Hartlepool
Borough Council

2026 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 2026

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Executive Summary: Air Quality in Our Area

Air pollution is associated with a number of adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children, the elderly, and those with existing heart and lung conditions. There is also often a strong correlation with equalities issues because areas with poor air quality are also often less affluent areas[1,2]

A report from the Royal College of Physicians (RCP) highlights the growing evidence of the range of impacts linked to air pollution and is estimated to contribute to the equivalent of 30,000 deaths in the UK in 2025 and costs more than £27 billion annually[3].

The Borough of Hartlepool is situated on the North-East coast within the Tees Valley and has an estimated population of 98,180[4]. Hartlepool has a strong industrial heritage, and in the past, this has often made a significant contribution to poor air quality in the area. Early air quality monitoring within Hartlepool and neighbouring councils was specifically targeted to industrial sources of pollution.

Many of the old industrial plants have now closed and regulation has improved significantly over the decades. In 2025, there were 19 installations regulated by the Environment Agency and a further 24 regulated by the Local Authority under the Environmental Permitting Regulations 2016. The closure of plants and better regulation has resulted in industrial air pollution at ground level being greatly reduced.

Please see both Public Registers at: *public-register/industrial-installations* and *Public Register - Environmental Permits | Hartlepool Borough Council*

Other sources of air pollution include construction activities and emissions from residential properties. Within 2025 there were 6 planning applications approved for substantial residential developments in Hartlepool which may affect local air quality.

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[1] Public Health England. Air Quality: A Briefing for Directors of Public Health, 2017

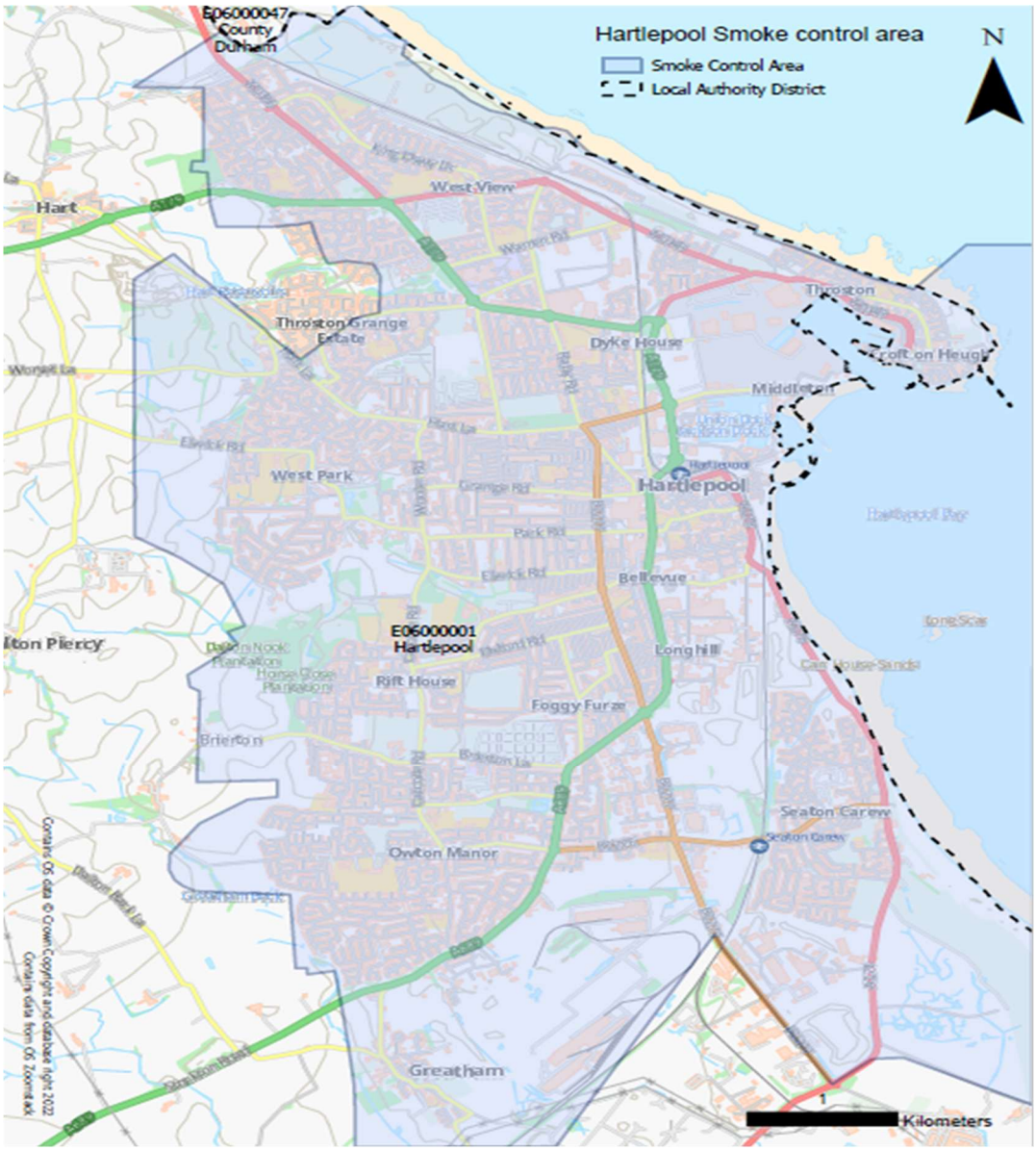
[2] Defra. Air quality and social deprivation in the UK: an environmental inequalities analysis, 2006

[3] RCP. A breath of fresh air: responding to the health challenges of modern air pollution, 2025

[4] Office for National Statistics (ONS). Local indicators for Hartlepool, 2024

Natural sources can also affect air quality. Due to its coastal location, Hartlepool occasionally experiences elevated particulate levels during strong north-easterly winds. Rare “foam storm” events may also occur, which can cause irritation and exacerbate existing health conditions for some individuals.

Most residential properties in the Borough of Hartlepool are included in a smoke control area (see map below) where the solid fuels used are restricted to those approved by the Department for Environment, Food and Rural Affairs (Defra) or fuels burned in a Defra approved appliance in order to reduce emissions to the atmosphere.



Notwithstanding this, Officers within the Environmental Protection team regularly receive reports, and investigate cases where unauthorized fuels and/or appliances are being used within the smoke control areas. In 2025 officers investigated 64 complaints of unathorised burning and served 9 Notices as a result.

Over recent years there has been an increase in the use of solid fuel stoves as a source of heating for domestic properties, potentially further increasing the emission of harmful environmental pollutants. A resident can install a log burner or multi fuel stove provided it is on the Defra list of exempted appliances and is installed by a competent person registered under the Heating Equipment Testing and Approval (HETAS) scheme.

In 2021, the Air Quality (Domestic Solid Fuel Standards) (England) Regulations 2020 came into force which tightened the standards relating to the sale of wood and other fuels which can be burnt in a domestic property and ensures that the sale of wood for combustion in domestic properties includes a 'ready to burn' mark.

Although there are several factors which affect air quality, it is pollution from road traffic, with its primary emissions at ground level, which is now of greatest concern to public health, and is the focus for air quality monitoring within Hartlepool.

Whilst road traffic has increased dramatically over recent decades in the United Kingdom, largely due to the increase in car ownership, Hartlepool still has a relatively low level of car ownership. The most recent census figures (2021) from the Office for National Statistics (ONS) revealed that 29.6% of households in the Borough have no car. This compares with a National Figure of 21%.[5]

Traffic flows within the Borough are generally moderate, with through-traffic largely directed onto the A689 and A179 corridors. The greatest potential exposure to pollution occurs along key commuter routes and it is in these areas that most action needs to be targeted to alleviate air pollution. Fortunately, most housing along these roads is low rise, and set back

[5] Office for National Statistics (ONS). How life has changed in Hartlepool: Census, 2021

from kerbside so that there is good dispersion of air pollutants compared with older UK cities and towns.

Air Quality in Hartlepool

Hartlepool Borough Council reviews and undertakes air quality assessments independently and in co-operation with neighbouring Councils in the Tees Valley. The Council produces annual reports for the UK Government and once finalised, these reports are available for the public and published on the Council's website.

Air quality monitoring is conducted via the use of three automatic sites at Stockton Road, St Abbs Walk (Automatic Urban and Rural Network AURN) and a new monitoring station has been commissioned in 2025 at Hart Lane (Hart Village). Non-automatic monitoring is also undertaken, and diffusion tubes are situated across the Borough.

The pollutants measured are Nitrogen Dioxide (NO_2) and Particulate Matter (PM_{10} and $PM_{2.5}$) at St Abbs Walk and Hart Lane with NO_2 and PM_{10} monitored at Stockton Road.

Hartlepool's annual report has consistently concluded that air quality in the Borough is generally good in areas where the public are regularly exposed to air pollution. As the results are below objective levels set by Government, there has been no need to declare any Air Quality Management areas in the Borough. Notwithstanding this, Hartlepool Borough Council has, through partnership-working, introduced a range of initiatives and actions as part of its commitment to improving air quality. The majority of these actions and initiatives are to reduce the environmental impact of traffic on the roads and encourage healthier, alternative methods of transport.

