Dover District Council

2025 Annual Status Report

June 2025

Document Control Sheet

Identification	
Client	Dover District Council
Document Title	Dover District Council 2025 Air Quality Annual Status Report
Bureau Veritas Ref No.	AIR26245091

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Version Control				
Version	**Date**	**Author**	**Reason for Issue/Summary of Changes**	**Status**
1.0	May 2025	J Cai	Draft for Comment	Draft
2.0	June 2025	J Cai	Updates	Final

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2025 Air Quality Annual Status Report (ASR)

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

Date: June, 2025

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Report Reference Number	Dover District Council 2025 ASR
Date	June 2025

Local Responsibilities and Commitment

This ASR was prepared by Bureau Veritas in conjunction with the Environmental Protection section of Dover District Council with the support and agreement of the following officers:

Brian Gibson, Senior Environmental Protection Officer

This ASR has been approved by Andrzej Kluczynski, Environmental Protection & Crime Manager:

This ASR has been signed off by a Director of Public Health:

Dr Anjan Ghosh, Director of Public Health, Kent County Council CC

If you have any comments on this ASR please send them to Brian Gibson at:

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Executive Summary: Air Quality in Our Area

Air Quality in Dover District Council

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

Air pollution particularly affects the most vulnerable in society, children, the elderly, and those with existing heart and lung conditions. Low-income communities are also disproportionately impacted by poor air quality, exacerbating health and social inequalities.

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

Table ES 1 - Description of Key Pollutants

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

The Port of Dover town is the district's principal town and is a major hub of transport-related activity and is strategically important for the UK. Large volumes of road traffic utilise the A2 and A20 entering and leaving the town, which predominantly represents the

main source of air pollution in the area. In addition to Dover, Deal and Sandwich are the other main towns within the district.

There is currently one Air Quality Management Area (AQMA) declared within the district. This AQMA has been designated due to exceedances of the annual mean Air Quality Strategy[1] (AQS) Objective for nitrogen dioxide (NO_2), with the elevated concentrations caused primarily by road traffic emissions. The AQMA is:

- High Street/Ladywell AQMA[2], declared in 2007.

The monitor in High St/Ladywell AQMA reports its fifth year of compliance with monitored NO_2 annual mean concentrations below 10% of the AQS objective. The Council therefore intends to revoke this AQMA in 2026.

Annual mean NO_2 concentrations were below 10% of the AQS Objective at all locations in 2024. The highest concentration was 31.5µg/m^3, reported at the triplicate monitoring site (DV-06, DV-07, DV-08) located within the High Street/Ladywell AQMA. A decrease in concentrations was observed at the majority of monitoring sites when compared to 2023 data.

In the past five years, there have been no exceedances of the annual PM_{10} AQS Objective (40µg/m^3) at the automatic PM_{10} monitoring site on Townwall Street (Dover Centre Roadside). In 2024, there were two 24-hour means that exceeded the daily PM_{10} AQS Objective of 50µg/m^3. This is below the PM_{10} AQS 24 hour mean objective (no more than 35 24 hour mean concentrations in exceedance of 50µg/m^3)

There is currently no monitoring undertaken for $PM_{2.5}$ within the district. However, the annual mean $PM_{2.5}$ concentration at Dover Centre in 2024 was estimated in accordance with the methodology presented in LAQM.TG(22) to be 14.0µg/m^3, which is below the $PM_{2.5}$ annual mean AQS Objective of 20µg/m^3.

[1] Defra. UK Air. National Air Quality Objectives.

[2] High Street/Ladywell AQMA. UK Air Defra website for High Street/Ladywell AQMA.

Actions to Improve Air Quality

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

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

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

A new Air Quality Action Plan (AQAP) was approved by Defra in May 2024 and was formally adopted by Dover District Council on 17th July. More information can be found in the DDC Air Quality Monitoring website. Measures to further improve the air quality in Dover have been included in the new AQAP and are presented in this year's ASR.

Dover District Council (the Council) adopted its Core Strategy (CS) in February 2010. The CS covers the period up to 2026 and includes ambitious plans to regenerate Dover and other areas of the district and has an adopted Land Allocations Local Plan (LALP). The Council is currently in the process of producing a Dover District Local Plan[6] which will replace the adopted CS, LALP and 'saved' 2002 Local Plan Policies. A Consultation on Main Modifications ran from 11th April to 24th May 2024, and the Local Plan was adopted on 16th October 2024. Air quality is one of a number of key considerations that has been

[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

[6] Dover. Dover District Local Plan.

taken into account as part of the development, consultation, adoption and implementation of the new Local Plan.

In 2023, KMAQP successfully bid for a joint Defra Air Quality Grant. The funding has been used to develop a digital training resource for Health Care Practitioners across Kent and Medway to enable practitioners to advise patients with cardio-vascular disease or respiratory disease on how to reduce their exposure to air pollution, and work on Patient and Public resources is also underway. The unveiling of the platform coincided with Clean Air Day on 20th June 2024. In 2025, promotional activity is in place for Clean Air Day on 19th June 2025

Conclusions and Priorities

During 2024, there were no exceedances of the relevant annual mean AQS Objective for either NO_2 or PM_{10} across Dover. The concentrations at most sites across the NO_2 diffusion tube network decreased compared to 2023. Comparing with COVID-19 years, 2024 concentrations were decreased at 11 out of 15 sites when compared to 2020 data, and at all 19 sites when compared to 2021 data.

The High St/Ladywell AQMA has now been compliant within 10% of the annual mean NO_2 for five consecutive years. The Council therefore intends to revoke this AQMA in 2026.

There have been no exceedances of the PM_{10} annual mean objectives within the past five years, and there were no exceedances of the daily average AQS Objective in 2024.

A new Air Quality Action Plan (AQAP) was approved by Defra in May 2024 and was formally adopted by Dover District Council on 17th July. The adopted AQAP outlines proposed actions under five broad topics:

Priority 1: Transport

Priority 2: Behaviour Change

Priority 3: Strategies and Policy Guidance

Priority 4: Planning and Infrastructure

Priority 5: Air Quality Monitoring

As Dover District Council is intended to revoke the final AQMA within the district in 2026, Dover District Council plans to change the current adopted AQAP to an Air Quality Strategy to continue to improve air quality in the area.

The Dover District Local Plan was submitted for Examination on Friday 31st of March 2023. The Council consultation on Main Modifications ran from 11th April – 24th May 2024. The Local Plan then was adopted on 16th October 2024.

The impacts of Brexit upon the port will continue to be a key influence in the coming years and any decisions made will be assessed in terms of the air quality impacts within Dover.

How to get Involved

There are several ways that everyone can get involved to help improve air quality in Dover. Due to road traffic being the main source of pollutant emissions within the district you can look to move to more sustainable methods of transport. For example: looking to minimise unnecessary car journeys by choosing to walk, cycle, car-share or use public transport instead.

For further information regarding air quality the following links are provided:

- To download DDC's air quality monitoring data, you can visit: https://kentair.org.uk/data;
- To report a nuisance or pollution problem, please fill in the form located here: https://forms.dover.gov.uk/xfp/form/1230; and,
- All other general enquiries should be made by either ringing 01304 872428 or emailing EnvProtection@DOVER.GOV.UK. You can also visit https://www.dover.gov.uk/Environment/Environmental-Protection/Air-Quality/Air-Quality-Monitoring.aspx.

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Tables

1 Local Air Quality Management

This report provides an overview of air quality in Dover District Council during 2024. It fulfils the requirements of Local Air Quality Management (LAQM) as set out in Part IV of the Environment Act (1995), as amended by the Environment Act (2021), and the relevant Policy and Technical Guidance documents.

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

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

2 Actions to Improve Air Quality

2.1 Air Quality Management Areas

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

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

- NO_2 annual mean;

The A20 AQMA has now been revoked, as of 1st April 2025.

The High St/Ladywell AQMA reports its 5th year of compliance. The Council therefore intends to revoke this AQMA in 2026.

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
High Street/ Ladywell AQMA	2007	NO_2 Annual Mean	An area encompassing roads and properties between the junction of Effingham Crescent/High Street, and Priory Hill/High Street.	NO	50.5 µg/m^3	31.5 µg/m^3	5 years	Dover AQAP, May 2024	https://www.dover.gov.uk/Environment/Environmental-Protection/Air-Quality/Appendix-1-Dover-AQAP-2024-2028.pdf

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

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

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

Defra's appraisal of last year's ASR concluded that the report is well structured, detailed, and provides the information specified in the Guidance. The following comments are designed to help inform future reports:

1. There are good quality maps included in Appendix D. This allows the reader to easily see where each monitoring site is located, and to see if it is still fit for purpose. This is encouraged for future reports.
2. There are good quality graphs included in the discussion of the trends in the monitoring results. This allows the reader to easily see the trends in the monitoring results and is encouraged for future reports.
3. There is good discussion about the planning applications that the council have received in 2023. This allows people to see what future developments could be happening within the council's administrative area and is encouraged for future reports.
4. The column names in Table 2.2 in the ASR don't match Table 2.2 contained within the excel template. This should be corrected before publishing the ASR.
5. There is no text outlining the justification of using a national bias adjustment factor in the QA/QC procedures. This should be corrected for future reports. Also, a local bias adjustment factor should also be calculated and used in future reports, considering that there is a triplicate co-location monitoring site near to the one automatic monitoring site that was used by DDC.

There is no triplicate co-location monitoring site in the district. Therefore, the national bias adjustment factor is used. This is clarified in the QA/QC procedures in this year's report.

Dover District Council has taken forward a number of direct measures during the current reporting year of 2024 in pursuit of improving local air quality. Details of all measures completed, in progress or planned are set out in Table 2.2. 22 measures are included within Table 2.2, with the type of measure and the progress Dover District Council have made during the reporting year of 2024 presented. Where there have been, or continue to be, barriers restricting the implementation of the measure, these are also presented within Table 2.2.

