



Air Quality Annual Status Report 2024

Bureau Veritas



June 2024



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Document Control Sheet

Identification				
Client	High Peak Borough Council			
Document Title	High Peak Borough Council – 2024 Air Quality Annual Status Report			
Bureau Veritas Ref No.	AIR22190858			
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Configuration				
Version	Date	Author	Reason for Issue/Summary of Changes	Status
1.0	28/06/2024	J Khan	First Draft	Draft
2.0	28/06/2024	J Khan	Second Draft	Final
		Name	Job Title	Signature
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High Peak Borough Council

working for our community

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: June 2024

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Date	June 2024

Executive Summary: Air Quality in Our Area

Air Quality in High Peak Borough Council

Breathing in polluted air affects our health and costs the NHS and our society billions of pounds each year. Air pollution is recognised as a contributing factor in the onset of heart disease and cancer and can cause a range of health impacts, including effects on lung function, exacerbation of asthma, increases in hospital admissions and mortality. 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 year¹.

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 pollution².

High Peak Borough Council (HPBC) is one of the eight district and local authorities that make up the county of Derbyshire. HPBC is located in the northwest of the region (population circa 92,000) between the Greater Manchester conurbation to the west and the metropolitan areas of Sheffield and Barnsley to the east.

The main source of air pollution within HPBC is road traffic emissions from the major roads that cross the borough (the A6, the A628 and the A57) and form key travel routes between the cities of Manchester and Sheffield, as well as the local roads that connect the borough's main population centres (Glossop, New Mills, Whaley Bride, Chapel-en-le-Frith and Buxton) to these key travel routes. Residential exposure to the increased pollutant concentrations caused by these emissions is the primary concern as there are a number of properties located within close proximity to the road network.

There are three [Air Quality Management Areas \(AQMAS\)](#) as of 2023. During 2022, there were just two declared AQMAS, but following a detailed study undertaken by HPBC in an area of concern, another AQMA was identified and declared. All three AQMAS have been declared due to exceedances of the 40 µg/m³ annual mean objective for nitrogen dioxide (NO₂); Tintwistle AQMA (on the A628 Woodhead Road) and Dinting Vale AQMA (on the

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

A57 Dinting Vale Road) both declared in 2019. The Fairfield AQMA was declared in 2023 and encompasses the properties on the A6 Fairfield Road and the A53 Buxton.

Passive diffusion tubes were utilised by HPBC throughout the borough to monitor NO₂ during 2023. 54 monitoring sites and one Automatic Urban and Rural Network (AURN) automatic rural background station were used in 2023.

For the 17 monitoring sites located within existing AQMAs, a general decrease in annual average NO₂ concentrations was observed in 2023 compared to 2022 data, with only four sites (HP5, HP33A,33B, HP41A,41B and HP21A, 21B) reporting increased annual average concentration levels. Only two sites (HP33A,33B and HP5) reported an exceedance of the annual average NO₂ objective (40 µg/m³) following distance correction.

For the 37 sites outside of existing AQMAs 26 of the sites reported decreases in annual mean concentrations compared with 2022 data. None of the monitoring sites recorded exceedances of the annual mean NO₂ objective (40 µg/m³), and none of the sites recorded concentrations within 10% of the annual mean objective (36 µg/m³).

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})	<p>Particulate matter is everything in the air that is not a gas.</p> <p>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.</p> <p>PM₁₀ refers to particles under 10 micrometres. Fine particulate matter or PM_{2.5} are particles under 2.5 micrometres.</p>

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 Plan³ 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 Strategy⁴ provides more information on local authorities' responsibilities to work towards these new targets and reduce fine particulate matter in their areas.

The Road to Zero⁵ 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.

HPBC has taken forward a number of measures during the reporting year of 2023 in pursuit of improving local air quality:

- *Air Quality Action Plan (AQAP) update* - a conservative revised detailed assessment and source apportionment exercise has been completed for all existing AQMAs, and the area of concern in Fairfield Road in Buxton. This established that the current AQMAs should remain in place, and as of September 2023, HPBC declared Air Quality Management Area No.3: Fairfield Road. This covers a 630 m stretch of the A6 (and A53) between A6 Fairfield Road / Alma Steet junction, through to the A53 Bridge Street and ending at the railway viaduct on the A53 Bridge Street, incorporating 104 properties.
- *Extension of Smoke Control Zones* – HPBC is working towards introducing new Smoke Control Zones by 2026, which will help reduce PM_{2.5} levels once established. HPBC currently has Smoke Control Orders covering the majority of

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

Buxton and Glossop. Whilst it is recognised that improvements in the regulation of these zones will likely improve air quality within these areas, it will not significantly affect the impacts of domestic burning outside of these established zones. It has therefore been proposed that extending the current smoke control zones across the borough, in addition to the improvements in their regulation, could significantly improve emissions from domestic burning. The consultation on the implementation of new smoke control areas was delayed in 2023, partly due to resourcing issues but also, HPBC was awaiting further guidance on implementing smoke control areas. This has now been issued and it is hoped that the consultation will be launched before the end of 2024. The extent of the proposed changes to smoke control varies from the entire borough to the restricting of the more populous towns currently not included, such as Chapel-en-le-Frith, New Mills and Whaley Bridge, and will be determined in consultation with members and the public.

- *Green Towns Scheme* - A pilot scheme in Buxton Town Centre to lower the speed limit from 30mph to 20mph was launched in 2022 by Derbyshire County Council, in conjunction with other stakeholders including HPBC. The scheme will be designed to assess if a lower speed limit could improve health and could encourage healthier and more sustainable modes of transport. It is proposed that a lower safer speed, with fewer accelerations and decelerations would improve air quality and reduce carbon emissions and could encourage more people to walk or cycle for shorter journeys. At the request of HPBC, this trial area was extended from Buxton Town Centre to include AQMA No. 3: Fairfield Road, to determine if the lowering of speeds in this area had a positive effect on pollution levels. Unfortunately, public feedback for the proposal was not favourable and subsequently Derbyshire County Council have no immediate plans to move forward with this trial.

Conclusions and Priorities

During 2023, two sites (HP33A,33B and HP5) reported an exceedance of the annual average NO₂ objective (40 µg/m³) following distance correction. One exceedance of the NO₂ annual mean objective was recorded within the Tintwistle AQMA at HP5 and one within the Fairfield AQMA at HP33 (A&B). No exceedences were recored in Dinting Vale AQMA.

Annual mean NO₂ concentrations monitored via diffusion tubes were higher at 12 (of 54 sites when compared to 2022 levels. The largest annual increase was 5.9 µg/m³ at HP5.

Regarding Tintwistle and Dinting Vale AQMAs, it is recommended that both remain in force, as monitoring sites within both AQMAs have recorded exceedances of the annual mean objective within the past five years, with the exception of 2020 and 2021 in which concentrations across the UK were reduced relative to the Covid-19 pandemic.

The following actions are considered to be key priorities in ensuring the air quality conditions within HPBC to comply with the AQS objectives:

- Encouraging the use of EV by providing the public with EV charging points to aid in the reduction of pollution within the borough;
- The installation of automatic monitors within AQMAs which is expected to be completed by 2026; and
- Introducing smoke control zones to aid reducing emissions in the areas not currently covered by new smoke control order.

Local Engagement and How to get Involved

The public can engage with HPBC via their [website](#) which contains further local information on the following:

- Air quality monitoring;
- Declared AQMAs;
- Smoke control areas; and
- Wood burning stoves.

The public can also report any concerns about air quality via the Council's website.

As the main source of air pollution within the borough is road traffic, HPBC encourages consideration of alternative modes of transport by promoting sustainable transport choices. Further information can be found on the [Derbyshire County Council website](#), which discusses:

- Sustainable travel and smarter choices (cycling, public transport, car sharing schemes and community transport schemes); and
- School travel plans (including Travel Smart – a range of practical initiatives and curriculum projects to promote cycling, scooting, car shar and public transport on the school journey).

In addition, HPBC is currently involved in the Air Aware project in collaboration with neighbouring Staffordshire authorities, contributing to the [Air Aware website](#) which provides downloadable materials and further information on:

- Funding;
- Volunteering;
- Small actions that can make a big difference, such as:
 - Turning your car off;
 - Car sharing;
 - Getting on your bike (or scooter);
 - Walking;
 - Getting your car serviced;
 - Working smarter;
 - Using public transport;
 - Zero and low carbon vehicles; and
 - Renewable home energy sources.

Local Responsibilities and Commitment

This ASR was prepared by Bureau Veritas on behalf of the Environmental Health Department of High Peak Brough Council with the support and agreement of the following officers and departments:

- Communities and Climate Change;
- Asset Management;
- Service Commissioning; and
- Derbyshire County Council Highways Authority and Sustainable Travel Team.

This ASR has been approved by:

- Alicia Patterson – Head of Environmental Health



This ASR has been submitted to the Director of Public Health Derbyshire and is awaiting feedback

If you have any comments on this ASR please send them to Dr Daniel McCrory at:

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1 Local Air Quality Management

This report provides an overview of air quality in HPBC 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 HPBC 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 High Peak Borough Council can be found in Table 2.1. The table presents a description of the three AQMAs that are currently designated within HPBC. Appendix D: Map(s) of Monitoring Locations and AQMAs provides maps of AQMAs and also the air quality monitoring locations in relation to the AQMAs. The air quality objectives pertinent to the current AQMA designations are as follows:

- NO₂ annual mean.

HPBC currently has three declared AQMAs. During 2022 there were only two AQMAs, but following exceedances of the NO₂ annual mean air quality objective, an additional AQMA was declared along Fairfield Road in Buxton.

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
HPBC AQMA No. 1: Tintwistle	Declared 11/09/2019	Nitrogen dioxide NO ₂ Annual Mean	The designated area incorporates the following section of the Woodhead Road; between the Bank Lane/ Woodhead Road Junction and the Old Road/ Woodhead Road Junction	YES	46.6 µg/m ³	41.1 µg/m ³	Not compliant**	Ongoing	Ongoing
HPBC AQMA No. 2: Dinting Vale	Declared 04/12/2019	Nitrogen dioxide NO ₂ Annual Mean	The AQMA encompasses the properties between the A626 Glossop Road / A57 Dinting Vale Junction and the A57 Dinting Vale/ Dinting Lane Junction	YES	40.6 µg/m ³	30.4 µg/m ³	4 years*	Ongoing	Ongoing
HPBC AQMA No. 3: Fairfield	Declared 18/09/2023	Nitrogen dioxide NO ₂ Annual Mean	The AQMA encompasses the properties on the A6 Fairfield Road and A53 Buxton between the A6 Fairfield Road /Alma Street junction through to the A53 Bridge Street and ending at the railway viaduct on the A53 Bridge Street	YES	45.5 µg/m ³	41.5 µg/m ³	0 years	Ongoing	Ongoing

* Including 2020 and 2021, which are likely anomalous due to the impact of COVID-19 and national lockdown restrictions on emissions

** Compliant between 2019-2022

High Peak Borough confirm the information on UK-Air regarding their AQMA(s) is up to date.

High Peak Borough confirm that all current AQAPs have been submitted to Defra.

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

2023 ASR Appraisal Comments

The 2023 ASR was re-submitted to address comments from Defra. The following comments were made regarding the re-submission of the ASR. Defra's appraisal of last year's ASR concluded that "The report provides some of information specified in the Guidance. These comments remain from the original ASR appraisal". The following comments were made about the re-submission of the ASR:

1. *"The reported annual mean NO₂ concentrations for HP64, HP65, HP66 and HP67 differ between Tables A.4 and B.1. The correct data needs to be included in both tables before this Annual Status Report can be accepted. **The data in Table B.1 now matches the data in Table A.3***
2. *There are a couple of errors regarding the diffusion tube IDs within Section 3.2.1. Firstly, the site IDs appear incorrect for the concentrations following distance correction within "Area of Concern along Fairfield Road, Buxton". The text states that there is a concentration of 39.3 µg/m³ at HP22, this is incorrect and should be HP44 as per Table C.3. Secondly, the text states HP33 reports the highest concentration outside of an existing or proposed AQMA in "Diffusion Tubes Outside of Existing and Proposed AQMAs", this site ID should be HP32. These errors should be correct for clarity prior to resubmission. **The results included in Section 3.2.1 are now correct.***
3. *The Council have included the comments from the 2022 ASR and responded to and acted upon them. This is encouraging to see.*
4. *HPBC have carried out an additional detailed assessment to determine whether a new AQMA needed to be declared. It is welcoming that they have included this assessment within the 2023 ASR.*
5. *HPBC have included clear figures showing the locations of all monitoring sites within the Borough (including the AURN) and AQMAs within the Appendix. The proposed AQMA location could have been included too.*
6. *The trends observed in the monitoring results have been discussed extensively and are presented clearly in multiple figures, split up by location. This is appreciated and HPBC should continue this in future ASRs."*

HPBC 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. 46 measures are included within Table 2.2, with the type of measure and the progress HPBC have made during the reporting year of 2023 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.2.

More detail on these measures can be found in their respective Action Plans. Key completed measures are:

- *Smoke Control Enforcement to reduce smoke emissions in smoke control areas. This work was completed by the Environmental Health team.*
- *The Council adopted a new Developer Contributions SPD in 2023. The SPD sets out details regarding the Council's approach to planning obligations and the types of contributions that will be required and makes specific reference to contributions to mitigate air quality impacts.*
- *Inspect under the Environmental Permit regime. Introduction/increase of environment charges through permit systems and economic instruments to reduce emissions from industrial processes.*

HPBC expects the following measures to be completed over the course of the next reporting year:

- *Review of the current resident on-street parking in High Peak AQMA No.2*
- *Installation of continuous Air Quality Monitors in AQMAs*

HPBC's priorities for the coming year are:

- *The draft AQAP has been submitted to Defra to improve air quality within the borough. The steering committee has been established and a meeting has been scheduled for the summer period. The installation of continuous monitors within AQMAs not just for NO₂ but also PM.*

HPBC worked to implement these measures in partnership with the following stakeholders during 2023:

- National Highways (North-West);
- Derbyshire County Council (DCC);
- Cenex DCC;
- Midlands Connect;
- Nottinghamshire County Council (NCC);
- Energy Saving Trust;

- Staffordshire Moorlands District Council (SMDC);
- Staffordshire County Council (SCC);
- Transport for Greater Manchester;
- Public Health England (PHE);
- Derby City Council;
- District Councils;
- East Midlands Councils;
- Greater Manchester (GM);
- Buxton Town Team.

Table 2.2 – 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	National Highways to review Air Quality, junction capacity, Speed limits and Road Safety along the A628 (Tintwistle).	Traffic Management	Control systems, Congestion management, traffic reduction Urban Traffic	2025	2025/26	National Highways / HPBC	National Highways	No	Not Funded	TBC	Planning	Reduced emissions from vehicles	Reduction in traffic congestion & NO ₂ levels at relevant receptors	National Highways have completed a review of road speeds and road safety along the A628 in Tintwistle, including the section incorporating AQMA No.1: Tintwistle, as part of a Village gateway project along the A628.	National Highways indicate that before further assessments and proposals are undertaken, they will need to assess the impacts of the village gateways scheme and also the A57 link road once they have all been delivered, in order to gauge next steps
2	DCC Highways Authority to review Air Quality, junction capacity, Speed limits and Road Safety along the A57 (Glossop).	Traffic Management	Control systems, Congestion management, traffic reduction Urban Traffic	2024	2025/26	DCC	DCC	No	Part Funded	TBC	Planning	Reduced emissions from vehicles	Reduction in traffic congestion & NO ₂ levels at relevant receptors	DCC Highways have held an internal workshop review potential measures and officers are now evaluating any barriers and impacts to identify what measures are currently deliverability	AQMA 2 current priority
3	DCC Highways Authority to review Air Quality, junction capacity, Speed limits and Road Safety along A6 (Buxton).	Traffic Management	Control systems, Congestion management, traffic reduction Urban Traffic	2024/25	2025/26	DCC	DCC	No	Part Funded	TBC	Planning	Reduced emissions from vehicles	Reduction in traffic congestion & NO ₂ levels at relevant receptors	DCC Highways have held an internal workshop review potential measures and officers are now evaluating any barriers and impacts to identify what measures are currently deliverability	AQMA.3 will be addressed after AQMA 2
4	Investigate the use of Urban Traffic Management and Control in Buxton and Glossop	Traffic Management	UTC, Congestion management, traffic reduction	2022	2024/25	DCC	DCC	NO	Fully Funded	£100k -500k	Implementation	Reduction in emissions	emission data	UTMC is now operational.	https://www.derbyshire.gov.uk/site-elements/documents/pdf/transport-roads/highways-infrastructure-asset-management/connected-futures.pdf

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
5	Support the DCC "Green Towns" pilot scheme to reduce the speed limit in Buxton Town Centre and AQMA No.3: Fairfield Road from 30mph to 20mph and determine the impact of AQ emissions, traffic flow and safety	Traffic Management	Reduction of speed limits, 20mph zones	2022	Not yet commenced	DCC/HPBC	DCC	NO	Fully Funded	£100k -500k	Planning	TBC	TBC	In consultation phase	The County Council now appear to have dropped this scheme due to public feed back
6	Installation of further rapid (50kw+) EV Charging points across borough	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2025	2025/26	DCC/HPBC/ Midlands Connect	LEVI Fund	No	Funded	TBC	Planning	Reduced emissions from vehicles	Number of EV charge points installed	Final Selection of sites/ locations within the HPBC district being determined	-
7	Installation of On-street charging utilising lamp columns (5kW) across borough	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2025	2025/26	DCC/HPBC/ Midlands Connect	LEVI Fund	No	Funded	TBC	Planning	Reduced emissions from vehicles	Number of EV charge points installed	Final Selection of sites/ locations within the HPBC district being determined	-
8	Installation of charge points in residential areas (7kW)	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2025	2025/26	DCC/HPBC/ Midlands Connect	LEVI Fund	No	Funded	TBC	Planning	Reduced emissions from vehicles	Number of EV charge points installed	Final Selection of sites/ locations within the HPBC district being determined	-

