



*Dover District Council
Air Quality Action Plan*

March 2023

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Contact Details		
Company Name	Bureau Veritas UK Limited	Dover District Council
Contact Name	Hannah Smith	Brian Gibson
Position	Senior Consultant	Senior Environmental Protection Officer
Address	5 th Floor 66 Prescott Street London E1 8HG	Dover District Council Council Offices White Cliffs Business Park Whitfield Dover CT16 3PJ
Telephone	020 7661 0774	01304 872 428
e-mail	hannah.smith@uk.bureauveritas.com	brian.gibson@dover.gov.uk
Websites	www.bureauveritas.co.uk	www.dover.gov.uk

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	Name	Job Title	Signature
Prepared By	J Cai	Graduate Consultant	
Approved By	H Smith	Senior Consultant	

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Bureau Veritas UK Limited
5th Floor, 66 Prescott Street
London
E1 8HG

Telephone: +44 (0) 161 446 4600
Registered in England 1758622
www.bureauveritas.co.uk

Registered Office
Suite 206 Fort Dunlop
Fort Parkway
Birmingham B24 9FD

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Dover District Council Air Quality Action Plan

In fulfilment of Part IV of the
Environment Act 1995
Local Air Quality Management

2023

Dover District Council

Local Authority Officer	Brian Gibson
Department	Environmental Protection
Address	Dover District Council, Council Offices, White Cliffs Business Park, Whitfield, Dover CT16 3PJ
Telephone	01304 872428
E-mail	Brian.Gibson@dover.gov.uk
Report Reference number	Dover District Council AQAP
Date	March 2023

Executive Summary

This Air Quality Action Plan (AQAP) has been produced as part of our statutory duties required by the Local Air Quality Management framework. It outlines the action we will take to improve air quality in Dover District Council between 2023 - 2028.

This action plan replaces the previous action plan which ran from 2007. Projects delivered through the past action plan include:

- Improved traffic management through junction improvements along the A20 Townwall Street to reduce stop/start movements of HGVs heading for the Port. Including the removal of traffic lights and the introduction of strategic barriers;
- Improvements to Eastern Docks layout via the Traffic Management Improvement (TMI) project;
- New Dover Eastern Docks Exit Road to A20 Townwall Street; and
- Supplementary Air Quality Planning Guidance published as part of Kent & Medway Air Quality Partnership

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 and older people, and those with heart and lung conditions. There is also often a strong correlation with equalities issues, because areas with poor air quality are also often the less affluent areas^{1,2}.

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion³. Dover District Council is committed to reducing the exposure of people in Dover to poor air quality in order to improve health.

This Action Plan aims to tackle the main causes of poor air quality within Dover District, namely emissions from road traffic, particularly cars, LGVs and buses. We have developed actions that can be considered under 22 broad topics including:-

- Alternatives to private vehicle use
- Environmental permits

¹ Environmental equity, air quality, socioeconomic status and respiratory health, 2010

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

³ Defra. Abatement cost guidance for valuing changes in air quality, May 2013

- Freight and delivery management on trunk routes into Dover
- Policy guidance and development control
- Promoting low emission transport
- Promoting travel alternatives
- Public information
- Transport planning and infrastructure
- Traffic management
- Vehicle fleet efficiency

Our priorities are based on identifying measures that can lead to improvement in air pollution levels, raising the profile of air pollution issues within the district and working with partners and stakeholders to identify further measures.

In this AQAP we outline how we plan to effectively tackle air quality issues within our control. However, we recognise that there are a large number of air quality policy areas that are outside of our influence (such as vehicle emissions standards agreed in Europe), but for which we may have useful evidence, and so we will continue to work with regional and central government on policies and issues beyond Dover District Council's direct influence.

Responsibilities and Commitment

This AQAP was prepared by Bureau Veritas and the Environmental Protection Team of Dover District Council with the support and involvement of the departments:

- Environmental Protection
- Climate Change and Energy Conservation
- Community Services & Development
- Community Safety, CCTV and Emergency Planning
- Licensing
- Parking Services
- Property Services and Grounds Maintenance
- Waste Services
- Building Control
- Procurement
- Planning and Development Control

- Press & Media
- Dover Harbour Authority
- Kent County Council Highways

In preparing the draft of this AQAP, consultation has been carried out with:

- Louise May- Strategic Director (Corporate & Regulatory)
- Councillor Martin Bates- Portfolio Holder for Transport, Licensing and Regulatory Services

This AQAP will be subject to an annual review, appraisal of progress and reporting to Management Team Progress each year will also be reported in the Annual Status Reports (ASRs) produced by Dover District Council, as part of our statutory Local Air Quality Management duties.

If you have any comments on this AQAP please send them to Senior Environmental Protection Officer Brian Gibson at:

Address: The Environmental Protection Team, Dover District Council, White Cliffs Business Park, Honeywood Close, Whitfield, Kent, CT16 3PJ

Telephone: 01304 872428

Email: envprotection@dover.gov.uk

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1 Introduction

This report outlines the actions that Dover District Council (DDC) will deliver between 2023 – 2028 in order to reduce concentrations of air pollutants and exposure to air pollution; thereby positively impacting on the health and quality of life of residents and visitors to the district.

It has been developed in recognition of the legal requirement on the local authority to work towards Air Quality Strategy (AQS) objectives under Part IV of the Environment Act 1995 and relevant regulations made under that part and to meet the requirements of the Local Air Quality Management (LAQM) statutory process.

This Plan will be reviewed every five years at the latest and progress on measures set out within this Plan will be reported on annually within Dover's air quality ASR.

This action plan focuses on actions to improve air quality across the entire district, with a specific focus on the two areas currently designated as Air Quality Management Areas (AQMAs), both of which are declared for exceedances of the NO₂ annual mean Air Quality Strategy (AQS) objective:

- A20 AQMA – An area following the A20 from just west of the Limekiln Roundabout at the western end to a point c.140m from the Eastern Docks in Dover. The AQMA was declared in 2004 and amended in 2007 and 2009; and
- High St / Ladywell AQMA – An area encompassing roads and properties between the junction of Effingham Crescent/High Street, and Priory Hill/High Street. The AQMA was declared in 2007.

The Port of Dover town 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. DDC has limited control over the emission standards of vehicles entering the Port from Continental fleet operators, and this should be recognised as a major limitation of the actions that DDC can directly take on some of the contributing vehicles. As such, DDC will continue to lobby and work with Central Government and Highways England on this issue. This Plan therefore focusses on actions more directly under the control of DDC, and the local partnerships that are in place, or need to be strengthened.

2 Summary of Current Air Quality in Dover District Council

Please refer to the latest ASR from Dover District Council for a thorough review of the status of air quality across the district.

Dover is “the gateway to England” and its location at the narrowest crossing point in the Channel has always given it great significance for both trade and military activities.

The main sources of pollutant emissions within Dover are linked with road transport sources entering and leaving the Port of Dover; regular cross-channel ships and large volumes of road traffic arising as a result of associated transport of goods along the A2 and A20 entering and leaving the town.

There were no exceedances of the annual mean NO₂ objective in 2020. All sites, excluding site DV30, recorded annual mean concentrations below 36 µg/m³ (i.e. not within 10% of the AQS objective). Site DV30 is adjacent to 19B High Street Dover, slightly to the north of the High Street/ Ladywell AQMA boundary. Exceedances of the annual mean NO₂ AQS objective have been recorded at DV30 since its installation in 2017, and 2020 is the first year the site hasn't exceeded the AQS objective. It should be noted that the NO₂ concentration in 2020 was largely impacted by the Covid 19 pandemic. During lockdown, an evident decrease of NO₂ can be widely observed across the country. To better understand the current air quality in Dover, the monitoring results in 2019 is also an essential reference. DV30 is the only site that had an exceedance of the annual mean NO₂ objective in 2019. Excluding DV30 and DV06/DV07/DV08, all other sites recorded annual mean concentrations below 36 µg/m³. Site DV06 / DV07/DV08 is located in Town Hall, Dover, within the High Street / Ladywell AQMA.

There have been no exceedances of the PM₁₀ AQS objective within the past five years at the single PM₁₀ monitoring location on Townwall Street (Dover Centre). There is currently no monitoring undertaken for PM_{2.5} within the District. However, the annual mean PM_{2.5} concentrations at Dover Centre in 2019 and 2020 were estimated in accordance with the methodology presented in LAQM.TG(16) to be 15.4 µg/m³ and 15.9 µg/m³ respectively, both below the PM_{2.5} obligatory standard of 25 µg/m³.

