0	10.4
DT8	303005	107418	Roadside	91.7	91.7	15.6	10.9	13.9	12.4	10.6
DT9	303040	107238	Suburban	91.7	91.7	9.9	7.2	8.3	8.6	7.2
DT10	302187	107549	Roadside	100.0	100.0	24.8	15.8	20.1	19.2	17.3
DT11	302050	107359	Kerbside	100.0	100.0	32.4	23.2	29.0	26.9	24.7
DT12	302056	107296	Roadside	91.7	91.7	37.8	26.8	33.9	33.2	28.7
DT13	302071	107199	Roadside	100.0	100.0	33.9	25.0	29.8	30.4	26.1

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2023 (%) (2)	2019	2020	2021	2022	2023
DT14	301263	107560	Kerbside	100.0	100.0	15.9	12.0	12.5	11.9	10.9
DT15	287900	98061	Roadside	91.7	91.7	28.9	21.0	25.6	24.6	21.0
DT16	283986	99653	Roadside	100.0	100.0	34.8	25.9	32.0	28.0	25.9
DT17	283874	99943	Roadside	100.0	100.0	32.7	25.2	28.8	27.4	23.4
DT18	283845	100043	Roadside	100.0	100.0	27.7	22.8	25.3	23.5	21.4
DT19	283298	100285	Roadside	100.0	100.0	33.1	25.0	29.8	27.6	25.4
DT20	282738	100377	Roadside	100.0	100.0	37.9	29.9	33.8	31.2	28.7

☒ **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 (Crediton AQMA)