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
9	Review of HPBC parking strategy to incentivise parking for low emission vehicles	Promoting Low Emission Transport	Emission based parking or permit charges	2021	2023	HPBC/DCC	HPBC	No	Not funded	TBC	Planning	Reduced emissions from vehicles	TBC	Not yet commenced	Parking review being undertaken for the district
10	Review of the current resident on-street parking in High Peak AQMA No.2: Dinting Vale	Other	Other	2024	2024	HPBC	HPBC	No	Not Funded	TBC	Planning	Reduction	TBC	Not yet commenced	Review to be undertaken
11a	Implementation of Bus service Improvement Plan	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2020	2029	HPPC / DCC/Energy Saving Trust	Central Government (BSIP)	No	Fully Funded	>£10 million	Implementation	Reduced emissions from vehicles	Achieve 95% Euro 6 or better by end 2029/30, including a fleet engine retrofit programme & Develop plans for hydrogen and/or electric infrastructure within 4 years	Enhanced Partnership Plan (EP Plan) which formally adopted the	https://derbysbus.info/Derbys%20hire%20BSIP%20%E2%80%93%20Final%2029-10-21.pdfh
11b	With relevant stakeholders, determine if lower emission buses can be prioritised for services directly impacting on the AQMAs	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2024	2025	HPBC/DCC	N/A	No	N/A	N/A	Planning	Reduced emissions from vehicles	No of Low emission buses serving AQMAs	Not yet commenced	-
11c	With DCC, determine if the road network can be redesigned so that the bus stops within the AQMA are set back from the main road, so traffic can continue to flow.	Other	Other	2024	2025	HPBC / DCC	HPBC/ DCC	No	Not Funded	£10K+	Planning	Reduction in idling Vehicles/ congestion	TBC	Not yet commenced Discussions have taken place	A cost of around 10K has been established for this proposal

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
12a	Support the development of Mobility Hub in Buxton	Promoting Low Emission Transport	Other	2022	Not yet commenced	Cenex,DCC/Midlands Connect	TBC	TBC		£50k -£100k	TBC	TBC	TBC	Funding Awarded https://www.midlandsconnect.uk/news/100-000-funding-awarded-to-supercharge-sustainable-travel-around-derbyshire/	https://www.midlandsconnect.uk/media/1839/the_future_of_rural_mobility_report_final.pdf
13	Development of Derbyshire (or HPBC) Fleet Strategy	Freight and Delivery management	Policy	2025/26	Not Yet Commenced	DCC / HPBC/Freight Stake holders	TBC	No	TBC	TBC	Aspirational	Reduced emissions from vehicles	Number of LEV in the fleet	Aspirational	Could be produced as part of the DCC LTP review
14	Promotion of Fleet advice and recognition schemes across High Peak	Vehicle Fleet Efficiency	Fleet Efficiency and Recognition Schemes	2024/25	On going	HPBC/DCC	HPBC	No	Funded	TBC	Planning	Reduced emissions from vehicles	Stars awarded for Performance	Not yet initiated	-
15	Support the development and implementation of a Glossop Active Travel Masterplan	Promoting Travel Alternatives	Promotion of active travel	2023	2024/25	DCC/HPBC/Sustrans /Move More HP	Active Travel England via the Capability and Ambition Fund	No	Funded	TBC	Planning	Reduced emissions from vehicles	TBC	Draft Travel plan has been produced	-
16	Support the development and implementation of an active travel for school's plan for Glossop to Hollingworth and Hadfield	Promoting Travel Alternatives	Promotion of active travel	2023	2024/25	Sustrans /Move More HP	HPBC UK Shared Prosperity Fund	No	Funded	£20k	Planning	Reduced emissions from vehicles	TBC	Feasibility Study Completed by Sustrans	Implementation may be through Glossop Active Travel masterplan
17	Support the development and implementation of a Buxton on the Move travel plan	Promoting Travel Alternatives	Promotion of active travel	2021	On going	Buxton Town Team/DCC/HPBC	Active Travel England via the Capability and Ambition Fund	No	Part Funded	TBC	Planning	Reduced emissions from vehicles	TBC	Buxton on the move	-
18	Support the completion of the Link 2 and Link 3 of Derbyshire's Key Cycle Network in Glossop	Promoting Travel Alternatives	Promotion of cycling	2021	On going	DCC	DCC	No	Part Funded	TBC	Implementation	Reduced emissions from vehicles	Route Completion	TBC	-
19	Support the completion of the Link 17, Link 21 and Link 22 of Derbyshire's Key Cycle Network in Buxton	Promoting Travel Alternatives	Promotion of cycling	2021	On going	DCC	DCC	No	Part Funded	TBC	Implementation	Reduced emissions from vehicles	Route Completion	On going	-

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
20	Promotion of Walking and Cycling	Promoting Travel Alternatives	Workplace Travel Planning	2015	Ongoing	DCC/HPBC	DCC/HPBC	No	Funded	TBC	Implemented	Reduced vehicle emissions	N/A	Ongoing	https://www.derbyshire.gov.uk/leisure/countryside/access/cycling/cycling.aspx
21	Increased promotion of School travel plans and improved focus on air quality	Promoting Travel Alternatives	School Travel Plans	2018/ 2019	ongoing	HPBC/ DCC	DCC/HPBC	No	Funded	TBC	Implemented	Reduced emissions from vehicles	No of Schools Travel Plans approved & adopted	Travel plans ongoing, additional AQ focus not yet introduced	https://www.derbyshire.gov.uk/transport-roads/transport-plans/sustainable-travel/school-travel-plans/school-travel-plans.aspx
22	Increased promotion of work base travel plans	Promoting Travel Alternatives	Workplace Travel Planning	2018/ 2019	Operational	DCC/ HPBC	HPBC/DCC	No	Funded	TBC	Implemented	Reduced emissions from vehicles	No of Business Travel Plans approved & adopted	Quantitative appraisal is ongoing	https://www.derbyshire.gov.uk/transport-roads/transport-plans/sustainable-travel/sustainable-travel-and-smarter-choices.aspx
23	Promotion of car share schemes	Promoting Travel Alternatives	Workplace Travel Planning	2018/ 2019	Operational	DCC/ HPBC	HPBC/DCC	No	Funded	TBC	Implemented	Reduced emissions from vehicles	No of Business Travel Plans approved & adopted	Quantitative appraisal is ongoing	https://www.derbyshire.gov.uk/transport-roads/transport-plans/sustainable-travel/sustainable-travel-and-smarter-choices.aspx
24	Reduce emissions from Council Fleet	Vehicle Fleet Efficiency	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2019	On going	HPBC/ AES	HPBC	No	Funded	TBC	Implementation	Reduced emissions from vehicles	Number of LEV in the fleet	The Energy Saving Trust has assessed the councils fleet vehicles. The majority of the fleet comply with are highest EURO emission standard with the rest completed by 2023	Progress reported in Annual climate change report-
25	Reduce emissions from Council Grey Fleet	Vehicle Fleet Efficiency	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2022	Ongoing	HPBC	HPBC	No	Funded	TBC	Planning	Reduced emissions from vehicles	Number of LEV in the grey fleet	Initial assessment to be implemented	Progress reported in Annual climate change report
26	Incentivise Council Staff to switch to Low emission vehicles	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2022	Ongoing	HPBC	HPBC	No	Funded	TBC	Implementation	Reduced emissions from vehicles	Number of staff switching to LEV	Review of allowances scheme on going, exploring a salary sacrifice scheme to move to EV .	Progress reported in Annual climate change report

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
27	Promote and support active Travel for Council Staff	Promoting Travel Alternatives	Promoting Active Travel	2022	Ongoing	HPBC	HPBC	No	Funded	TBC	Implementation	Reduced emissions from vehicles	Number of Staff engaged in active travel	Cycle to work launched and agile working policy adopted	Progress reported in Annual climate change report
28	Revise Councils procurement policy to embed sustainability and low carbon and emissions considerations into decision making	Policy Guidance and Development Control	Other policy	2022	2022	HPBC	HPBC	No	Funded	TBC	Implementation	Reduction in Carbon emission	TBC	Policy adopted	Progress reported in Annual climate change report
29	Review the potential for providing improve access to electrical power supplies to established outdoor event areas to reduce the need for the use of diesel generators by traders	Policy Guidance and Development Control	Other	TBC	TBC	HPBC /DCC	TBC Future/High Street fund	No	TBC	TBC	TBC	Reduced emissions from vehicles / NMRM	TBC	Aspirational	facilitate the reduction of localised generator emissions by making more electrical sockets available
30	Use of the planning regime to minimise impact of new developments in AQMAs and wider district	Policy Guidance and Development Control	Other policy	2005	Operational	HPBC	Developer Contributions	No	N/A	N/A	TBC	Reduced emissions	TBC	The Council adopted a new Developer Contributions SPD in 2023 that's makes specific reference to contributions to mitigate air quality impacts.	-
31	Continue to promote and increase the installation of EV charging points through development control processes	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2015	Operational	HPBC	Developer Contributions	No	N/A	N/A	TBC	Reduced emissions from vehicles	increased installation of EV charging points	EV charging points are conditioned through the planning process, this is to be strengthened by the implementation of Air Quality supplementary planning document	-
32	Review of HPBC Local Plan to include specific policies on air quality	Policy Guidance and Development Control	Other policy	2022	EQ10Operational Review Ongoing	HPBC	HPBC	No	N/A	N/A	TBC	Reduced vehicle and building emissions	New Policy Adopted	Implementation ongoing	-

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
33	Develop a supplementary planning document for Air Quality	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2018	N/A	PHE /East Midlands Councils	HPBC/ PHE /East Midlands Councils	No	N/A	N/A	TBC	Reduction in a range of pollutants	N/A	Establishes a range of measures expected by developers Reduction in a range of pollutants from development	-
34	Review of Derbyshire County Council Local Transport Policy (LTP4)	Policy Guidance and Development Control	Other policy	2024	2025/26	DCC	DCC	No	TBC	TBC	Planning	Reduced emissions from transport	TBC	TBC	Implementation is on-going
35	Review of Taxi Licencing Policy to encourage taxis licensed by the Council to comply with vehicle emission limits	Policy Guidance and Development Control	Other policy	2022	2023/24	HPBC	HPBC	No	Funded	TBC	Implementation	Reduced emissions from vehicles	Number of LEV Taxis in the fleet. All licensed taxis should meet minimum emission standard	Out to consultation with a view to adoption in 2023	-
36	Review of Street Trading Policy to encourage trader licensed by the Council to comply with emission limits	Policy Guidance and Development Control	Other policy	2024	2024/25	HPBC	HPBC	No	Funded	TBC	Planning	Reduced emissions from street traders	TBC	Not yet implemented	Proposed changes to street trading licenses needs approval from Council members
37	Ant-idling Enforcement on council owned land	Vehicle Fleet Efficiency	Other	2024/25	2025/26	HPBC	HPBC	No	Not Funded	TBC	Planning	Reduced Vehicle emissions	TBC	Not yet implemented	Proposed enforcement needs signage to be in place and approval from Council members
38	Smoke Control Enforcement	Other	Other	Ongoing	Operational	HPBC	HPBC	Yes	Defra Funded	TBC	Completed	Reduced emissions in smoke control areas	Fines Issued/ complaints received	On going	This is statutory work completed by the Environmental Health team
39	Introduction of New Smoke Control Zones	Policy Guidance and Development Control	Other policy	2024/25	2025/26	HPBC	HPBC	No	No	TBC	Planning	Reduced emissions in areas not currently smoke control areas	Area Covered BY new smoke control order	On-going	The extent of the proposed changes to smoke control areas needs agreement from Council members
40	Inspect under the Environmental Permit regime	Environmental Permits	Introduction/increase of environment charges through permit systems and economic instruments	Completed	Continual	HPBC	HPBC	NO	TBC	TBC	Completed	Restricting emissions from industrial processes	Installations adhering to permits and enforcement / penalties for breaches	On-going	This is statutory work completed by the Environmental Health team

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
41	Anti-idling promotion and introduction of Anti idling signage at key locations in AQMAs and across the district	Public Information	Other	2024	2025/2026	HPBC/ DCC	HPBC	No	Part Funded	TBC	Planning	Reduced emissions from vehicles	N/A	Quantitative appraisal is on-going	https://sben.co.uk/2023/03/air-aware-anti-idling-campaign/
42	Raise awareness of impacts of coal and wood burning	Public Information	Other	2022	Operational	HPBC	DCC/ HPBC/Defra Grant	Yes	Funded	TBC	Implementation	Reduced emissions from Coal and wood burning	Through public awareness / web site use	Quantitative appraisal is on-going	https://www.highpeak.gov.uk/article/355/Smoke-control-areas
43	Improve Air Quality web page and develop an Air Quality Portal showing real time pollution levels across the AQMAs and wider district.	Public Information	Other	2024/25	2025/26	HPBC	HPBC/Developer Contribution & possible Defra Grant	No	Not Funded	20K+	planning	TBC	Through public awareness / web site use	TBC	Requires the installation of continuous monitors across the AQMAs
44	Develop Air Quality Awareness and Promotion events in conjunction with other relevant partners.	Public Information	Other	2017/18	Operational	DCC / HPBC	DCC / HPBC/Defra Grant	YES	Funded		Implementation	TBC	Through public awareness / web site use	Implementation is on-going	-
45	Support and contribute to the Derbyshire Air Quality Working and related projects	Policy Guidance and Development Control	Regional Groups Co-ordinating programmes to develop Area wide Strategies to reduce emissions and improve air quality	On-going	On-going	Public Health/HPBC and other stakeholders	HPBC	No	Funded	N/A	Implementation	N/A	Full engagement across the group / regular meetings	On-going	-
46	Installation of continuous Air Quality Monitors in AQMAs	Install continuous Air Quality Monitors in AQMAs	Public Information	Other	2024	Ongoing	HPBC	HPBC / National Highways Defra / Developer Contributions	Yes	Part Funded	£20K+	Implementation	N/A	No of units installed	Funding secured for 2 continuous AQ monitors. NH also required to instal AQ monitors in AQMAs 1 & 2 as a consequence of DCO for the A57 link road

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

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

There are now two targets to work towards:

- The annual mean concentration target, which requires that by the end of 31st December 2040, the annual mean level of PM_{2.5} in ambient air must be equal to or less than 10µg/m³ with an interim target of 12µg/m³ to be achieved by the end of January 2028, as set out in the Environmental Improvement Plan 2022.
- The other major target is, the population exposure reduction target, this requires that there is at least a 35% reduction in population exposure by the end of 31st December 2040 (“the target date”), as compared with the average population exposure in the three-year period from 1st January 2016 to 31st December 2018 (“the baseline period”), determined in accordance with regulation 8.

Efforts within High Peak are being focused on monitoring NO₂ levels, with a particular focus on the established AQMAs. As road traffic is often the primary source of emissions of both NO₂ and particulates, measures implemented to reduce road traffic emissions within the borough will also reduce levels of PM₁₀ and PM_{2.5}.

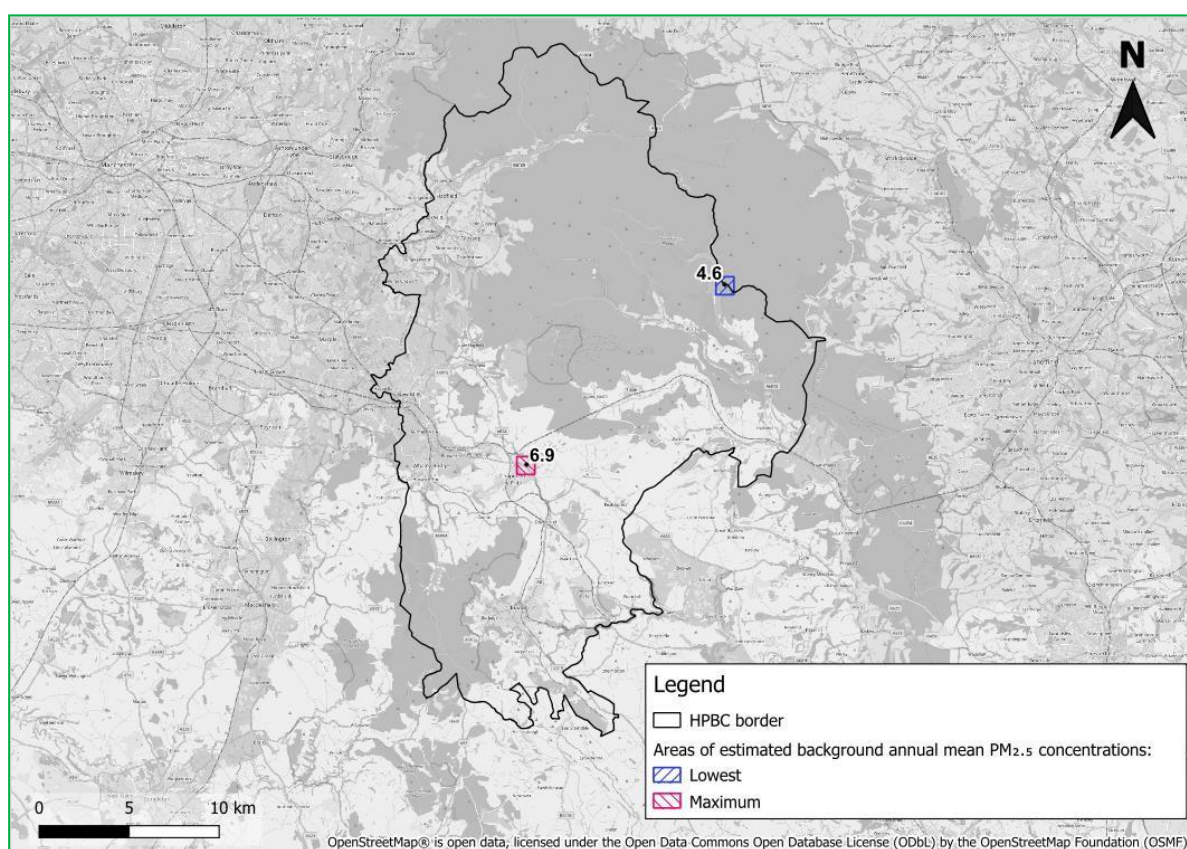
2.3.1 Fine Particulate Matter (PM_{2.5}) Levels in High Peak

As HPBC does not monitor either PM_{2.5} nor PM₁₀, the area of maximum background annual mean PM_{2.5} concentrations and the area of minimum background annual mean PM_{2.5} has been derived from the Defra Background maps. The [Defra background maps](#)⁶ (2018 reference year) can be used to identify the predicted background PM_{2.5} concentrations across the UK. The current Defra 2023 background maps show that the

⁶ Defra Background Mapping data for local authorities (2018-based), available online at <https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2018>

highest concentration across the borough is predicted to be $6.9 \mu\text{g}/\text{m}^3$ within the $1 \times 1 \text{ km}$ grid square within the centroid grid reference of 406500, 381500, an area of north east Chapel-en-le-Frith, encompassing a section of the A6 Chapel Bypass. This is slightly lower than was predicted in the same area during 2022 ($7.0 \mu\text{g}/\text{m}^3$). The background maps also provide a breakdown of sources. For this grid square, approximately half of the $\text{PM}_{2.5}$ concentrations is estimated to arise from secondary $\text{PM}_{2.5}$ formation, which forms following chemical reactions of other gaseous atmospheric pollutants, such as NO_x , ammonia (NH_3), and volatile organic compounds (VOCs).