Assessment of air quality has also been undertaken through the use of dispersion modelling. Dispersion modelling provides a means by which predictions on the levels of NO₂ and PM₁₀ can be made and then verified against the monitored levels to provide an assessment of uncertainty in predictions. A model of Dover was constructed through parameterisation of the volume of traffic and its composition (e.g. cars, lorries, light duty vehicles, motorbikes, buses etc.) and speed. Processing of the dispersion of the emission arising from the traffic is undertaken using representative weather data for the area taking account of various influencing factors such as buildings and gradients.

Both monitoring and modelling techniques have been used to assess air pollution levels within the two AQMAs declared for exceedances of the annual mean NO₂ objective.

2.1 A20 AQMA

The A20 AQMA was declared in 2004 due to exceedances of the NO₂ annual mean AQS Objective, and was subsequently amended in 2007 and 2009. It encompasses an area following the A20 from just west of the Limekiln Roundabout at the western end to approximately 120m from the Eastern Docks roundabout in Dover. The Amendments in 2007 and 2009 amended the boundary to no longer include the properties in Marine Parade and East Cliff to the east due to improvements in NO₂ concentrations as a result of the measures implemented within the 2007 AQAP.

National Highways is the relevant transport authority for the A20/M20 corridor, encompassing the roads within the A20 AQMA. Kent County Council (KCC) is the relevant highway and transport authority for roads on the local network (e.g. Woolcomber Street, which joins the A20 Townwall Street in the AQMA). Both organisations are key stakeholders in the success of this Plan and DDC will continue to work closely with them.

There are eight diffusion tube sites within this AQMA, including two triplicate sites. There is one continuous monitor with the AQMA, which is co-located with the diffusion tube DV10. Annual mean NO₂ concentrations from these sites are presented in Table 2.1. Exceedances were reported in 2016 at DV10 and in 2017 at

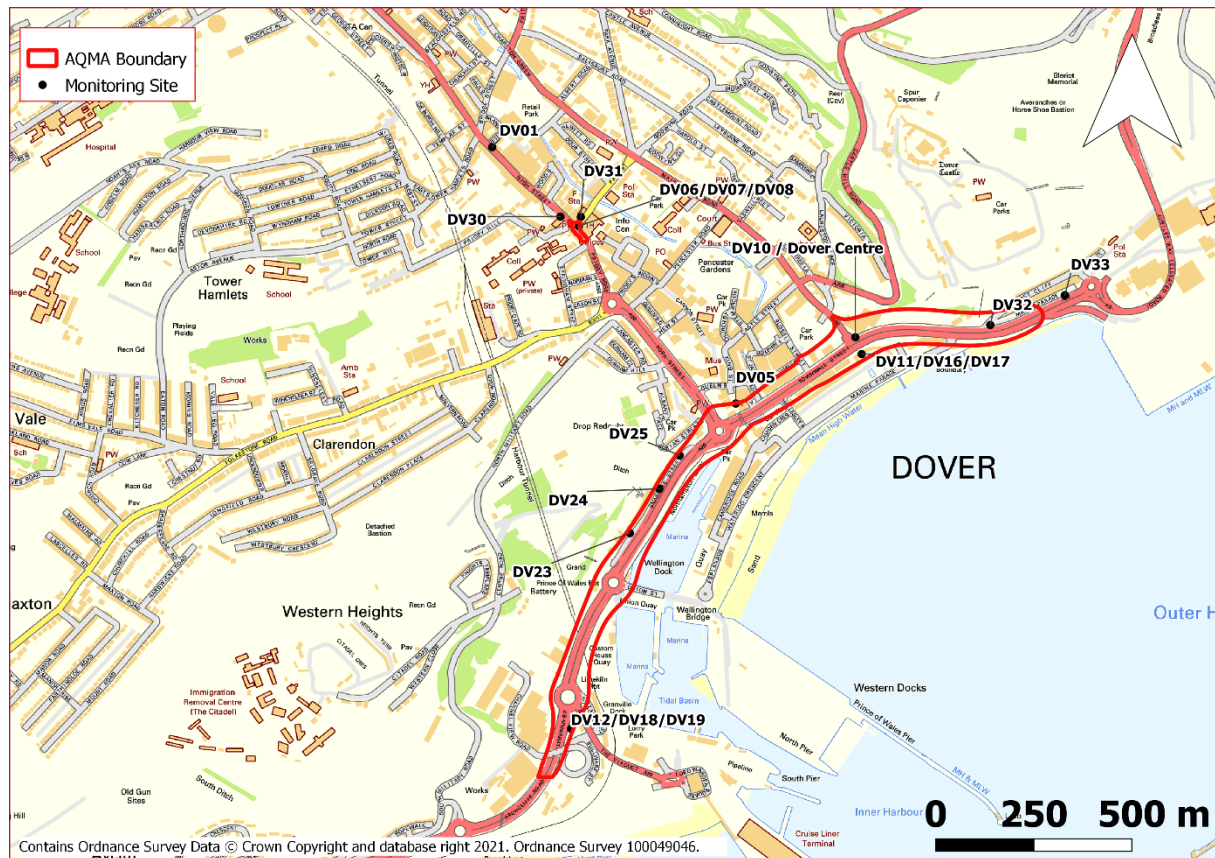
DV10, DV24 and DV32. The locations of these monitoring sites are illustrated in Figure 2.1.

Table 2.1 - A20 AQMA Annual Mean NO₂ Concentrations

Site ID	X OS Grid Ref.	Y OS Grid Ref.	Site Type	Annual mean NO ₂ concentration (µg/m ³)				
				2016	2017	2018	2019	2020
Dover Centre (continuous monitor)	632302	141465	Roadside	26.0	27.0	26.0	22.0	22.7
DV05	631997	141296	Urban Centre	34.1	33.6	28.8	24.4	20.3
DV10	632302	141465	Roadside	41.4	45.4	38.3	35.9	26.4
DV11, DV16, DV17	632318	141422	Roadside	31.6	33.2	29.9	28.1	23.1
DV12, DV18, DV19	631577	140468	Roadside	36.3	36.6	34.5	31.5	26.5
DV23	631727	140966	Roadside	36.1	38.0	34.3	31.2	25.3
DV24	631802	141079	Roadside	38.4	42.8	39.0	33.7	26.1
DV25	631854	141164	Roadside	35.1	35.4	32.6	29.3	28.9
DV32	632646	141496	Roadside	-	40.1	35.4	31.7	26.7

Note:
Exceedances of the NO₂ annual mean AQS objective are in **bold**

Figure 2.1 - Location of Monitoring Sites within A20 AQMA



Detailed dispersion modelling of the air quality within the A20 AQMA area reflected the monitoring results and highlighted one sensitive receptor location where the NO₂ concentration was predicted to be within 10% of the AQS Objective within the AQMA. Source apportionment (analysis of the contributing emissions sources to the overall pollutant burden at a location) was also undertaken showing the contribution of specific vehicle classes and background levels of pollution make towards overall NO_x concentrations.

The necessary NO_x reductions required to meet the UK annual mean NO₂ objective of 40µg/m³ were calculated for 2019 as it represented the baseline year at the time of assessment. It should be noted that the impact of Covid 19 has resulted in the unusual monitoring data since 2020, as the Covid restrictions greatly reduced traffic flows, thus leading to a decrease in pollutant concentration. In this case, it is more appropriate to set 2019 as the baseline. Section 3.3 details the findings of the source apportionment assessment.

2.2 High Street / Ladywell AQMA

In 2007 DDC declared an AQMA for an area encompassing roads and properties between the junction of Effingham Crescent/High Street and Priory Hill/High Street. The AQMA was declared due to congestion at the junction as a result of a high number of vehicle movements travelling through a relatively narrow area consisting of closely packed buildings creating a canyon effect along the High Street.