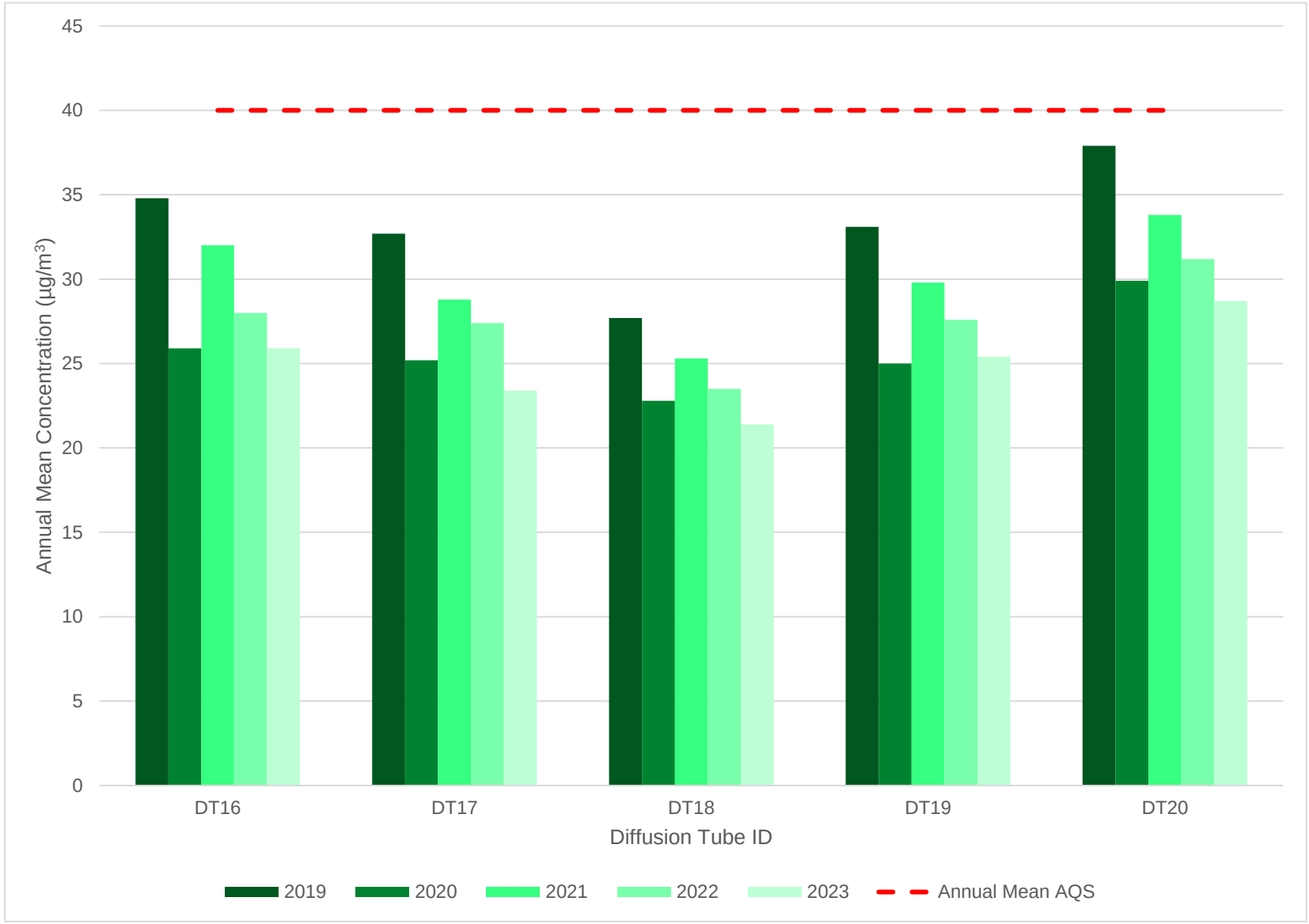


Figure A.2 – Trends in Annual Mean NO_2 Concentrations (Cullompton AQMA)