Figure 2-1 Highest & lowest estimated annual mean $\text{PM}_{2.5}$ concentrations.



2.3.2 $\text{PM}_{2.5}$ and Mortality in Derbyshire

The Public Health Outcomes Framework data tool⁷ compiled by Public Health England quantifies the mortality burden of $\text{PM}_{2.5}$ within England on a county and local authority

⁷Public Health Outcomes Framework, Public Health England. data tool available online at <https://fingertips.phe.org.uk/search/air%20quality#page/1/qid/1/pat/6/ati/501/are/E07000037/iid/93861/age/230/sex/4/cat/-1/ctp/-1/yr/1/cid/4/tbm/1/page-options/ow-do-0>

scale. The 2022 fraction of mortality attributable to PM_{2.5} pollution across England is 7.8%, and the fraction within HPBC is below the national average at 6.9%, as well as the Derbyshire regional average of 7.7%.

Table 2-3 - Estimated average number of deaths by local authority area attributable to PM_{2.5} within Staffordshire for adults over 30

District/County	Percentage
High Peak	6.9%
Derbyshire Dales	6.8%
South Derbyshire	8.2%
Erewash	8.9%
Amber Valley	8.4%
North East Derbyshire	7.1%
Chesterfield	7.0%
Bolsover	7.6%
Derby	8.7%
England	7.8%

2.3.3 Actions being taken within High Peak Borough Council to reduce PM_{2.5}

HPBC is currently still working toward implementing new Smoke Control Zones in 2023, which will help reduce PM_{2.5} levels, once established. High Peak Brough Council currently has Smoke Control Orders covering the majority of Buxton and Glossop. Whilst it is recognised that improvements in the regulation of these zones will likely improve air quality within these areas, it will not significantly affect the impacts of domestic burning outside of these established zones. It has therefore been proposed that extending the current smoke control zones across the brough, in addition to the improvements in their regulation, could significantly improve emissions from domestic burning. The consultation on the implementation of new smoke control areas was delayed in 2023, partly due to resourcing issues but also, HPBC was awaiting further guidance from Defra on implementing smoke control areas. This has now been issued and it is hoped that the consultation will be launched before the end of 2024. The extent of the proposed changes to smoke control varies from the entire borough to the restricting of the more populous towns currently not included, such as Chapel-en-le-Frith, New Mills and Whaley Bridge,

and will be determined in consultation with members and the public. In addition to the above, HPBC has continued to promote improved behavioural change with regard to the use of woodburning stoves, through its website and social media posts

The extent of the proposed changes to smoke control varies from the entire borough to the restricting of the more populous towns currently not included, such as Chapel-en-le-Frith, New Mills and Whaley Bridge.

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}. Where required, HPBC will review any proposed actions to be implemented with the County Council Public Health team, to consider the potential impact of the measures and whether any further action is required.

Table 2.4 – Actions being taken within High Peak to reduce PM_{2.5}

Measures category	Measure Classification	Effect on reducing NO _x and PM ₁₀ emissions (low, medium, high)	Reduces PM _{2.5} emissions	Summary of measures
Traffic Management	Urban Traffic Control systems, Congestion management, traffic reduction	low	✓	UTC proposed for Buxton and Glossop Centre as part of Connected Future Project
	Reduction of speed limits, 20mph zones	low	✓	20mph zones near some schools in residential areas
	Anti-idling enforcement	low	✓	Anti Idling Campaign toolkits available to schools for pupil run campaign.
	Other	low	✓	Proposed Live Public Facing portal linked to Zephyr air quality monitor for PM _{2.5} with district modelling.
Promoting Travel Alternatives	Workplace Travel Planning	low	✓	https://www.derbyshire.gov.uk/transport-roads/transport-plans/sustainable-travel/sustainable-travel-and-smarter-choices.aspx
	Encourage / Facilitate home-working	low	✓	Agile working policy adopted
	School Travel Plans	low	✓	https://www.derbyshire.gov.uk/transport-roads/transport-plans/sustainable-travel/school-travel-plans/school-travel-plans.aspx
	Promotion of cycling	low	✓	https://www.derbyshire.gov.uk/leisure/countryside/access/cycling/cycling.aspx

Measures category	Measure Classification	Effect on reducing NOx and PM ₁₀ emissions (low, medium, high)	Reduces PM ₂₅ emissions	Summary of measures
	Promotion of walking	low	✓	https://www.derbyshire.gov.uk/leisure/countryside/access/cycling/cycling.aspx
	Share a Lift Scheme	low	✓	https://www.derbyshire.gov.uk/transport-roads/transport-plans/sustainable-travel/sustainable-travel-and-smarter-choices.aspx
Transport Planning & Infrastructure	Local Transport Plans and District Strategies	high	✓	Derbyshire Local Transport Plan (LTP3)
	Public transport improvements- interchanges stations and services	low	✓	develop an innovative mobility hub at Buxton Railway Station
	Public cycle hire scheme	low	✓	
	Cycle network	low	✓	The Local Cycling and Walking Infrastructure Plan
	Bus route improvements	high	✓	As a result of BSIP & BSIP+ funding consideration is being given to bus route improvement Bus Service Improvement Plan 2021
Alternatives to private vehicle use	Active Travel Fund	low	✓	Move More High Peak a collaborative strategy that will see partners working together with the aim to move more every day and to provide greater support to those that need it most.

Measures category	Measure Classification	Effect on reducing NOx and PM ₁₀ emissions (low, medium, high)	Reduces PM ₂₅ emissions	Summary of measures
	Bus based Park & Ride	medium	✓	Buxton Walk and Ride project
	Car Clubs	low	✓	Buxton on the move
Policy Guidance and Development Control	Planning applications to require assessment of exposure / emissions for development requiring air quality impact assessment	high	✓	High Peak Local Plan (2016-2031)
	Air Quality Strategy	high	✓	Draft Air Quality Action Plan 2024-2029 submitted to Defra awaiting further feedback from consultees
	Planning Guidance for developers	high	✓	HPBC "Air Quality and Emissions Mitigation" Guidance for Developers available, and currently being updated with view to be adopted as an official SPD
	Developer Contributions based on damage cost calculation	high	✓	Damage cost assessment used for applicable applications Developer Contributions SPD now makes specific reference to contributions to mitigate air quality impacts.
	Planning Policies	high	✓	High Peak Local Plan (2016-2031)

Measures category	Measure Classification	Effect on reducing NOx and PM ₁₀ emissions (low, medium, high)	Reduces PM ₂₅ emissions	Summary of measures
	Low Emissions Strategy	high	✓	Forms part of Climate Change Action Plan & Climate change action plan part 2
Vehicle Fleet Efficiency	Promoting low emission public transport	high	✓	Bus Service Improvement Plan 2021
	Vehicle retrofitting programmes	medium	✓	On going / in development Energy Saving Trust (EST) have reviewed current fleet and issued recommendations including training .
	Public Vehicle Procurement - Prioritising uptake of low emission vehicles	high	✓	Procurement Strategy in development; Climate change action plan part 2
	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	high	✓	Majority of fleet comply with highest EURO emission next replacement period in 2028. EV salary Sacrifice Scheme launched for employees
	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles,	high	✓	Low Emission Vehicle Infrastructure(LEVI) Strategy 2019 - 2029 Also in discussion with DN2 authorities regarding installation of EV chargers at Council hubs to be shared by Council vehicles across Nn2 area

Measures category	Measure Classification	Effect on reducing NOx and PM ₁₀ emissions (low, medium, high)	Reduces PM ₂₅ emissions	Summary of measures
	EV recharging, Gas fuel recharging			
	Priority parking for LEV's	high	✓	In development
	Taxi Licensing conditions	medium	✓	In development
	Taxi emission incentives	medium	✓	In development
	EV Strategy	high	✓	Low Emission Vehicle Infrastructure(LEVI) Strategy 2019 - 2029
Environmental permits	Introduction/increase of environment charges through permit systems and economic instruments (Permit fees set centrally)	medium	✓	On going Environmental Permits inspection of installation adhering to permits and enforcement/penalties for breaches
	Measures to reduce pollution through IPPC Permits going beyond BAT	medium	✓	https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211863/env-permitting-general-guidance-a.pdf (Chapter 15)
Other measures	Smoky Diesel Hotline	medium	✓	https://www.gov.uk/report-smoky-vehicle

Measures category	Measure Classification	Effect on reducing NOx and PM ₁₀ emissions (low, medium, high)	Reduces PM ₂₅ emissions	Summary of measures
	Domestic Smoke Control advice and Enforcement	high	✓	https://www.highpeak.gov.uk/article/355/Smoke-control-areas
	Garden Bonfires - Advice and nuisance enforcement	medium	✓	SMDC Smoke Nuisance and Bonfires & EPUK leaflet used
	Commercial burning advice and enforcement	medium	✓	HPBC Commercial smoke & waste management “its a burning issue” EA leaflet
	Multi agency working with Fire Service and Environment Agency for trade burning	medium	✓	Information shared as appropriate.

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

This section sets out the monitoring undertaken within 2023 by HPBC 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

HPBC has no automatic (continuous) monitoring sites within the borough. However, there is an Automatic Urban and Rural Network (AURN) national monitoring site located at [Ladybower](#) Reservoir that is within High Peak. The results of this station have been included for completeness within this ASR and raw data is available on the [UK Air website](#).

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

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

HPBC undertook non-automatic (i.e. passive) monitoring of NO₂ 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: [Map\(s\) of Monitoring Locations and AQMAs](#). 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 (NO₂)

Table A.3 and Table A.4 in Appendix A compare the ratified and adjusted monitored NO₂ annual mean concentrations for the past five years with the air quality objective of 40 µg/m³. 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. The maximum NO₂ annual mean concentration reported for 2023 was 42.5 µg/m³ at HP33A, 33B.

Table A.5 in Appendix A compares the ratified continuous monitored NO₂ hourly mean concentrations for the past five years with the air quality objective of 200 µg/m³, not to be exceeded more than 18 times per year.

All diffusion tube monitoring locations in HPBC had data capture over 75%, therefore annualisation was not required. The NO₂ results for 2023 have been bias adjusted using a national bias adjustment factor of 0.86. Diffusion tube annualisation is further detailed in Appendix C. The analysis of the 2023 monitoring data is detailed below, and has been done in relation to the designated AQMAs in HPBC and the area of concern identified along Fairfield Road.

Tintwistle AQMA

Diffusion tube sites located within the Tintwistle AQMA are presented in Figure A.1. There were two recorded exceedences of the annual mean, (HP5 and HP63A,63B). Historically, HP5 has reported the highest NO₂ concentration within the Tintwistle AQMA. During 2023 HP5 recorded and exceedence of the AQO with a concentration of 41.1 µg/m³.

HP63A,63B was installed in 2022 nearby HP5 to confirm readings at HP5. HP63A,63B recorded a concentration of 42.7 µg/m³ during 2023 which was the highest recorded concentration in the AQMA. It should be noted however, that following distance correction to predict annual mean concentrations at the nearest receptor, the annual mean

concentration at HP63A,63B fell to 34.2 $\mu\text{g}/\text{m}^3$, which is no longer within 10% of the AQS objective (36 $\mu\text{g}/\text{m}^3$).

Dinting Vale AQMA

Monitored concentrations are compared against the annual AQS objective in

Figure A.2. Within the Dinting Vale AQMA only one site recorded an annual mean NO_2 concentration within 10% of the AQO, 37.4 $\mu\text{g}/\text{m}^3$ at HP25A, HP25B, however, following distance correction to predict annual mean concentrations at the nearest receptor, the annual mean fell to 28.4 $\mu\text{g}/\text{m}^3$. HP51, HP52 and HP53 all present a downward trend in annual mean concentrations.

Fairfield Road AQMA

The Fairfield Road AQMA was declared in 2023 due to exceedences of the NO_2 annual mean objective. Figure A.3 presents the NO_2 concentrations within the Fairfield AQMA. HP33A,33B, HP41A,41B and HP44 recorded concentrations above the annual mean AQS objective. HP 41A,41B and HP44 recorded concentrations below the objective following distance correction. HP43, HP64 and HP65 reported concentrations below 10% of the AQS objective.

Diffusion Tubes Outside of Existing AQMAs

Figure A.4 – Trends in NO_2 Concentrations Outside of AQMAs: Tintwistle and Hadfield
Figure A.7 present the annual concentrations of monitoring sites located outside existing AQMAs.

There are 37 diffusion tube monitoring sites located outside existing AQMAs, 26 of which have been monitoring for at least five years.

During 2023, HP13 recorded the lowest concentration (10.6 $\mu\text{g}/\text{m}^3$) of any of the monitoring sites located outside of the AQMAs. The highest concentration was 31.8 $\mu\text{g}/\text{m}^3$ and was reported at HP32A,32B. There were no reported exceedences at any site, nor were any annual mean concentrations within 10% of the AQS objective.

3.2.2 Sulphur Dioxide (SO_2)

Table A.6 in Appendix A compares the ratified continuous monitored SO_2 concentrations from the AURN site considered during the reporting year of 2023, with the air quality objectives for SO_2 . At the Ladybower AURN site, there were no recorded exceedences of any of the objectives for SO_2 .

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)
UKA00171	Ladybower AURN	Rural	416585	389645	NO ₂ , O ₃ , SO ₂	No	Chemiluminescent	N/A	N/A	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.2 – Details of Non-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?	Distance to Relevant Exposure (m) ⁽¹⁾	Distance to kerb of nearest road (m) ⁽²⁾	Tube Co-located with a Continuous Analyser?	Tube Height (m)
HP3	Tintwistle - Woodhead Road (L1) EB	Roadside	402891	397536	NO ₂	No	0.0	4.0	No	2.3
HP4	Tintwistle - Woodhead Road (L2) WB	Roadside	402827	397492	NO ₂	No	0.0	2.0	No	1.9
HP5	Tintwistle - Woodhead Road (L3) EB	Roadside	402694	397442	NO ₂	AQMA1 - Tintwistle	0.0	3.0	No	2.0
HP6	Tintwistle - Woodhead Road (L4) EB	Roadside	402550	397360	NO ₂	AQMA1 - Tintwistle	0.0	4.1	No	2.5
HP8	Tintwistle - Church Road	Roadside	402242	397265	NO ₂	AQMA1 - Tintwistle	0.0	1.5	No	2.4
HP10	Furness Vale Primary School	Roadside	400843	383475	NO ₂	No	0.0	4.1	No	2.3
HP10a	Furness Vale Primary School 2	Roadside	400834	383480	NO ₂	No	0.0	1.5	No	2.5
HP11	Dove Holes C of E Primary School	Roadside	407667	378235	NO ₂	No	0.0	5.0	No	2.6
HP13	Buxton - Granby Rd	Roadside	406581	373422	NO ₂	No	0.0	10.5	No	2.0
HP14	Hadfield - Brookfield / Tavern Road junction	Roadside	401111	395391	NO ₂	No	6.0	1.6	No	2.5
HP16	Hadfield - Woolley Bridge Road (L2)	Roadside	401221	395992	NO ₂	No	1.0	1.5	No	2.5
HP17	Newtown traffic lights (A6/A6015 Junction)	Roadside	399411	384561	NO ₂	No	2.8	2.1	No	2.7
HP20	Tintwistle - Manchester Road / New Road junction	Kerbside	401962	397279	NO ₂	No	0.9	0.9	No	2.7

Site 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)
HP21, HP21B	Dinting C of E Primary School (A57)	Roadside	402073	394337	NO ₂	AQMA 2 - Dinting Vale	0.0	1.6	No	2.6
HP22, HP22B	Glossop - High Street West, Glossop (A57) (L1) EB	Roadside	402429	394221	NO ₂	No	0.0	3.0	No	2.6
HP24	Glossop - High Street East, Glossop (A57) (L2) WB	Roadside	403794	394089	NO ₂	No	2.8	1.0	No	2.7
HP25, HP25B	Dinting Vale - Dinting Vale (L1) (A57)	Kerbside	401797	394509	NO ₂	AQMA 2 - Dinting Vale	2.7	0.6	No	2.5
HP26, HP26B	Hadfield - Woolley Bridge	Roadside	401024	395675	NO ₂	No	0.3	2.3	No	2.5
HP27A	Hadfield - Woolley Bridge Road/A57 Roundabout	Roadside	400960	395819	NO ₂	No	9.5	2.9	No	2.6
HP28	Hadfield - Hadfield Road (L1)	Roadside	401269	395969	NO ₂	No	2.8	2.0	No	2.6
HP29	Tintwistle - Manchester Road (L1)	Roadside	401224	396974	NO ₂	No	0.0	2.4	No	2.4
HP30	Tintwistle - Manchester Road / Matthew Close junction	Roadside	401641	397241	NO ₂	No	3.1	2.3	No	2.6
HP31	Tintwistle - Manchester Road (L2)	Roadside	401875	397260	NO ₂	No	0.4	1.0	No	2.6
HP32, HP32B	Bridgemont - Buxton Road	Roadside	401200	382565	NO ₂	No	2.1	1.4	No	2.5
HP33, HP33B	Buxton - Fairfield Road (L1) SB	Roadside	406599	373951	NO ₂	AQMA 3 - Fairfield	0.4	2.7	No	2.6
HP34	Dove Holes South - Buxton Road - SB	Roadside	407543	377757	NO ₂	No	0.8	1.9	No	2.6