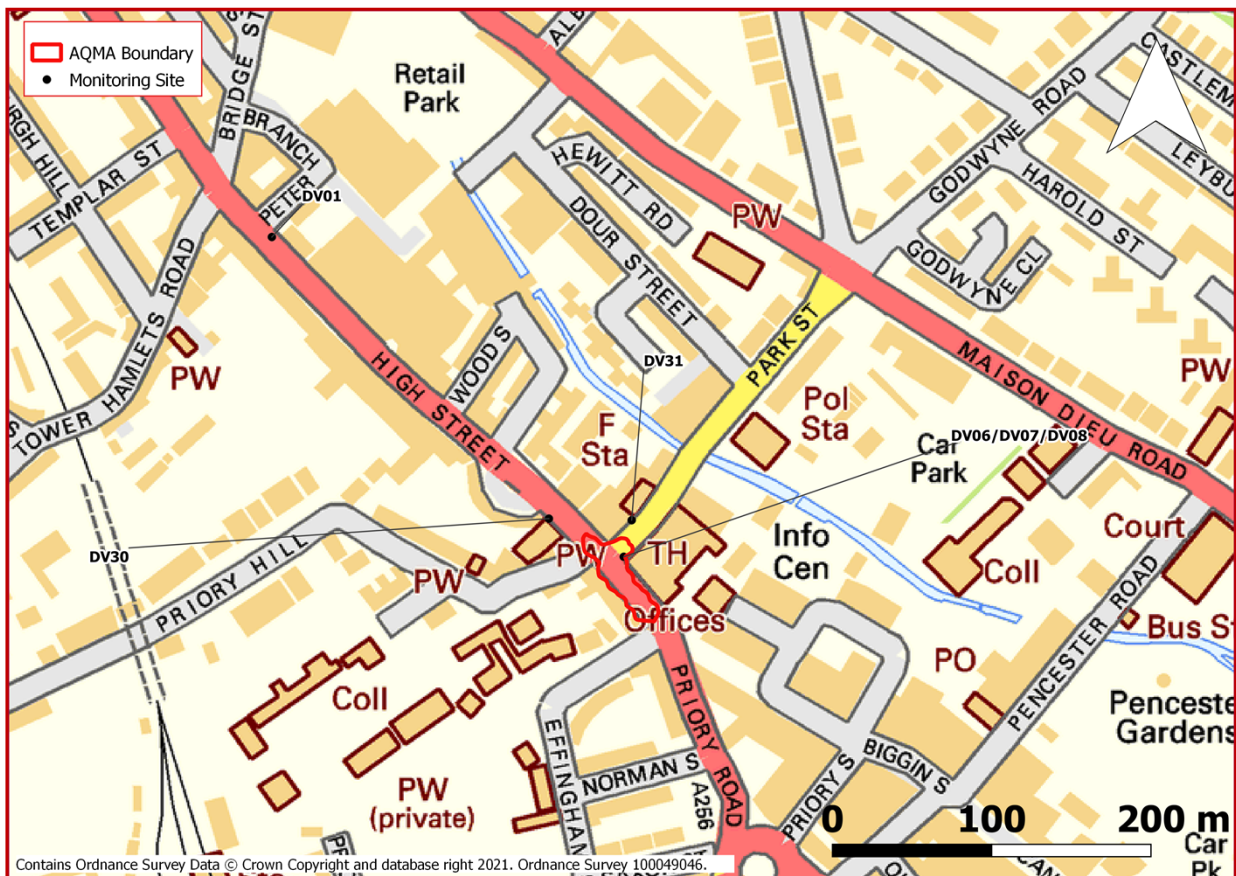
There is one triplicate diffusion tube site within this AQMA (DV06/ DV07 / DV08), and a further two diffusion tubes sites located close to the AQMA boundary (DV30 and DV31). Annual mean NO₂ concentrations from these sites are presented in Table 2.2. Exceedances were reported in 2016, 2017 and 2018 at DV06/DV07/DV08 and in 2017, 2018 and 2019 at DV30, which is outside the AQMA boundary. Diffusion tube DV30 is sited in a location where there has been some construction activity which led to low data capture in 2019 and 2020 and inconsistency with the height of the tube throughout the year. The locations of these monitoring sites are illustrated in Figure 2.2.

Table 2.2 – High Street / Ladywell AQMA Annual Mean NO₂ Concentrations

Site ID	X OS Grid Ref.	Y OS Grid Ref.	Site Type	Annual mean NO ₂ concentration (µg/m ³)				
				2016	2017	2018	2019	2020
DV06 / DV07 / DV08	631597	141748	Roadside	44.5	45.4	40.4	39.8	33.7
DV30	631550	141772	Kerbside	-	40.9	40.5	40.4	35.7
DV31	631602	141771	Kerbside	-	36.7	31.2	31.5	23.5

Note:
Exceedances of the NO₂ annual mean AQS objective are in **bold**

Figure 2.2 - Location of Monitoring Sites within High St / Ladywell AQMA



3 Dover District Council's Air Quality Priorities

3.1 Public Health Context

Mounting scientific evidence shows the scale of the impact of poor ambient air quality on health. Research shows that the most common air pollutants of concern, NO₂, PM₁₀ and PM_{2.5} (particulate matter in the fractions of less than 10 microns and 2.5 microns in diameter), are linked to various health complications, impacting the cardiovascular and respiratory systems. Exposure to these pollutants can bring about symptoms such as nose and throat irritation, followed by bronchoconstriction and dyspnoea, alongside increasing reactivity to natural allergens, increasing the risk of respiratory infections through the pollutants interaction with the immune system⁴, and may lead to reduced lung function.

Alongside this, there is increasing interest and pressure from members of public for Local Authorities to actively tackle and reduce air pollution in their areas. Previously, there had been no deaths officially linked to air pollution, however in 2020 the first person in the UK had 'air pollution' listed as a cause of death. Although currently there are no legislative outcomes as a result of this, this further increases the pressure and duty of care that Local Authorities have in order to protect their residents. Poor air quality is considered to be a significant contributory factor to the loss of life, shortening lives by an average of 5 months. In 2010, the Department of Health's Committee on the Medical Effects of Air Pollutants (COMEAP) reported that long-term exposure to outdoor air pollution contributes to the equivalent of 29,000 deaths in 2008 in the UK, and an associated loss to the population of 340,000 life-years. A further report by the Royal College of Physicians reported in 2016 that it contributed to the equivalent of 40,000 deaths in 2015.

Local authorities have a range of powers which can effectively help to improve air quality. However, the involvement of public health officials is crucial in playing a role to assess the public health impacts and providing advice and guidance on taking appropriate action to reduce exposure and improve the health of everyone within Dover District Council.

⁴ Marilena Kampa and Elias Castanas, Human Health Effects of Air Pollution, June 2007

The Air Quality Indicator in the Public Health Outcomes Framework (England) provides further impetus to join up action between the various local authority departments which impact on the delivery of air quality improvements. The “Air Quality – A Briefing for Directions of Public Health” document published in March 2017 provides a one-stop guide to the latest evidence on air pollution, guiding local authorities to use existing tools to appraise the scale of the air pollution issue in its area. It also advises local authorities how to appropriately prioritise air quality alongside other public health priorities to ensure it is on the local agenda.

The document comprises the following key guides:

- Getting to grips with air pollution – the latest evidence and techniques;
- Understanding air pollution in your area;
- Engaging local decision-makers about air pollution;
- Communicating with the public during air pollution episodes;
- Communicating with the public on the long term impacts of air pollution; and
- Air Pollution: an emerging public health issue: Briefing for elected members.

Besides NO₂, there is an increasing focus on fine particulate matter. PM_{2.5} is a pollutant of concern meaning particulate matter which is 2.5 microns or less in diameter. Neither AQMA has been declared for PM_{2.5} and the modelling as part of the detailed assessment has shown predicted levels below the annual mean objective of 25µg/m³.

The Public Health Outcomes Framework data tool⁵ compiled by Public Health England quantifies the mortality burden of PM_{2.5} within England on a county and local authority scale. The 2019 fraction of mortality attributable to PM_{2.5} pollution in Dover is 4.9%, which is below South East region’s average of 5.2% and the national average of 5.1%.

It should be noted that this figure only accounts for one pollutant (PM_{2.5}) for which stronger scientific evidence on links with mortality exist, and not NO₂, for which the AQMAs are declared, so the true figure is possibly even higher. Furthermore, following on from a review of research into the death burden associated with the air

⁵ Public Health Outcomes Framework, Public Health England. data tool available online at <https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/0/gid/1000043/pat/6/par/E12000008/ati/202/are/E06000036/cid/4/page-options/ovw-do-0>

pollution mixture rather than single pollutants acting independently, COMEAP are currently reviewing the ability to link deaths to one specific pollutant.

It is expected that some of the measures implemented within this action plan for the achievement of reductions in NO₂ will have co-benefits in additionally reducing concentrations of PM₁₀ and PM_{2.5}.

3.2 Planning and Policy Context

There are a number of related policies and strategies at the local and regional level that can be tied in directly with the aims of the AQAP. The majority of these policies and strategies are focused on transportation issues and are therefore likely to help contribute to overall improvements in air quality across the DDC area. The review of these strategies and policies also assists in preventing duplication of work within the AQAP but can instead work in concordance for mutual benefit whilst also focusing on direct measures outside those considered within the already developed strategies and policies. This section outlines the strategies and policies that have the most significant potential to impact on pollutant concentrations within DDC.

The most relevant policies and strategic documents are detailed below.

3.2.1 Clean Air Strategy 2019

The Clean Air Strategy⁶ has been published to set out the case for action at a national level, identifying a number of sources of air pollution within the UK including road transportation (relevant in terms of the AQMAs currently present within Dover) and sets out the actions required to reduce the impact upon air quality from these sources. It has been developed in conjunction with three other UK Government Strategies; the Industrial Strategy, the Clean Growth Strategy, and the 25 Year Environment Plan.