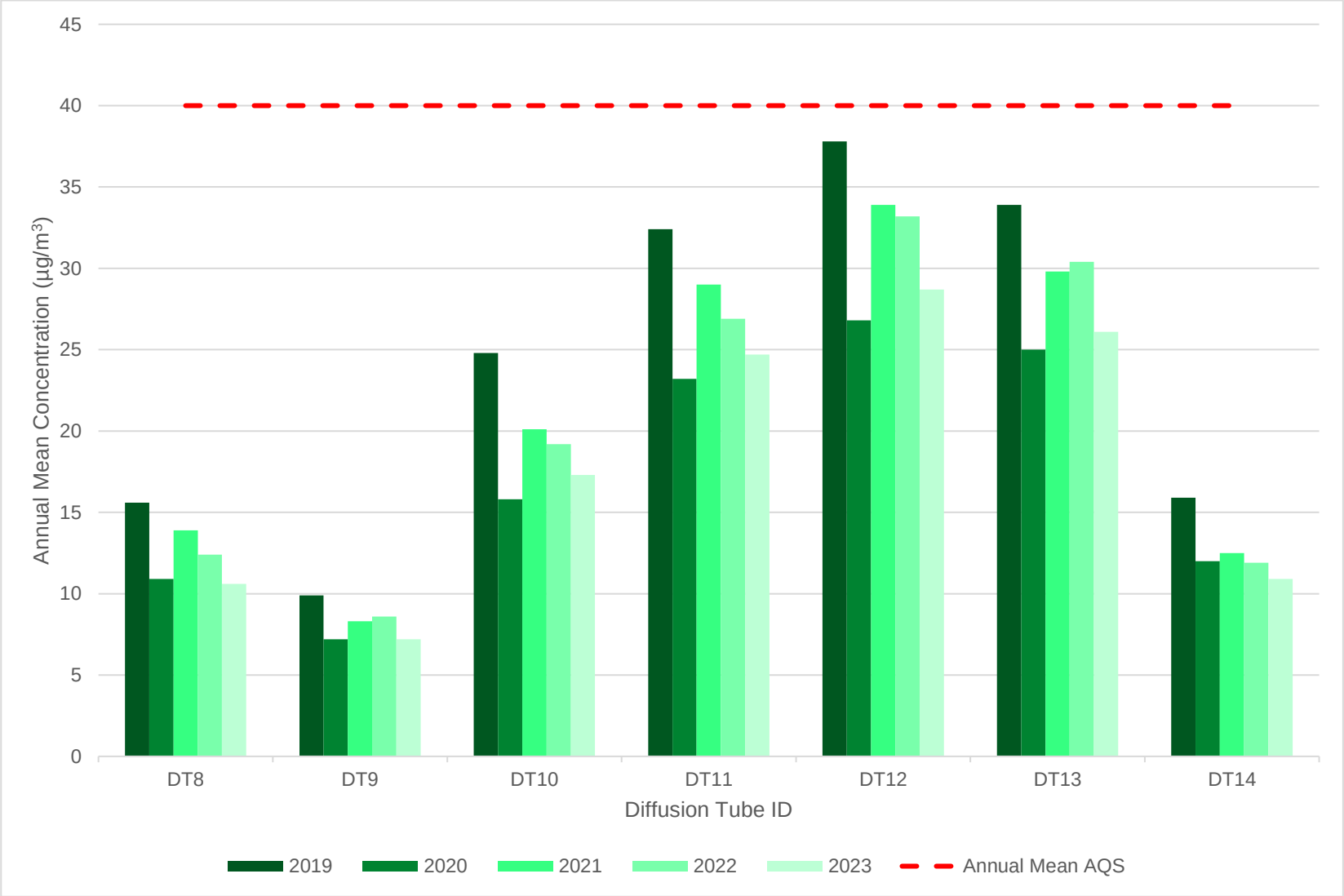
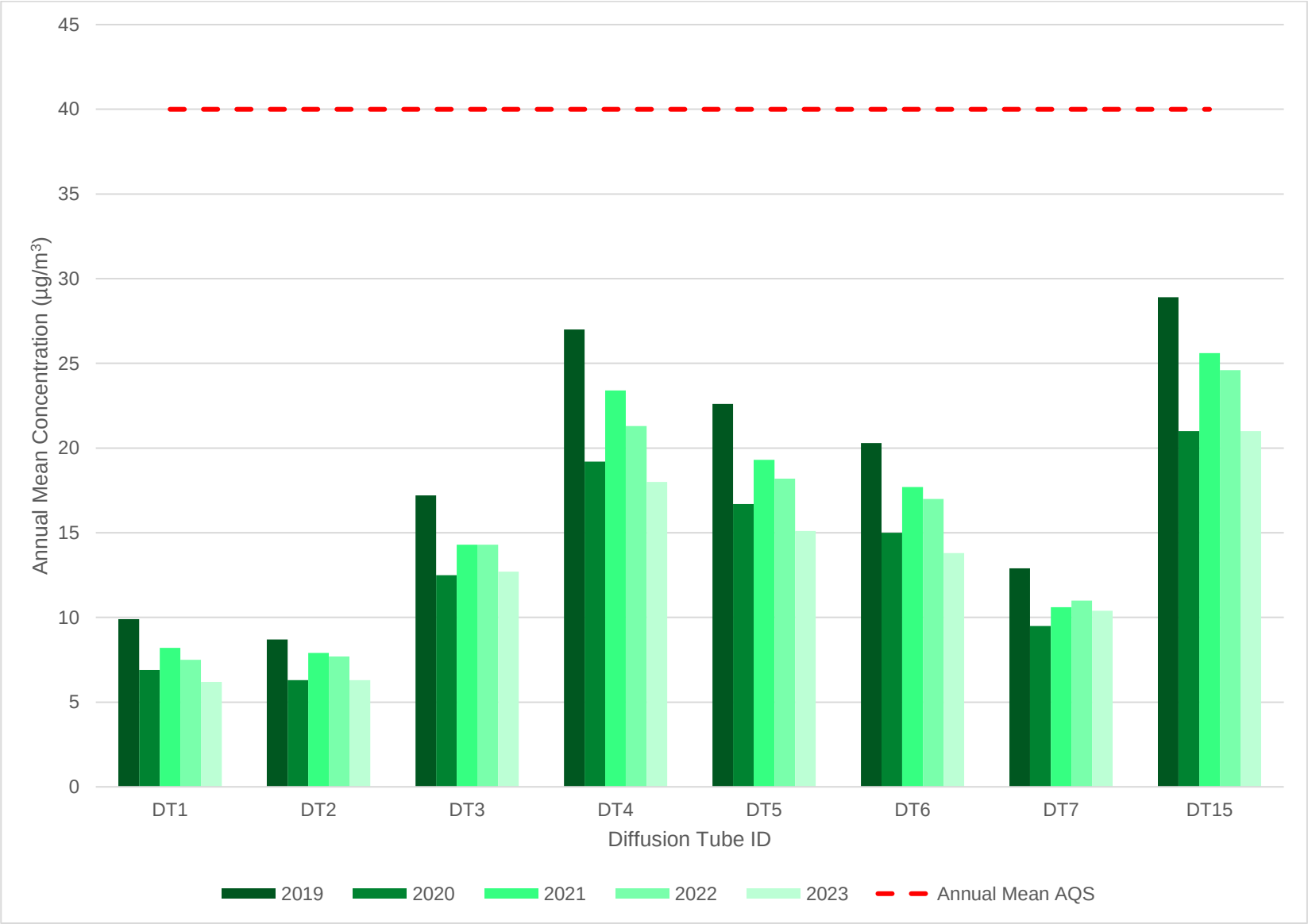