Site 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)
HP35	Dove Holes - Hallsteads (L1) NB	Roadside	407678	378329	NO ₂	No	0.4	2.6	No	2.6
HP36	Furness Vale - War memorial, Buxton Road	Roadside	400739	383533	NO ₂	No	9.4	1.9	No	2.3
HP37	Furness Vale - Buxton Road	Roadside	400679	383627	NO ₂	No	2.5	2.3	No	2.8
HP38	Newtown - Buxton Road EB	Roadside	399681	384577	NO ₂	No	2.4	1.6	No	2.6
HP39	Newtown - Buxton Road WB	Roadside	399713	384580	NO ₂	No	3.4	2.1	No	2.7
HP41, HP41B	Buxton - Fairfield Road (L2) SB	Roadside	406405.3	373760	NO ₂	AQMA 3 - Fairfield	0.4	2.0	No	2.8
HP42, HP42B	Buxton - Fairfield Road (L3) NB	Roadside	406402	373898	NO ₂	AQMA 3 - Fairfield	3.1	2.2	No	2.6
HP43	Buxton - Fairfield Road (L4) SB	Roadside	406451	373920	NO ₂	AQMA 3 - Fairfield	3.9	1.4	No	2.5
HP44	Buxton - Fairfield Road - Bulls Head	Roadside	406607	373973	NO ₂	AQMA 3 - Fairfield	0.4	1.6	No	2.7
HP45	Whaley Bridge - Buxton Road	Roadside	401081	380736	NO ₂	No	0.4	2.9	No	2.8
HP47	Charlesworth - George & Dragon	Roadside	400526	392905	NO ₂	No	0.0	1.1	No	2.6
HP48	Hadfield - Park Road	Roadside	402441	395857	NO ₂	No	2.4	1.9	No	2.3
HP50	Buxton - London Road	Roadside	405959	372781	NO ₂	No	0.4	2.5	No	2.6

Site 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)
HP51	Dinting Vale - Dinting Vale (L1) NB (A57)	Roadside	402076	394319	NO ₂	AQMA 2 - Dinting Vale	0.4	2.1	No	2.4
HP52	Dinting Vale - Dinting Vale (L2) NB (A57)	Roadside	402127	394270	NO ₂	AQMA 2 - Dinting Vale	2.4	2.2	No	2.2
HP53	Dinting Vale - Dinting Vale (L3) SB (A57)	Kerbside	402145	394271	NO ₂	AQMA 2 - Dinting Vale	4.0	0.5	No	2.3
HP54A	New Mills - Church Road WB	Roadside	400302	385253	NO ₂	No	3.2	1.4	No	2.5
HP56	Newtown - Albion Road	Roadside	399440	384640	NO ₂	No	3.0	2.1	No	2.3
HP60	Dove Holes - Hallsteads (L2) NB	Roadside	407614	378088	NO ₂	No	1.2	3.0	No	2.2
HP61	Glossop - High Street West, Glossop (A57) (L3) EB	Roadside	403403	394071	NO ₂	No	0.0	6.6	No	2.5
HP62	Tintwistle - Woodhead Road & Bank Row (L5) EB	Roadside	402227	397273	NO ₂	AQMA1 - Tintwistle	1.0	1.5	No	2.4
HP63, HP63B	Tintwistle - Woodhead Road (L6) EB	Roadside	402704	397443	NO ₂	AQMA1 - Tintwistle	2.7	1.2	No	2.5
HP64	Buxton - Spring Gardens NB	Roadside	406314	373596	NO ₂	AQMA 3 - Fairfield	2.0	1.5	No	2.4
HP65	Buxton - Fairfield Road, Brooklyn Place NB	Roadside	406340	373595	NO ₂	AQMA 3 - Fairfield	4.6	2.3	No	2.5
HP66	Buxton - High Street, 5-Ways NB	Roadside	405767	372970	NO ₂	No	2.0	0.1	No	2.5
HP67	Buxton - Dale Road, 5-Ways EB	Roadside	405813	372941	NO ₂	No	1.9	2.9	No	2.5

Site 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)
HP68	LP mini-roundabout Buxton	Roadside	406262	373610	NO ₂	No	5.5	1.5	No	2.5
HP69	TP Dinting Vale near Tesco	Roadside	402592	394154	NO ₂	No	0.3	2.0	No	2.5

Notes:

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

(2) N/A if not applicable.

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

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
UKA00171	416585	389645	Rural	98.8	98.8	6.1	4.6	4.7	5.2	4.2

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

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

Notes:

The annual mean concentrations are presented as µg/m³.

Exceedances of the NO₂ annual mean objective of 40µg/m³ are shown in **bold**.

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

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

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

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

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

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
HP3	402891	397536	Roadside	100.0	100.0	25.7	18.2	20.2	20.2	18.6
HP4	402827	397492	Roadside	100.0	100.0	32.6	28.1	23.0	23.2	21.6
HP5	402694	397442	Roadside	100.0	100.0	37.4	20.3	32.9	35.2	41.1
HP6	402550	397360	Roadside	92.3	92.3	30.0	19.7	26.5	26.0	23.1
HP8	402242	397265	Roadside	100.0	100.0	35.5	24.8	30.6	27.8	26.6
HP10	400843	383475	Roadside	100.0	100.0	25.8	19.1	21.1	20.6	20.4
HP10a	400834	383480	Roadside	92.3	92.3					24.4
HP11	407667	378235	Roadside	92.3	92.3	20.5	15.5	15.9	17.7	16.1
HP13	406581	373422	Roadside	100.0	100.0	13.8	10.8	11.3	10.8	10.6
HP14	401111	395391	Roadside	100.0	100.0	23.0	18.3	18.7	19.8	17.5
HP16	401221	395992	Roadside	100.0	100.0	23.9	18.3	19.7	19.8	18.5
HP17	399411	384561	Roadside	100.0	100.0	31.4	23.2	26.2	25.3	24.4
HP20	401962	397279	Kerbside	100.0	100.0	26.3	19.4	30.5	28.2	30.8

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
HP21A, HP21B	402073	394337	Roadside	100.0	100.0	38.9	29.3	32.4	29.8	30.3
HP22A, HP22B	402429	394221	Roadside	100.0	100.0	31.3	24.7	26.4	25.7	25.3
HP24	403794	394089	Roadside	100.0	100.0	29.4	22.9	23.6	22.5	22.6
HP25A, HP25B	401797	394509	Kerbside	100.0	100.0	46.3	36.1	36.6	37.6	37.4
HP26A, HP26B	401024	395675	Roadside	90.3	90.4	30.8	23.3	26.7	25.1	24.2
HP27A	400960	395819	Roadside	92.3	92.3	33.8	24.4	27.0	27.2	26.9
HP28	401269	395969	Roadside	92.3	92.3	21.6	18.5	18.4	18.3	17.8
HP29	401224	396974	Roadside	90.4	90.4	27.3	18.8	21.3	22.5	21.3
HP30	401641	397241	Roadside	90.4	90.4	27.3	19.4	20.2	21.3	20.2
HP31	401875	397260	Roadside	82.7	82.7	35.9	24.9	27.6	28.5	30.0
HP32A, HP32B	401200	382565	Roadside	100.0	100.0	38.6	28.8	31.6	30.8	31.8
HP33A, HP33B	406599	373951	Roadside	100.0	100.0	45.4	33.8	39.1	37.3	42.5
HP34	407543	377757	Roadside	90.4	90.4	26.3	21.6	24.7	25.3	23.3
HP35	407678	378329	Roadside	100.0	100.0	29.2	22.5	25.9	23.6	24.0

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
HP36	400739	383533	Roadside	100.0	100.0	30.8	23.6	27.1	27.2	25.4
HP37	400679	383627	Roadside	100.0	100.0	27.3	21.4	22.2	22.7	21.0
HP38	399681	384577	Roadside	92.3	92.3	33.3	23.2	24.6	26.0	21.0
HP39	399713	384580	Roadside	82.7	82.7	23.5	17.5	19.1	19.1	22.1
HP41A, HP41B	406405.3	373760	Roadside	100.0	100.0	44.4	34.1	35.4	36.8	40.4
HP42A, HP42B	406402	373898	Roadside	100.0	100.0	50.3	36.5	43.7	45.5	37.5
HP43	406451	373920	Roadside	100.0	100.0	34.0	26.5	27.3	29.6	29.1
HP44	406607	373973	Roadside	92.3	92.3	36.2	30.6	36.6	40.7	39.9
HP45	401081	380736	Roadside	100.0	100.0	28.5	22.6	23.1	23.8	20.1
HP47	400526	392905	Roadside	100.0	100.0	32.2	24.1	28.2	26.9	30.2
HP48	402441	395857	Roadside	100.0	100.0		22.5	22.9	23.1	21.7
HP50	405959	372781	Roadside	92.3	92.3		21.3	23.7	24.5	22.6
HP51	402076	394319	Roadside	90.4	90.4			29.8	29.3	27.7
HP52	402127	394270	Roadside	92.3	92.3			26.0	25.1	24.0

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) ⁽¹⁾	Valid Data Capture 2023 (%) ⁽²⁾	2019	2020	2021	2022	2023
HP53	402145	394271	Kerbside	100.0	100.0			33.2	32.2	31.5
HP54A	400302	385253	Roadside	100.0	100.0			23.6	23.2	22.7
HP56	399440	384640	Roadside	100.0	100.0			24.1	25.3	24.3
HP60	407614	378088	Roadside	84.6	84.6				24.3	22.8
HP61	403403	394071	Roadside	90.4	90.4				16.6	16.6
HP62	402227	397273	Roadside	100.0	100.0				31.6	30.7
HP63A, HP63B	402704	397443	Roadside	100.0	100.0				42.7	42.7
HP64	406314	373596	Roadside	100.0	100.0				27.1	26.1
HP65	406340	373595	Roadside	100.0	100.0				26.2	24.3
HP66	405767	372970	Roadside	100.0	100.0				25.8	24.3
HP67	405813	372941	Roadside	90.4	90.4				23.0	22.4
HP68	406262	373610	Roadside	92.3	92.3					22.7
HP69	402592	394154	Roadside	82.7	82.7					23.9

☒ 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 $\mu\text{g}/\text{m}^3$.

Exceedances of the NO_2 annual mean objective of $40\mu\text{g}/\text{m}^3$ are shown in **bold**.

NO_2 annual means exceeding $60\mu\text{g}/\text{m}^3$, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined**.