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

Table ES 1 - Description of Key Pollutants

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

Actions to Improve Air Quality

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

The Environmental Improvement Plan[6] sets out actions that will drive continued improvements to air quality and to meet the new national interim and long-term targets for fine particulate matter ($PM_{2.5}$), the pollutant of most harmful to human health. The Air Quality Strategy[7] provides more information on local authorities' responsibilities to work towards these new targets and reduce fine particulate matter in their areas.

The Road to Zero[8] 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.

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

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

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

Hartlepool Borough Council works jointly with neighbouring authorities in the Tees Valley and other external agencies to implement actions to improve air quality. The Tees Valley Combined Authority (TVCA) has developed a joint strategic transport plan in collaboration with the five constituent Local Authorities, Darlington, Middlesbrough, Redcar & Cleveland, Stockton-on-Tees and Hartlepool. The plan covers the period 2020-2030 and has the vision "To provide a high quality, quick, affordable, reliable, low carbon and safe transport network for people and freight to move within, to and from Tees Valley".

Within the Council, Environmental Health professionals work closely with officers from various disciplines, including Public Health, Traffic and Transportation and Planning to improve air quality in the area.

Conclusions and Priorities

The data collected from the St Abbs Walk automatic air quality monitoring station and the diffusion tube sites all indicate that the levels of NO2 remain below 2019 (pre-pandemic) figures, however the levels at St Abbs Court and at all diffusion tube sites had increased slightly from those recorded in 2024. The levels are still all well below the national objective levels. Data for PM_{10} and $PM_{2.5}$ was not available from the Stockton Road and Hart Lane stations due to software issues. However, data for PM_{10} was available from the St Abbs Walk (AURN) site and the levels at that site were 15.6 µg/m³ with 10 exceedances (>50 µg/m³) during 2025.

$PM_{2.5}$ is now measured in Hartlepool at the St Abbs Walk (AURN) site when previously it was calculated based on PM_{10} levels and using a nationally derived figure to calculate the likely level from verified levels in neighbouring Local Authorities. The actual level for Hartlepool measured in 2025 was 8.4 µg/m³.

The Environmental Targets (Fine Particulate Matter) (England) Regulations 2023 set a legally binding long term Annual Mean Concentration Target (AMCT) of 10µg/m³ by 2040. There is also an interim target of 10µg/m³ by 31 December 2030. The Hartlepool level for 2025 of 8.4µg/m³ is below the new targets.

There were implications on air quality measurements and reporting in Hartlepool during 2025. A comprehensive review of monitoring equipment was completed in 2024, and new software/monitoring equipment was to be purchased for a site at Hart Lane (Hart Village) and installed this year. There were delays in purchasing the new equipment which is now installed and operational. However, new software is still required to upload the data for analysis. There were also software issues at the station on Stockton Road and data analysis

has not been possible for this site for 2025. All 8 diffusion tube sites continue to be available and have data collected and analysed. Despite the challenges, officers within the Local Authority continue to monitor and work to improve air quality within the Borough.

How to get Involved

Hartlepool Borough Council ensure that the residents and people who visit and work in the Borough have up to date information on air quality; regularly providing information on the website including current and previous ASRs, Air Quality Strategy and leaflets etc on topics of interest or concern.

There are many ways in which residents of Hartlepool can contribute to reducing the levels of air pollution within the Borough for example:

- Reducing the level of traffic on the roads by using alternative methods of transport such as walking or cycling which has benefits for health and wellbeing as well as the environment. Hartlepool is part of the Tees Valley Walking and Cycling Network through the TVCA which aims to make it easier to get around Tees Valley. Residents can check out all the ways to travel around the region, plan cycle routes, visit walking/cycling hubs and learn about multimillion-pound investments to improve transport across Tees Valley. Further information is available from: *https://teesvalley-ca.gov.uk/travel/*
- The Hartlepool Walking and Cycling Hub runs regular courses to help get you cycling confidently and enjoying being out and about on two wheels. The hub provides 1:1 fully tailored training sessions away from traffic and busy roads. They can provide bikes to learn on and helmets for your safety during these sessions.
- If you need to travel by car, consider joining a car sharing scheme. For information on car sharing please use the following link: *www.liftshare.com*
- When possible, try to use public transport instead of private vehicles.
- If you intend to replace your existing vehicle then consider purchasing 'greener' vehicles such as hybrid and electric vehicles which are becoming more readily available.
- Ensure that your vehicle is well maintained and keep tyre pressures properly inflated to manufacturer's recommendation. Drive more smoothly and avoid excessive speed, excessive braking and prolonged idling.
- Many workers may have the opportunity to work from home either full time or on a hybrid basis which would lead to reduced traffic on our roads.

- Support local garden initiatives and plant more trees and greenery – and don’t burn garden waste/rubbish in the garden – take it to the waste recycling centre.

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1 Local Air Quality Management

This report provides an overview of air quality in Hartlepool during 2025. 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 Hartlepool Borough Council to improve air quality and any progress that has been made.

The statutory air quality objectives applicable to LAQM in England are presented in Table E.1.

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

Air Quality Management Areas (AQMAs) are declared when there is an exceedance or likely exceedance of an air quality objective. After declaration, the authority should prepare an Air Quality Action Plan (AQAP) within 18 months. The AQAP should specify how air quality targets will be achieved and maintained and provide dates by which measures will be carried out.

Hartlepool Borough Council currently does not have any declared AQMAs. A local Air Quality Strategy is in place to prevent and reduce polluting activities. The Local Air Quality Strategy is available at *Air Quality Strategy 2023-2030*

2.2 Progress and Impact of Measures to address Air Quality in Hartlepool

Defra's appraisal of last year's ASR concluded that the report was well structured, detailed, and provided the information specified in the guidance. There were a few issues raised which have been addressed in this ASR:

- Ensuring all site IDs correspond correctly to information provided
- Updating the map of monitoring sites and providing labels to identify site locations
- Providing a more accessible link to the AQS

Hartlepool Borough Council has taken forward a number of direct measures during the current reporting year of 2025 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2 below. 15 measures are included within the table with the type of measure and the progress Hartlepool Borough Council has made during the reporting year of 2025 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within the table.

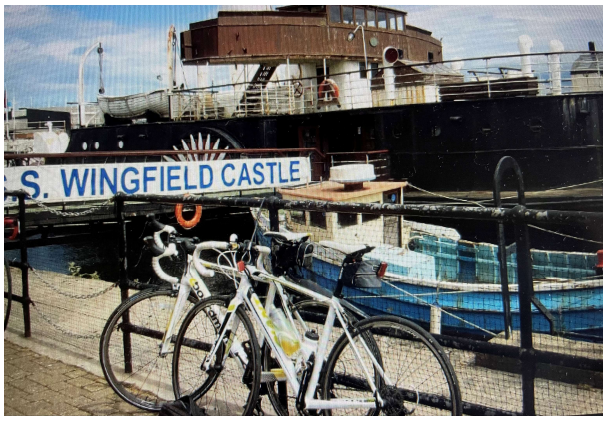
The priority measure on new air quality monitoring equipment and software to be installed/operational is partially completed and software issues will be resolved in 2026.

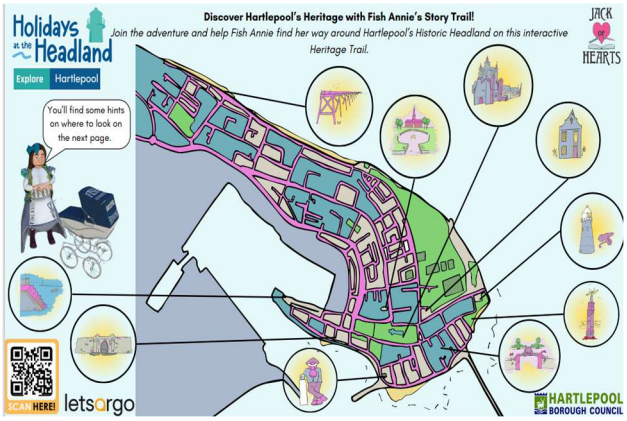
A new priority measure has been included in the action plan in 2025, installing new EV charge points across the Borough. Locations are currently being investigated and consultation with the public will commence in 2026.

The measure to upgrade all taxis to comply with Euro 6 engine standards (or be emission free) has been in force from 1st September 2025. The updated policy reflects the Council's commitment to improving air quality across the Borough.

Hartlepool Borough Council is committed to promotion of sustainable travel measures and various initiatives have been progressed over the last few years to encourage cycling and walking.

Hartlepool benefits from a well-established network of cycling routes that support the delivery of national and local objectives relating to active travel, green infrastructure, and public access to the natural environment. There are now more than 50 miles of traffic free cycle paths, quiet roads and bridleways for cyclists of all ages and abilities to enjoy.