Key actions that are detailed within the strategy aimed at reducing emissions from transportation sources include the following:

- The publication of the Road to Zero strategy, which sets out plans to end the sale of new conventional petrol and diesel cars and vans by 2040;
- New legislation to compel vehicle manufacturers to recall vehicles and non-

⁶ Department for Environment, Food and Rural Affairs (2019), Clean Air Strategy

road mobile machinery for any failures in emission control systems, and to take effective action against tampering with vehicle emissions control systems;

- Develop new standards for tyres and brakes to reduce toxic non-exhaust particulate emissions from vehicles. This action would not necessarily target reduction in NO₂ for which both AQMAs within Dover has been declared;
- The encouragement of the cleanest modes of transport for freight and passengers; and
- Permitting approaches for the reduction of emissions from non-road mobile machinery, especially in urban areas.

3.2.2 UK Plan for Tackling Roadside Nitrogen Dioxide Concentrations

Published in July 2017, the UK Plan for Tackling Roadside Nitrogen Dioxide Concentrations (Detailed Plan)⁷ is the UK governments plan for bringing concentrations of NO₂ within statutory limits within the shortest possible time. It is identified that the most immediate air quality challenge within the UK is tackling the issue of NO₂ concentrations close to roads, especially within towns and cities. The plan identifies a number of local authorities that were required to complete feasibility studies to define NO₂ concentrations on road links identified by the national Pollutant Climate Mapping (PCM) model as being in exceedance of the NO₂ annual mean AQS objective.

Dover District Council were not one of the authorities identified, regardless, the UK Plan provides a high level of detail on possible solutions, and their implementation, to reduce NO_x emissions from vehicles, and therefore lower NO₂ concentrations. The actions detailed within the UK Plan include the following:

- Implementation of Clean Air Zones (CAZs);
- New real-world driving emissions requirements for light passenger and commercial vehicles;
- Additional funding to accelerate the uptake of low emissions buses and also for the retrofitting of older buses;

⁷ Department for Environment, Food and Rural Affairs, Department for Transport (2017), UK Plan for Tackling Roadside Nitrogen Dioxide Concentrations (Detailed Plan)

- Additional funding to accelerate the uptake of hydrogen vehicles and associated infrastructure;
- New mandatory emissions standards for non-road mobile machinery; and
- Local cycling and walking investment plans.

3.2.3 Dover District Corporate Plan (2020 – 2024)

The Corporate Plan outlines a four-year programme which sets out the key priorities and focus for all activities and services carried out by DDC. The plan is designed to give context for all other strategies and plans that are produced. It is therefore an important document to consider when developing the AQAP. The Corporate Plan is designed to “*encourage, facilitate and deliver a stronger local economy, with opportunities for everyone to reach their ambitions.*” This philosophy is implemented through four priority themes. With regards to air quality the following priority is relevant:

Priority Theme Three: CLIMATE CHANGE, ENVIRONMENT & ASSETS

Of which one of the focuses is on raising awareness, reducing emissions from our own activities and developing plans to reduce emissions across the District. This priority theme will be achieved through, amongst other things:

- Developing electric vehicle charging points
- Developing cycling and walking infrastructure and promoting cycling and walking routes
- Continuing with our Kearsney and Parks projects and encouraging/supporting development of ‘great places’
- Continuing to reduce the incidence and effects of environmental crimes and pollution to air, land and water, through enforcement and educational activities
- Improve and protect the health, safety and welfare of people working in, living in and visiting the District through our environmental health and licensing activities
- Developing a strategy, within the Local Plan, Air Quality Review and Air Quality Action Plan, for improving air quality, through cleaner greener transport, more trees planted for carbon emissions and potential new wooded areas

3.2.4 The Core Strategy (2010 - 2026)

The Dover Core Strategy is the District's key plan in the local development framework up to 2026. It identifies the issues facing the District, the aims and objectives and considers the options for addressing the issues. The core policies within the plan specifically address air quality are as follows:

- **Policy CP7** – Green Infrastructure Network – protecting and enhancing the existing network of green infrastructure. Proposals that would introduce additional pressure on the existing and proposed green infrastructure network are only permitted if they incorporate quantitative and qualitative measures, as appropriate, sufficient to address that pressure. Air quality monitoring will be used to help assess the need for mitigation measures and, if required, establish the nature of those measures.
- **Policy CP8** – Dover Waterfront – Planning permission only granted along the waterfront provided the proposals incorporate avoidance and mitigation measures to address impact on air quality issues associated with the A20 trunk road and the Port operations.

3.2.5 Dover District Local Plan – Draft

Dover District Council's existing Local Plan consists of the Core Strategy 2010, the Land Allocations Plan 2015, and saved policies from the 2002 Local Plan. The new [Dover District Local Plan](#) has been published in draft form, which will replace the previous plan. It is anticipated that the Local Plan will be adopted in 2023, following the appropriate consultations and approvals. The Development Management Policy relating to air quality is DM Policy 41:

“All development should be designed to encourage an increase in the use of sustainable modes of transport. In addition, major development proposals will be required to demonstrate a shift to the use of sustainable low emission transport in order to minimise the impact of vehicle emissions on air quality.

Development proposals that might lead to a significant deterioration in air quality or national air quality objectives being exceeded, either alone, or in combination with other committed development, will be required to submit an Air Quality Assessment, carried out in accordance with the relevant guidance, to be agreed with the Local

Planning Authority as part of planning applications. Such an Assessment should address:

- a) The cumulative effect of further emissions arising from the proposals; and*
- b) The proposed mitigation measures, including appropriate design and offsetting measures, which would prevent National Air Quality Objectives being exceeded or would reduce the extent of any air quality deterioration.*

Proposals which will result in National Air Quality Objectives being exceeded will not be permitted.”

Regulation 18 within the draft local plan include changes to Building Regulations requiring provision of electric vehicle recharging points.

3.2.6 Other Policies of Relevance

In a broader sense, there are a number of Kent focussed policies that have been developed by KCC which are of relevance to Dover. For example, the [Kent Environment Strategy \(2016\)](#) sets out the following target in relation to air quality in the County:

- Decrease the number of days of moderate or higher air pollution and the concentration of pollutants to align with the Kent and Medway Air Quality Partnership and national monitoring standards.

[The Kent Freight Action Plan](#) also includes some direction which will help support the freight focussed measures that are to be implemented as a result of the AQAP. The Freight Action Plan emphasises the need for a collaborative approach to manage the freight network which impacts all local authorities within Kent. In particular the focus is on actions to:

- Tackle overnight lorry parking
- Find a long-term solution to Operation Stack
- Effectively manage the routing of HGV traffic
- Take steps to address freight traffic problems associated with communities

- Ensure KCC make effective use of planning and development control powers to reduce the impact of freight traffic

These measures will likely have a knock-on effect on local air quality in Dover and will act as a base to build on with more localised freight controlling measures.

KCC also published the Kent & Medway Energy and Low Emissions Strategy in June 2020. The strategy is designed to develop a multi-agency approach to improving air quality, reducing carbon emissions and creating a more sustainable energy infrastructure across Kent and Medway. In recognition of the UK environment and climate emergency, all 14 local authorities in Kent and Medway have committed to ambitious targets to reduce greenhouse gas emissions to net-zero by 2050 at the latest. The document focusses on emissions in the wider sense and addresses the estimated growth across the region. It has been estimated that by 2031 there will be 178,000 additional homes (24% growth) and 396,300 additional people (23% growth). It is likely that this will create a higher demand for energy, and domestic gas and electricity sales will rise by 23% and 19% respectively from 2014/15 to 2030/31.

Therefore, although the main source of pollution within the two declared AQMAs is associated with road vehicle emissions, it is important to have an understanding and appreciation of other potential sources which could become more prevalent in the coming years. Therefore, measures proposed in the AQAP will need to also address air quality as a whole within DDC rather than to specifically focus on road vehicle emissions.

3.3 Source Apportionment

The AQAP measures presented in this report are intended to be targeted towards the predominant sources of emissions within the AQMAs. Where road transport is identified as the principal source of emissions, the relative contributions from different vehicle types (e.g. cars, Heavy Good Vehicles (HGVs), Light Goods Vehicles (LGVs), and buses) can be determined to identify which vehicle type represents the most significant source of pollution.

A source apportionment exercise was carried out using an air dispersion model to assess the overall emissions profile of vehicles moving through the AQMAs. Source apportionment was carried out for each AQMA separately.

Emission sources of NO₂ are dominated by a combination of direct NO₂ (f-NO₂) and oxides of nitrogen (NO_x), the latter of which is chemically unstable and rapidly oxidised upon release to form NO₂. Reducing levels of NO_x emissions therefore reduces levels of NO₂. As a consequence, the source apportionment study has considered the emissions of NO_x which are assumed to be representative of the main sources of NO₂.