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

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

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

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

Figure A.1 – Trends in Annual Mean NO₂ Concentrations: Tintwistle AQMA

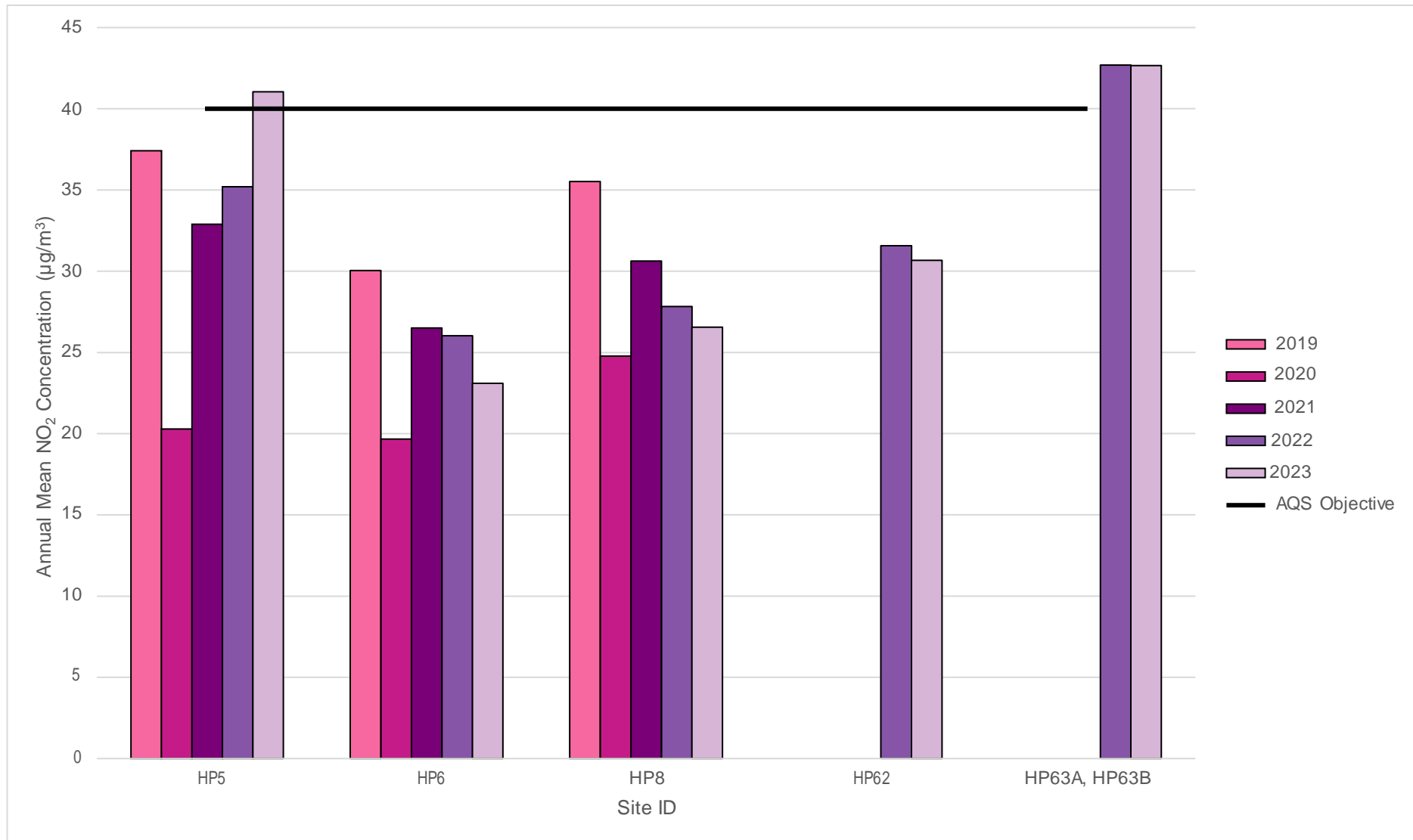


Figure A.2 – Trends in Annual Mean NO₂ Concentrations: Dinting Vale AQMA

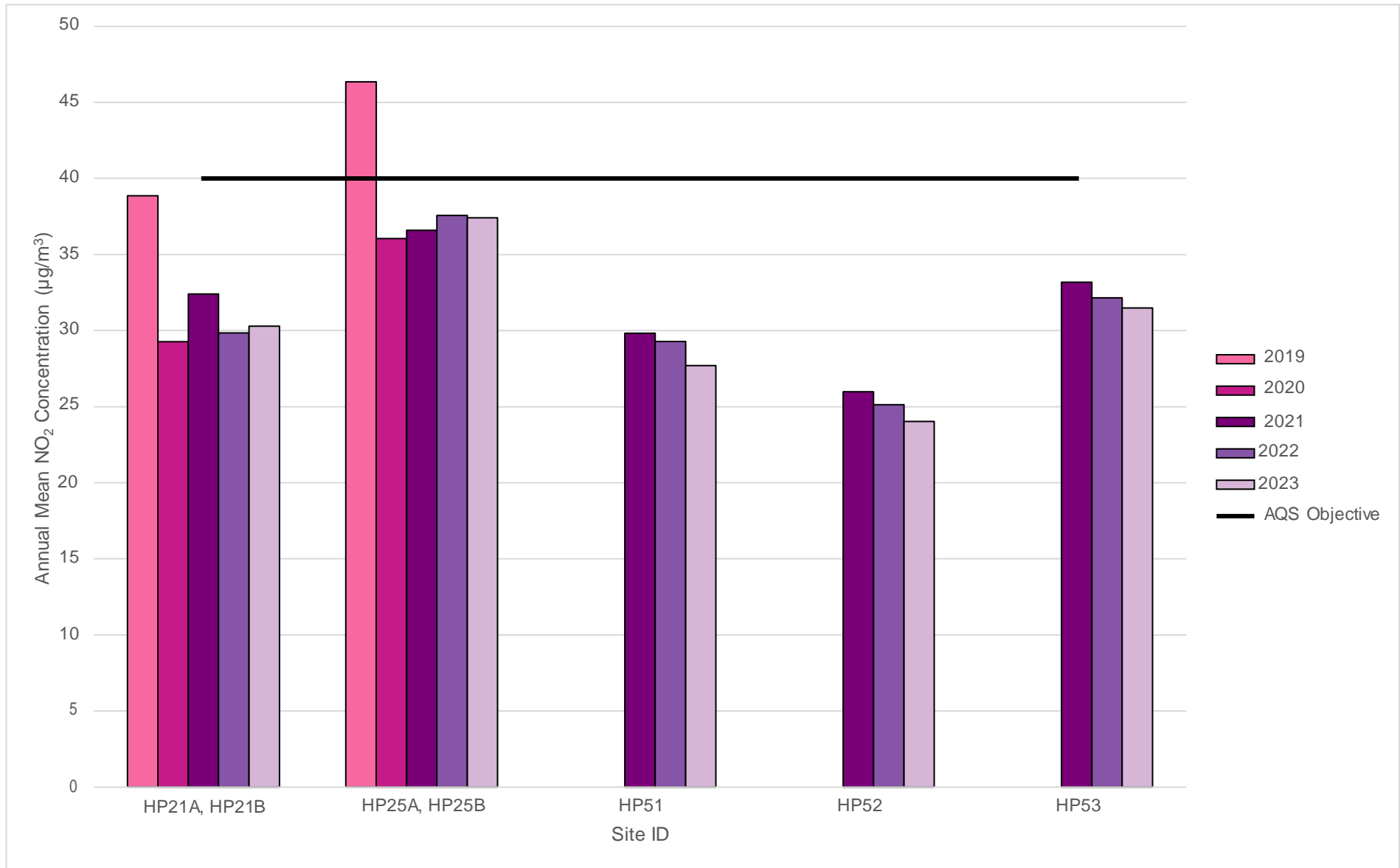


Figure A.3 – Trends in Annual Mean NO₂ Concentrations: Fairfield Road AQMA

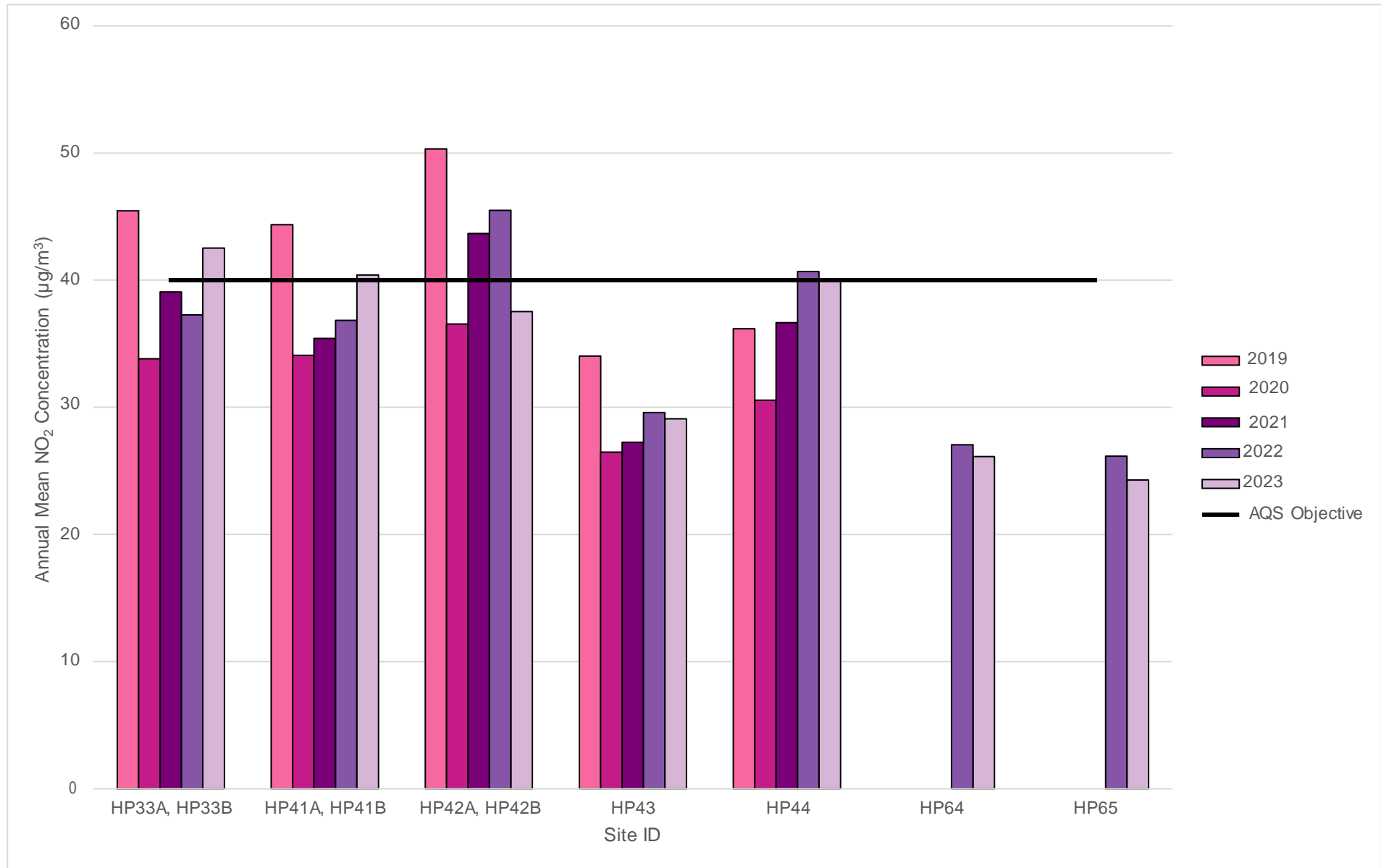


Figure A.4 – Trends in NO₂ Concentrations Outside of AQMAs: Tintwistle and Hadfield

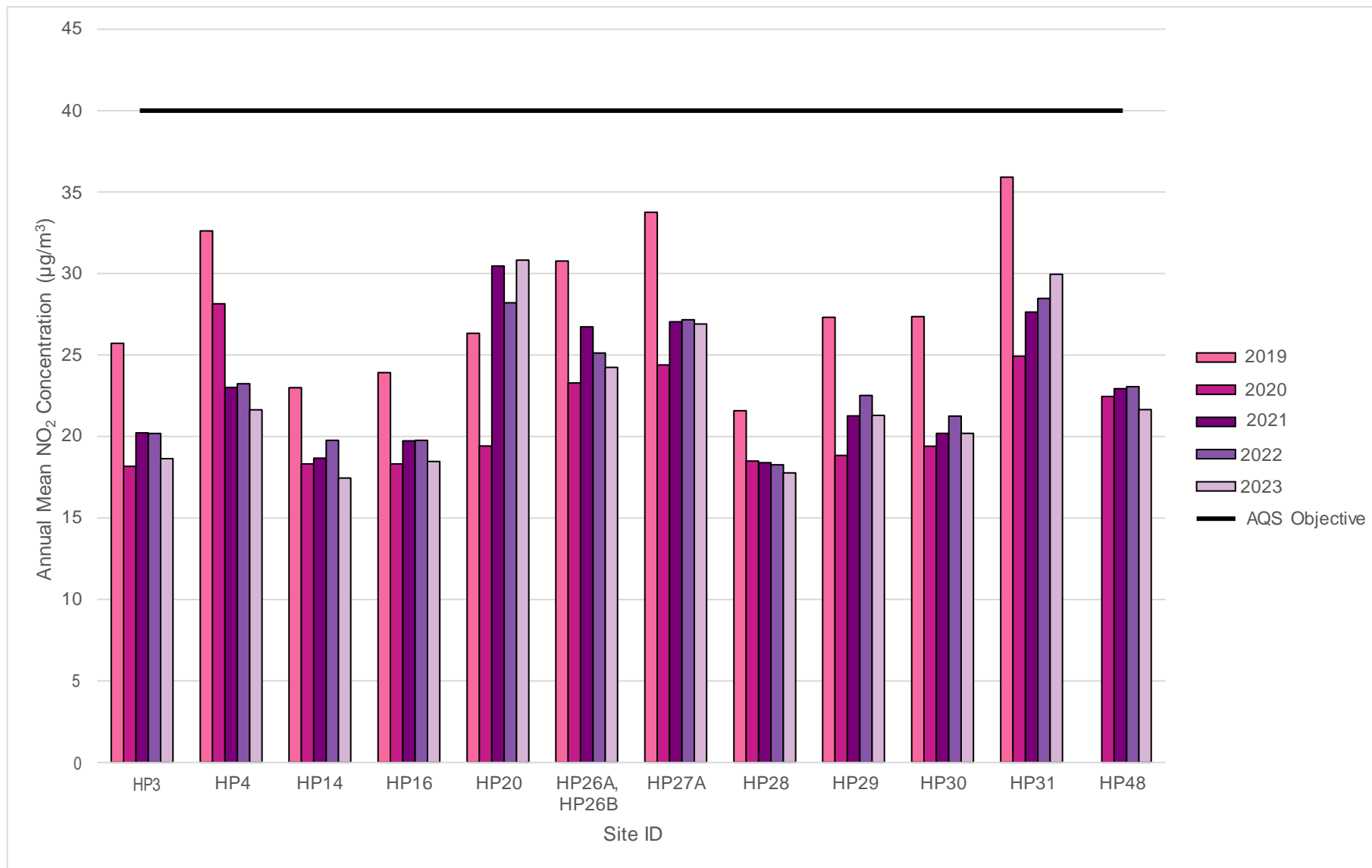


Figure A.5 – Trends in NO₂ Concentrations Outside of AQMA: Buxton, Charlesworth and Glossop

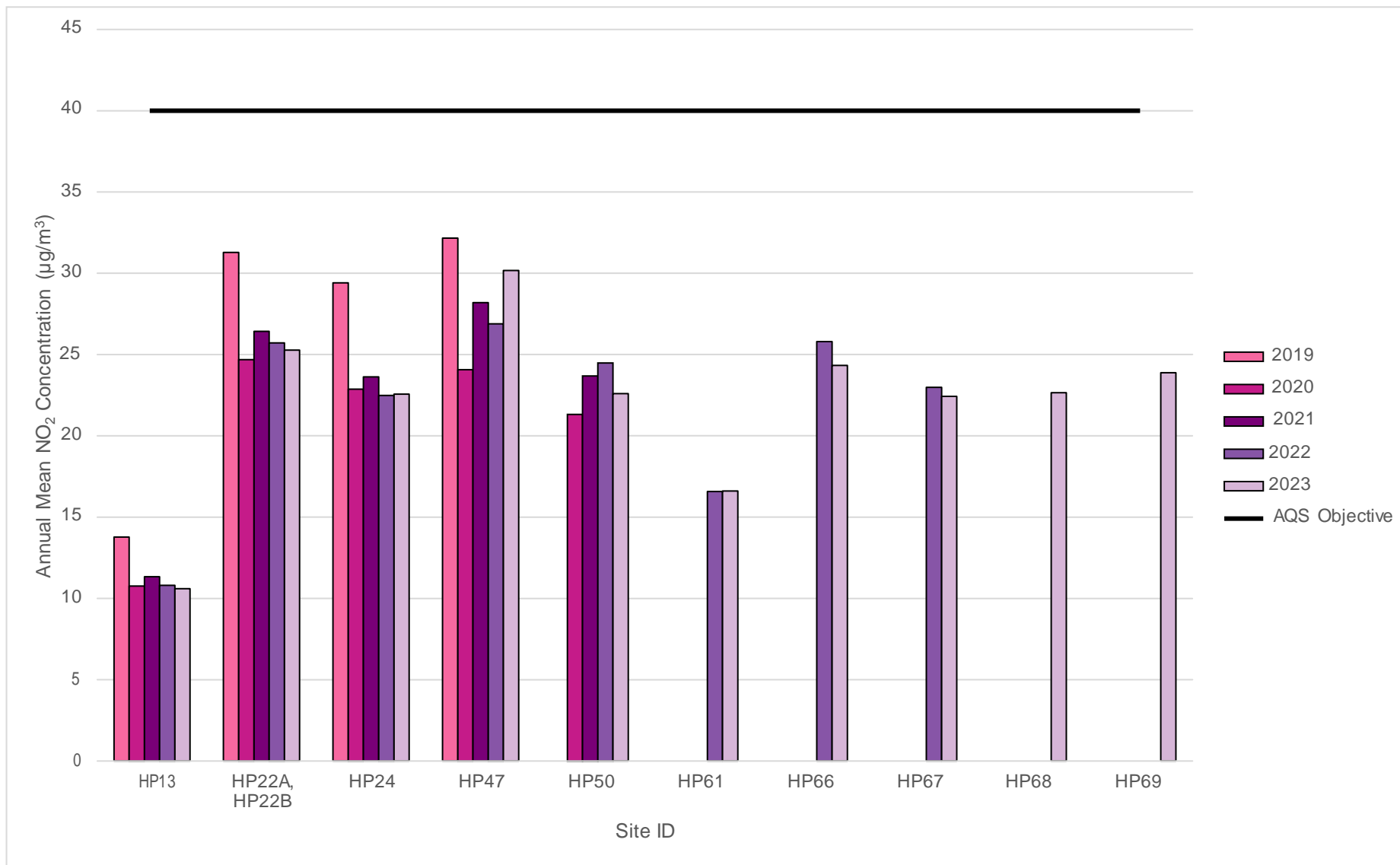


Figure A.6 – Trends in NO₂ Concentrations Outside of AQMAs: Bridgemont, Furness Vale, New Mills, New Town & Whaley Bridge

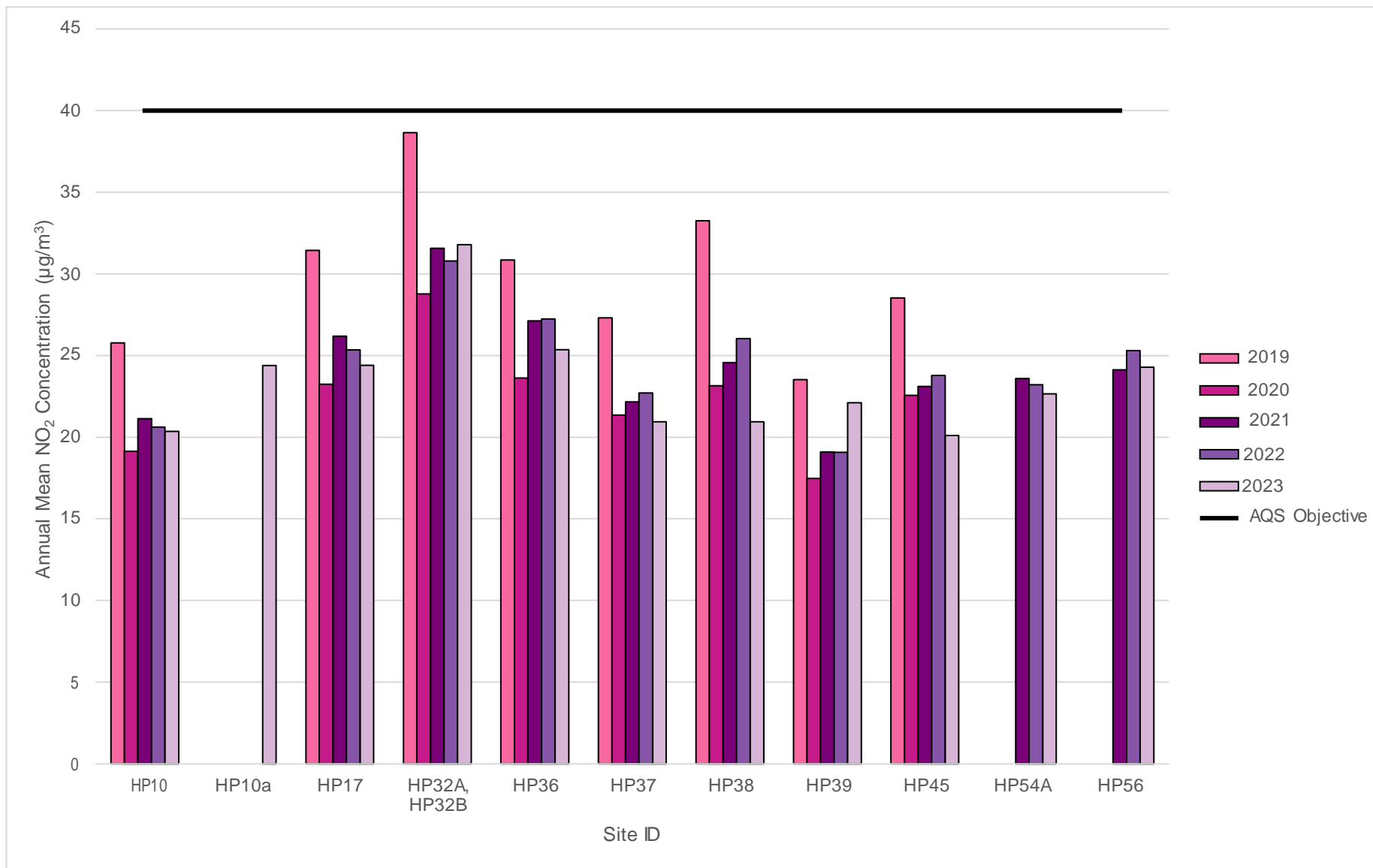


Figure A.7 – Trends in NO₂ Concentrations outside of AQMAs: Dove Holes and Peak Forest

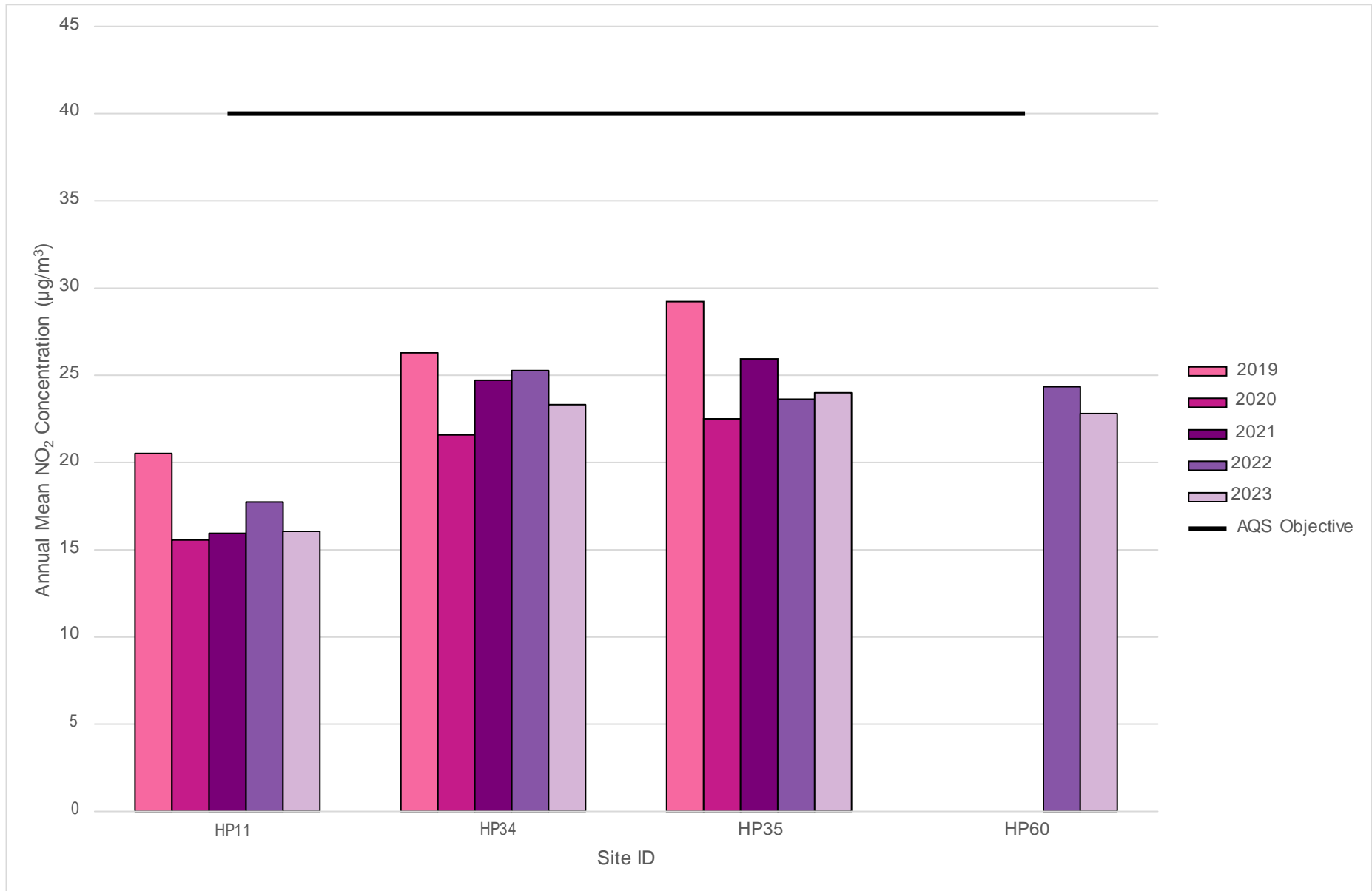


Table A.5 – 1-Hour Mean NO₂ Monitoring Results, Number of 1-Hour Means > 200µg/m³

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
UKA00171	416585	389645	Rural	98.8	98.8	0	0	0	0	0

Notes:

Results are presented as the number of 1-hour periods where concentrations greater than 200µg/m³ have been recorded.