Key completed measure is:

- **Local Plan policy and guidance** - The Dover District Local Plan was adopted on 16th October 2024. It sets out the policies and plans to guide future development to 2040. It is used to determine planning applications in the District. The Local Plan includes sustainable travel initiatives and Air Quality assessments requirement for all planning applications where air quality is an issue.

Dover District Council worked to implement these measures in partnership with the following stakeholders during 2024:

- Kent County Council (KCC)
- Kent and Medway Air Quality Partnership (KMAQP)
- Kent Energy Centre
- National Highways

Dover District Council expects the following measures to be progressed over the course of the next reporting year:

- Encourage Council Travel Plan opportunities and seek to facilitate uptake of sustainable modes of transport;
- Work together with developers to improve sustainable transport links serving new developments; and,
- Work with KCC to improve the facilities for cycling and walking within Dover districtincluding promoting the cycle-to-work scheme.

Dover District Council's priorities for the coming year are:

- **Work with KCC to improve public transport services and encourage the use of more sustainable transport modes –** A new Fast Track Bus Service (ELV) from Whitfield to Dover Town is currently underway. Stagecoach have also committed to invest in low emission technology and have a zero-emission fleet by 2035. KCC is offering travel plans for new developments.
- **Work with KMAQP on promotional activities to raise the profile of air quality in Dover -** Dover DC as member of KMAQP worked with KCC on the Kent and Medway Energy and Low Emissions Strategy (ELES)
- **Procuring low emission vehicles for the LGV and HGV fleet, council-owned fleets and refuse fleet –** Ten Electric Vehicles (EVs) are currently utilised by DDC**.** DDC Environmental Crime team currently runs two ELVs. White Cliffs Countryside

Project have three ELVs. Parking Services have three ELVs. Civic Car is an ELV. Property Services have one ELV.

- **Revocation of High Street/ Ladywell AQMA –** DDC plans to revoke the final AQMA within the district based on the monitoring results. Once the AQMA is revoked, the current AQAP will be changed to a new Air Quality Strategy.

The monitoring results show that High Street/Ladywell AQMA has achieved compliance for consecutive five years. It is therefore anticipated that Dover District Council will proceed with revocation of this final AQMA within the district in 2026.

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
5	Work with KCC to improve public transport services and encourage the use of more sustainable transport modes	Transport Planning and Infrastructure	Public transport improvements-interchanges stations and services	2022	2035	DDC/KCC	DDC/KCC	No	Funded	£1 million - £10 million	Planning	Below annual mean AQS objectives	% modal shift to public transport	Initially the service will be operated by ultra low emission buses which will be replaced by a dedicated fleet of five electric buses in 2025.	. New Fast Track Bus Service (ELV) from Whitfield to Dover Town underway. Stagecoach commitment to invest in low emission technology and have a zero emission fleet by 2035. . KCC offering travel plans for new developments.
8	Work with KMAQP on promotional activities to raise the profile of air quality in Dover	Policy Guidance and Development Control	Regional Groups Co-ordinating programmes to develop Area wide Strategies to reduce emissions and improve air quality	2022	Ongoing	DDC/KMAQP	DDC/KMAQP	No	Not Funded	< £10k	Planning	Below annual mean AQS objectives	% improvement in energy efficiency, SAP rating	Currently exploring Abbie Ayre and the Shed of Science AQ shows to schools in Dover area. Digital resource for Healthcare professionals now launched	Dover DC as member of K&MAQP worked with KCC on Kent and Medway Energy and Low Emissions Strategy (ELES)
17	Procuring low emission vehicles for the LGV and HGV fleet, council-owned fleets and refuse fleet	Promoting Low Emission Transport	Company Vehicle Procurement - Prioritising uptake of low emission vehicles	Ongoing	2029	DDC	DDC	No	Not Funded	£50k - £100k	Implementation	NO_2 To be confirmed if considered for further assessment. NO_x emission reduction will be able to be calculated annually depending on the change in fleet composition	Fleet composition	10 Electric Vehicles current utilised by DDC.	DDC Environmental Crime team currently runs two ELVs. White Cliffs Countryside Project have three ELVs. Parking Services have three ELVs. Civic Car is an ELV. Property Services have one ELV.
1	Encourage Council Travel Plan opportunities and seek to facilitate uptake of sustainable modes of transport;	Promoting Travel Alternatives	Workplace Travel Planning	2023	2025-2027	DDC	DDC	No	Not Funded	< £10k	Planning	Below annual mean AQS objectives	% increase in amount of usage in schemes identified in comments column	Ongoing	Cycle to work scheme Electric Staff Vehicle Pool Car trial Electric Vehicle Staff Salary scheme ·Flexible and remote working
2	Work together with KCC to encourage the uptake of Employer and School Travel Plans within the District; including School start time variations and walking to school incentives/ encouragement	Promoting Travel Alternatives	School Travel Plans	2022	tbc	DDC/KCC	DDC/KCC	No	Not Funded	< £10k	Planning	Below annual mean AQS objectives	. No. of travel plans in place . Reduction in school vehicle drop-offs / pick-ups	On-going	Approximately 73% of primary and 89% of secondary schools in Dover District have approved school travel plans
3	Work with KCC to improve the facilities for cycling and walking within Dover district; promote cycle-	Promoting Travel Alternatives	Promotion of cycling	Ongoing	2025-2027	DDC/KCC	DDC/KCC	No	Not Funded	< £10k	Planning	Below annual mean AQS objectives	. %modal shift to cycling/walking, No. miles new cycle lanes/routes . Number of	On-going	. Includes Dover District Cycling Plan. 2019 Updated DDC website published local cycle routes and introduced Betteshanger cycle tracks. DDC introduced Cycling to Work scheme in Oct 2021.

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
	to-work scheme and bike rental scheme												bikes available and rentals		. Introduction of: - E cycle training scheme - Kent Connected App - Clearing of NCN paths - Explore Kent website
4	Work together with developers to improve sustainable transport links serving new developments.	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2022	2025-2027	DDC	DDC	No	Not Funded	< £10k	Planning	Below annual mean AQS objectives	No. planning applications where improvements secured	Planning conditions included in all major developments to install ELV charging points	Change in building regulations requiring some new developments to have electric vehicle charging infrastructure.
6	Local air quality monitoring within the District to ensure a high standard of data is achieved	Public Information	Other	1995 onwards	ongoing	DDC	DDC	No	Not Funded	£10k - 50k	Planning	Below annual mean AQS objectives	Recorded Concentration	Completed Annually, renewed in 2018. Two automatic sites decommissioned, but more diffusion tubes added to compensate	General trend of reduction in concentrations monitored (LAQMTG22)
7	Make details of the Action Plan measures and annual progress reports available on the Website	Public Information	Via the Internet	Annually	Annually	DDC	DDC	No	Not Funded	< £10k	Planning	Below annual mean AQS objectives	Availability of recently published reports on the Website	DDC now revoked AQMA in Townwall St	ASR documents freely available. Part of general and continual efforts of DDC Environmental Protection..
9	Local Plan policy and guidance	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	Ongoing	2024	DDC/KCC	DDC/KCC	No	Not Funded	< £10k	Implementation	Below annual mean AQS objectives	Implementation of policy	Local Plan timetable: Regulation 18 draft since November 2021; Local Plan dated to 2040	. The DDC draft local plan already includes sustainable travel initiatives. . AQ Assessments for all planning applications where AQ is an issue . Developers are advised to make reference to K&MAQP Guidance for AQ and IAQM/EPUK Guidance
10	District wide promotion of active travel	Promoting Travel Alternatives	Intensive active travel campaign & infrastructure	Ongoing	2025-2027	DDC/KCC	DDC/KCC	No	Not Funded	< £10k	Planning	NO_2 Measure to increase public awareness	Number of promotion events	National campaigns promoted on social media platforms	DDC webpages can link to active travel - KCC looking to update Local Transport Plan -. DDC run Wellbeing at Work initiatives.
11	Behaviour change campaigns to reduce single occupancy car trips	Public Information	Other	Ongoing	2025-2027	DDC	DDC	No	Not Funded	< £10k	Implementation	NO_2 Measure to increase public awareness	Number of campaigns	Electric pool cars available and DDC staff mileage scheme reviewed	Officers are encouraged to car share where site visits permit. Social media posts to encourage the public to follow DDCs example.
12	Flexible working and home working encouraged	Promoting Travel Alternatives	Encourage / Facilitate home-working	2023	2025-2027	DDC	DDC	No	Not Funded	< £10k	Implementation	NO_2 Measure to increase public awareness	Number of campaigns	New Flexible working policy being viewed at DDC	Flexible working and home working policy has already been in place.
13	Educational campaigns for schools	Public Information	Other	2022	2025-2027	DDC	DEFRA and LA contributions	Yes	Partially funded	<£10k	Planning	NO_2 Measure to increase public awareness	Number of school sign ups to pollution patrol	Reviewed in early 2023 to evaluate school participation	As part of a 'Schools Group' DDC partner in a successful Defra bid for a 'Digital Schools