The methodology to achieve this involves dispersion modelling of road traffic emissions. Traffic data inputs were supplied by the appointed transport consultants and supplemented by DfT road traffic statistics. The Emissions Factors Toolkit (EFT) version 10.1 developed by Defra⁸ was used, selecting the “Detailed Option 1” that allowed the percentage fleet input by: Car; Taxi; LGV; HGV; Bus and Coach; and Motorcycle. Road-NO_x contributions for each source type at receptor locations were then modelled using Cambridge Environmental Research Consultants ADMS-Roads™ dispersion model (version 5.0).

Background pollutant concentrations, as derived for the area from UK-Air, have been added to the ADMS-Roads modelled road source output to calculate predicted total annual mean concentrations of NO_x and NO₂. For each location the total NO_x from all vehicle classes as well as the percentage attributable to background sources has been predicted.

Error! Reference source not found. illustrates the general breakdown of NO_x concentrations averaged across all modelled locations, providing information regarding:

- The regional background, which the Council is unable to influence;
- The local background, which the Council should have some influence over; and
- Other local sources (explicitly modelled), which the Council should be able to directly influence with policy intervention.

⁸ Defra, Emission Factors Toolkit (2020). <http://laqm.defra.gov.uk/review-and-assessment/tools/emissions-factors-toolkit.html>

Figure 2.3 - Average NO_x Contribution Across All Modelled Receptors – General Breakdown

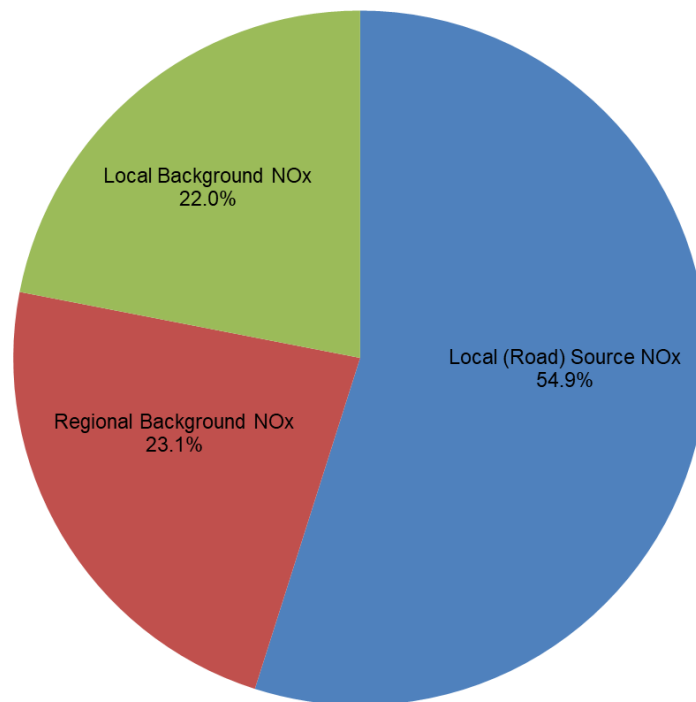


Figure 2.4, Figure 2.5 and Figure 2.6 provide detailed breakdowns of the local source contributions to NO_x concentrations, based on:

- The average across all modelled receptors. This provides useful information when considering possible action measures to test and adopt. It will however understate road NO_x concentrations in problem areas;
- The receptor where the maximum road NO_x concentration has been. This is likely to be in the area of most concern and so a good place to test and adopt action plan measures. This location is within the High St / Ladywell AQMA. Any gains predicted by action plan measures are likely to be greatest at this location but would not represent gains across the whole modelled area.
- The receptor where the second highest road NO_x concentration has been predicted which represents the maximum concentration within the A20 AQMA. This is a good place to assess the main sources of concern in the worst-case receptor location within the A20 AQMA, as the sources differ from the model-wide worst-case receptor location that is located in the High Street / Ladywell AQMA.

Figure 2.4 - Source Apportionment of NOx Averaged Across All Modelled Receptors

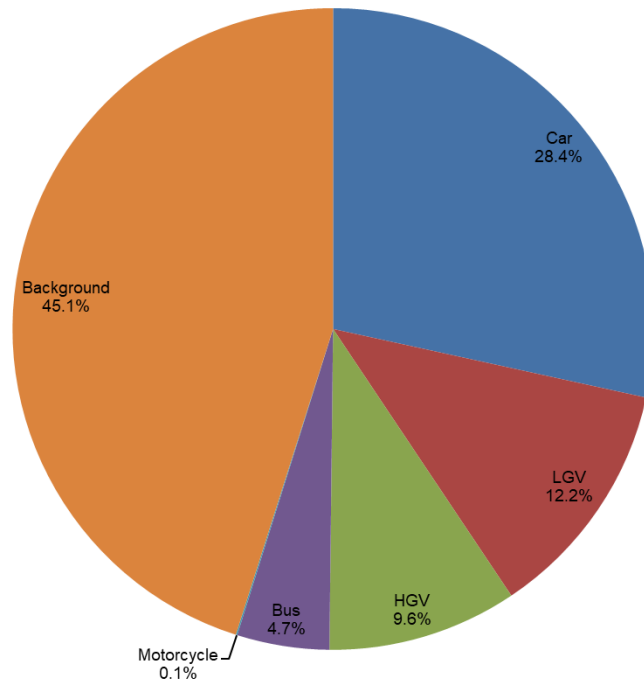


Figure 2.5 - Source Apportionment of NOx at Receptor with the Maximum Road NOx Concentration (R58) within the High St / Ladywell AQMA

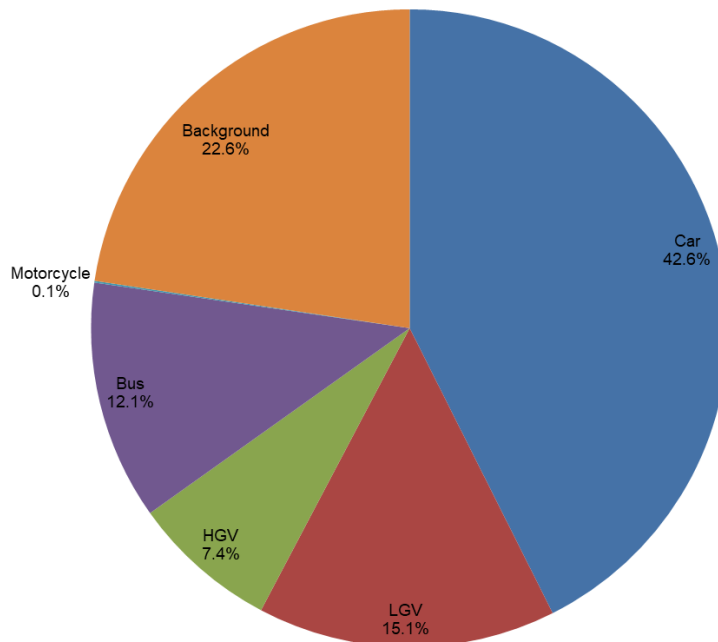
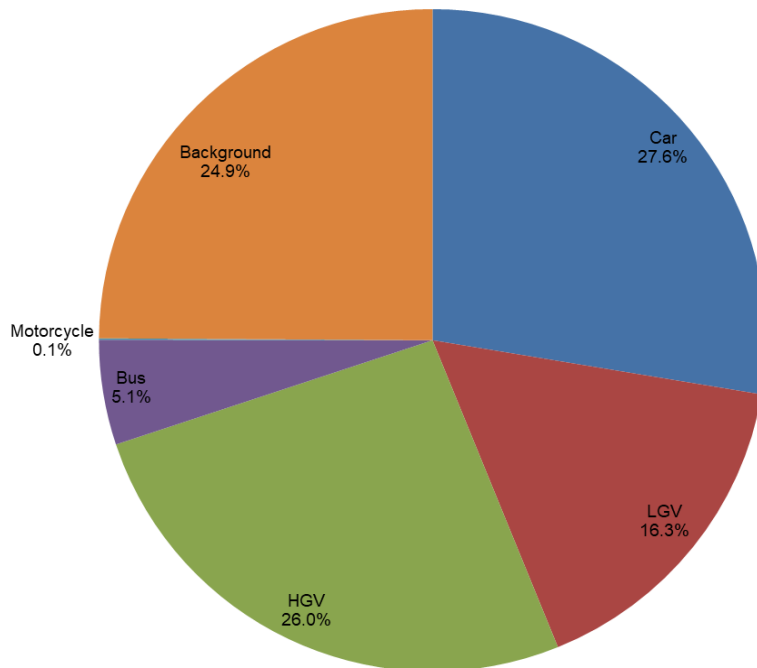


Figure 2.6 - Source Apportionment of NO_x at Receptor with the Maximum Road NO_x Concentration (R54) within the A20 AQMA



Error! Reference source not found. provides a more detailed breakdown of source apportionment in relation to NO_x concentrations for the following criteria:

- Contributions based on average NO_x levels across all modelled locations;
- Contributions based on NO_x levels at the highest NO₂ concentration in the High St / Ladywell AQMA; and
- Contributions based on NO_x levels at the highest NO₂ concentration in the A20 AQMA.