Exceedances of the NO₂ 1-hour mean objective (200µg/m³ 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 – SO₂ 2023 Monitoring Results, Number of Relevant Instances

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⁾	Number of 15-minute Means > 266µg/m ³	Number of 1-hour Means > 350µg/m ³	Number of 24-hour Means > 125µg/m ³
UKA00171	416585	389645	Rural	97.8	97.8	0 (95.9)	0 (97.9)	0 (97.9)

Notes:

Results are presented as the number of instances where monitored concentrations are greater than the objective concentration.

Exceedances of the SO₂ objectives are shown in **bold** (15-min mean = 35 allowed a year, 1-hour mean = 24 allowed a year, 24-hour mean = 3 allowed a year).

If the period of valid data is less than 85%, the relevant percentiles are 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%).

Appendix B: Full Monthly Diffusion Tube Results for 2023

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

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.86)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
HP3	402892	397536	23.9	24.8	18.5	19.4	21.8	24.4	19.5	21.8	22.7	23.2	22.9	17.2	21.7	18.6	-	
HP4	402828	397493	27.6	29.7	22.0	25.0	23.9	23.6	24.6	25.9	26.9	26.0	25.9	20.8	25.2	21.6	-	
HP5	402695	397442	55.1	54.2	49.5	42.9	48.7	42.0		48.6	58.8	35.2	83.2	39.1	47.7	41.1	-	July reading omitted due to debris in tube and reading anonymously low
HP6	402550	397360		32.3	25.2	30.5	33.1	29.1	28.1	28.5	29.2	26.8	26.5		26.9	23.1	-	December reading omitted due to debris in tube and reading anonymously low
HP8	402243	397265	36.1	36.4	25.1	29.1	30.6	28.0	30.8	29.8	32.0	29.9	35.1	27.7	30.9	26.6	-	
HP10	400843	383475	25.9	26.2	28.4	23.3	27.8	19.6	19.8	21.5	23.4	24.2	26.3	17.8	23.7	20.4	-	
HP10a	400835	383480		32.1	21.3	31.9	33.5	28.8	24.1	27.1	30.3	31.3	31.9	19.6	28.4	24.4	-	
HP11	407667	378235	18.0	19.6	21.1	20.4	19.0	17.9	13.0	14.5	17.8	20.4	23.7		18.7	16.1	-	
HP13	406582	373422	15.3	14.3	14.0	12.8	10.9	10.3	7.2	9.5	11.1	13.2	17.9	11.3	12.3	10.6	-	
HP14	401111	395391	29.1	26.3	18.9	18.0	16.6	13.8	18.3	18.9	20.2	22.8	22.2	18.4	20.3	17.5	-	
HP16	401221	395992	27.8	29.6	21.4	19.1	18.7	17.9	15.7	18.0	20.8	21.2	27.0	20.6	21.5	18.5	-	
HP17	399411	384561	33.1	31.2	30.5	31.9	33.4	28.6	23.7	25.3	26.5	28.9	28.5	18.9	28.4	24.4	-	
HP20	401962	397279		49.9	18.5	21.5	21.4		46.9	18.7	21.4	23.4	34.3	20.6	35.9	30.8	-	Results omitted due to anonymously high
HP21A	402073	394337	37.8	44.1	34.3	38.1	33.8	33.1	29.4	31.3	36.3	37.8	40.2	30.5	-	-	-	Duplicate Site with HP21A and HP21B - Annual data provided for HP21B only
HP21B	402073	394337	27.0	47.3	36.9	38.2	34.4	28.4	28.4	31.0	35.6	38.5	42.0	31.1	35.2	30.3	-	Duplicate Site with HP21A and HP21B - Annual data provided for HP21B only
HP22A	402430	394221	37.7	38.1	29.1	27.7	25.9	23.6	23.3	26.3	29.1	29.7	35.2	27.1	-	-	-	Duplicate Site with HP22A and HP22B - Annual data provided for HP22A only
HP22B	402430	394221	37.6												29.4	25.3	-	Duplicate Site with HP22A and HP22B – Decommissioned in 2023

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 (0.86)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
HP24	403794	394089	32.9	32.1	24.8	26.8	24.3	23.5	21.0	23.7	23.5	27.8	31.0	23.4	26.2	22.6	-	
HP25A	401797	394509	48.4	48.7	44.6	43.1	40.8	45.6	46.8	41.5	43.3	42.1	42.5	34.1	-	-	-	Duplicate Site with HP25A and HP25B - Annual data provided for HP25B only
HP25B	401797	394509	52.3	49.2	43.2	41.8	41.5	43.5	43.3	39.9	44.5	43.8	43.5	36.2	43.5	37.4	28.4	Duplicate Site with HP25A and HP25B - Annual data provided for HP25B only
HP26A	401024	395675	27.9	34.1		28.5	29.2	25.3	24.5	25.8	27.2	30.5	32.3	24.9	-	-	-	Duplicate Site with HP26A and HP26B - Annual data provided for HP26B only
HP26B	401024	395675	33.0	32.0		28.2	28.1	25.5	24.1	26.4	28.4	28.0	33.1	23.2	28.2	24.2	-	Duplicate Site with HP26A and HP26B - Annual data provided for HP26B only
HP27A	400960	395819	35.3	36.7	29.9	31.1		27.3	30.8	28.3	32.1	30.0	34.0	28.7	31.3	26.9	-	
HP28	401269	395969	28.3	26.5	20.4	20.1	18.3	15.0	17.3	16.8	19.3	19.9	25.4		20.7	17.8	-	
HP29	401224	396974	25.6	27.3	21.6	25.0	26.0	26.6	22.9	22.9	27.5	24.8		22.3	24.8	21.3	-	
HP30	401641	397241	30.7	27.7	19.0	21.6	23.3	23.8	19.6	22.7	24.2	24.4		21.4	23.5	20.2	-	
HP31	401875	397260	37.3	37.1		32.0	34.5	34.2	29.9	31.4	35.5		50.6	25.8	34.8	30.0	-	
HP32A	401200	382565	35.2	38.0	35.3	37.4	39.6	33.3	33.9	34.1	44.3	37.3	47.3	23.5	-	-	-	Duplicate Site with HP32A and HP32B - Annual data provided for HP32B only
HP32B	401200	382565	42.1	37.1	37.3	36.1	38.7	36.3	32.7	33.4	42.1	37.6	52.0	22.8	37.0	31.8	-	Duplicate Site with HP32A and HP32B - Annual data provided for HP32B only
HP33A	406600	373951	38.1	41.5		44.8	43.6	43.8	66.5	41.6	78.0	58.0	70.6	47.9	-	-	-	Duplicate Site with HP33A and HP33B - Annual data provided for HP33B only
HP33B	406600	373951	37.1	44.7	40.3	46.2	45.7	40.6	48.4	38.7	56.0	73.0	61.9	39.4	49.4	42.5	41.5	Duplicate Site with HP33A and HP33B - Annual data provided for HP33B only
HP34	407543	377757	25.6	29.9		30.8	29.5	28.7	22.4	24.0	29.6	30.8	29.5	17.4	27.1	23.3	-	
HP35	407678	378329	24.0	31.7	33.2	33.7	28.7	24.0	21.5	25.0	30.7	30.6	31.9	19.8	27.9	24.0	-	
HP36	400739	383533	30.2	29.0	29.1	29.7	32.0	30.4	27.3	29.7	32.1	30.7	33.5	20.1	29.5	25.4	-	
HP37	400679	383627	33.2	26.7	21.2	23.9	23.7	21.4	20.8	22.8	24.4	27.1	27.6	19.6	24.4	21.0	-	
HP38	399681	384577	37.8	35.9	24.1	28.7	30.5	16.8	15.5	18.8	19.0		25.6	15.3	24.4	21.0	-	
HP39	399713	384580	28.4			18.5	20.8	24.3	26.6	28.0	27.9	31.7	29.0	21.9	25.7	22.1	-	

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 (0.86)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
HP41A	406405	373760	50.6	40.8	40.4	50.6	52.2	48.3	50.7	49.1	57.5	50.1	48.2	37.3	-	-	-	Duplicate Site with HP41A and HP41B - Annual data provided for HP41B only
HP41B	406405	373760	38.8	40.6	46.7	I/S	52.1	49.0	48.8	48.1	59.5	52.6	45.6	19.6	47.0	40.4	39.2	Duplicate Site with HP41A and HP41B - Annual data provided for HP41B only
HP42A	406402	373898	51.1	53.5	40.3	51.3	50.7	49.6	33.7	38.5	44.4	43.6	38.6	26.6	-	-	-	Duplicate Site with HP42A and HP42B - Annual data provided for HP42B only
HP42B	406402	373898	45.1	49.8	55.2	48.2	50.2	49.1	33.9	37.5	45.1	44.7	40.3	26.5	43.6	37.5	31.6	Duplicate Site with HP42A and HP42B - Annual data provided for HP42B only
HP43	406451	373920	30.4	32.7	38.1	41.1	35.1	33.7	31.7	29.3	37.4	37.1	32.1	27.3	33.8	29.1	-	
HP44	406607	373973	44.8	38.8	43.7	39.2	40.6	35.6	40.9	35.4	43.1	48.5			46.4	39.9	38.5	November reading omitted due to anonymously high
HP45	401082	380736	22.2	16.1	13.3	24.6	24.5	22.7	22.9	23.8	26.6	27.5	33.1	23.3	23.4	20.1	-	
HP47	400526	392905	39.2	34.3	26.8	30.4	36.5	34.6	19.8	29.6	28.8	41.5	46.8	52.7	35.1	30.2	-	
HP48	402442	395858	19.4	15.7	21.6	24.5	27.3	26.2	23.7	26.5	30.3	29.1	32.4	25.5	25.2	21.7	-	
HP50	405959	372781	24.4	28.4	26.9	31.0	30.3	25.7	19.0	23.8	26.6		32.5	20.3	26.3	22.6	-	
HP51	402076	394319	34.9	35.6	33.2	34.5	30.9	I/S	27.3	28.0	31.0	31.2	36.3	31.5	32.2	27.7	-	
HP52	402127	394270	37.3	31.3	31.9	27.6	23.0	24.3	22.1	19.9		25.6	30.7	33.7	27.9	24.0	-	
HP53	402145	394271	41.1	43.2	38.7	35.0	33.3	31.8	32.9	32.8	37.3	40.3	38.4	34.6	36.6	31.5	-	
HP54A	400302	385253	26.2	29.4	23.9	26.4	26.5	25.3	22.0	24.5	28.2	29.2	31.6	22.9	26.3	22.7	-	
HP56	399440	384641	30.5	30.2	27.0	29.2	27.9	27.0	26.1	28.2	30.2	29.8	30.0	22.8	28.2	24.3	-	
HP60	407615	378089	20.4	28.8	20.0	32.0	24.5	25.4	22.4	23.7	30.6	30.2	27.6		26.5	22.8	-	
HP61	403404	394072	24.8	25.2	17.2	18.3	17.6	15.7	15.1	18.8	19.9	21.9		17.8	19.3	16.6	-	
HP62	402228	397274	44.5	49.6	32.1	36.0	35.3	34.7	33.4	36.8	36.5	29.5	30.9	28.6	35.7	30.7	-	
HP63A	402705	397444	55.0	56.9	44.3	47.7	53.6	58.6	47.1	51.1	51.2	46.1	45.3	35.0	-	-	-	Duplicate Site with HP63A and HP63B - Annual data provided for HP63B only
HP63B	402705	397444	52.6	58.0	45.4	47.8	53.3	55.2	51.9	53.0	49.9	42.3	49.4	39.9	49.6	42.7	34.2	Duplicate Site with HP63A and HP63B - Annual data provided for HP63B only

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 (0.86)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
HP64	406314	373597	27.9	33.2	33.3	30.5	33.1	30.5	23.4	30.1	34.1	32.7	32.2	23.6	30.4	26.1	-	
HP65	406341	373595	25.9	30.9	31.3	29.9	29.5	27.8	22.4	26.7	31.4	28.8	31.3	23.0	28.2	24.3	-	
HP66	405767	372970	32.9	29.8	27.1	32.1	29.7	22.8	24.9	25.6	28.4	31.1	32.6	22.4	28.3	24.3	-	
HP67	405813	372942	30.2	30.4	26.3	26.5	26.6		21.9	23.5	23.4	26.3	30.7	21.0	26.1	22.4	-	
HP68	406262	373611		30.2	27.2	30.8	30.7	29.8	14.1	24.8	28.3	28.3	27.7	17.9	26.3	22.7	-	
HP69	402593	394155		34.7		26.0	26.2	24.0	20.5	26.0	27.2	30.8	36.4	25.9	27.8	23.9	-	

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

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

Local bias adjustment factor used.

National bias adjustment factor used.

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

High Peak Borough Council confirm that all 2023 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System.

Notes:

Exceedances of the NO₂ annual mean objective of 40µg/m³ are shown in **bold**.

NO₂ annual means exceeding 60µg/m³, indicating a potential exceedance of the NO₂ 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 High Peak Borough Council During 2023

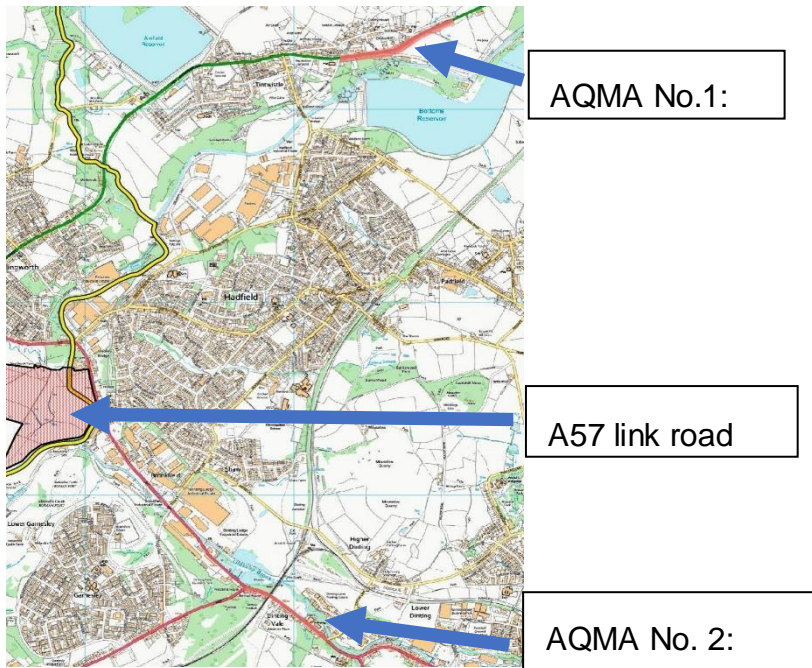
In last year's ASR it was reported that HPBC had adopted a pioneering project to use spent hydrogenated vegetable oil on suitable vehicles, not only to reduced CO₂ emissions but also particulates. Unfortunately, the 10-fold increase in price for HVO has meant that it is now significantly more expensive to run the fleet compared to traditional diesel. A decision was made to revert to traditional diesel until a cheaper source is found or prices drop.

Trans-Pennine Upgrade/A57 Link Road project

The Trans-Pennine link road upgrade aims to transform the region by reducing congestion and improve travel links between Sheffield and Manchester and reduce pollution.

As noted in the previous ASRs, the proposed A57 Link Roads scheme, development consent order (DCO), which includes the A5/A628 Mottram Bypass and the A57(T) to A57 Link Roads, was approved by the secretary of state on 16th November 2022 (with modifications*). The proposed location of A57 link Road (and GM _ CAZ) is shown in Figure D:1 below.

Figure D:1 Proposed location of A57 link Road



Full details of the proposed A57 link road can be found here:

<https://highwaysengland.co.uk/our-work/north-west/a57-trans-pennine-upgrade/>

Full details and documents relating to the DCO examination can be found here:

<https://infrastructure.planninginspectorate.gov.uk/projects/north-west/a57-link-roads-previously-known-as-trans-pennine-upgrade-programme/>

Summary of the DCO examination and Air Quality

The key documents submitted by the national Highways National Highways with regard to Air Quality impacts of the proposed scheme can be found here:

- [Environmental Statement - Chapter 5 - Air Quality](#)
- [Appendix 5.5 Air Quality Model Results](#)
- [Figure 5.2i - Air Quality Model Sensitive Receptors](#)
- [Figure 5.4 - Air Quality EU Compliance Risk](#)
- [Figure 5.2ii - Air Quality Model Sensitive Receptors](#)
- [Appendix 5.2 - Air Quality Legislation and Policy](#)
- [Appendix 5.4 - Air Quality Baseline](#)
- [Appendix 8.4 - Assessment of Likely Significant Air Quality on Designated Habitats](#)
- [Appendix 5.3 - Further Details on Air Quality Modelling](#)

- Figure 5.1 - Air Quality Constraints Map

Several queries were raised by HPBC, with regard to aspects of the submitted assessment. An overview of some of these queries can be found in the [local impact report](#), jointly prepared and submitted by HPBC & DCC, to the planning inspectorate as part of the examination.