The coastal promenade route forms a key component of the town's active travel infrastructure, linking Hartlepool Marina with Seaton Carew. This route provides a safe and accessible corridor for non-motorised users, encouraging modal shift away from private vehicle use while enhancing access to blue space and coastal assets.

Extending southwards, the network connects to the Teesmouth National Nature Reserve at North Gare. This linkage is of particular significance in supporting DEFRA's objectives around improving public access to high-quality natural environments, while also promoting awareness and appreciation of designated sites of ecological importance. Careful management of these routes helps balance recreational use with the protection of sensitive habitats and species.

A circular route around the Historic Headland offers additional opportunities for active recreation within an area of cultural and heritage value, supporting place-based approaches to tourism and local distinctiveness. Furthermore, Summerhill Woodland Adventure Park provides dedicated off-road and BMX cycling facilities, contributing to inclusive access by catering for a wide range of users, including younger people and those seeking more informal or skills-based cycling opportunities.

Collectively, this network enhances connectivity, supports low-carbon travel choices, and contributes to the multifunctional use of green and blue infrastructure.

Hartlepool Borough Council worked to implement these measures in partnership with the following stakeholders during 2025:

- Tees Valley Combined Authority
- Tees Valley Local Authorities
- Local Councillors
- Local bus companies
- Local taxi companies
- General Public

The principal challenges and barriers to implementation that Hartlepool Borough Council anticipates facing are a lack of staff resources and adequate funding.

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	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
Priority Air Quality Actions														
1	Replacement of Air Monitoring Equipment/Software	Public information	Other	2023	2026	HBC Environmental Health	HBC	Funded	£10k-£50k	Implementation	Effective and accurate measurement of pollutants	Software/equipment installed and operational	Equipment in situ and recording data.	Software system is expected to be fully operational in 2026
2	Elwick Bypass/A19 link Road	Transport Planning and Infrastructure	Other	2023	2027	HBC Planning and Highways Dept, Highways Agency	DfT/Highways Agency, HBC / Developer Funding	Funded	£24M	Planning	Significantly reduce levels of vehicles through village, achievement of better air quality	Traffic levels in Elwick village	Scheme going through relevant planning process. Agreement given by Council to progress CPOs and SROs	Awaiting final details and implementation date
3	Introduction of on street EV charge points	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles	2025	2030	HBC/TVCA	TVCA	Funded	£10k-£50k	Implementation	Reduced vehicle emissions	No of charge points implemented	Locations currently being investigated, consultation with the public to commence 2026.	Constraints due to officer time and resources
4	Net Zero and Climate Change Strategy	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2023	2025	HBC	HBC	Funded	<£10k	Implementation	Reduced carbon emissions from various sources	Less fuel used in vehicles. Building efficiency and less emissions overall	Implementation on-going	Ongoing evaluation and implementation, financial restraints
5	Campaigns to provide information about the impacts of domestic burning and good practice, including wood burners and burning of garden waste	Public Information	Other	2023	2028	HBC	HBC	Not Funded	< £10k	Implementation	Public Awareness	Reduction in number of domestic burning complaints received. Measured concentration of pollutants	Public information produced on garden bonfires and webpage created on HBC website.	Constraints due to officer time and resources
6	Tees Valley Bus Improvement Plan.	Policy Guidance and Development Control	Low Emissions Strategy	2022	2027	TVCA, TVLA and bus companies	TVCA/Central Gov	Partially Funded	£1 million - £10 million	Implementation	Reduced vehicle emissions	Measured concentration of pollutants at local monitoring stations	Implementation on-going	First phase successful, second phase on-going
7	Promoting sustainable travel alternatives	Promoting Travel Alternatives	Promotion of walking	2018	2030	HBC, TVCA and Middlesbrough Environment City (MEC)	HBC/TVCA Capability funding	Partially funded	£100k-£500k	Implementation	Reduced vehicle emissions	Further investment in promoting travel alternatives	HBC is committed to promotion of sustainable travel measures and various initiatives have been progressed over the last year	Ongoing process
8	Continue to promote sustainable travel	Promoting Travel Alternatives	Promotion of cycling	2012	2040	HBC, TVCA and Middlesbrough Environment City (MEC)	HBC/TVCA Capability funding	Partially funded	£100k-£500k	Implementation	Reduced vehicle emissions	Further investment in promoting travel alternatives	Hartlepool now has more than 50 miles of traffic free cycle paths, quiet roads and bridleways for cyclists of all ages and abilities.	Ongoing process
9	Hybrid Working for employees	Promoting Travel Alternatives	Encourage / Facilitate homeworking	2020	2040	HBC	HBC	Not Funded	< £10k	Implementation	Potential 10% reduction in fuel consumption	Measured concentration of pollutants at local monitoring stations	A system of hybrid working is now incorporated into appropriate services	Hybrid working in place across all services that can utilise it and ongoing process

Measure No.	Measure Title	Category	Classification	Year Measure Introduced in AQAP	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments / Barriers to Implementation
10	Environmental Health Promotions	Public Information	Other	2022	2040	HBC	HBC	Not Funded	< £10k	Implementation	Potential reduction in fuel consumption	Measured concentration of pollutants at local monitoring stations	'Eco - driving tips' promotion. Webpage produced and available on website	One project completed other topics being considered subject to officer time and resources
11	Active participation in annual Clean Air Days	Public Information	Other	2023	2040	HBC	HBC	Not Funded	< £10k	Planning	Public Awareness	Participation in annual Clean Air Days	To commence when staff resources are available	Constraints due to officer time and resources
12	Introduction of '20's Plenty' and other speed restrictions to various areas and streets across the Borough	Promoting Low Emission Transport	Other	2012	2040	HBC	HBC	Not Funded	< £10k	Implementation	Consistent, smooth driving at lower speeds can reduce vehicle emissions	No of 20s Plenty Zones in the Borough Measured concentration of pollutants at local monitoring stations	Work continues in reducing speed limits on major and minor roads in the Borough. Elwick Road scheme Implemented along with Spring Garden Road and Reedston Road, Proposing a school time twenty MPH limit on Rossmere Way.	All proposed schemes require approval from Council following public consultation exercise.
13	Licensed taxis to be minimum Euro 6 vehicles	Promoting Low Emission Transport	Taxi Licensing conditions	2021	2025	HBC/local taxi drivers and companies	HBC	Funded	< £10k	Completed and measure in force from 1st September 2025	Reduced vehicle emissions	Number of taxis compliant	Despite resistance from taxi trade to upgrade to low emission vehicles, HBC policy is now in force and vehicles must now comply with Euro 6 engine standards or be emission free from 1st September 2025.	(Wheelchair accessible vehicles are exempt from this requirement until 1st September 2026)
14	Introduction of a new bus service (Service 51) linking Elwick and Hartlepool	Transport Planning and Infrastructure	Bus route improvements	2025	2026	HBC / TVCA/ Stagecoach	TVCA	Funded	£10k-£50k	Implementation	To encourage alternatives to vehicle use	Implementation / No of customers	Bus route to be implemented in 2026	Objections to bus route / bus stops
15	Bikeability Training	Promoting Travel Alternatives	Promotion of cycling	2025	2030	HBC/ The cycle Partnership		Funded	< £10k	Implementation	To encourage alternatives to vehicle use	No of children attending scheme	Scheme is implemented across borough at majority of schools	Ongoing process

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

As detailed in Policy Guidance LAQM.PG22 (Chapter 8) and the Air Quality Strategy[9], local authorities are expected to work towards reducing emissions and/or concentrations of fine particulate matter ($PM_{2.5}$)). There is clear evidence that $PM_{2.5}$ (particulate matter smaller 2.5 micrometres) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

The latest data available on the Public Health England website (2024) states that the fraction of mortality attributed to particulate air pollution within Hartlepool was 4.1% which was lower than the overall value for England which was 5.3% and also lower than the Northeast Region (4.8%).

Latest results (2024) for fine particulate matter – concentrations of total $PM_{2.5}$ shows that for this measure, levels within Hartlepool were 5.5µg/m³ which is lower than the overall value for England (7.1µg/m³) and slightly lower than the rate for the North East Region (5.7µg/m³).

Further information on this data can be found on Public Health England's Website using the following link: *https://fingertips.phe.org.uk/*

Hartlepool Borough Council is taking the following measures to address $PM_{2.5}$:

- Monitoring of $PM_{2.5}$ has been undertaken since mid-2022 at the St Abbs Walk monitoring station and all government objectives have consistently been easily met where relevant public exposure exists and this is expected to continue.
- Hartlepool council will continue to work and co-operate with the four other Tees Valley councils in trying to identify in more detail sources of fine particles, and see if any local action can cost effectively reduce emissions / concentrations.
- We will continue to work in collaboration with our transport partners via TVCA and other stakeholders to reduce transport impacts as a whole. This has benefit for all emissions from transport sources, including $PM_{2.5}$.
- Hartlepool Borough Council has purchased a new Palas Fidas 200 dust monitor for our new Hart Lane (Hart Village) monitoring station which collects data for both $PM_{2.5}$

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

and PM_{10} in the one unit. This allows for a better understanding of PM levels in the Borough.