Table 2.3 - Source Apportionment of NO_x

Results	All Vehicles	Car	LGV	HGV	Bus	Moto	Background
Average across all modelled receptors							
NO_x Concentration (µg/m³)	19.0	9.8	4.2	3.3	1.6	0.0	15.6
Percentage of Total NO_x	54.9%	28.4%	12.2%	9.6%	4.7%	0.1%	45.1%
Percentage Road Contribution	100.0%	51.8%	22.2%	17.4%	8.5%	0.1%	-
Receptor R58 within High St / Ladywell AQMA – exceeding the AQS Objective and reporting the maximum road NO_x Concentration							
NO_x Concentration (µg/m³)	57.5	31.6	11.2	5.5	9.0	0.1	16.8

Results	All Vehicles	Car	LGV	HGV	Bus	Moto	Background
Percentage of Total NO _x	77.4%	42.6%	15.1%	7.4%	12.1%	0.1%	22.6%
Percentage Road Contribution	100.0%	55.0%	19.6%	9.6%	15.7%	0.1%	-
Receptor R54 within A20 AQMA – reporting within 10% of AQS Objective							
NO _x Concentration (µg/m ³)	50.7	18.6	11.0	17.6	3.5	0.0	16.8
Percentage of Total NO _x	75.1%	27.6%	16.3%	26.0%	5.1%	0.1%	24.9%
Percentage Road Contribution	100.0%	36.8%	21.6%	34.7%	6.8%	0.1%	-

Of the contributors to total NO_x concentrations, local (road) sources are the largest at 54.9%, followed by regional background at 23.1%, then local background at 22.0%. This means that the Council should be able to influence 76.9% of total NO_x concentrations with intervention policies.

When considering the average breakdown of NO_x concentration across all modelled receptors in more detail, road traffic accounts for 19µg/m³ (54.9%) of total NO_x (34.6µg/m³). Of this total average NO_x, Cars account for the most (28.4%) of any of the vehicle types on average, followed by LGVs (12.2%).

At the receptor where the maximum road NO_x concentration has been predicted in the High St / Ladywell AQMA (57.5µg/m³, predicted at receptor R58), road traffic accounts for 77.4% of the overall NO_x. Of this total NO_x, Cars account for the most (42.6%) of any of the vehicle types, followed by LGVs (15.1%) and Buses (12.1%). This indicates that **Cars, Buses and LGVs are largely responsible for the exceedances in the High St / Ladywell AQMA.**

However, the receptor where the highest road NO_x concentration was predicted within the A20 AQMA, shows that different localised effects are influencing the NO_x concentrations. At R54, although Cars are the highest contributors to road NO_x (27.6%), this is closely followed by HGVs (26.0%) and then LGVs (16.3%). This confirms that this is a common route for HGVs to take in order to access the port, and indicates that **Cars, HGVs and LGVs are largely responsible for the worst air quality within the A20 AQMA.** Understanding the key routes into the town and

towards the port, including how different vehicle types are using the surrounding roads will help focus measures.

3.4 Required Reduction in Emissions

In line with the methodology presented in Box 7.9 of LAQM.TG(16), the necessary reduction in Road NO_x emissions required to bring the High Street / Ladywell AQMA into compliance is calculated below. This is done at the worst-case exposure location for the declared AQMA. When considering the A20 AQMA, no exceedances were modelled, the required reduction has therefore not been calculated. There are uncertainties about future traffic flows, particularly relating to HGVs across Dover in the port area, which is associated with the A20 AQMA.

Table 2.4 provides the details on the calculations of the NO_x emission reduction at the worst-case exposure location, R58 in the High Street / Ladywell AQMA. The reduction in NO_x required to achieve compliance with the annual mean NO₂ objective of 40µg/m³ at the worst-case location of R58 is **2.0%**. This reduction would achieve the compliance needed at the worst-case location, within the High Street / Ladywell AQMA.

Table 2.4 - Required NO_x emission reduction at the worst-case receptor location: High Street / Ladywell AQMA

Metric	Value (Concentrations as µg/m ³)
Worst-Case Relevant Exposure NO₂ Concentration	40.4
Equivalent NO_x Concentration	74.3
Background NO_x	16.8
Background NO₂	12.4
Road NO_x – Current	57.5
Road NO_x - Required (to achieve NO₂ concentration of 39.9µg/m³)	56.3
Required Road NO_x Reduction	1.2
Required % Reduction	2.0%

3.5 Key Priorities

Based on the above information, the AQAP measures should be divided into five targeted categories, although there is often some overlap between some of the categories:

- **Priority 1: Transport** – Provision of additional transport infrastructure; changes to road layout or operation; formulation of traffic plans with the aim being to encourage the use of greener modes of transport, and/or reduce congestion and associated vehicle emissions
- **Priority 2 – Public Health** – Encouragement of wider behavioural changes in local population with respect to their travel choices, raise awareness and educate members of the public on the impact of air pollution
- **Priority 3 - Strategies and Policy Guidance** – Working with partners and stakeholders to direct the use of legislation and targeted enforcement to control air pollution
- **Priority 4 – Planning and Infrastructure** – Mitigate potential air quality impacts effectively by being involved in decision making early on for future developments required to support the growth of DDC.
- **Priority 5 – Air Quality Monitoring (Evidence for Improvement)** – Ensure satisfactory air quality monitoring data is available to track outcomes of the implemented AQAP measures.

3.5.1 Priority 1: Transport

The main source of air pollution within DDC is associated with road transport emissions. Therefore, reducing transport emissions through the measures contained within the action plan is a key priority. The approach focusses on areas where the Council has direct control (e.g. planning and procurement of outsourced functions), or areas where measures can be implemented via a partnership e.g. with National Highways and/or Kent County Council.

The annual forecast for growth at the Port of Dover was between 2% and 4% based on Dover Transport Study Forecasting Report 2007. However, the port has reported a continuous decrease in traffic since 2015 (except for 2018, where a marginal increase of 0.08% was reported). Since 2020, the impact of Covid 19 further reduced

the annual traffic towards the port. Since the restrictions associated with Covid 19 have now been lifted, it can be predicted that the traffic will return to normal levels in the following years. Among all traffic to and from the port, road haulage vehicles accounted for approximately 53% of all vehicles from 2016 to 2019. The number of road haulage vehicles reached a peak in 2017 of 2,601,162 and then began to decrease year on year to 2,149,595 in 2021. However, road haulage vehicles still accounted for 86% of all traffic to the port due to the decrease in tourist cars and coaches as a consequence of the Covid 19 travel restrictions.

The primary route for HGV traffic to and from the port is the M20/A20. The proposed redevelopment of the Western Docks, to help alleviate the capacity requirements, will increase pressure on the A20 route. The A20 is partially covered by the declared AQMA as a result of reported exceedances of the annual mean NO₂ objective. Therefore, measures within this AQMA need to focus on freight management and transport improvements. The Port of Dover have issued a [Port Air Quality Strategy](#), as part of this, they have issued a [Statement of Intent](#) which shows their commitment to delivering a sustainable port operation in order to help improve local air quality. It is therefore important that the Port of Dover are involved in the development and implementation of measures associated with managing port traffic.

There are indications from recent monitoring data that the removal of roundabouts on the A20 approach road through Dover has had a beneficial effect on local air quality. The introduction of 'A20 Dover TAP' provides for port traffic to be held on the left lane of A20 outside Dover and then 'trickled' through the AQMA area of the A20 to the port. This has resulted in some significant improvements to nitrogen dioxide levels around Snargate Street:

<https://www.doverport.co.uk/administrator/tinyMCE/source/Environment/Port%20of%20Dover%20Air%20Quality%20Strategy.pdf>

The High Street/Ladywell AQMA has also been declared as a result of road transport emissions. However, unlike the A20 AQMA, the congestion is not associated with the port traffic. The one-way nature of the road system around Dover has created inefficiencies regarding the flow of traffic through the town centre. The Transport Strategy has considered improving the bus routes to counteract the issues associated with the one-way system. With regards to air quality, measures are

required to ensure that the buses using this route are sustainable, low emission buses and that overall traffic flows are being managed to reduce congestion at the junction. The overarching objective to increase employment within the town centre will inevitably encourage an increase in traffic into the centre of Dover. Promoting sustainable modes of transport will be of great importance to ensure traffic flows do not continue to increase. Modal shift away from private vehicle use, a move to tighter emissions standards of buses, and the promotion and enhancement of cycling and walking as healthy alternatives to car journeys form important aspects of this Plan. Moreover, densification of electric vehicle charging infrastructure and employer and school travel plans further aid the aspiration to reduce emissions from vehicles within the AQMAs.