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
															Resource' led by Canterbury CC called "Pollution Patrol"
14	District wide Clean Air Days	Public Information	Other	2023	2023-2027	DDC/KCC	DDC/KCC	No	Not Funded	< £10k	Implementation	NO_2 Measure to increase public awareness	Number of campaigns	part of Kent initiative 2022. Promotional activity in place for Clean Air Day 25th June 2025	DDC to promote national clean air days.
15	Taxi/Private Hire Vehicle Policy license fees	Promoting Low Emission Transport	Taxi Licensing conditions	2022	2023	DDC	DDC	No	Not Funded	£1,500	Implementation	NO_2 Measure to increase public awareness	Implementation of policy	Part of DDC Licensing Policy	DDC new Licensing Policy. 4.3.3: Vehicle Specifications enable Electric, Hybrid or LPG converted vehicles to be licensed. This Authority offers a reduction in the licence fee for any vehicle that is electric, hybrid or LPG converted of 25%.
16	Engage with bus operators to introduce ultra-low emission vehicles into the fleets	Vehicle Fleet Efficiency	Promoting Low Emission Public Transport	2022	2022	DDC	DDC	No	Not Funded	< £10k	Implementation	NO_2 To be confirmed if considered for further assessment. NO_x emission reduction will be able to be calculated annually depending on the change in fleet composition	Fleet composition	Part of Construction of Dover Fastrack 2022	Dover Fastrack which will become a zero-emission bus service with a fleet of electric buses – has a new route under construction. In addition Stagecoach have a net zero target for their fleet of 2035
18	Alternative fuel (EV) infrastructure development	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	2022	2023	DDC	Office for zero Emission Vehicles	No	Funded	£320,529 (Total Project Costs)	Planning	NO_2 Small impact upon NO_2 concentrations from measure individually, estimated to be less than 1µg/m^3 based upon a low to medium uptake.	Number of EV charging points	29 public electric vehicle charging posts installed across the district	DDC succeed in OLEV funding bid for 19 sites, 42 units to be completed 2022. Additional 7 ELV chargers have been installed at Council office car park and there are plans to increase numbers for public use.
19	On and off-street parking charges linked to vehicle emissions standards	Promoting Low Emission Transport	Priority parking for LEV's	2022	2022	DDC	DDC	No	Not Funded	< £10k	Implementation	NO_2 Small impact upon NO_2 concentrations from measure individually, estimated to be less than 1µg/m^3 based upon a low to medium uptake.	Number of discounted permits	Parking permits discounted for low emission vehicles	On and off street parking charges for low emission vehicles explored.

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	Port of Dover improvements	Freight and Delivery Management	Other	2022	2025-2027	Port of Dover	Port of Dover	No	Not Funded	£50k - £100k	Planning	NO_2 Small impact upon NO_2 concentrations from measure individually, estimated to be less than 1µg/m^3 based upon a low to medium uptake.	Reduction in NO2 concentrations	Port of Dover have published an Air Quality Action Plan	· P&O have 2 new hybrid vessels that use electric power when in port to reduce emissions. · POD exploring use of further anti-idling signage along port “buffer zone”. · Feasibility Study undertaken regarding use of electric vehicles
21	Provision of high quality, bespoke and accessible information on sustainable travel	Public Information	Other	2022	2022	DDC/KCC	DDC/KCC	No	Not Funded	< £10k	Planning	NO_2 Measure to increase public awareness	Number of campaigns	DDC officers’ input in to KCC Low Emission Strategy.	DDC officers’ input in to KCC Low Emission Strategy.
22	Work with Kent Energy Centre to promote and implement energy efficiency measures in Dover	Promoting Low Emission Plant	Shift to installations using low emission fuels for stationary and mobile sources	2019	2022	DDC/Kent Energy Centre	DDC/Kent Energy Centre	No	Not Funded	< £10k	Planning	Below annual mean AQS objectives	% improvement in energy efficiency, SAP rating	On-going	Dover DC as member of K&MAQP worked with KCC on Kent and Medway Energy and Low Emissions Strategy (ELES)

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

As detailed in Policy Guidance LAQM.PG22 (Chapter 8) and the Air Quality Strategy[7], local authorities are expected to work towards reducing emissions and/or concentrations of fine particulate matter ($PM_{2.5}$)). There is clear evidence that $PM_{2.5}$ (particulate matter smaller 2.5 micrometres) has a significant impact on human health, including premature mortality, allergic reactions, and cardiovascular diseases.

The Defra 2024 background maps for Dover (2021 reference year)[8] show that all background concentrations of $PM_{2.5}$ are far below the annual mean Air Quality Objectives of 20µg/m^3 for $PM_{2.5}$. The average $PM_{2.5}$ background concentration for DDC is 5.6µg/m^3. The highest background concentration is estimated to be 8.4µg/m^3 within the 1 x 1km grid square with the centroid grid reference of 623500,151500. This grid square is located near Spinney Lane in Aylesham, outside of the AQMAs. There is an industrial estate within the village including a waste recycling centre on Spinney Lane. The industrial and agricultural activities in, and surrounding, the village may contribute to the $PM_{2.5}$ concentration at this location. The background maps also provide a breakdown of sources. For this grid square, the majority of the estimated $PM_{2.5}$ concentration (3.9µg/m^3) is attributed to secondary $PM_{2.5}$ formation, where $PM_{2.5}$ is formed from the chemical reactions of other gaseous atmospheric pollutants such as sulfur dioxide (SO_2) and nitrogen oxides (NO_x, NO and NO_2).

The Public Health Outcomes Framework data tool[9] compiled by Public Heath England quantifies the mortality burden of $PM_{2.5}$ within England on a county and local authority scale. The 2023 fraction of mortality attributable to particle air pollution (indicator D01) in Dover is 4.8%, which is below the average for the Southeast region (5.1%) and for

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

[8] Defra Background Mapping data for local authorities (2021-based), available online at https://uk-air.defra.gov.uk/data/laqm-background-maps?year=2021

[9] Public Health Outcomes Framework, Public Health England. data tool available online at https://fingertips.phe.org.uk/profile/public-health-outcomes-framework

England (5.2%). The 2022 estimates of the fraction of mortality attributable to $PM_{2.5}$ pollution range from 2.5% in West Devon to 8.3% in the City of London.

It was proposed, as suggested in LAQM.TG(22) that action in relation to $PM_{2.5}$ monitoring, and reduction actions are reviewed with Kent County Council Public Health Team whilst developing the updated AQAP to consider whether any specific additional actions are required. Dover District Council expects that some of the measures implemented within its AQAP and set out in Table 2.2 for the achievement of reductions in NO_2 will have co-benefits in additionally reducing concentrations of PM_{10} and $PM_{2.5}$. As road transport has been identified as the main source of pollution within Dover District Council and is known to be an important source of $PM_{2.5}$ emissions, measures aimed at promoting low emission transport and travel alternatives are likely to help reduce local $PM_{2.5}$ concentrations. In particular, measures 1 to 5 in Table 2.2 can be expected to reduce $PM_{2.5}$ emissions from road transport within the district.

The Council recognise the importance of considering $PM_{2.5}$ and that long-term exposure (over several years) to elevated concentrations of particulate matter ($PM_{2.5}$) at levels typically experienced in urban areas reduces life expectancy between several months and a few years. Dover Council has contributed to and supports the Kent and Medway Energy and Low Emissions Strategy, published in June 2020[10]. The strategy highlighted that in 2017 there were an estimated 922 deaths associated with $PM_{2.5}$ exposure across Kent and Medway. The Kent and Medway Energy and Low Emissions Strategy has therefore included particulate matter as one of the key indicators of success across the region.

[10] https://www.kent.gov.uk/__data/assets/pdf_file/0009/112401/Kent-and-Medway-Energy-and-Low-Emissions-Strategy.pdf

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

This section sets out the monitoring undertaken within 2024 by Dover District Council and how it compares with the relevant air quality objectives. In addition, monitoring results are presented for a five-year period between 2020 and 2024 to allow monitoring trends to be identified and discussed.

3.1 Summary of Monitoring Undertaken

3.1.1 Automatic Monitoring Sites

Dover District Council undertook automatic (continuous) monitoring of particulate matter of less than 10 micrometres in diameter (PM_{10}) at one site during 2024. Table A.1 in Appendix A shows the details of the automatic monitoring sites.

The Dover Centre Roadside page available on Kent Air presents automatic monitoring results for Dover District Council.

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

Dover District Council undertook non- automatic (i.e. passive) monitoring of NO_2 at 21 sites during 2024. Table A.2 in Appendix A presents the details of the non-automatic sites.

Maps showing the location of the monitoring sites are provided in Appendix D. Further details on Quality Assurance/Quality Control (QA/QC) for the diffusion tubes, including bias adjustments and any other adjustments applied (e.g. annualisation and/or distance correction), are included in Appendix C.

3.2 Individual Pollutants

The air quality monitoring results presented in this section are, where relevant, adjusted for bias, annualisation (where the annual mean data capture is below 75% and greater

than 25%), and distance correction. Further details on adjustments are provided in Appendix C.

3.2.1 Nitrogen Dioxide (NO_2)

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

For diffusion tubes, the full 2024 dataset of monthly mean values is provided in Appendix B. Note that the concentration data presented in Table B.1 includes distance corrected values, only where relevant.

In 2024, there was one triplicate monitoring site (DV-06, DV-07 and DV-08) located within the High Street/Ladywell AQMA, as well as two additional monitoring sites located near to the AQMA boundary (DV-31 and DV-30). All sites in and around the High Street/Ladywell AQMA reported annual mean NO_2 concentrations below 10% of the AQS Objective, and concentrations at all sites decreased when compared to 2023 data. The highest concentration of 31.5µg/m^3 was reported at the triplicate site located within High Street/Ladywell AQMA.

The High Street/Ladywell AQMA has been compliant with the annual mean NO_2 objective (within 10% of the AQS objective) for five consecutive years since 2020. While concentrations in 2020 and 2021 were likely impacted by reduced activity during the COVID-19 pandemic, the overall trend from 2020-2025 shows sustained compliance. Therefore, the Council plans to revoke this AQMA in 2026

At all monitoring locations outside of AQMAs, annual mean NO_2 concentrations were below 10% of the AQS objective. Most of the monitoring locations recorded annual mean concentrations lower than the reported 2023 concentrations except for the triplicate site DV-11, DV-16, DV 17 and site DV-40 which recorded slight increases of 0.4µg/m^3 and 0.9 µg/m^3, respectively.