Figure A.3 – Trends in Annual Mean NO_2 Concentrations (Outside AQMAs)



Appendix B: Full Monthly Diffusion Tube Results for 2023

Table B.1 – NO_2 2023 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 0.79	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT1	298374	113514	11.5	11.8	7.2	6.9	5.0	6.0	5.1	6.4	missing	8.0	10.6	8.1	7.9	6.2	-	
DT2	297404	113236	12.9	11.4	7.6	tube dropped	3.8	5.1	missing	5.6	6.2	8.5	12.5	6.3	8.0	6.3	-	
DT3	296568	112787	26.6	20.3	16.2	13.3	10.9	9.8	12.8	12.4	15.2	17.9	22.7	15.1	16.1	12.7	-	
DT4	295119	112725	26.5	29.2	18.0	22.1	17.4	20.5	18.5	18.6	22.5	27.8	30.0	22.0	22.8	18.0	-	
DT5	303360	111293	27.4	25.7	17.5	14.6	15.0	16.4	16.2	17.0	17.7	17.7	27.1	17.5	19.2	15.1	-	
DT6	303373	110348	25.3	24.7	13.3	16.4	13.7	16.8	7.5	15.9	15.7	21.5	23.1	15.4	17.4	13.8	-	
DT7	302151	108329	16.0	15.6	missing	10.5	11.1	10.5	missing	16.1	12.5	14.9	15.2	8.7	13.1	10.4	-	
DT8	303005	107418	16.3	18.8	14.5	12.6	10.7	11.7	10.0	missing	11.4	14.3	17.4	10.5	13.5	10.6	-	
DT9	303040	107238	12.7	12.9	8.0	error	6.8	8.0	6.7	8.2	7.0	9.7	12.8	7.7	9.1	7.2	-	
DT10	302187	107549	27.2	29.3	21.9	22.0	16.1	22.3	14.1	17.2	21.7	24.7	25.7	19.6	21.8	17.3	-	
DT11	302050	107359	34.3	38.6	28.3	32.0	32.3	33.0	22.5	21.6	35.0	37.6	35.0	24.3	31.2	24.7	-	
DT12	302056	107296	39.7	45.5	29.7	36.2	missing	30.2	31.1	21.5	43.3	43.7	39.2	38.9	36.3	28.7	-	
DT13	302071	107199	38.2	46.9	29.6	30.1	35.9	29.7	21.8	23.4	33.4	32.0	39.6	36.5	33.1	26.1	-	
DT14	301263	107560	17.1	19.4	12.8	12.5	12.9	14.9	8.8	9.3	13.1	15.2	17.8	12.5	13.9	10.9	-	
DT15	287900	98061	31.5	34.9	18.4	25.0	29.4	30.7	missing	22.5	21.2	18.5	38.1	22.6	26.6	21.0	-	
DT16	283986	99653	34.4	35.6	35.0	34.9	29.0	34.8	29.0	25.4	36.9	36.2	34.3	28.0	32.8	25.9	-	
DT17	283874	99943	30.7	37.5	22.9	29.8	30.2	29.6	21.7	24.8	35.3	37.1	31.1	24.1	29.6	23.4	-	
DT18	283845	100043	28.2	32.4	25.3	36.5	23.2	32.0	17.1	20.9	27.5	31.2	29.3	21.6	27.1	21.4	-	