3.5.2 Priority 2: Public Health

As discussed in further detail in Section 3.1, the impact of air pollution on public health is a major driver for improving air quality. Within Dover a key priority is to ensure the health and wellbeing of the community is maintained. It is accepted that the most effective way to achieve this is to change the attitudes towards travel behaviour overall. The Council is responsible for encouraging and facilitating these changes through education and awareness as well as through schemes which incentivise change. Improving air pollution for the benefit of public requires a wide reaching perspective and will therefore not be specific to the AQMAs but instead be aimed at the whole of the district.

3.5.3 Priority 3: Strategies and Policy Guidance

DDC is part of the Kent and Medway Air Quality Partnership (KMAQP). Continued involvement within this partnership is crucial to allow for successful working with partners and stakeholders to embed air quality in all associated strategies and policies. The KMAQP allows for collaboration between neighbouring authorities to create consistency with regards to how air quality is managed across Kent. Of relevance to reducing the regional background contributions of pollution to overall pollutant concentrations in the AQMAs are the Kent Freight Action Plan (targeting HGVs to ensure an efficient use of the road network in the goods distribution sector) and the Kent Low Emissions and Energy Strategy. This Strategy will seek to target a more efficient use of energy and an overall strategic direction for energy demands

across Kent, whilst additionally seeking to promote access to low emissions alternatives (for both energy and transport sectors).

3.5.4 Priority 4: Planning and Infrastructure

The Core Strategy identified the overall economic, social and environmental objectives for the district and evaluated the amount, type and broad location of development that is required to fulfil the objectives. The Land Allocation Plan (2016 – 2026) identified the specific sites within the district that are suitable for development .

The New District Local Plan has also been published in draft format and is anticipated to be adopted in 2023, covering the period up to 2040. The Local Plan will shape the future development of the district's towns and villages and builds upon the already published Land Allocation Plan. A number of new sites were identified for housing development during the plan period up to 2040, these are outlined within the [Local Plan](#) Site Allocations Policy 1 Non Strategic Housing Allocations.

In terms of air quality, promotion of electric charging points to be integrated into the development plans in the early stages will help to support the drive towards low emission vehicles. Encouraging public transport routes to and from the allocated development sites will also help facilitate a move towards modal shift, away from cars towards active travel and use of public transport. This will specifically be beneficial for the Ladywell/High Street AQMA whilst also likely to give rise to benefits in the A20 AQMA.

3.5.5 Priority 5: Air Quality Monitoring (Evidence for Air Quality Improvement)

Air quality monitoring is a useful way to fully appreciate the extent of the air pollution problem in Dover. It can also assist in quantifying the improvements that have materialised as a consequence of implementing measures to reduce emissions. Currently, DDC monitor NO₂ extensively within Dover town centre using passive diffusion tubes. However, there are no continuous monitoring stations reporting NO₂ concentrations in the district. The inclusion of continuous monitoring stations in the air quality monitoring programme will help to provide greater confidence in the existing concentrations, show hourly pollution trends to understand, for example, how the movement of HGV Port traffic impacts air quality over the course of a day, month

or year and can be used to locally verify the diffusion tube data to allow greater accuracy in the overall measurements. Furthermore, as regional background is expected to decline in the coming years, the installation of a background monitoring station will be beneficial in realising these improvements and understanding the contribution of other sources specific to Dover. DDC will be considering the viability of installing a continuous monitoring station in a suitable location to provide real time NO₂ concentrations.

4 Development and Implementation of Dover District Council’s AQAP

4.1 Consultation and Stakeholder Engagement

In developing this AQAP, we have consulted with internal and external stakeholders. We intend to conduct a public consultation including contacting other local authorities, agencies, businesses for their views and comments on this action plan. Schedule 11 of the Environment Act 1995 requires local authorities to consult the bodies listed in Table 4.1.:

The response to our Internal and external stakeholder engagement to assist in compiling the list of proposed measures is given in Appendix A.

Table 4.1 – Proposed Consultation

Consultee
the Secretary of State
the Environment Agency
the highways authority
all neighbouring local authorities
other public authorities as appropriate, such as Public Health officials
bodies representing local business interests and other organisations as appropriate

4.2 Steering Group

A steering group was established at the start of the update process to drive forward the development of the new AQAP. The core aim of the steering group was to identify measures for inclusion within the AQAP that would be effective both in terms of reducing NO₂ concentrations and also feasible in terms of implementation and delivery.

AQAP consultation meetings were held between 27th June – 9th August 2022.

Measures identified in Table 5.1 (AQAP Measures) were discussed and examined.

See Appendix A for abridged meeting notes.

5 AQAP Measures

Table 5.1 shows the Dover District Council AQAP measures. It contains:

- a list of the actions that form part of the plan
- the responsible individual and departments/organisations who will deliver this action
- estimated cost of implementing each action (overall cost and cost to the local authority)
- expected benefit in terms of pollutant emission and/or concentration reduction
- the timescale for implementation
- how progress will be monitored

NB: Please see future ASRs for regular annual updates on implementation of these measures

Table 5.1 – Air Quality Action Plan Measures

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
1	Encourage Council Travel Plan opportunities and seek to facilitate uptake of sustainable modes of transport;	Promoting Travel Alternatives	Workplace Travel Planning	DDC	Ongoing	2023 onwards	% increase in amount of usage in schemes identified in comments column	Below annual mean AQS objectives	Ongoing	2025-2027	<ul style="list-style-type: none"> • 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	DDC/KCC	Ongoing	2022	No. of travel plans in place Reduction in school vehicle drop-offs / pick-ups	Below annual mean AQS objectives	On-going	tbc	Approximately 73% of primary and 89% of secondary schools in Dover District have approved school travel plans

Dover District Council

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
3	Work with KCC to improve the facilities for cycling and walking within Dover district; promote cycle-to-work scheme and bike rental scheme	Promoting Travel Alternatives	Promotion of cycling	DDC/KCC	Ongoing	Ongoing	%modal shift to cycling/walking, No. miles new cycle lanes/routes Number of bikes available and rentals	Below annual mean AQS objectives	On-going	2025-2027	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. Introduction of: <ul style="list-style-type: none"> • 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	DDC	Ongoing	2022 onwards	No. planning applications where improvements secured	Below annual mean AQS objectives	Planning conditions included in all major developments to install ELV charging points	2025-2027	Change in building regulations requiring some new developments to have electric vehicle charging infrastructure.

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
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	DDC/KCC	Ongoing	2022 onwards	% modal shift to public transport	Below annual mean AQS objectives	On-going	2035	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
6	Local air quality monitoring within the District to ensure a high standard of data is achieved	Public Information	Other	DDC	Ongoing	1995 onwards	Recorded Concentration	Below annual mean AQS objectives	Completed Annually, renewed in 2018. Two automatic sites decommissioned, but more diffusion tubes added to compensate	ongoing	General trend of reduction in concentrations monitored (LAQMTG16)
7	Make details of the Action Plan measures and annual progress reports available on the Website	Public Information	Via the Internet	DDC	Ongoing	Annually	Availability of recently published reports on the Website	Below annual mean AQS objectives	On-going	Annually	ASR documents freely available. Part of general and continual efforts of DDC Environmental Protection..

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
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	DDC/KMAQP	Ongoing	2022 onwards	% improvement in energy efficiency, SAP rating	Below annual mean AQS objectives	On-going	Ongoing	Dover DC as member of K&MAQP worked with KCC on Kent and Medway Energy and Low Emissions Strategy (ELES)
9	Local Plan policy and guidance	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	DDC/KCC	2022	Ongoing	Implementation of policy	Below annual mean AQS objectives	Local Plan timetable: Regulation 18 draft since November 2021; Local Plan dated to 2040	2024	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	DDC/KCC	Ongoing	Ongoing	Number of promotion events	NO2 Measure to increase public awareness	National campaigns promoted on social media platforms	2025-2027	DDC webpages can link to active travel - KCC looking to update Local Transport Plan -. DDC run Wellbeing at Work initiatives.