The reduction in concentrations across the district is likely a result of Dover District Council's ongoing efforts to tackle NO_2 emissions from road traffic through measures targeting the promotion of low emission transport and travel alternatives (as set out in Table 2.2).

There have been no diffusion tube monitoring sites with an annual mean greater than 60µg/m^3. As per LAQM.TG(22), an annual mean NO_2 concentration greater than 60µg/m^3 can be used as a proxy to indicate whether there is an exceedance of the NO_2 1-hour mean AQS Objective (no more than 18 hourly mean concentrations in exceedance of 200µg/m^3). It is therefore assumed that there have been no exceedances of the 1-hour mean objective of 200µg/m^3 within Dover.

3.2.2 Particulate Matter (PM_{10})

Table A.4 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.5 in Appendix A compares the ratified continuous monitored PM_{10} daily mean concentrations for the past five years with the air quality objective of 50µg/m^3, not to be exceeded more than 35 times per year.

The PM_{10} monitoring site is located in Dover Centre within the A20 AQMA (which was revoked in April 2025). There have been no exceedances of the PM_{10} AQS objective within the past five years. The 2024 annual mean concentration (20.3µg/m^3) was slightly reduced when compared to 2023 data (21.5µg/m^3). There were two 24-hour means that exceeded 50µg/m^3, compared to zero in 2023. This is below the PM_{10} AQS 24 hour mean objective (no more than 35 24 hour mean concentrations in exceedance of 50µg/m^3)

3.2.3 Particulate Matter ($PM_{2.5}$)

There is currently no monitoring of $PM_{2.5}$ within Dover District Council. However, in accordance with LAQM.TG(22), $PM_{2.5}$ concentrations can be estimated from monitored PM_{10} concentrations using either a local PM_{10} and $PM_{2.5}$ monitoring PM_{coarse} split (the fraction of PM between 10µm and 2.5µm, i.e. PM_{10} minus $PM_{2.5}$), or a nationally derived factor[11].

The national factor for PM_{coarse} split is 4.5 for background sites and 6.0 for roadside sites in 2024. As there is no local monitoring for $PM_{2.5}$, the nationally derived roadside factor of 6.0 road has been applied to the PM_{10} concentration (20.3 µg/m^3) at the Dover Centre

[11] Defra. Estimating $PM_{2.5}$ from PM_{10} Measurements. Available at: https://laqm.defra.gov.uk/air-quality/air-quality-assessment/estimating-pm2-5-from-pm10-measurements/

Roadside automatic monitoring site. The estimated $PM_{2.5}$ concentration in 2024 was therefore 14.3µg/m^3, which is below the $PM_{2.5}$ annual mean AQS Objective (20µg/m^3).

3.2.4 Sulphur Dioxide (SO_2)

There is currently no SO_2 monitoring in Dover, however historically Dover undertook SO_2 monitoring in the previously declared Eastern Docks AQMA.

The AQMA was declared for exceedances of the 15-minute SO_2 objective in the Eastern Docks area in 2002. Since this time, sulphur emissions from ferry ships using the Port of Dover have reduced. Monitoring data showed that the air quality objectives were being met at the port, with no exceedances since 2006. Residents within the AQMA were consulted via letter in 2013 and no comments were received; the AQMA was therefore revoked in 2014 and monitoring was discontinued.

Appendix A: Monitoring Results

Table A.1 – Details of Automatic Monitoring Sites

Site ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA?	Which AQMA? (1)	Monitoring Technique	Distance to Relevant Exposure (m) (2)	Distance to kerb of nearest road (m) (1)	Inlet Height (m)
Dover Centre	A20 Townwall Street, Dover	Roadside	632302	141465	PM_{10}	NO	N/A	TEOM	N/A	2.5	2

Notes:

(1) N/A if not applicable

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

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

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
DV-01	Paydens, High Street, Dover	Roadside	631369	141961	NO_2	NO	2.0	1.5	NO	2.6
DV-04	Car Park - Opp No.2, Christchurch Way, Dover	Urban Background	630944	143159	NO_2	NO	6.0	N/A	NO	1.6
DV-05	Bench Street, Dover	Urban Centre	631986	141321	NO_2	NO	4.0	30.0	NO	3.0
DV-06, DV-07, DV-08	Dover Town Hall	Roadside	631601	141722	NO_2	YES - High St/Ladywell	0.0	2.5	NO	3.0
DV-10	PM10 Micros TEOM, Townwall Street, Dover	Roadside	632298	141469	NO_2	NO	0.0	2.5	NO	2.0
DV-11, DV-16, DV-17	The Gateway, Dover	Roadside	632317	141429	NO_2	NO	0.0	12.0	NO	3.0
DV-12, DV-18, DV-19	St Martins House, Hawkesbury Street, Dover	Roadside	631576	140474	NO_2	NO	0.0	10.0	NO	3.0
DV-23	126, Snargate Street, Dover	Roadside	631729	140965	NO_2	NO	0.0	15.0	NO	3.0
DV-24	148, Snargate Street, Dover	Roadside	631825	141112	NO_2	NO	0.0	10.0	NO	3.0
DV-25	167, Snargate Street, Dover	Roadside	631858	141167	NO_2	NO	0.0	15.0	NO	3.0
DV-28	Sunny Corner, Old Folkestone Road, Dover	Urban Background	630717	140020	NO_2	NO	0.0	N/A	NO	2.0

Diffusion Tube ID	Site Name	Site Type	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Pollutants Monitored	In AQMA? Which AQMA?	Distance to Relevant Exposure (m) (1)	Distance to kerb of nearest road (m) (2)	Tube Co-located with a Continuous Analyser?	Tube Height (m)
DV-30	19, High Street, Dover	Kerbside	631581	141744	NO_2	NO	0.0	5.0	NO	2.0
DV-31	3, Ladywell, Dover	Kerbside	631598	141763	NO_2	NO	2.0	2.0	NO	2.0
DV-32	1, Marine Parade, Dover	Roadside	632657	141499	NO_2	NO	2.0	4.0	NO	2.0
DV-33	24, Marine Parade, Dover	Roadside	632835	141572	NO_2	NO	10.0	5.0	NO	2.0
DV-36	Sholden Primary School, London Road, Deal	Roadside	635698	152325	NO_2	NO	0.0	2.0	NO	2..0
DV-37	London Road, Deal	Kerbside	636161	151957	NO_2	NO	5	2.0	NO	2.0
DV-38	Roundabout, London Road, Deal	Kerbside	636259	151914	NO_2	NO	2.0	1.5	NO	2.0
DV-39	St Edmund's School, Barton Road, Dover	Roadside	631418	142455	NO_2	NO	5	2.5	NO	2.0
DV-40	39 Queen Street, Deal	Roadside	637538	152556	NO_2	NO	1.8	2.9	No	2.0
DV-41	4-6 West Street, Deal	Roadside	637507	152590	NO_2	NO	0.5	3.0	No	2.0

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: Non-Automatic Monitoring (µg/m^3)

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
DV-01	631369	141961	Roadside	90.4	90.4	25.5	26.2	26.1	24.6	22.7
DV-04	630944	143159	Urban Background	90.4	90.4	12.7	13.7	13.8	11.6	11.6
DV-05	631986	141321	Urban Centre	100.0	100.0	20.3	22.1	23.6	23.3	22.0
DV-06, DV-07, DV-08	631601	141722	Roadside	100.0	100.0	33.7	35.2	35.5	32.8	31.5
DV-10	632298	141469	Roadside	100.0	100.0	26.4	28.3	30.6	25.8	25.4
DV-11, DV-16, DV-17	632317	141429	Roadside	100.0	100.0	23.1	22.1	24.7	21.0	21.4
DV-12, DV-18, DV-19	631576	140474	Roadside	100.0	100.0	26.5	27.2	26.5	25.1	23.7
DV-23	631729	140965	Roadside	100.0	100.0	25.3	27.7	28.2	25.7	24.8
DV-24	631825	141112	Roadside	84.6	84.6	26.1	27.6	27.4	27.2	25.6
DV-25	631858	141167	Roadside	92.3	92.3	28.9	30.2	30.8	28.7	27.5
DV-28	630717	140020	Urban Background	100.0	100.0		14.1	16.3	12.8	12.6
DV-30	631581	141744	Kerbside	100.0	100.0	35.7	33.9	36.5	31.2	29.5

Diffusion Tube ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
DV-31	631598	141763	Kerbside	100.0	100.0	23.5	26.5	29.6	26.6	25.6
DV-32	632657	141499	Roadside	92.3	92.3	26.7	28.5	29.8	27.4	27.1
DV-33	632835	141572	Roadside	82.7	82.7	28.4	29.5	32.9	30.4	29.3
DV-36	635698	152325	Roadside	100.0	100.0	14.9	16.4	16.0	14.3	14.2
DV-37	636161	151957	Kerbside	100.0	100.0	-	29.5	22.9	20.8	20.4
DV-38	636259	151914	Kerbside	92.3	92.3	-	34.0	37.4	30.1	29.4
DV-39	631418	142455	Roadside	92.3	92.3	-	19.9	18.9	18.7	17.4
DV-40	637538	152556	Roadside	100.0	25.0	-	-	-	17.4	18.3
DV-41	637507	152590	Roadside	100.0	25.0	-	-	-	18.4	18.4

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

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

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

Notes:

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

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

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

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

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

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

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

Figure A.1 – Trends in Annual Mean NO_2 Concentrations: Within and nearby the High Street/Ladywell AQMA