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 0.79	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DT19	283298	100285	34.5	40.6	29.5	36.4	29.8	38.7	19.1	24.3	35.8	35.2	35.8	26.5	32.2	25.4	-	
DT20	282738	100377	40.2	43.8	34.9	38.9	27.3	38.8	27.4	24.5	35.9	41.7	50.7	32.4	36.4	28.7	-	

☒ **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**

☒ **Mid 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 Mid Devon District Council During 2023

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

Additional Air Quality Works Undertaken by Mid Devon District Council During 2023

The new Air Quality Supplementary Planning Document (SPD) was adopted in April 2023 and replaces the 2008 Air Quality SPD. This new Air Quality SPD has a number of purposes which aim to:

- Support relevant policies in the adopted Mid Devon Local Plan 2013 – 2033 in relation to air quality;
- Engage with developers earlier on in the planning process and assist in determining when an air quality assessment is required for a new development;
- Set out a clear method for developers to provide air quality information as part of their applications; and,
- Identify suitable mitigation measures to be included at the planning stage.

QA/QC of Diffusion Tube Monitoring

The diffusion tubes used by Mid Devon District Council during 2023 were of the 20% TEA in water method and supplied and analysed by Somerset Scientific Services, operated by Somerset County Council. This laboratory takes part in the QA/QC Field Intercomparison, operated on behalf of Defra. Somerset Scientific Services Ltd are a UKAS accredited laboratory.

Monitoring was completed in adherence with the 2023 Diffusion Tube Monitoring Calendar.

Diffusion Tube Annualisation

All diffusion tube monitoring locations within Mid Devon District Council recorded data capture of 75% therefore it was not required to annualise any monitoring data. In addition, any sites with a data capture below 25% do not require annualisation.

Diffusion Tube Bias Adjustment Factors

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

Mid Devon District Council have applied a national bias adjustment factor of 0.79 to the 2023 monitoring data. A summary of bias adjustment factors used by Mid Devon District Council over the past five years is presented in Table C.1.

Table C.1 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2023	National	03/24	0.79
2022	National	03/23	0.82
2021	National	06/22	0.86
2020	National	03/21	0.76
2019	National	09/20	0.83

NO_2 Fall-off with Distance from the Road

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

No diffusion tube NO_2 monitoring locations within Mid Devon District Council required distance correction during 2023.