- Campaigns on education and enforcement of Clean Air Act and Smoke Control Areas will continue and help to reduce the levels of particulates in our environment.

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

This section sets out the monitoring undertaken within 2025 by Hartlepool Borough Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2021 and 2025 to allow monitoring trends to be identified and discussed.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

Hartlepool Borough Council undertook automatic (continuous) monitoring at 3 sites during 2025. The monitoring station alongside the busy main A689 Stockton Road (Barra Grove) leading into Hartlepool measures nitrogen dioxide and particulate matter PM_{10}. Although data was recorded by the monitoring station during 2025, a software issue prevented the data from being downloaded and processed. Consequently the data could not be analysed and has been excluded from this report.

In 2025, a new automatic monitoring station was purchased and installed at Hart Lane (Hart Village) close to the A179 Hart Bypass. Although the equipment was operational for the latter part of the monitoring period, software related issues prevented the retrieval of useable data. Consequently no data from this monitoring station will be available for analysis until 2026. The monitoring station measures nitrogen dioxide and particulate matter PM_{10} and $PM_{2.5}$.

A third automatic monitoring site, installed by DEFRA at St Abbs Walk measures continuous urban background NO_2, PM_{10} and $PM_{2.5}$ as part of the Automatic Urban Rural Network (AURN).

Table A.1 in Appendix A shows the details of the automatic monitoring sites. Detailed information on monitoring results can be found at: *https://www.hartlepool.gov.uk/public-protection/air-quality-hartlepool* Defra also presents automatic monitoring results for Hartlepool Borough Council through the UK Air Website: *Site Information for Hartlepool St Abbs Walk(UKA00645) - DEFRA UK Air - GOV.UK*

A map showing the location of the monitoring sites is 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

Hartlepool Borough Council undertook non- automatic (i.e. passive) monitoring of NO2 at 8 sites during 2025. Table A.2 in Appendix A presents the details of the non-automatic sites.

The map in Appendix D shows the location of the monitoring sites. Further details on Quality Assurance/Quality Control (QA/QC) for the diffusion tubes, including bias adjustments and

any other adjustments applied (e.g. annualisation and/or distance correction), are included in Appendix C.

3.2 Individual Pollutants

The air quality monitoring results presented in this section are, where relevant, adjusted for bias, annualisation (where the annual mean data capture is below 75% and greater than 25%), and distance correction. Further details on adjustments are provided in Appendix C.

3.2.1 Nitrogen Dioxide (NO_2)

Table A.3 and A.4 in Appendix A compare the ratified and adjusted monitored NO_2 annual mean concentrations for the past five years with the air quality objective of 40µg/m^3. Note that the concentration data presented represents the concentration at the location of the monitoring site, following the application of bias adjustment and annualisation, as required (i.e. the values are exclusive of any consideration to fall-off with distance adjustment).

For diffusion tubes, the full 2025 dataset of monthly mean values is provided in Appendix B. Note that the concentration data presented in Table B.1 includes distance corrected values, only where relevant.

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

3.2.2 Particulate Matter (PM_{10})

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

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

3.2.3 Particulate Matter ($PM_{2.5}$)

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

$PM_{2.5}$ is measured in Hartlepool at the St Abbs Walk (AURN) site. The measured level for Hartlepool in 2025 was 8.4 µg/m³.

In 2026, measured levels of $PM_{2.5}$ will also be available from the new monitoring station at Hart Lane (Hart Village).

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?	Monitoring Technique	Distance to Relevant Exposure (m) (2)	Distance to kerb of nearest road (m) (1)	Inlet Height (m)
A1	Stockton Road (Barra Grove)	Roadside	450300	529700	NO_2, PM_{10}	NO	Chemiluminescent; beta attenuated	10	12	2
A2	Hart Lane (Hart Village)	Roadside	447314	534899	NO_2, PM_{10}, $PM_{2.5}$	NO	Chemiluminescent; Optical (FIDAS 200)	14	1.6	1.8
A3	St Abbs Walk (AURN)	Urban Background	451429	532312	NO_2, PM_{10}, $PM_{2.5}$	NO	Chemiluminescent	6.5	6	2

Note:

(1) N/A if not applicable

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

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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
S1	Cleveland Road	Roadside	451292	534303	NO_2	NO	21	2.1	No	2.4
S2	Powlett Road	Roadside	450400	533900	NO_2	NO	0	5	No	2.5
S3	Woodstock Way	Roadside	448395	535806	NO_2	NO	4	2	No	2.5
S4	The Fens (Hart)	Roadside	447343	534962	NO_2	NO	3	5	No	2.3
S5	Oxford Road	Roadside	449385	531076	NO_2	NO	14	2.8	No	2.3
S6	Fens Crescent	Roadside	449600	529100	NO_2	NO	0	5	No	2.5
S7	The Front Seaton Carew	Roadside	452502	529935	NO_2	NO	1.5	1.6	No	2.2
S8	Blakelock Gardens	Roadside	450691	531839	NO_2	NO	3	1.5	No	2.3

Notes:

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

(2) N/A if not applicable.

Table A.3 – Annual Mean NO_2 Monitoring Results: Automatic Monitoring (µg/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 2025 (%) (2)	2021	2022	2023	2024	2025
A1	450300	529700	Roadside	0	0	12.1	-	-	-	-
A2	447314	534899	Roadside	-	-	-	-	-	-	-
A3	451429	532312	Urban Background	96.86	96.86	10.3	10.4	9.0	9.0	10.0

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

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

☒ **Where exceedances of the NO_2 annual mean objective occur at locations not representative of relevant exposure, the fall-off with distance concentration has been calculated and reported concentration provided in brackets for 2025.**

Notes:

The annual mean concentrations are presented as µg/m³.

Exceedances of the NO_2 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 NO_2 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 2025 (%) (2)	2021	2022	2023	2024	2025
S1	451292	534303	Roadside	82.7	82.7	-	-	15.3	11.3	15.0
S2	450400	533900	Roadside	90.4	90.4	11.6	11.8	10.4	9.1	11.1
S3	448395	535806	Roadside	90.4	90.4	9.2	11	10.4	8.7	10.1
S4	447343	534962	Roadside	90.4	90.4	-	-	10.4	9.2	10.6
S5	449385	531076	Roadside	82.7	82.7	-	-	16.5	14.8	16.5
S6	449600	529100	Roadside	90.4	90.4	11.9	13.2	11.2	10.4	11.8
S7	452502	529935	Roadside	90.4	90.4	-	-	17.1	15.0	16.8
S8	450691	531839	Roadside	90.4	90.4	-	-	14.6	13.1	14.0

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

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

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

Notes:

The annual mean concentrations are presented as µg/m³.

Exceedances of the NO_2 annual mean objective of 40µg/m³ are shown in **bold**.

NO_2 annual means exceeding 60µg/m³, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined**.