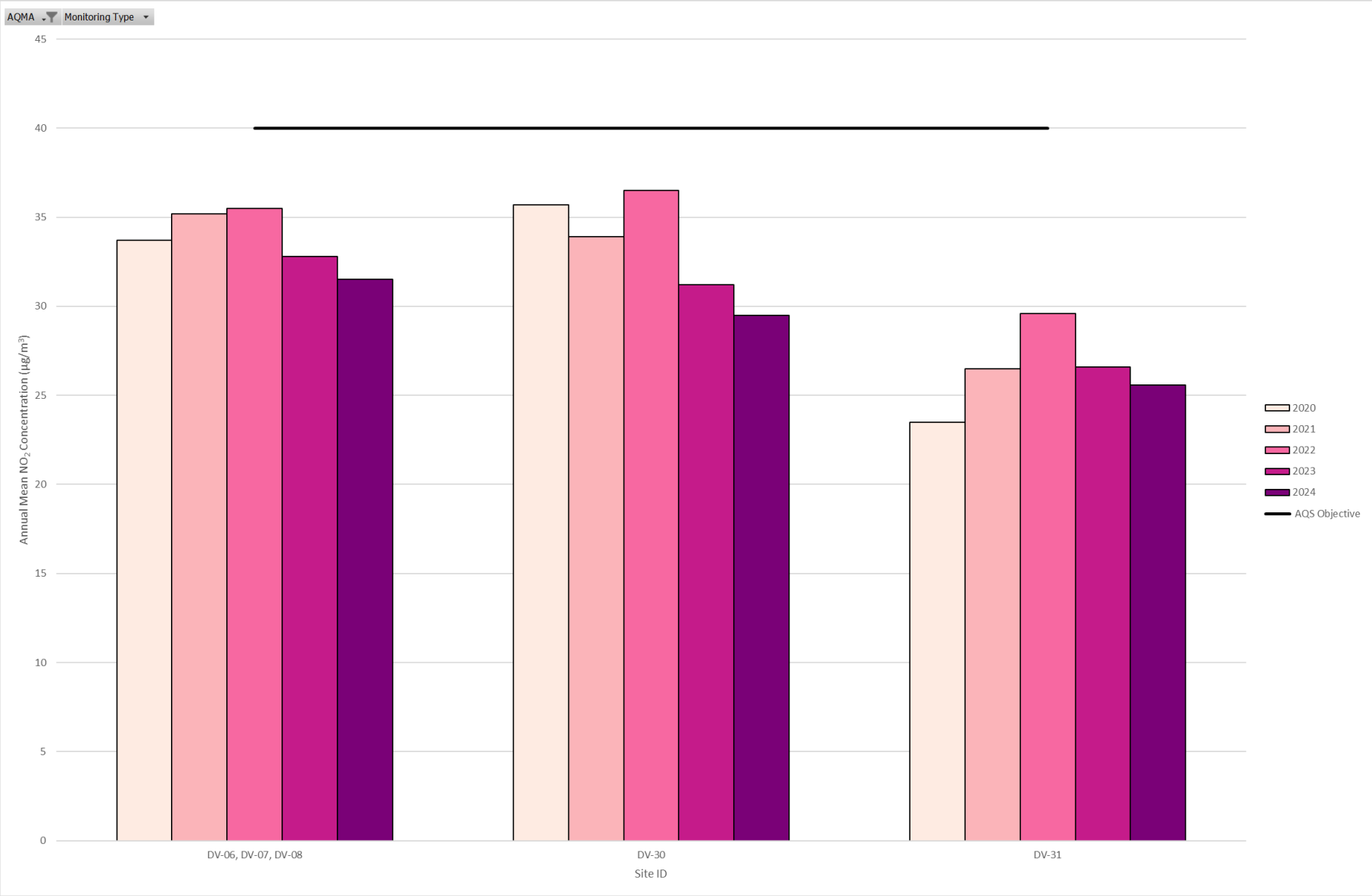


Figure A.2 – Trends in Annual Mean NO_2 Concentrations: Outside of AQMA

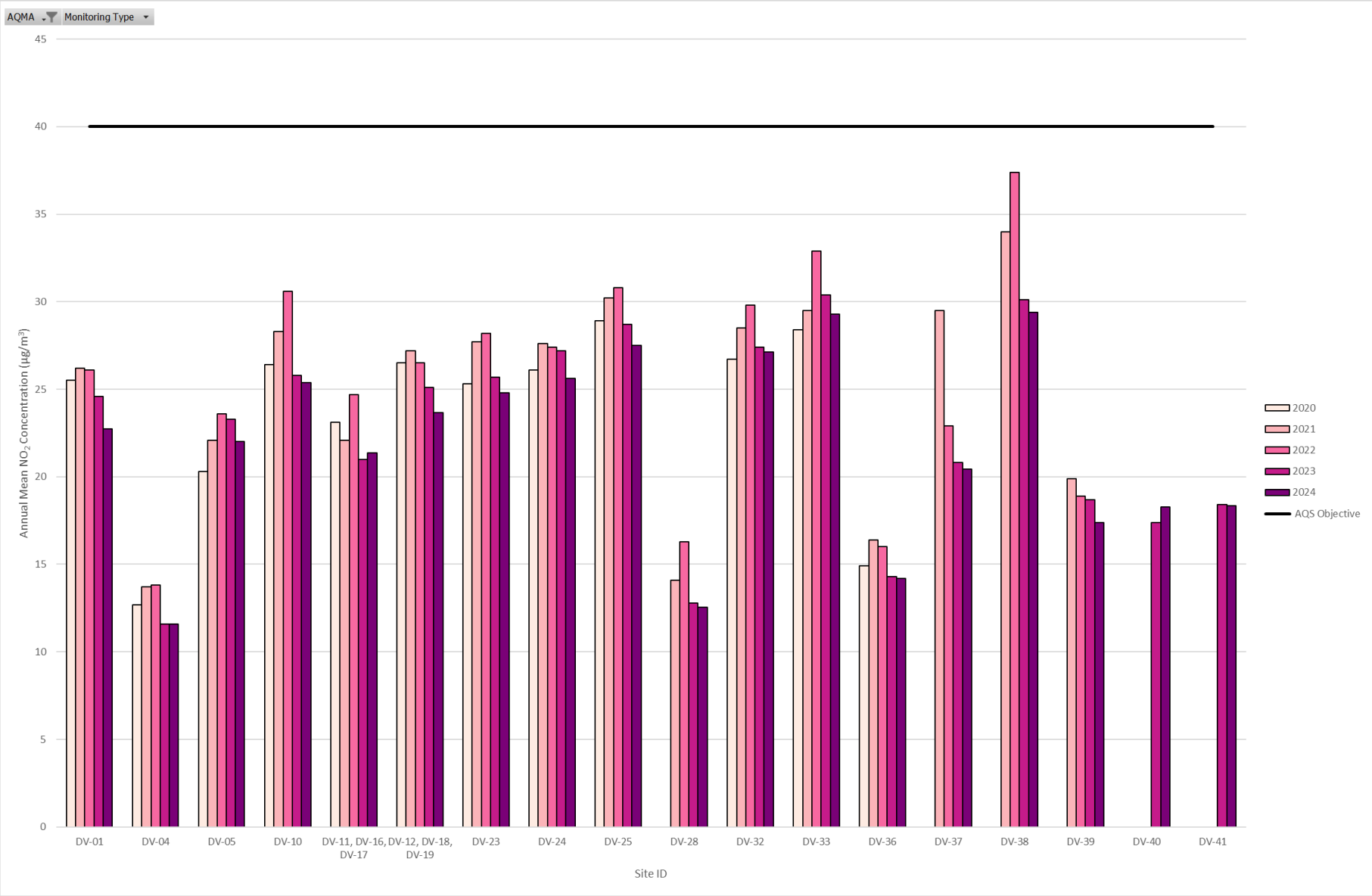


Table A.4 – Annual Mean PM_{10} Monitoring Results ($\mu g/m^3$)

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
Dover Centre	632302	141465	Roadside	97.6	97.6	22.7	20.8	22.0	21.5	20.3

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

Notes:

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

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

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

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

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

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

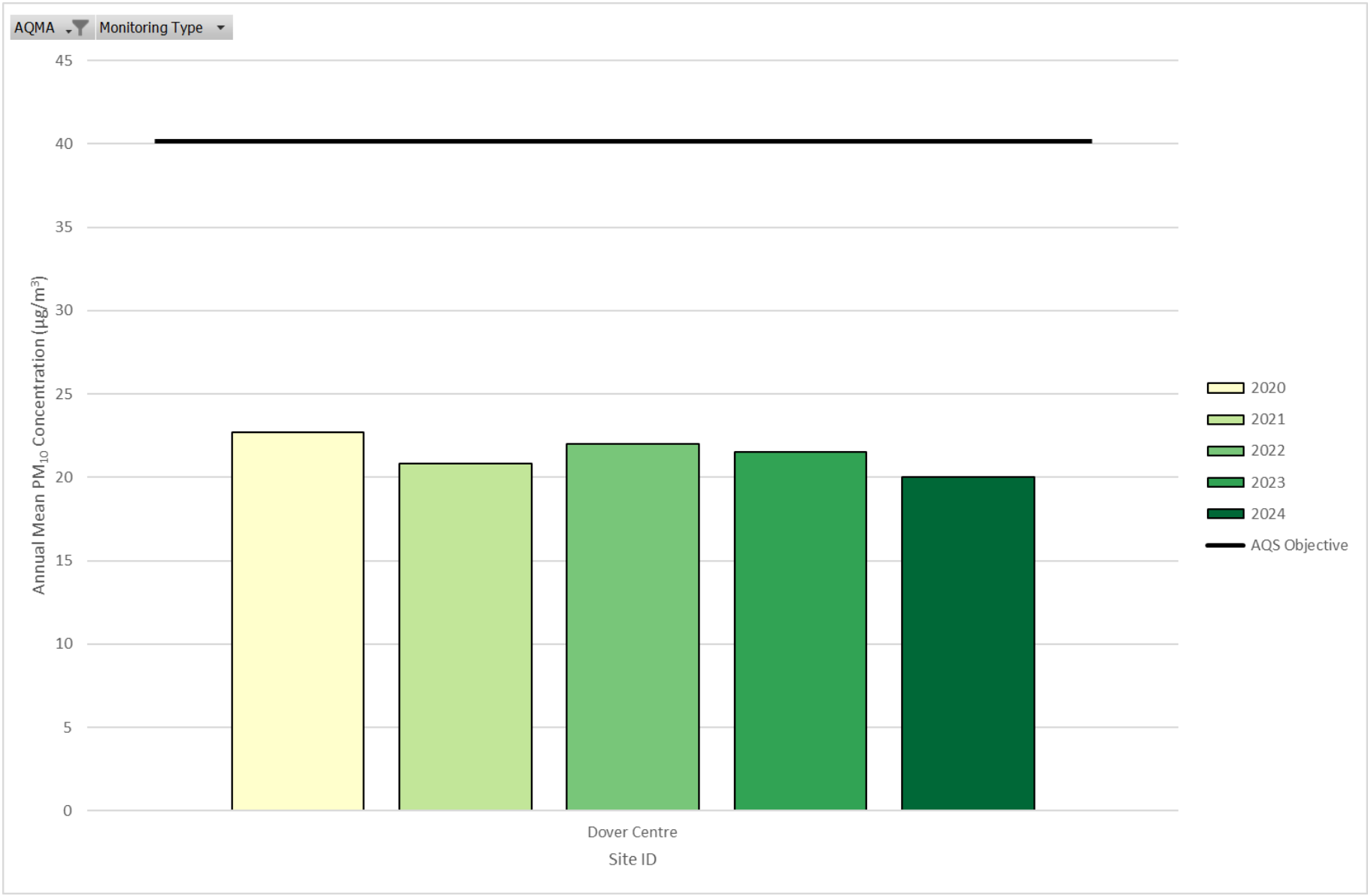


Table A.5 – 24-Hour Mean PM_{10} Monitoring Results, Number of PM_{10} 24-Hour Means > 50µg/m^3

Site ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Site Type	Valid Data Capture for Monitoring Period (%) (1)	Valid Data Capture 2024 (%) (2)	2020	2021	2022	2023	2024
Dover Centre	632302	141465	Roadside	97.6	97.6	1	0	2	0	2

Notes:

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

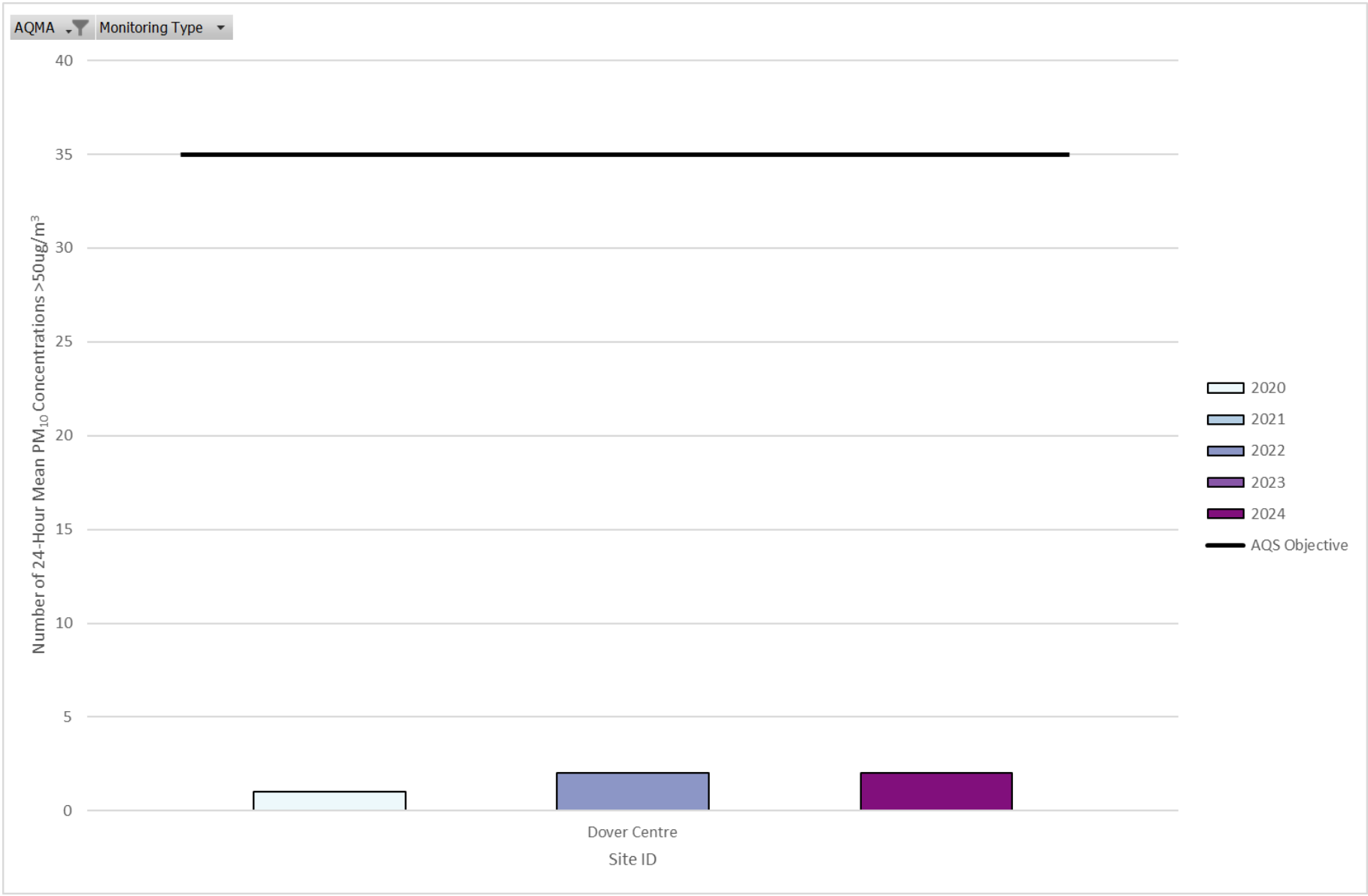
Exceedances of the PM_{10} 24-hour mean objective (50µg/m^3 not to be exceeded more than 35 times/year) are shown in **bold**.

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

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

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

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



Appendix B: Full Monthly Diffusion Tube Results for 2024

Table B.1 – NO_2 2024 Diffusion Tube Results ($\mu g/m^3$)

DT ID	X OS Grid Ref (Easting)	Y OS Grid Ref (Northing)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean: Raw Data	Annual Mean: Annualised and Bias Adjusted (0.84)	Annual Mean: Distance Corrected to Nearest Exposure	Comment
DV-01	631369	141961	29.5	37.7	39.6	20.6	21.5	25.2	30.0	26.8	35.6	33.5	30.6	19.1	29.1	22.7		
DV-04	630944	143159	9.7	16.0	19.0	13.7	16.7	12.1	14.9	12.7	14.8	17.9	20.1	10.6	14.9	11.6	-	
DV-05	631986	141321	33.1	32.8	37.9	28.3		25.7	31.2	25.3	24.3	29.4	30.8	11.7	28.2	22.0	-	
DV-06	631601	141722	43.2	39.5	48.1	39.3	43.7	43.7	40.7	40.8	39.1	46.2	27.1	29.1	-	-	-	Triplicate Site with DV-06, DV-07 and DV-08 - Annual data provided for DV-08 only
DV-07	631601	141722	47.8	41.2	43.4	38.8	43.3	43.8	41.4		38.9	25.5	40.6	33.4	-	-	-	Triplicate Site with DV-06, DV-07 and DV-08 - Annual data provided for DV-08 only
DV-08	631601	141722	43.7	47.9	46.4	37.5	47.2	41.4	43.0	38.1	39.8	44.0	43.0	25.2	40.4	31.5	-	Triplicate Site with DV-06, DV-07 and DV-08 - Annual data provided for DV-08 only
DV-10	632298	141469	34.0	28.8	42.3	32.0	37.1	28.3	35.4	31.4	31.9	36.9	32.2	20.4	32.6	25.4	-	
DV-11	632317	141429	21.1	30.0	28.8	24.3	34.0	26.6	30.5	25.4	27.5	30.5	27.5	13.8	-	-	-	Triplicate Site with DV-11, DV-16 and DV-17 - Annual data provided for DV-17 only
DV-12	632317	141429	29.1	30.3	32.9	26.4	35.7	30.8	40.0	36.3	35.1	31.1	16.7	13.4	-	-	-	Triplicate Site with DV-12, DV-18 and DV-19 - Annual data provided for DV-19 only
DV-16	631576	140474	28.1	29.2	30.0	26.4	34.3	25.5	31.4	27.0	25.1	43.2	28.4	20.6	-	-	-	Triplicate Site with DV-11, DV-16 and DV-17 - Annual data provided for DV-17 only
DV-17	632317	141429	27.3	31.2	35.4	24.6	31.1	24.9	29.4	25.9	22.6	27.1	27.1	10.5	27.4	21.4	-	Triplicate Site with DV-11, DV-16 and DV-17 - Annual data provided for DV-17 only
DV-18	631576	140474	27.9	31.7	32.2	29.3	39.5	33.1	40.9	31.4	34.8	26.1	29.1	17.9	-	-	-	Triplicate Site with DV-12, DV-18 and DV-19 - Annual data provided for DV-19 only
DV-19	631576	140474	28.4	24.9	34.0	28.8	34.0	28.3	37.2	33.0	33.0	32.0	24.9	21.4	30.3	23.7	-	Triplicate Site with DV-12, DV-18 and DV-19 - Annual data provided for DV-19 only
DV-23	631729	140965	31.1	27.1	33.6	32.3	41.9	35.5	37.7	32.3	32.4	29.6	30.5	17.6	31.8	24.8	-	
DV-24	631825	141112	33.4	38.5	39.3	30.5	40.4	30.4	34.4	31.6	28.1	33.9	31.3	22.5	32.9	25.6	-	