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

Figure D.1 – Map of Non-Automatic Monitoring Site (Crediton AQMA)

Figure D.2 – Map of Non-Automatic Monitoring Site (Cullompton AQMA)

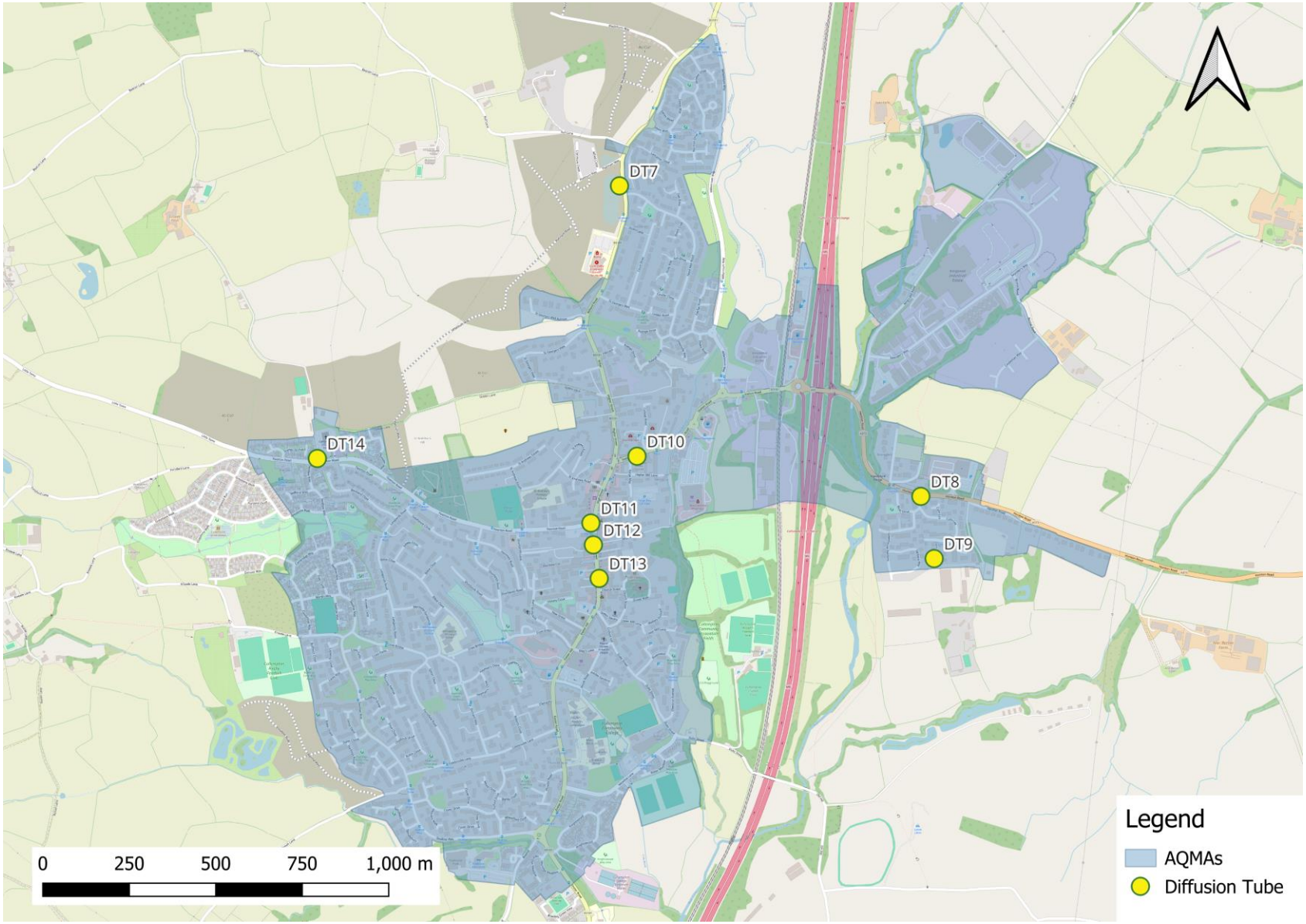


Figure D.3 – Map of Non-Automatic Monitoring Site (Tiverton)