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

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

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

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

Figure A.1 – Trends in Annual Mean NO_2 Concentrations

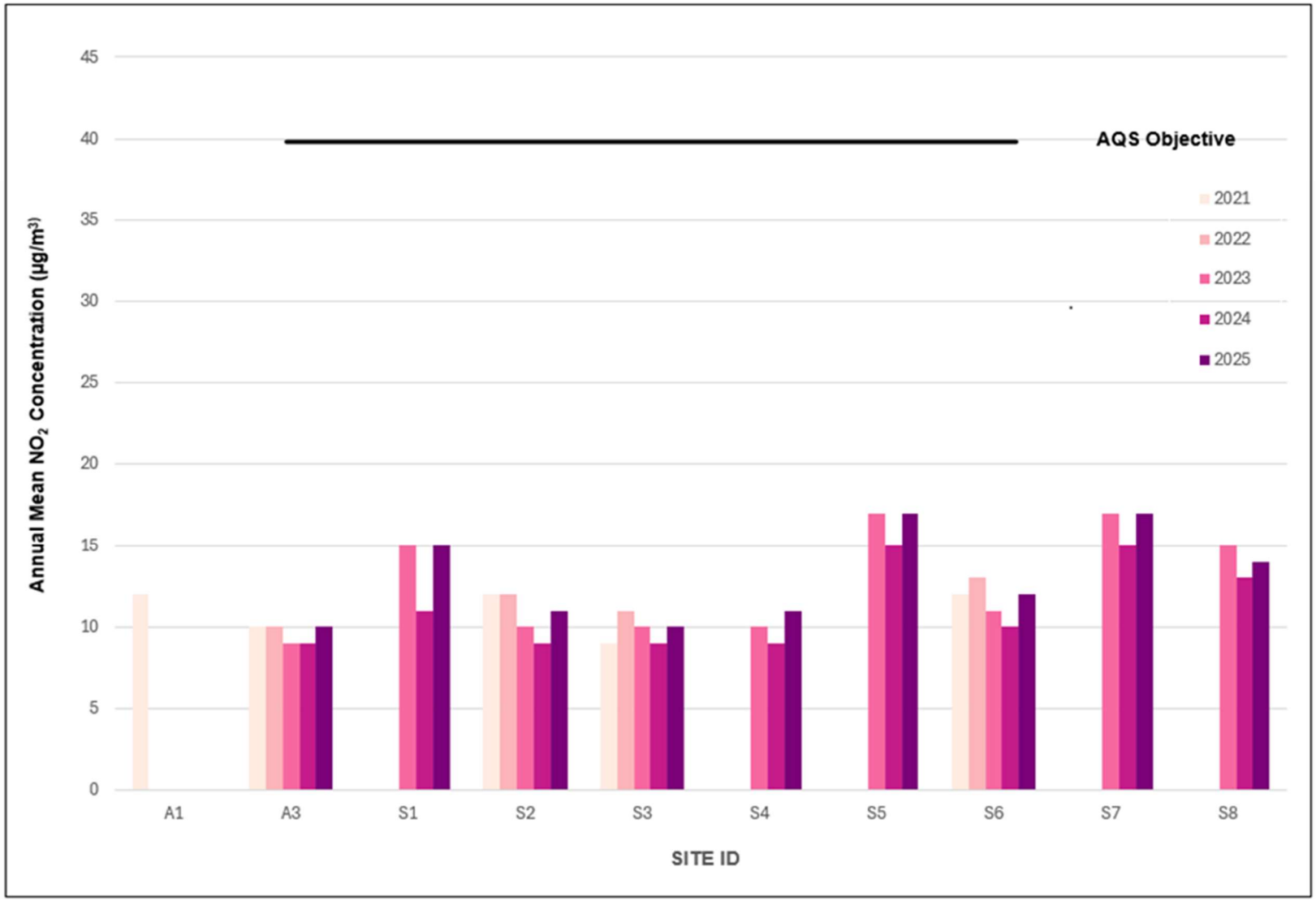


Table A.5 – 1-Hour Mean NO_2 Monitoring Results, Number of 1-Hour Means > 200µg/m³

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2025 (%) (2)	2021	2022	2023	2024	2025
A1	450300	529700	Roadside	0	0	0	-	-	-	-
A2	447314	534899	Roadside	-	-	-	-	-	-	-
A3	451429	532312	Urban Background	96.86	96.86	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 NO_2 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%).

Figure A.2 – Trends in Number of NO_2 1-Hour Means > 200µg/m³

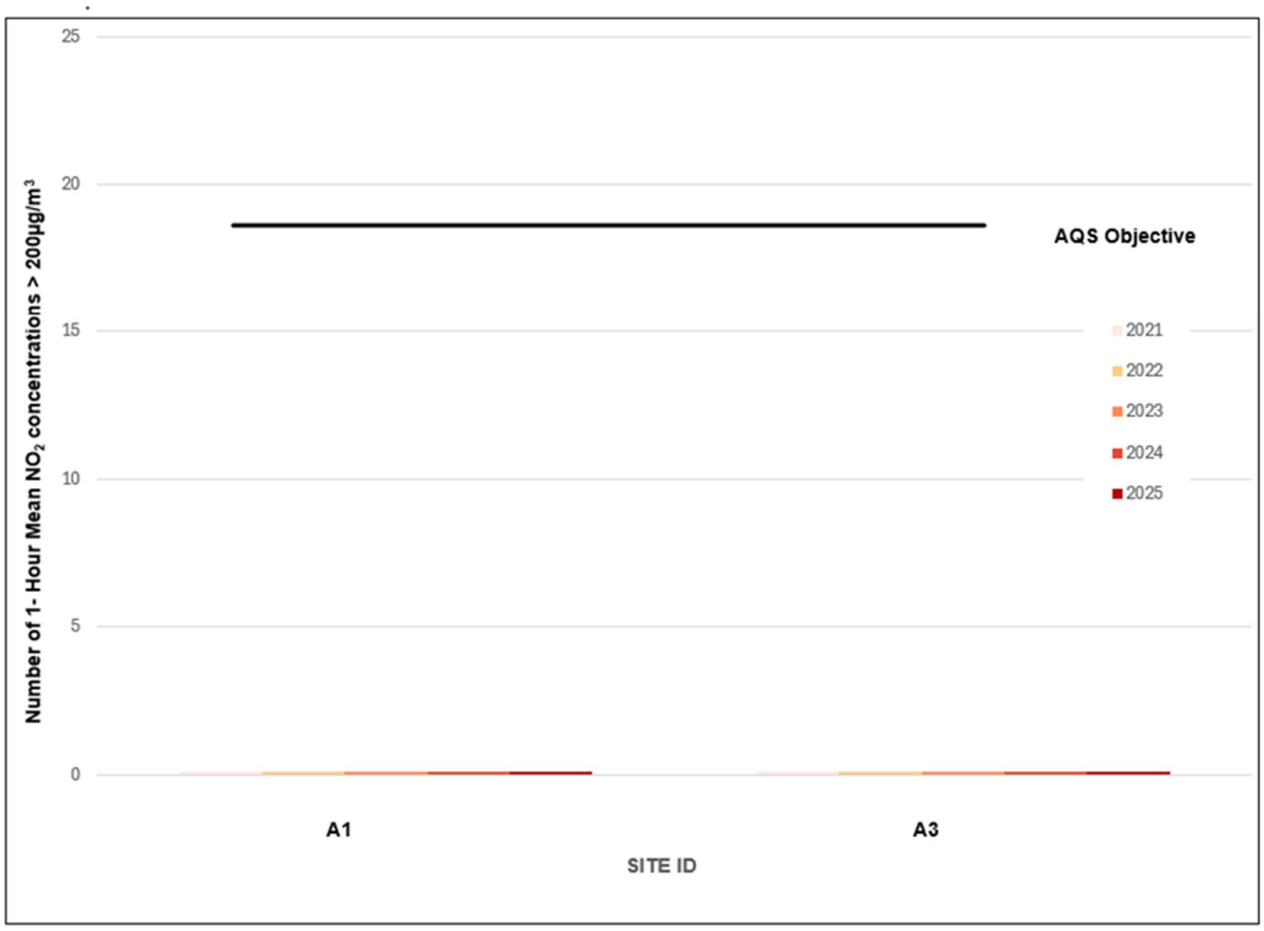


Table A.6 – Annual Mean PM_{10} Monitoring Results (µg/m³)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2025 (%) (2)	2021	2022	2023	2024	2025
A1	450300	529700	Roadside	0	0	22.9	-	-	-	-
A2	447314	534899	Roadside	-	-	-	-	-	-	-
A3	451429	532312	Urban Background	99.13	99.13	-	11.6	14.0	15.0	15.6

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

Notes:

The annual mean concentrations are presented as µg/m³.

Exceedances of the PM_{10} 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.