The examination formally began on November 17th 2021 and continued through to May 17th 2022. Discussions with National Highways and the inspectorate continued throughout this period, copies of these discussions can these can be found [here](#). The primary disagreement between the two bodies focused on the National Highways decision not to assess the schemes impacts on the HPBC's, Air Quality Management Areas (AQMA's No1 & No.2).

National Highways justification for this was that the traffic modelling indicated that the increase in flows through both AQMA's was below the threshold to trigger assessments and so were screened out. In the case of Dinting Vale, this was in spite of large increases in traffic using the A57 either side of the AQMA and Glossop town centre post opening. National Highways modelling indicated that traffic would effectively bypass the A57 through Glossop town centre as it would be at capacity and re-route via Shaw Lane, Dinting Road and Norfolk Street.

HPBC queried the traffic modelling used to screen out the AQMA's and considered it to be either implausible given the residential nature of the alternative route (and would therefore underestimate traffic through the AQMA), or if the model was correct, such a diversion would be undesirable to communities in the vicinity.

In his decision, the Secretary of State (SoS) acknowledged these concerns and stated that "more traffic might use Glossop High Street than predicted and alter the balance of benefits and disbenefits between the alternative routes and the A57". However, they are "satisfied that the overall traffic flows, resultant congestion and journey times as modelled provide a reasonable basis for assessing the Proposed Development".

Nevertheless, in recognition of the "uncertainties in traffic modelling and potential for materially new or materially different adverse effects from those identified in the ES", an additional requirement for National Highways has been included for the monitoring of air quality in the Tintwistle and Glossop/Dinting Vale AQMA's together with mitigation measures to mitigate any "exceedances of air quality limit values reasonably attributable to

the operation of the Proposed Development all to be agreed with the Secretary of State in consultation with the relevant planning authority”.

HPBC have yet to receive any information from the National Highways authority regarding any proposals to address the requirements of the DCO consent for the monitoring of air quality in the Tintwistle and Glossop/Dinting Vale AQMAs but it is hoped that this will be addressed soon.

The construction of the road was due to commence in the Spring of 2023, however, a legal challenge has been made against the Secretary of State’s decision to grant a Development Consent Order (DCO) for the A57 Link Roads scheme.

This matter has now resolved and it is understood that construction ground enabling works will start to take place in the summer of 2024, with construction of the road scheduled for spring 2025. It is hoped the road will be opened in 2027.

New Planning Developments

Several new developments have been progressed in 2023. Table C.1 details a list of planning applications with its assessment reference and planning reference. If it is a major development, then HPBC are requesting that an Air Quality Assessment (AQA) or Low Emission Strategy is produced and if in accordance the scheme has the potential to increase concentrations of pollutants in the surrounding area, developers are expected to fully mitigate the air quality impacts by providing mitigation measures to offset any identified impacts or by making a financial contribution in accordance with the new SPD.

Table C.2 – Details of Planning Application in HPBC during 2023

Assessment date	Assessment reference	Site location	X	Y	Planning Reference	Planning Proposal
AQA018	28/02/2023	Dove Holes Quarry, nr Buxton	408936	377258	<u>CM1/0523/6</u>	Application for the upgrading of the existing rail loadout area including the construction of a new screen house, new MOT store and new rail loadout with adjoining conveyor system.
AQA017	14/07/2023	Land North of Dinting Road, Glossop	401962	394957	<u>HPK/2021/016</u> 1	HPK/2021/0161: Reserved Matters Application for up to 14 dwellings and associated development, following outline consent Ref: HPK/2016/0648
AQA016	14/07/2023	Land North of Dinting Road, Glossop	402046	394877	<u>HPK/2021/016</u> 0	Reserved Matters Application for up to 101 dwellings and associated development, following outline consent Ref: HPK/2016/0648.
AQA015	28/02/2023	Land at Dinting Vale, Glossop	401985	394304	<u>HPK/2022/045</u> 6	Proposed residential development comprising 92 dwellings including areas of public open space, landscaping and associated works

AQA014	01/06/2022	Eastern Mill, Milltown, Glossop, Derbyshire,	403909	394030	<u>HPK/2022/031</u> <u>7</u>	Demolition of derelict industrial buildings, the erection of 25 new houses and two apartment buildings (51 units and 9 units respectively), conversion of Easton House into 10no. apartments and its former Coach house to 3no. dwellings, along with associated access works (including a new footway to Milltown and a new riverside walkway), car parking, restoration of Mill Pond, landscaping, amenity space and all associated works.
AQA013	29/04/2022	Land At, Granby Road, Fairfield, Buxton, Derbyshire,	407451	373035	<u>HPK/2022/035</u> <u>2</u>	The erection of 147 dwellings including the provision of two vehicular access points, the construction of roads, footways, and a pedestrian link with Tongue Lane, drainage infrastructure, public open space, landscaping, and other associated works.

Additional Air Quality Works Undertaken by High Peak Borough Council During 2023

A draft AQAP has been submitted to Defra that outlines the actions that are or will be undertaken will take to improve air quality in the designated AQMA's and the Borough as a whole between 2024 – 2029. Defra have made several recommendations to the report, and these are currently with appropriate consultees for further information.

The members of the steering group have now been established and meeting is to be arranged over the summer period.

In September 2023, HPBC declared Air Quality Management Area No.3: Fairfield Road. This covers a 630m stretch of the A6 (and A53) between A6 Fairfield Road / Alma Steet junction, through to the A53 Bridge Street and ending at the railway viaduct on the A53 Bridge Street, incorporating 104 properties.

QA/QC of Diffusion Tube Monitoring

The diffusion tubes for the year 2023 were supplied and analysed by Staffordshire Scientific Services, the tubes were prepared using the 20% TEA in water preparation method. All results have been bias adjusted and annualised where required before being presented in [Table A.4](#).

Staffordshire Scientific Services laboratory is UKAS accredited and participates in the [AIR-PT Scheme](#) (a continuation of the Workplace Analysis Scheme for Proficiency (WASP)) for NO₂ tube analysis and the Annual Field Inter-Comparison Exercise. These provide strict performance criteria for participating laboratories to meet, thereby ensuring NO₂ concentrations reported are of a high calibre. In the latest available AIR-PT results, AIR PT AR059 (September – October 2023), Staffordshire Scientific Services scored 100%. The percentage score reflects the results deemed to be satisfactory based upon the z-score of $< \pm 2$, which indicates satisfactory laboratory performance.

The precision of all the 11 local authority co-location studies in 2023 were rated as 'good', as shown by the [precision summary results](#). This precision reflects the laboratory's performance and consistency in preparing and analysing the tubes, as well as the subsequent handling of the tubes in the field. Tubes are considered to have a "good" precision where the coefficient of variation of duplicate or triplicate diffusion tubes for eight or more monitoring periods during a year is less than 20%.

Further information on the precision summary results can be found on the [LAQM website](#). Monitoring in 2023 was completed in adherence with the [2023 Diffusion Tube Monitoring Calendar](#), whereby most changeovers were completed within ± 2 days of the specified date.

Diffusion Tube Annualisation

Annualisation is required for any site with data capture less than 75% but greater than 25%. According to TG22, 75% data capture is equivalent to 9 months of monitoring assuming monitoring has been completed in line with the Defra monitoring calendar. In addition, any sites with a data capture below 25% do not require annualisation.

No diffusion tubes required annualisation during the monitoring year of 2023.

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/NO₂ continuous analysers. Alternatively, the national database of diffusion tube co-location surveys provides bias factors for the relevant laboratory and preparation method.

HPBC have applied a national bias adjustment factor of 0.86 to the 2023 monitoring data due to a local adjustment factor not being available. A summary of bias adjustment factors used by HPBC over the past five years is presented in Table C.3.

Figure C.1 - National Diffusion Tube Bias Adjustment Factor for Staffordshire Scientific Services

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										This spreadsheet will be updated at the end of June 2024			
Data only apply to tubes exposed monthly and are not suitable for correcting individual short-term monitoring periods										LAQM Helpdesk Website			
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.													
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:		Step 2:		Step 3:		Step 4:							
Select the Laboratory that Analyses Your Tubes from the Drop-Down List		Select a Preparation Method from the Drop-Down List		Select a Year from the Drop-Down List		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 ⁵ shown in blue at the foot of the final column.							
If a laboratory is not shown, we have no data for this laboratory.		If a preparation method is not shown, we have no data for this method at this laboratory.		If a year is not shown, we have no data ²		If you have your own co-location study then see footnote ⁶ . If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@bureauveritas.com or 0800 0327953							
Analysed By ¹		Method ³ <small>to do your calculation, choose (All) from the pop-up list</small>		Year ⁴ <small>To do your calculation, choose (All)</small>		Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m ³)	Automatic Monitor Mean Conc. (Cm) (µg/m ³)	Bias (B)	Tube Precision ⁸	Bias Adjustment Factor (A) (Cm/Dm)
Staffordshire Scientific Services		20% TEA in water		2023		R	Wigan Council	12	26	21	21.2%	G	0.82
Staffordshire Scientific Services		20% TEA in water		2023		UB	Salford City Council	11	22	20	8.2%	G	0.92
Staffordshire Scientific Services		20% TEA in water		2023		UB	Salford City Council	12	13	12	4.7%	G	0.96
Staffordshire Scientific Services		20% TEA in water		2023		R	Salford City Council	12	39	33	15.2%	G	0.87
Staffordshire Scientific Services		20% TEA in water		2023		KS	Manchester City Council	12	48	43	11.7%	G	0.90
Staffordshire Scientific Services		20% TEA in water		2023		UC	Manchester City Council	12	28	27	6.0%	G	0.94
Staffordshire Scientific Services		20% TEA in water		2023		SI	Manchester City Council	12	17	15	12.1%	G	0.89
Staffordshire Scientific Services		20% TEA in water		2023		KS	Manlybone Road intercomparison	11	50	38	31.8%	G	0.76
Staffordshire Scientific Services		20% TEA in water		2023		R	Stoke-on-trent City Council	12	50	37	35.4%	G	0.74
Staffordshire Scientific Services		20% TEA in water		2023		R	Stoke-on-trent City Council	12	53	44	20.8%	G	0.83
Staffordshire Scientific Services		20% TEA in water		2023		UB	Stoke-on-trent City Council	12	21	18	16.6%	G	0.86
Staffordshire Scientific Services		20% TEA in water		2023		Overall Factor⁵ (11 studies)					Use	0.86	

Table C.3 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2023	National	03/24	0.86
2022	National	06/23	0.86
2021	National	06/22	0.85
2020	National	09/21	0.85
2019	National	09/20	0.93

NO₂ Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO₂ concentration at the nearest location relevant for exposure has been estimated using the Diffusion Tube Data Processing Tool/NO₂ fall-off with distance calculator available on the LAQM Support website. Where appropriate, non-automatic annual mean NO₂ concentrations corrected for distance are presented in Table B.1.

Table C.4 – Non-Automatic NO₂ Fall off With Distance Calculations (concentrations presented in µg/m³)

Site ID	Distance (m): Monitoring Site to Kerb	Distance (m): Receptor to Kerb	Monitored Concentration (Annualised and Bias Adjusted)	Background Concentration	Concentration Predicted at Receptor	Comments
HP25A, HP25B	0.6	3.4	37.4	8.5	28.4	
HP33A, HP33B	2.7	3.1	42.5	8.0	41.5	<i>Predicted concentration at Receptor above AQS objective.</i>
HP41A, HP41B	2.0	2.3	40.4	8.9	39.2	<i>Predicted concentration at Receptor within 10% the AQS objective.</i>
HP42A, HP42B	2.2	5.3	37.5	8.9	31.6	
HP44	1.6	2.0	39.9	8.9	38.5	<i>Predicted concentration at Receptor within 10% the AQS objective.</i>
HP63A, HP63B	1.2	3.9	42.7	8.2	34.2	

QA/QC of Automatic Monitoring

Ladybower automatic continuous monitoring station is audited and maintained by Bureau Veritas as part of the AURN, and therefore the QA/QC procedures are not reported within this ASR. Full datasets are available through the [UK Air](#) website.

Automatic Monitoring Annualisation

The Ladybower AURN station recorded data capture of greater than 75% during 2023 (98.7% and 97.8% for NO₂ and SO₂, respectively), therefore no annualisation was required

NO₂ Fall-off with Distance from the Road

Wherever possible, monitoring locations are representative of exposure. However, where this is not possible, the NO₂ concentration at the nearest location relevant for exposure has been estimated using the NO₂ fall-off with distance calculator available on the LAQM

Support website. Where appropriate, automatic annual mean NO₂ concentrations corrected for distance are presented in Table A.3.

Furthermore, the considered AURN station did not require distance correction during the monitoring year of 2023.