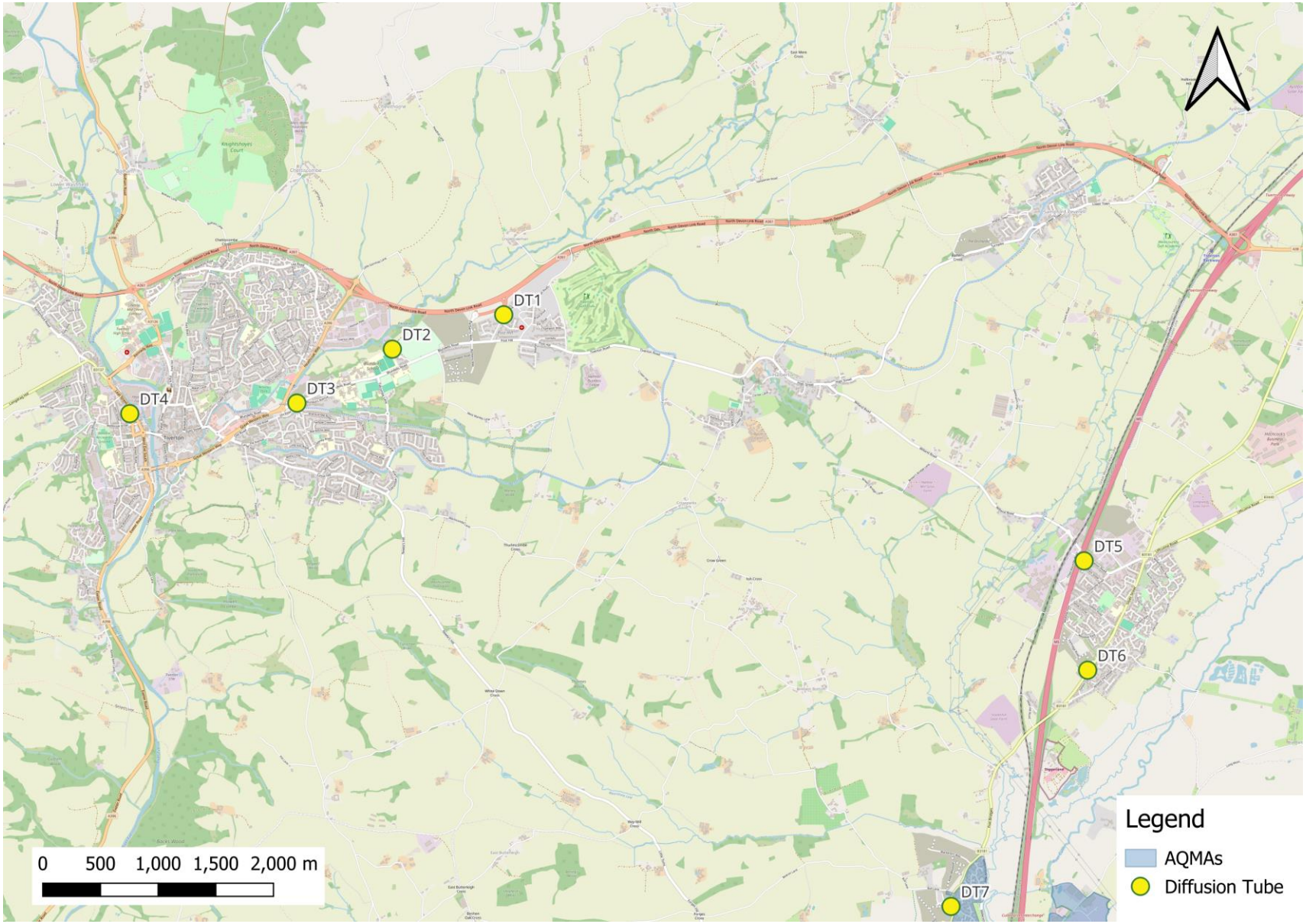


Figure D.4 – Map of Non-Automatic Monitoring Site (Newton St. Cyres)

Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[9]

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

[9] 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.
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