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

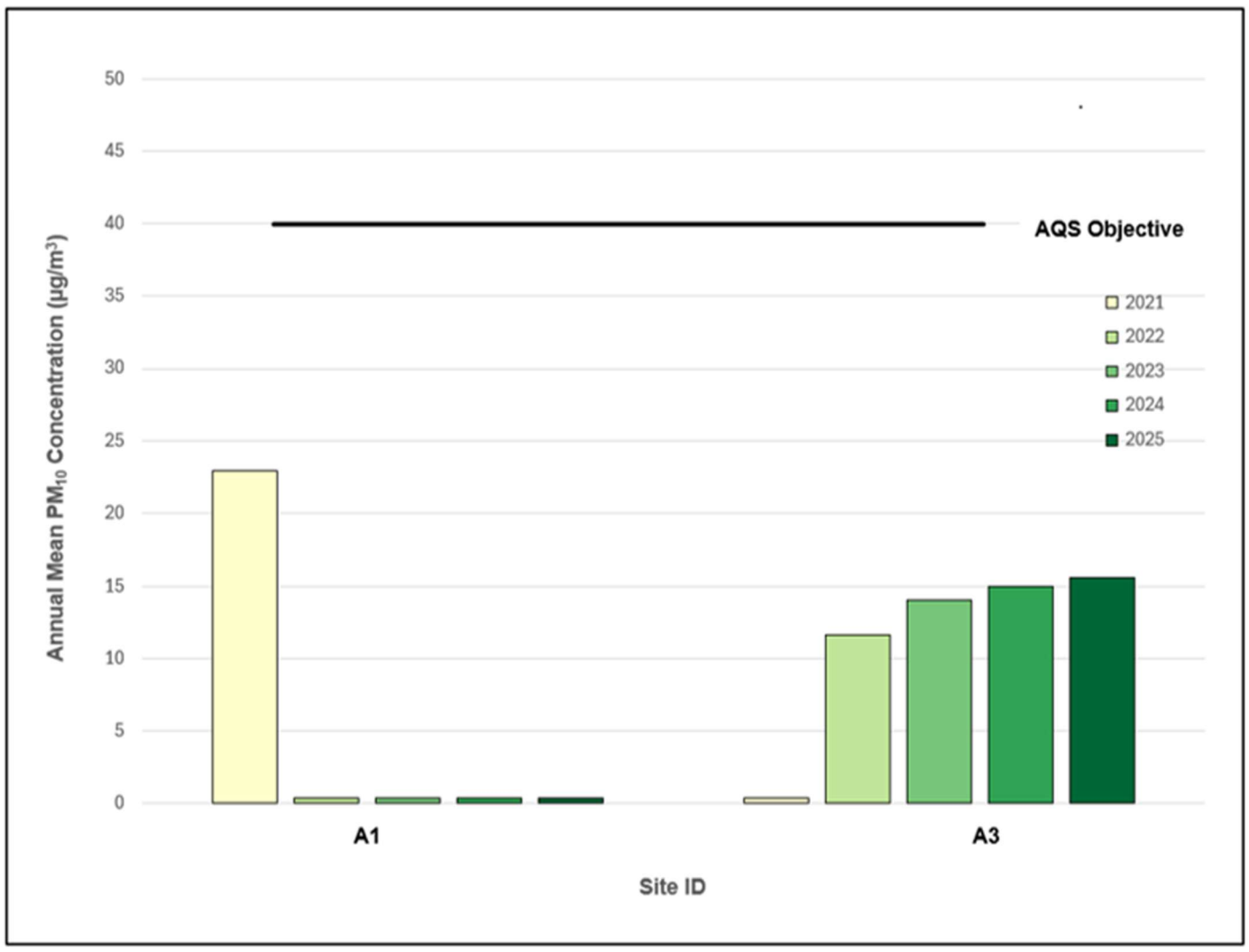


Table A.7 – 24-Hour Mean PM_{10} Monitoring Results, Number of PM_{10} 24-Hour Means > 50µg/m³

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2025 (%) (2)	2021	2022	2023	2024	2025
A1	450300	529700	Roadside	0	0	1 (33)	0 (34)	-	-	-
A2	447314	534899	Roadside	-	-	-	-	-	-	-
A3	451429	532312	Urban Background	99.13	99.13	-	0	0	0	10

Notes:

Results are presented as the number of 24-hour periods where daily mean concentrations greater than 50µg/m³ have been recorded.

Exceedances of the PM_{10} 24-hour mean objective (50µg/m³ not to be exceeded more than 35 times/year) are shown in **bold**.

If the period of valid data is less than 85%, the 90.4th percentile of 24-hour means is provided in brackets.

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

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

Figure A.4 – Trends in Number of 24-Hour Mean PM_{10} Results > 50µg/m³

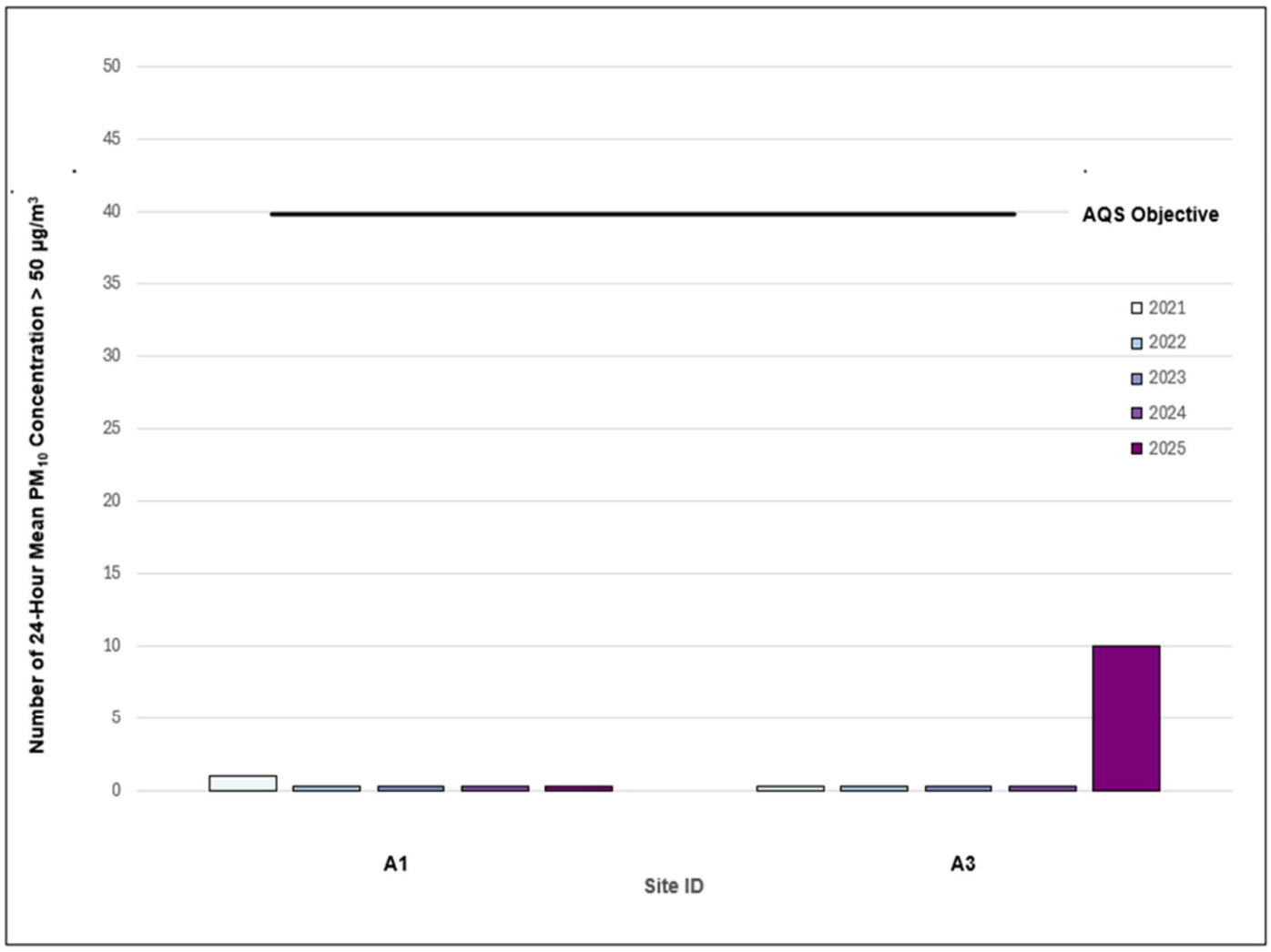


Table A.8 – Annual Mean $PM_{2.5}$ Monitoring Results (µg/m³)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2025 (%) (2)	2021	2022	2023	2024	2025
A1	450300	529700	Roadside	0	0	16	-	-	-	-
A2	447314	534899	Roadside	-	-	-	-	-	-	=
A3	451429	532312	Urban Background	99.13	99.13	0	6.5	7	8	8.4

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

Notes:

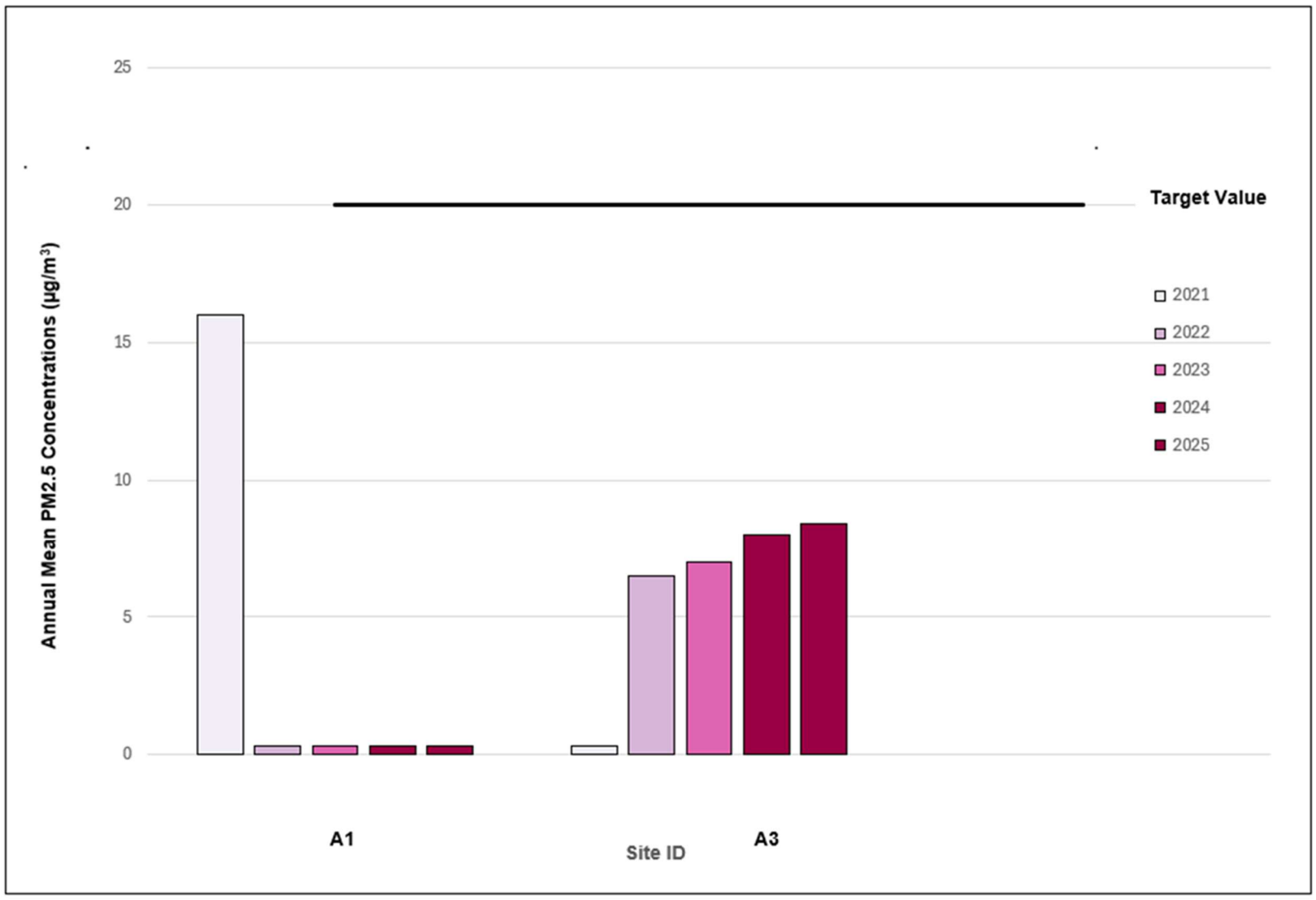
The annual mean concentrations are presented as µg/m³.