DV-25	631858	141167	30.9	41.5	44.3	35.9		37.6	42.0	28.7	33.0	36.1	30.4	27.7	35.3	27.5	-	
DV-28	630717	140020	15.3	15.2	19.0	13.6	24.0	14.4	22.5	14.9	16.7	18.7	15.2	3.6	16.1	12.6	-	
DV-30	631581	141744	41.8	35.4	45.3	36.3	43.8	38.5	40.5	36.6	37.5	37.5	30.4	30.3	37.8	29.5	-	
DV-31	631598	141763	36.6	32.2	35.8	30.8	39.6	29.7	35.6	28.2	35.7	35.6	36.7	16.9	32.8	25.6	-	
DV-32	632657	141499	32.7	39.8	39.6	31.1	45.2	33.9	37.0	32.8	31.9	35.3	36.0	21.9	34.8	27.1	-	
DV-33	632835	141572	41.3	37.5	47.3	40.4	32.8	30.4		36.5	37.4		34.3		37.5	29.3	-	
DV-36	635698	152325	20.7	22.9	21.8	16.3	21.2	18.6	18.1	17.0	18.5	19.4	18.9	5.1	18.2	14.2	-	
DV-37	636161	151957	28.9	25.3	26.6	24.0	30.8	24.5	26.0	23.4	26.7	30.1	27.3	20.8	26.2	20.4	-	
DV-38	636259	151914	36.8	46.1		27.8	46.5	40.5	41.8	39.4	36.2	48.1	39.3	12.0	37.7	29.4	-	
DV-39	631418	142455	22.0	25.9	27.7	20.6	22.7	19.1	20.7	17.0	22.5	23.1	23.9		22.3	17.4	-	
DV-40	637538	152556	28.4	26.9	27.3	21.7	28.6	21.5	25.3	22.0	19.7	25.2	23.9	10.8	23.4	18.3	-	
DV-41	637507	152590	23.5	27.0	27.0	19.7	27.3	19.9	24.4	20.5	25.1	23.1	27.6	17.3	23.5	18.4	-	

☒ **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.**

☒ **Dover District Council confirm that all 2024 diffusion tube data has been uploaded to the Diffusion Tube Data Entry System.**

Notes:

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

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

See Appendix C for details on bias adjustment and annualisation.

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

New or Changed Sources Identified Within Dover District Council During 2024

Several new development applications have been progressed in 2024. Table C.1 details a list of planning applications with relevant information. If the scheme is a major development, then Dover District Council are requesting that an Air Quality Assessment (AQA) is completed.

Table C.1 - Planning Applications within Dover District Council (2024)

Reference	Location	Details	Status	Comments
24/00293	Land At The Corner Of Townwall Street And Woolcomber Street Dover CT16 1QF	Erection of a drive thru restaurant, car parking, car charging bays, substation, landscaping and associated works, including Customer Order Displays (COD) and a height restrictor	Status: Awaiting decision Application received May-24	Air quality assessment has been submitted
24/00181	The Beacon Project Bench Street Dover Kent	Full application for the erection of an up to four storeys in height building for uses including education, offices, studio, gallery and cafe (Use Classes E(g)(i), E(b) and F1)	Grant Planning Permission Aug-24	Air quality assessment has been submitted

Additional Air Quality Works Undertaken by Dover District Council During 2024

Dover District Council has not completed any additional works within the monitoring year of 2024.

QA/QC of Diffusion Tube Monitoring

The diffusion tubes are supplied and analysed by SOCOTEC Didcot, formerly the Environmental Scientifics Group (ESG) Didcot, utilising the 50% triethanolamine (TEA) in acetone preparation method.

SOCOTEC Didcot is a UKAS accredited laboratory and participates in the AIR-PT Scheme for NO_2 tube analysis and the Annual Field Intercomparison Exercise. These provide strict performance criteria for participating laboratories to meet, thereby ensuring NO_2 concentrations reported are of a high calibre.

In the 2024 AIR NO_2 PT rounds, AIR-PT AR062 - AR066 (January - October 2024) SOCOTEC scored 100%. The percentage score reflects the results deemed to be satisfactory based upon the z-score of < ±2. Additionally, the precision of the NO_2 diffusion tubes (50% TEA in Acetone) supplied by SOCOTEC Didcot has been classified as 'good' for 30 observations out of total 33 observations in 2024. 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. Further information on the precision summary results can be found on the LAQM website.

Diffusion Tube Annualisation

Data capture at all diffusion tube locations was at least 75% in 2024. Therefore, no non-automatic monitoring sites in Dover District Council required annualisation during the 2024 monitoring year.

Diffusion Tube Bias Adjustment Factors

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

Dover District Council did not have any triplicate co-location sites during 2024. Therefore, Dover District Council have applied a national bias adjustment factor of 0.78 to the 2024 monitoring data. This has been derived from the national bias adjustment calculator, as shown in Figure C.1. A summary of bias adjustment factors used by Dover District Council over the past five years is presented in Table C.2.

Table C.2 – Bias Adjustment Factor

Monitoring Year	Local or National	If National, Version of National Spreadsheet	Adjustment Factor
2024	National	04/25	0.78
2023	National	03/24	0.77

2022	National	03/23	0.76
2021	National	03/22	0.78
2020	National	06/21	0.76

Figure C.1 - National Diffusion Tube Bias Adjustment Factor

National Diffusion Tube Bias Adjustment Factor Spreadsheet — Spreadsheet Version Number: 04/25

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 2025
LAQM Helpdesk Website

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

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

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

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

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

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

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

Analysed By	Method (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 Precision	Bias Adjustment Factor (A) (Cm/Dm)
SOCOTEC Didcot	50% TEA in acetone	2024	UB	Hull City Council	10	21	16	25.4%	P	**0.80**
SOCOTEC Didcot	50% TEA in acetone	2024	R	Hull City Council	9	27	20	35.3%	G	**0.74**
SOCOTEC Didcot	50% TEA in acetone	2024	R	Waverley Borough Council	10	21	18	13.7%	G	**0.88**
SOCOTEC Didcot	50% TEA in acetone	2024	R	Waverley Borough Council	11	22	16	32.3%	G	**0.76**
SOCOTEC Didcot	50% TEA in acetone	2024	R	Wrexham County Borough Council	10	15	13	17.0%	G	**0.85**
SOCOTEC Didcot	50% TEA in acetone	2024	UB	Gravesham Borough Council	11	21	19	9.7%	P	**0.91**
SOCOTEC Didcot	50% TEA in acetone	2024	R	Slough Borough Council	11	35	24	43.5%	G	**0.70**
SOCOTEC Didcot	50% TEA in acetone	2024	R	Slough Borough Council	11	26	20	32.6%	G	**0.75**
SOCOTEC Didcot	50% TEA in acetone	2024	R	Slough Borough Council	11	23	17	34.0%	G	**0.75**
SOCOTEC Didcot	50% TEA in acetone	2024	R	Slough Borough Council	10	31	23	33.4%	G	**0.75**
SOCOTEC Didcot	50% TEA in acetone	2024	R	Slough Borough Council	11	30	23	33.7%	G	**0.75**
SOCOTEC Didcot	50% TEA in acetone	2024	R	Thanet Distric Council	10	19	15	24.3%	G	**0.80**
SOCOTEC Didcot	50% TEA in acetone	2024	UB	Wirral Council	9	14	12	19.9%	G	**0.83**
SOCOTEC Didcot	50% TEA in acetone	2024	R	Derry City And Strabane District Council	11	28	32	-11.8%	G	**1.13**
SOCOTEC Didcot	50% TEA in acetone	2024	UB	Derry City And Strabane District Council	11	11	7	58.1%	G	**0.63**
SOCOTEC Didcot	50% TEA in Acetone	2024	R	Horsham District Council	11	22	17	31.1%	G	**0.76**
SOCOTEC Didcot	50% TEA in Acetone	2024	R	Leeds City Council	10	36	28	32.5%	G	**0.75**
SOCOTEC Didcot	50% TEA in Acetone	2024	KS	Leeds City Council	11	29	20	42.7%	G	**0.70**
SOCOTEC Didcot	50% TEA in Acetone	2024	R	Leeds City Council	11	24	18	36.4%	G	**0.73**
SOCOTEC Didcot	50% TEA in Acetone	2024	UC	Leeds City Council	10	25	19	31.2%	G	**0.76**
SOCOTEC Didcot	50% TEA in Acetone	2024	R	Huntingdonshire District Council	10	28	23	21.1%	G	**0.83**
SOCOTEC Didcot	50% TEA in Acetone	2024	R	North East Lincolnshire Council	11	39	21	84.1%	G	**0.54**
SOCOTEC Didcot	50% TEA in Acetone	2024	UB	North East Lincolnshire Council	10	12	10	20.0%	G	**0.83**
SOCOTEC Didcot	50% TEA in Acetone	2024	R	North East Lincolnshire Council	11	21	18	15.7%	G	**0.86**
SOCOTEC Didcot	50% TEA in acetone	2024		**Overall Factor (33 studies)**				Use		**0.78**

NO_2 Fall-off with Distance from the Road

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

No non-automatic monitoring sites within Dover District Council's jurisdiction required fall-off with distance correction during the 2024 monitoring year.