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

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

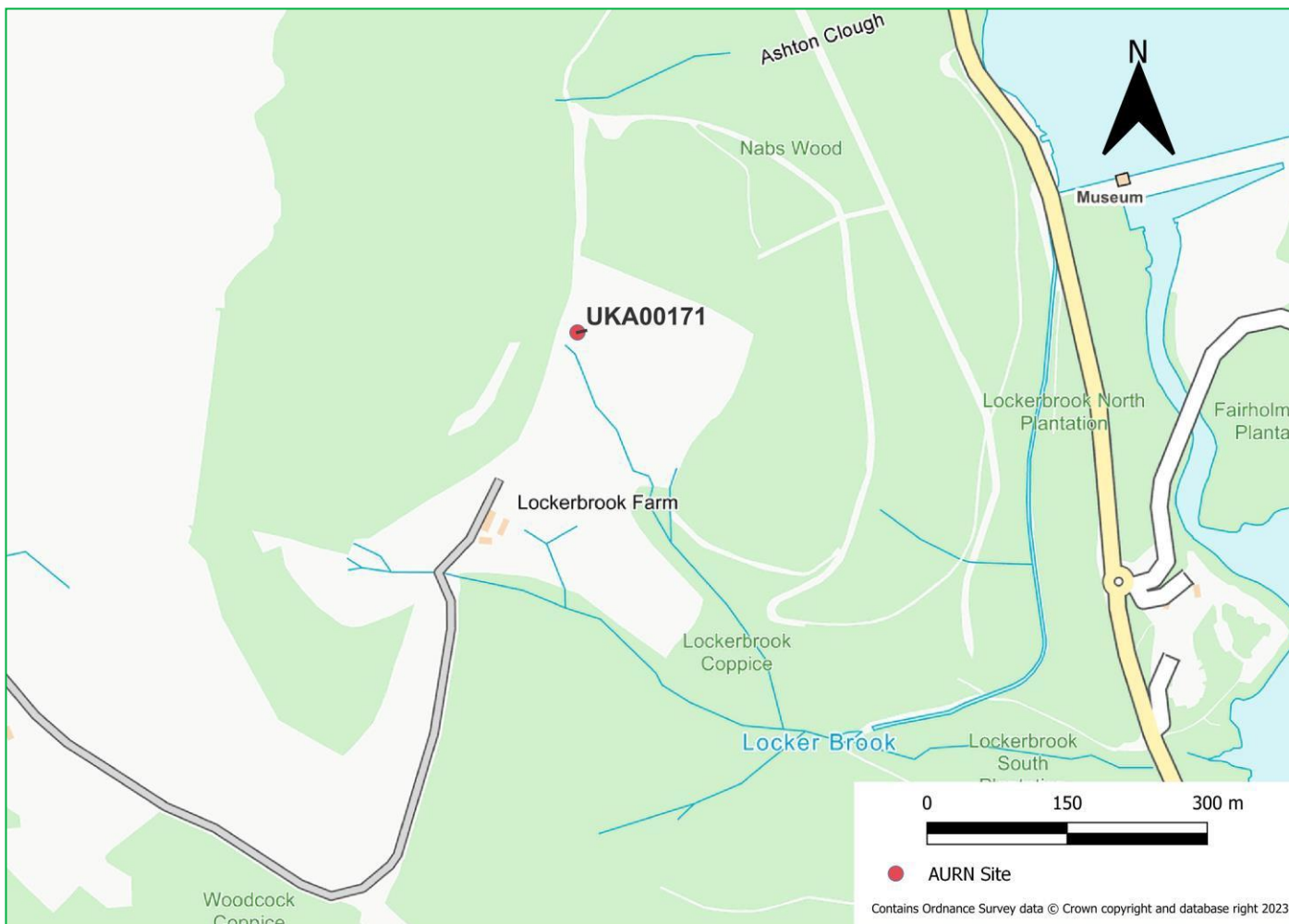


Figure D.2 – Map of Non-Automatic Monitoring Locations around Tintwistle AQMA

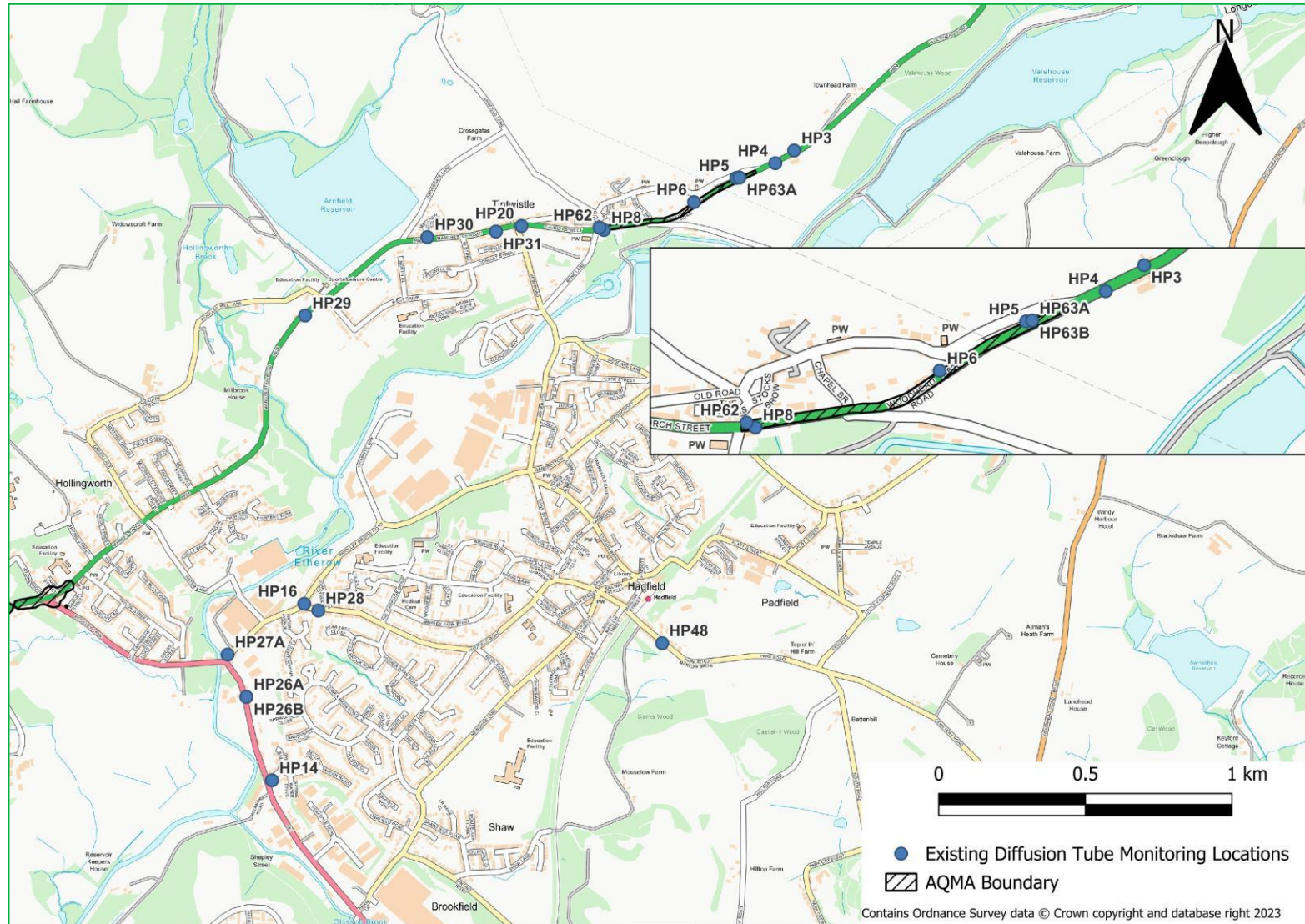
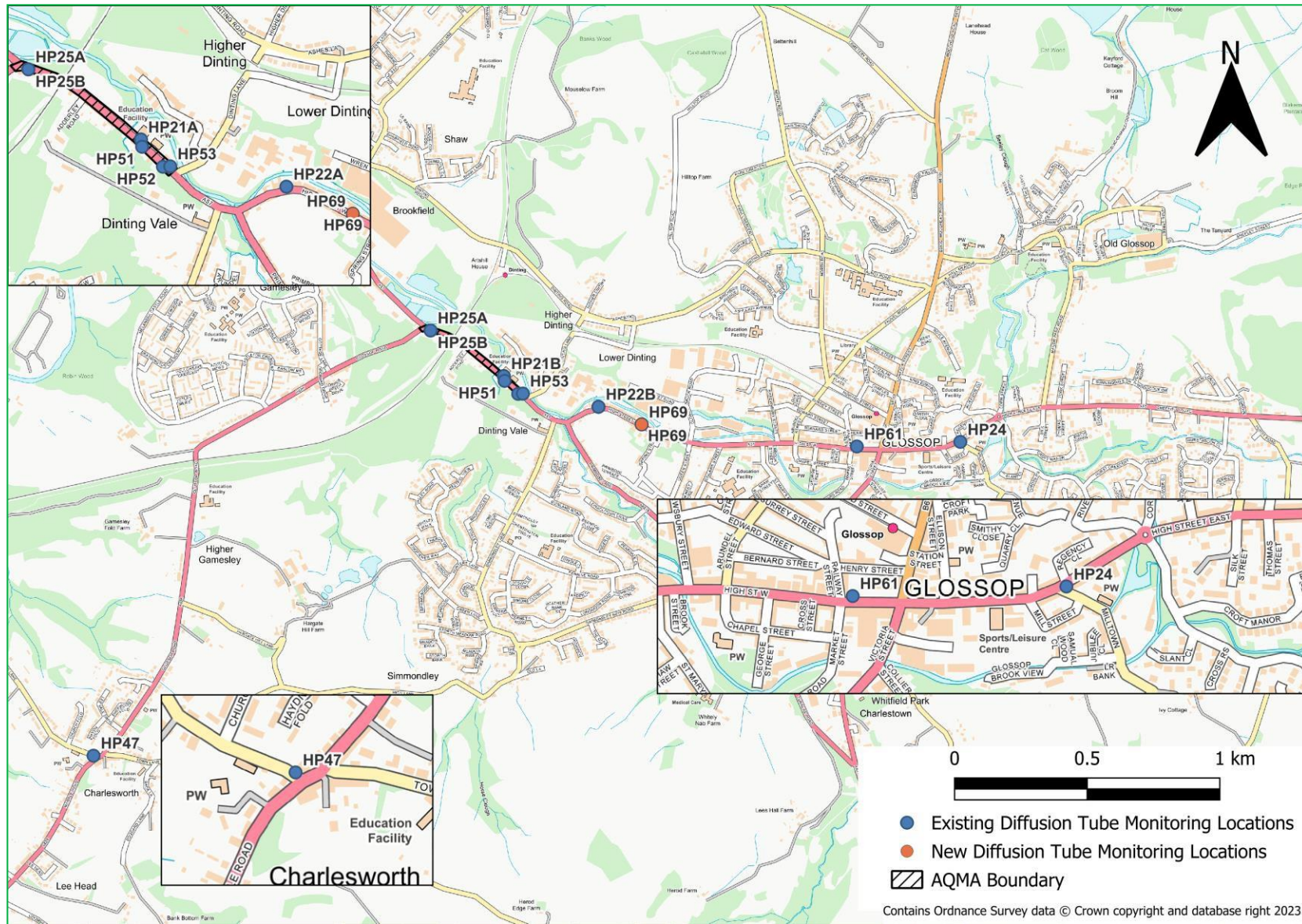


Figure D.3 – Map of Non-Automatic Monitoring Locations around Dinting Vale AQMA



**Figure D.4 – Map of Non-Automatic Monitoring Locations Outside of AQMAs:
Bridgemont, Furness Vale, Newtown, New Mills and Whaley Bridge**

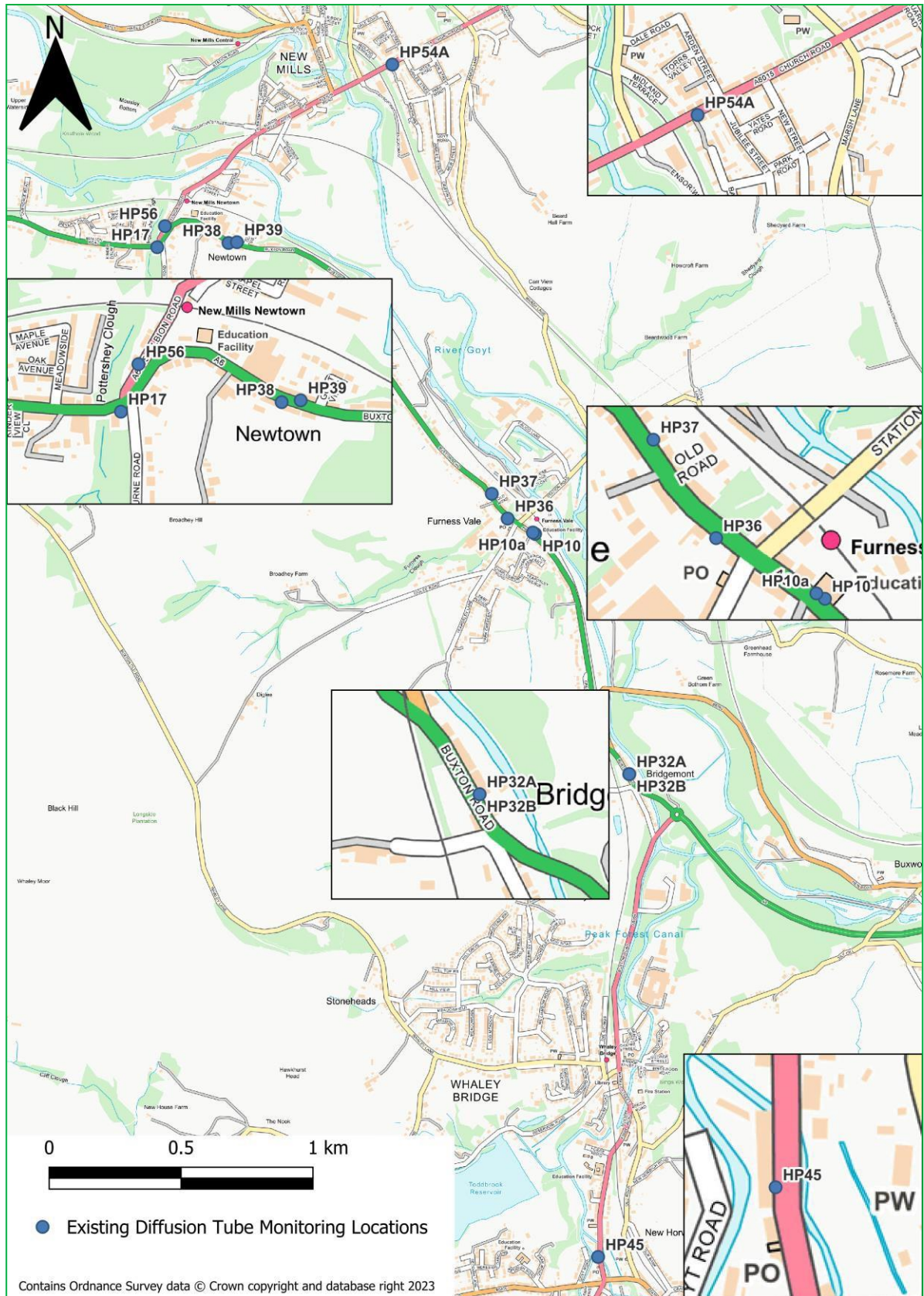


Figure D.5 – Map of Non-Automatic Monitoring Locations Outside of AQMAs: Dove Holes and Peak Forest

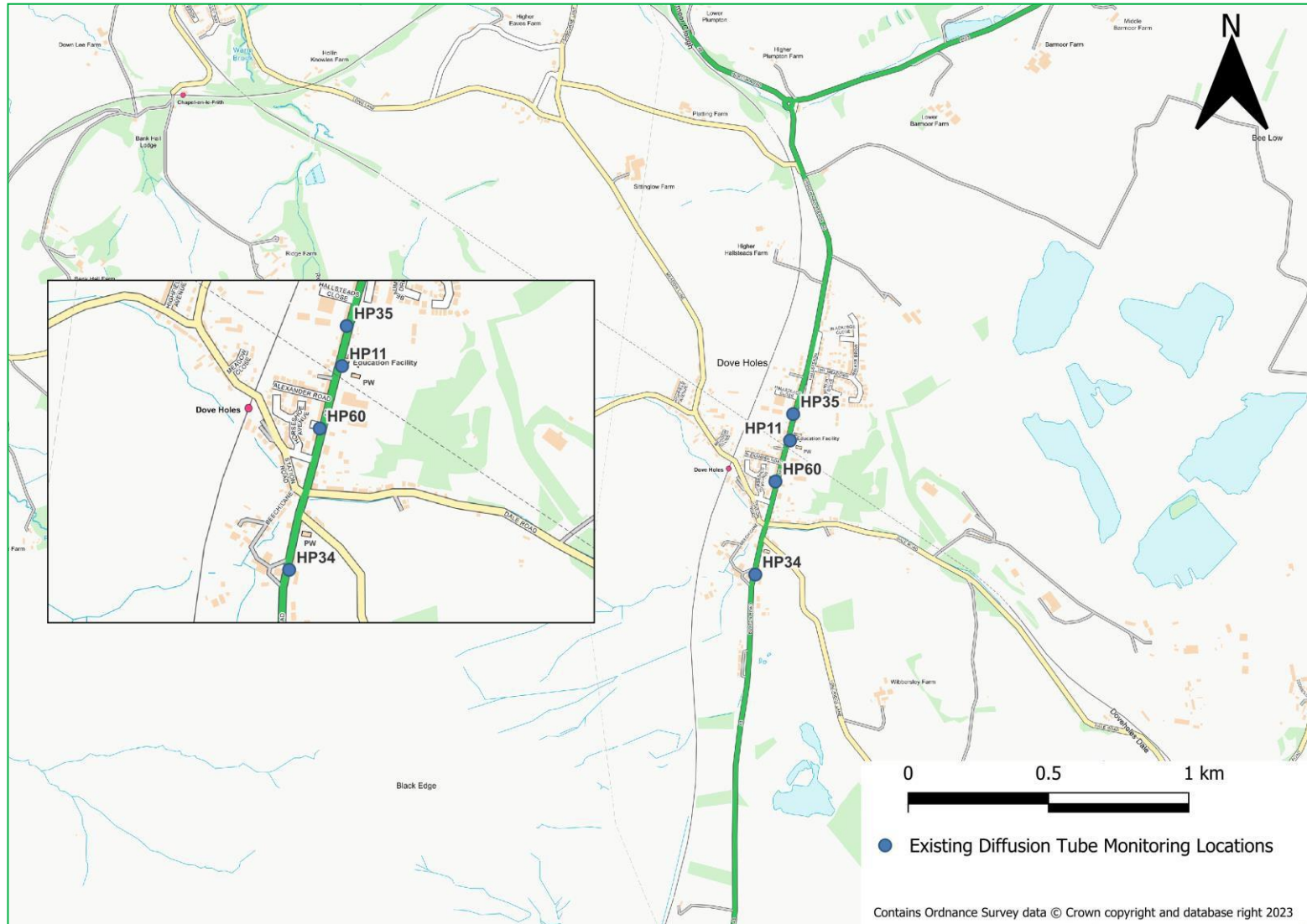
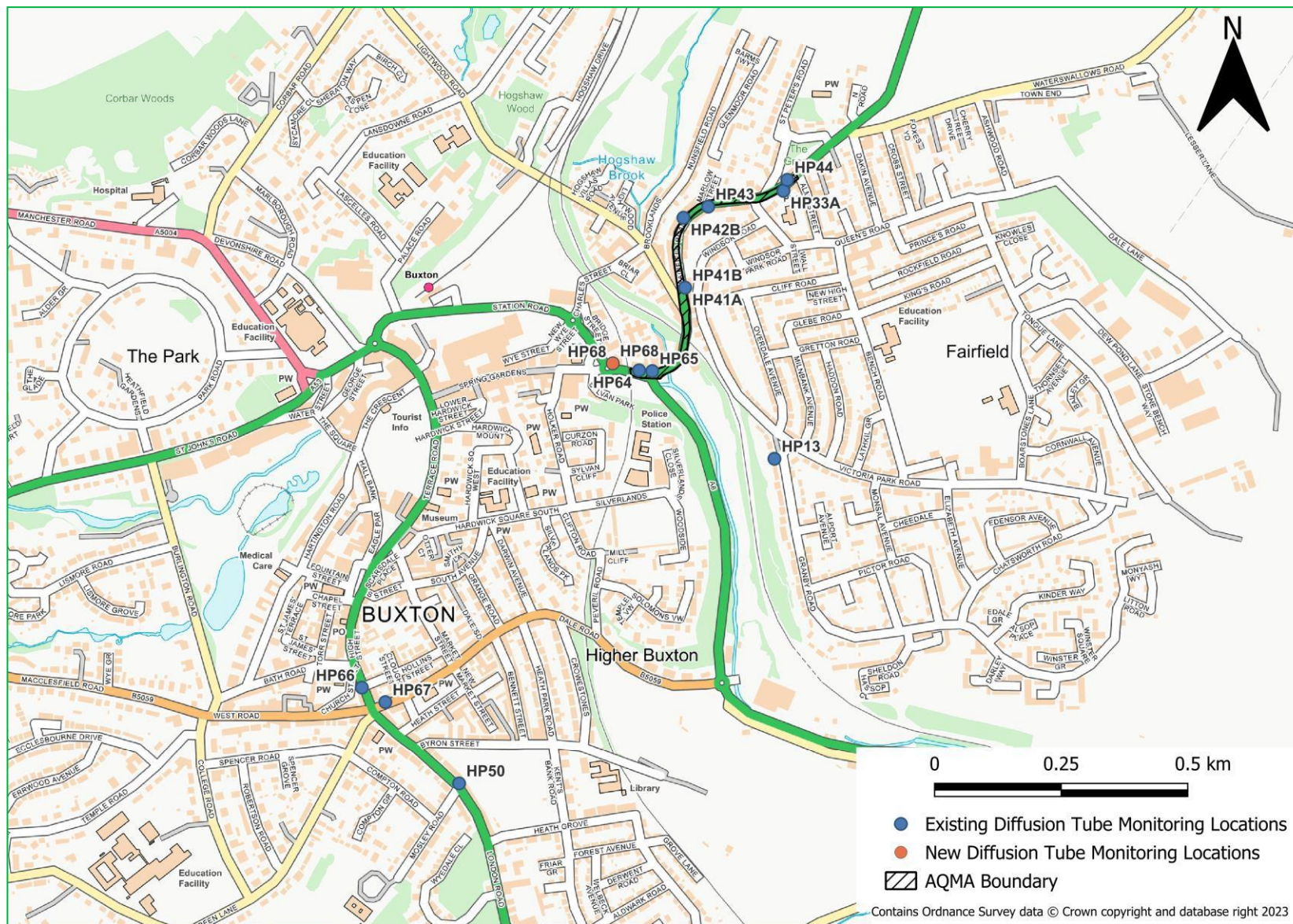


Figure D.6 – Map of Non-Automatic Monitoring Locations around Fairfield AQMA



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England⁸

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

⁸The units are in microgrammes of pollutant per cubic metre of air (µg/m³).

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
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

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