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

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

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

Figure A.5 – Trends in Annual Mean $PM_{2.5}$ Concentrations



Appendix B: Full Monthly Diffusion Tube Results for 2025

Table B.1 – NO_2 2025 Diffusion Tube Results (µg/m³)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.78)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
S1	451292	534303	28.5	23.4	20.7	17.4	25.6	12.8	-	11.5	15.0	16.9	20.5	-	19.0	14.9	-	Tube reading not available July and December
S2	450400	533900	22.5	15.9	15.2	11.6	28.7	7.0	9.5	8.2	10.2	11.9	15.5	-	14.0	10.9	-	Tube reading not available December
S3	448395	535806	18.1	12.7	13.6	10.4	24.9	8.7	10.4	9.2	9.9	12.5	12.7	-	12.9	10.0	-	Tube reading not available December
S4	447343	534962	18.3	15.4	15.5	12.6	25.0	9.8	7.6	8.2	11.3	11.7	13.9	-	13.5	10.5	-	Tube reading not available December
S5	449385	531076	34.9	26.9	21.0	17.9	27.2	15.9	14.8	10.3	18.2	-	24.8	-	21.0	16.4	-	Tube reading not available October and December
S6	449600	529100	25.4	18.4	16.0	12.5	25.5	10.1	9.2	10.0	12.9	13.0	13.7	-	15.0	11.7	-	Tube reading not available December
S7	452502	529935	33.3	19.0	23.7	18.1	31.9	16.7	15.1	13.7	18.3	20.6	26.0	-	21.4	16.7	-	Tube reading not available December
S8	450691	531839	24.3	19.7	15.6	17.7	36.4	10.5	15.0	12.9	15.6	9.2	20.3	-	17.7	13.8	-	Tube reading not available December

☒ **All erroneous data has been removed from the NO_2 diffusion tube dataset presented in Table B.1.**

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

☐ **Local bias adjustment factor used.**

☒ **National bias adjustment factor used.**

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

☒ **Hartlepool Borough Council confirm that all 2025 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System.**

Notes:

Exceedances of the NO_2 annual mean objective of 40µg/m³ are shown in **bold**.

NO_2 annual means exceeding 60µg/m³, indicating a potential exceedance of the NO_2 1-hour mean objective are shown in **bold and underlined**.

See Appendix C for details on bias adjustment and annualisation.

Appendix C: Supporting Technical Information / Air Quality Monitoring Data QA/QC

New or Changed Sources Identified Within Hartlepool Borough Council During 2025

Hartlepool Borough Council have identified the following planning approvals for residential dwellings within the reporting year of 2025 which may affect air quality.

Application No: **Decision:** **Decision Date:**	**Proposal:**	**Location of works:**
H/2023/0012 Planning Permission Approved 08/01/2025	Application for the erection of 9 no. Bungalow dwellings.	Land at the junction of Miers Avenue and Arkley Crescent, Hartlepool
H/2022/0181 Planning Permission Approved 26/02/2025	Planning application for the erection of up to 1200 no. dwellings with associated parking, landscaping and infrastructure.	Land North of A689, Wynyard Park Estate, Wynyard Woods
H/2023/0355 Planning Permission Approved 10/04/2025	Change of use from a Care Home (C2 Use Class) to 14no. self-contained residential flats (C3 Use Class)	Highnam Hall, Park Avenue, Hartlepool
H/2022/0382 Planning Permission Approved 31/07/2025	Erection of 51no. dwelling houses (Use Class C3) with associated infrastructure, access and landscaping.	Land West of Wynyard Village and South of the A689, Wynyard, Billingham
H/2025/0114 Planning Permission Approved 30/10/2025	Conversion and partial demolition of the former Gretton Court Care Home to create 14 no. dwellings for independent living and dementia care and associated works	1 Gretton Court, Heather Grove, Hartlepool
H/2022/0255 Planning Permission Approved 19/11/2025	Full Planning permission for the erection of 97 no. dwelling houses (Class C3) with associated infrastructure, access and landscaping	Land North of Countryside Properties, Wynyard Park Estate, Wynyard Woods

Additional Air Quality Works Undertaken by Hartlepool Borough Council During 2025

In 2025 Hartlepool Borough Council replaced the monitoring equipment at it's Stockton Road (Barra Grove) site. However, due to software problems, monitoring at the site has not been undertaken during the year and will re-commence in 2026. The site-specific monitoring equipment based at the Headland was also discontinued as deemed no longer necessary. New automatic monitoring equipment has been installed at Hart Lane (Hart Village) on the busy A179 as a more significant alternative.

QA/QC of Diffusion Tube Monitoring

Hartlepool Borough Council nitrogen dioxide diffusion tube programme is operated through an approved laboratory (SOCOTEC, Didcot) with formal accreditation to BS standards and one that participates in the AIR-PT programme. Particular attention is paid to correct installation of the tubes at site and reliable exposure duration.

Tube precision for this laboratory is consistently shown as good or satisfactory for tube preparation 50% TEA in acetone. SOCOTEC are considered to be satisfactory as they have 97% across their most recent 8 tube rounds where data was available - this indicates that diffusion tube results should be accurate to within +/- 2%.

Diffusion Tube Annualisation

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

Diffusion Tube Bias Adjustment Factors

The diffusion tube data presented within the 2026 ASR have been corrected for bias using an adjustment factor. Bias represents the overall tendency of the diffusion tubes to under or over-read relative to the reference chemiluminescence analyser. LAQM.TG22 provides guidance with regard to the application of a bias adjustment factor to correct diffusion tube monitoring. Triplicate co-location studies can be used to determine a local bias factor based on the comparison of diffusion tube results with data taken from NO_x/NO_2 continuous

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

Hartlepool Borough Council have applied a National bias adjustment factor of 0.78 to the 2025 monitoring data. The national bias adjustment factor was derived using the latest available 'National Diffusion Tube Bias Adjustment Factor Spreadsheet 03/26 (see below).

Hartlepool Borough Council has chosen to use a national bias adjustment factor for the 2025 data and has done so for the previous 4 years. The national bias adjustment factor has been selected on the basis that it includes 17 studies which reflects a larger sample size than would be possible for a local bias-adjustment factor in the Borough.

National Diffusion Tube Bias Adjustment Factor Spreadsheet — Spreadsheet Version Number: 03/26

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

This spreadsheet will be updated at the end of June 2026
LAQM Helpdesk Website

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

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

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

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

Step 3: Select a Year from the Drop-Down List — If a year is not shown, we have no data2

Step 4: Where there is only one study for a chosen combination, you should use the adjustment factor shown with caution. Where there is more than one study, use the overall factor3 shown in blue at the foot of the final column.