QA/QC of Automatic Monitoring

Dover District Council's 2024 automatic air quality monitoring data has been ratified by Air Quality Data Management (AQDM) according to the standards set out in the

LAQM.TG(22). The instruments used to validate the data undergo regular calibrations. For LAQM reporting, the EU Reference Equivalent PM_{10} has been calculated by running the Volatile Correction Model (VCM) on the TEOM data. PM_{10} instrument TEOM at site Dover Centre Roadside passed the QA/QC audit conducted by Ricardo on 25/09/2024.

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

The Council undertook monitoring of PM_{10} based on TEOM analysers at one location during 2024. TEOMs collect particles on a small oscillating filter. The change in oscillation frequency of the filter is proportional to the change in PM_{10} concentrations. TEOMs are operated at 50°C and as such lose volatile components of the PM_{10}. Therefore, the monitoring results have been corrected using the Volatile Correction Model[12]. The monitoring results are downloaded as gravimetric equivalent from the Kentair website[13]. The website managers of the Kentair are responsible for the PM_{10} adjustment.

Automatic Monitoring Annualisation

No annualisation was required for Dover District Council's one automatic monitoring location since data capture was more than 75%.

[12] Volatile correction model. https://www.volatile-correction-model.info

[13] Kent air. http://www.kentair.org.uk/

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

Figure D.1 – Map of Automatic Monitoring Site and Non-Automatic Monitoring Site around Dover A20

Figure D.2 – Map of Non-Automatic Monitoring Site in and around High Street/Ladywell AQMA

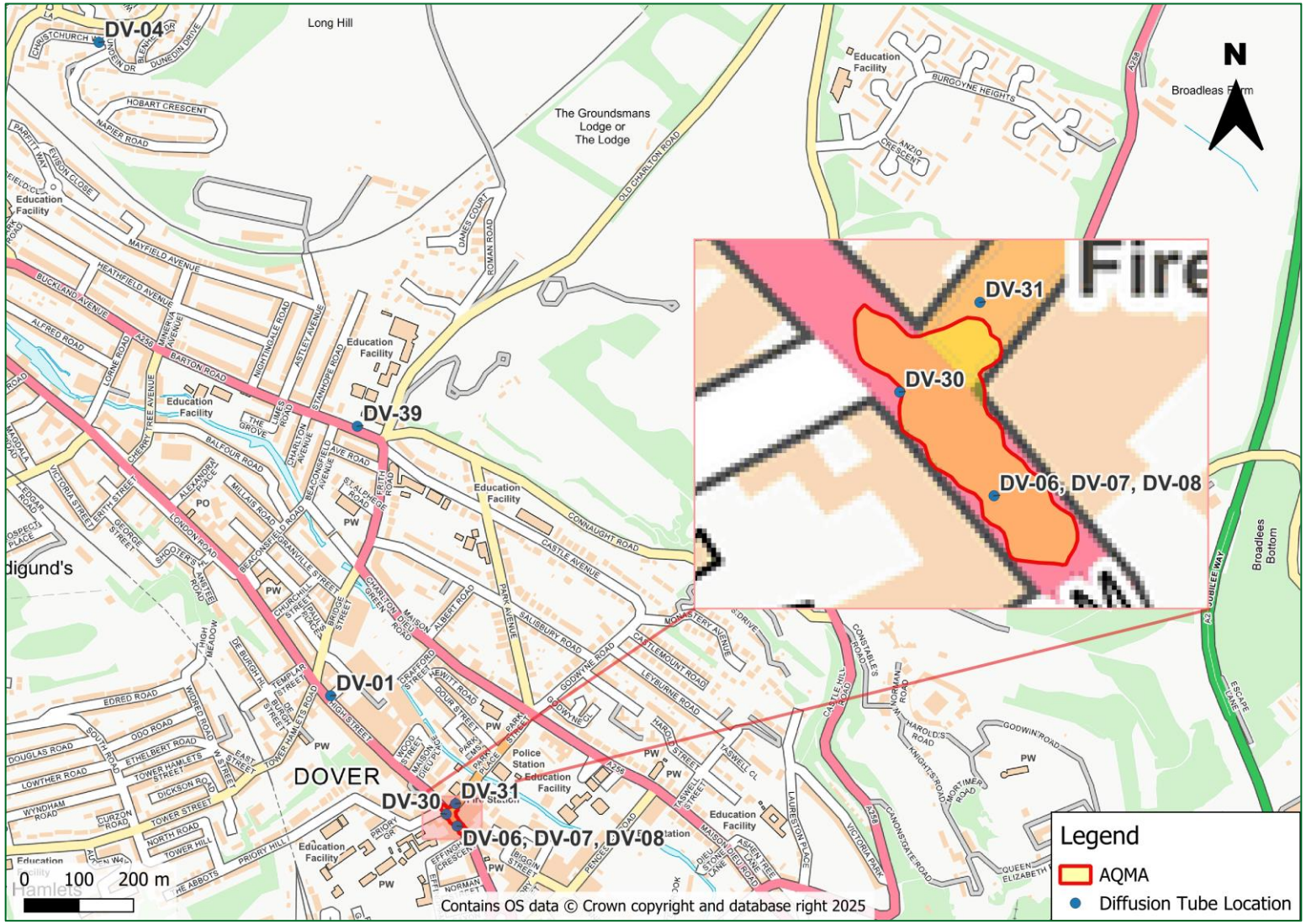
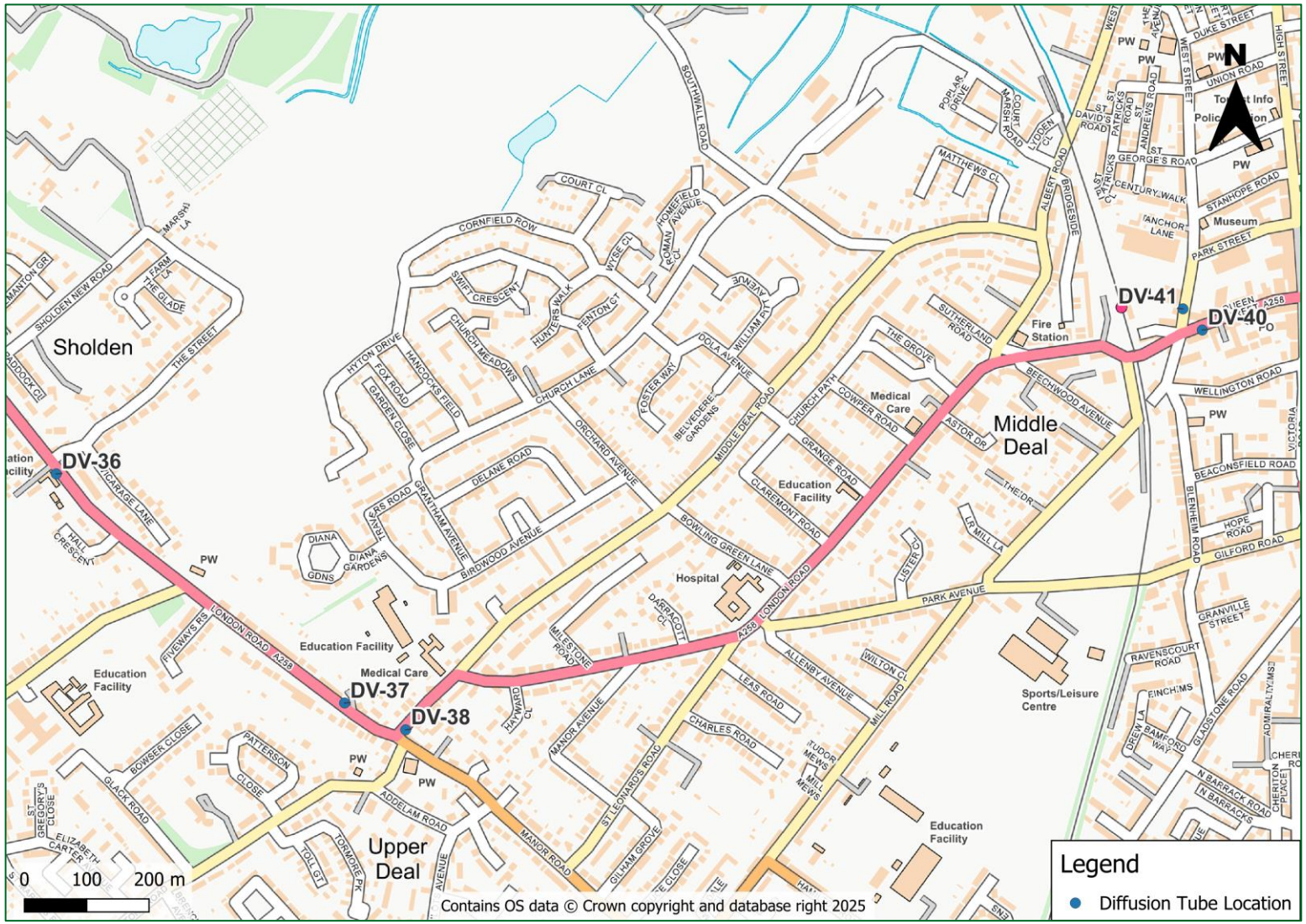


Figure D.3 – Map of Non-Automatic Monitoring Site in and around Deal



Appendix E: Summary of Air Quality Objectives in England

Table E.1 – Air Quality Objectives in England[14]

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

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

Glossary of Terms

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

References

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- Chemical hazards and poisons report: Issue 28. June 2022. Published by UK Health Security Agency
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