If you have your own co-location study then see footnote4. If uncertain what to do then contact the Local Air Quality Management Helpdesk at LAQMHelpdesk@bureauveritas.com or 0800 0327953

Analysed By1	Method (To undo your selection, choose (All) from the pop-up list)	Year (To undo your selection, choose (All))	Site Type	Local Authority	Length of Study (months)	Diffusion Tube Mean Conc. (Dm) (µg/m3)	Automatic Monitor Mean Conc. (Cm) (µg/m3)	Bias (B)	Tube Precision6	Bias Adjustment Factor (A) (Cm/Dm)
SOCOTEC Didcot	50% TEA in acetone	2025	UI	North Lincolnshire Council	12	15	12	21.9%	G	0.82
SOCOTEC Didcot	50% TEA in acetone	2025	UB	Derry City And Strabane District Council	12	12	8	40.1%	G	0.71
SOCOTEC Didcot	50% TEA in acetone	2025	R	Wrexham County Borough Council	12	16	14	9.2%	G	0.92
SOCOTEC Didcot	50% TEA in acetone	2025	R	Horsham District Council	11	19	16	21.3%	G	0.82
SOCOTEC Didcot	50% TEA in acetone	2025	R	Horsham District Council	10	20	16	26.3%	G	0.79
SOCOTEC Didcot	50% TEA in acetone	2025	R	Ipswich Borough Council	12	35	26	36.4%	G	0.73
SOCOTEC Didcot	50% TEA in acetone	2025	R	Leeds City Council	10	36	28	27.7%	G	0.78
SOCOTEC Didcot	50% TEA in acetone	2025	KS	Leeds City Council	12	27	20	35.4%	G	0.74
SOCOTEC Didcot	50% TEA in acetone	2025	R	Leeds City Council	12	36	26	37.4%	G	0.73
SOCOTEC Didcot	50% TEA in acetone	2025	R	Leeds City Council	11	23	18	26.9%	G	0.79
SOCOTEC Didcot	50% TEA in acetone	2025	UC	Leeds City Council	12	24	19	28.0%	G	0.78
SOCOTEC Didcot	50% TEA in acetone	2025	UB	Southend-on-sea City Council	11	16	12	28.5%	G	0.78
SOCOTEC Didcot	50% TEA in acetone	2025		Overall Factor3 (17 studies)				Use		0.78

A summary of bias adjustment factors used by Hartlepool Borough Council over the past five years is presented in Table C.1.

Table C.1 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2025	National	03/26	0.78
2024	National	04/25	0.78
2023	National	06/23	0.77
2022	National	03/22	0.78
2021	National	03/22	0.78

NO_2 Fall-off with Distance from the Road

No diffusion tube NO_2 monitoring locations within Hartlepool Borough Council required distance correction during 2025.

QA/QC of Automatic Monitoring

The management of the St Abbs (AURN) site is undertaken by *Bureau Veritas* on behalf of Defra and Quality Assurance and Quality Control (QA/QC) activities are contracted to *Ricardo Energy & Environment*. Calibration gases for the network are supplied by BOC Limited and are provided with a UKAS certificate of calibration by Ricardo Energy & Environment.

The two Hartlepool continuous local monitoring stations are modern installations and are operated under a comprehensive service contract. Operators of the site have received supplier training.

The Council is committed to achieving accuracy, precision, data capture, traceability and long-term consistency to ensure that data is representative of ambient air quality. In common with other Tees Valley Councils, Hartlepool has a documented quality assurance and control programme, which includes an established schedule of regular site calibrations, validation of data, and documentation of all procedures.

Details are summarised as follows:

Calibration gas is obtained from approved gas standard suppliers. Equipment has a comprehensive service agreement with the supplier.

Data capture site operators are experienced and trained personnel, monitoring data capture on a daily basis where possible to ensure that faults are detected and corrected quickly.

Ratification data is screened, where possible on a daily basis, to check for unusual measurements. Suspicious data is investigated fully, and if found to be faulty, is deleted from the records. Particular attention is paid to possible environmental changes in the vicinity of the analyser.

Data is recorded monthly and compared with earlier results.

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

The Stockton Road monitor uses beta attenuation monitor (BAM) technology. The raw measurements are adjusted to full gravimetric equivalence by dividing by 1.21.

Monitoring data from the new Palas Fidas 200 unit at Hart Lane will commence in 2026 and does not require the application of a correction factor.

The monitoring type used to measure PM_{10} and $PM_{2.5}$ at St Abbs Walk is an Automatic Urban and Rural Network (AURN) and does not require the application of a correction factor. The data has been subject to independent ratification and verification checks and full QA/QC audits at 6 monthly intervals.

Automatic Monitoring Annualisation

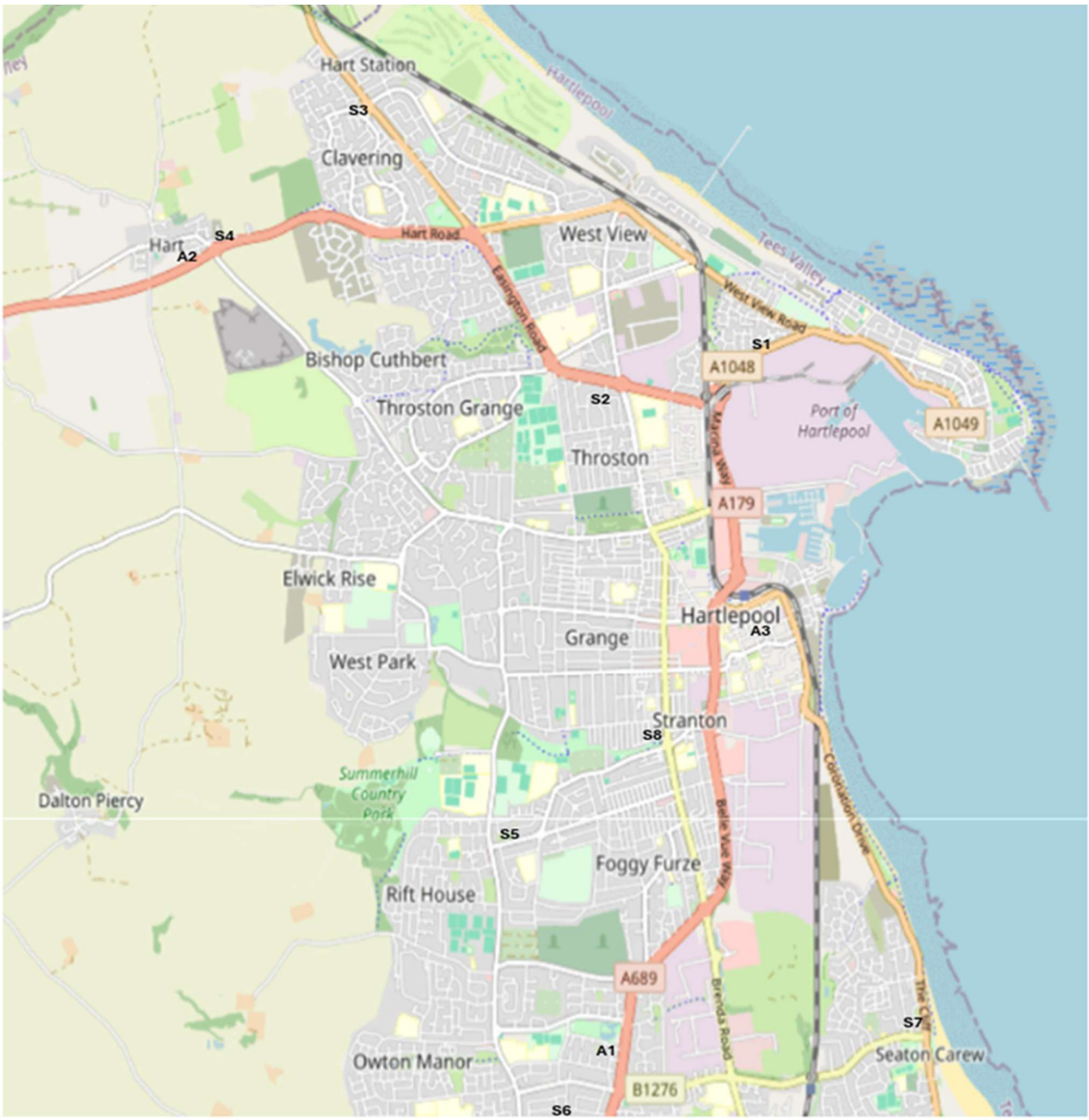
All (operational) automatic monitoring locations within Hartlepool Borough Council recorded data capture of greater than 75% therefore it was not required to annualise any monitoring data. In addition, any sites with a data capture below 25% do not require annualisation.

NO_2 Fall-off with Distance from the Road

No automatic NO_2 monitoring locations within Hartlepool Borough Council required distance correction during 2025.

Appendix D: Map of Monitoring Locations

Figure D.1 – Map of Monitoring Sites



Key:

Automatic Monitoring Sites (A):

A1 - Stockton Road
A2 - Hart Lane
A3 - St Abbs Walk

Diffusion Tubes Sites (S):

S1 - Cleveland Road
S2 - Powlett Road
S3 - Woodstock Way
S4 - The Fens (Hart)
S5 - Oxford Road
S6 - Fens Crescent
S7 - Seaton Carew
S8 - Blakelock Gardens

Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[10]

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

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

Glossary of Terms

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

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