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
11	Behaviour change campaigns to reduce single occupancy car trips	Public Information	Other	DDC	2022	Ongoing	Number of campaigns	NO2 Measure to increase public awareness	Electric pool cars available and DDC staff mileage scheme reviewed	2025-2027	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	DDC	2022	2023	Number of campaigns	NO2 Measure to increase public awareness	New Flexible working policy being viewed at DDC	2025-2027	Flexible working and home working policy has already been in place.
13	Educational campaigns for schools	Public Information	Other	DDC	Ongoing	2022	Number of school sign ups to pollution patrol	NO2 Measure to increase public awareness	Reviewed in early 2023 to evaluate school participation	2025-2027	As part of a 'Schools Group' DDC partner in a successful Defra bid for a 'Digital Schools Resource' led by Canterbury CC called "Pollution Patrol"
14	District wide Clean Air Days	Public Information	Other	DDC/KCC	2022	2023	Number of campaigns	NO2 Measure to increase public awareness	part of Kent initiative 2022	2023-2027	DDC to promote national clean air days.
15	Taxi/Private Hire Vehicle Policy license fees	Promoting Low Emission Transport	Taxi Licensing conditions	DDC	2022	2022	Implementation of policy	NO2 Measure to increase public awareness	Part of DDC Licensing Policy	2023	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%.

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
16	Engage with bus operators to introduce ultra-low emission vehicles into the fleets	Vehicle Fleet Efficiency	Promoting Low Emission Public Transport	DDC	2022	2022	Fleet composition	NO2 To be confirmed if considered for further assessment. NOx emission reduction will be able to be calculated annually depending on the change in fleet composition	Part of Construction of Dover Fastrack 2022	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
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	DDC	2022	Ongoing	Fleet composition	NO2 To be confirmed if considered for further assessment. NOx emission reduction will be able to be calculated annually depending on the change in fleet composition	4 Electric Vehicles current utilised by DDC.	2029	DDC Environmental Crime team currently runs three ELVs. DDC Grounds Maintenance exploring use of ELVs for supervisors DDC Parking Services and Community Safety Unit looking at move to ELVs upon contract renewal

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
18	Alternative fuel (EV) infrastructure development	Promoting Low Emission Transport	Procuring alternative Refuelling infrastructure to promote Low Emission Vehicles, EV recharging, Gas fuel recharging	DDC	Ongoing	2022	Number of EV charging points	NO2 Small impact upon NO2 concentrations from measure individually, estimated to be less than 1µg/m3 based upon a low to medium uptake.	29 public electric vehicle charging posts installed across the district	2023	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	DDC	2022	2022	Number of discounted permits	NO2 Small impact upon NO2 concentrations from measure individually, estimated to be less than 1µg/m3 based upon a low to medium uptake.	Parking permits discounted for low emission vehicles	2022	On and off street parking charges for low emission vehicles explored.

Measure No.	Measure	EU Category	EU Classification	Lead Authority	Planning Phase	Implementation Phase	Key Performance Indicator	Target Pollution Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments
20	Port of Dover improvements	Freight and Delivery Management	Other	Port of Dover	Ongoing	2022	Reduction in NO2 concentrations	NO2 Small impact upon NO2 concentrations from measure individually, estimated to be less than 1µg/m3 based upon a low to medium uptake.	Port of Dover have published an Air Quality Action Plan	2025-2027	<ul style="list-style-type: none"> 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	DDC/KCC	Ongoing	2022 onwards	Number of campaigns	NO2 Measure to increase public awareness	DDC officers input in to KCC Low Emission Strategy.	2022	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	DDC/Kent Energy Centre	Ongoing	2019	% improvement in energy efficiency, SAP rating	Below annual mean AQS objectives	On-going	2022	Dover DC as member of K&MAQP worked with KCC on Kent and Medway Energy and Low Emissions Strategy (ELES)

Appendix A: Response to Consultation

Table A.1 – Summary of Responses to Consultation and Stakeholder Engagement on the AQAP

Air Quality Action Plan Consultation Meetings Summary

The Environmental Protection Team conducted meetings/corresponded with relevant stakeholders between the 27/06/2022 and the 09/08/2022 to help form its air quality action plan.

The below tables detail key points from this consultation:

Internal stakeholders (Dover District Council)	
Department/Team	Measures identified to reduce air pollution
Grounds Maintenance	<ul style="list-style-type: none"> • GM team have explored market for electric alternatives to current fleet (11 vehicles) however not currently deemed viable due to cost. Will check the market again upon contract renewal • Exploring the two supervisors’ vehicles becoming electric and together with wider use of electric hand tools
Waste Services	<ul style="list-style-type: none"> • DDC refuse and recycling waste collection vehicles are all diesel and tied into contract until 2029 will consider electric vehicles following contract expiry • Collection route optimisation • Contractor (Veolia) have issued electric vehicles to their supervisors in our district.

Procurement	<ul style="list-style-type: none"> • Procurement Team to suggest to all project managers that a social value question be added to all new contract tender questionnaires.
Community Safety & Development	<ul style="list-style-type: none"> • Community development team offered to promote air quality at local events their team attends. • Explore promotion of educational online resource “Pollution Patrol” at Youth conference(s) • Will consider electric vehicles upon vehicle contract renewals
Press office/communications	<ul style="list-style-type: none"> • Continue to post air pollution messages on social media, e.g., anti-idling campaigns and clean air day • Link messaging to infrastructure projects such as Dover FAST TRACK • Work with Environmental Protection Team to promote online resource “Pollution Patrol”
Planning	<ul style="list-style-type: none"> • Building regulations recently changed requiring provision of electric vehicle charging points for applications relating to single dwelling(s) upwards. • Commercial developments steer to seek up to 10% be electric charging facilities with new applications
Licencing	<ul style="list-style-type: none"> • Reduction in licencing fees for taxi’s which are electric/hybrid
Planning Policy	<ul style="list-style-type: none"> • Copy of current local plan shared with Environmental Protection to consider adoption of the Kent & Medway Air Quality guidance document
Climate Change	<ul style="list-style-type: none"> • Hybrid working has seen reduction in staff travel • Climate Change Strategy
Parking Services	<ul style="list-style-type: none"> • Exploring idea of cycle parking in new car parks • Exploring replacing three diesel vehicles with electric ones • Parking permits currently linked to emissions
Human Resources	<ul style="list-style-type: none"> • Cycle to work scheme • New business milage policy • Exploring electric staff pool car scheme (for work duties) • Promotion of active travel

	<ul style="list-style-type: none"> • Electric vehicle car salary scheme • Flexible working policy
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External Stakeholders	
Stakeholder	Measures identified to reduce air pollution
Kent Highways	<ul style="list-style-type: none"> • Introduction of Dover FAST TRACK (Electric bus) • Improvements to EV charge point network in Kent including rural areas • Travel plans for new developments • Refurbishment works conducted at ladywell lights in Dover in 2021 • Active travel plans offered to all schools • Support for active travel schemes e.g.: <ul style="list-style-type: none"> ○ E cycle training scheme, ○ town cycle audits, ○ Kent connected app ○ Clearing NCN paths ○ “Explore Kent” • National bus strategy formed • Promotion and support of campaigns e.g., road safety week, national walking month, walk to school or work initiatives, etc via website, social media, and other methods
Stagecoach	<ul style="list-style-type: none"> • Commitment to investing in low emission technology, zero emission bus fleet target by 2035. • Reconnect scheme through KCC providing free bus travel • New Euro 6 Engine vehicles have automatic engine switch off when stationary • Advertising campaigns to promote using public transport planned following reduction in passenger numbers post Covid

Port of Dover	<ul style="list-style-type: none">• POD have air quality action plan• Exploring improvement of no idling signage along “buffer zone”• Two new P&O vessels will be hybrid meaning that vessels would be electric powered when entering and leaving ports.• Feasibility study being undertaken regarding electric vehicles with partners• POD requested additional investment in to increase amount of electricity coming into the port via the power network to enable reduction in use of fuels that create air pollution on site.
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Appendix B: Reasons for Not Pursuing Action Plan Measures

Table B.1 – Action Plan Measures Not Pursued and the Reasons for that Decision

Action category	Action description	Reason action is not being pursued (including Stakeholder views)
	Cycle-to-work schemes	Detailed in other action plan measures.
	Reducing vehicle idling	Resource to provide enforcement not available. AQMAs are located in areas with high flows of traffic where idling is not a major issue. Any type of enforcement in these areas is likely to cause traffic delays.
	Retrofitting or upgrade of private hire vehicles / taxis to LPG/retrofitting subsidies for local cab owners	No appetite following consultation with licensing team

<Appendix C: Add Additional Appendices as Required>

INSTRUCTIONS

The Council should add additional supporting appendices as required.

For example, where the selection of AQAP measures has been supported by further studies, e.g. quantitative appraisal of action plan measures through dispersion modelling, or other feasibility studies, this work should be included here.

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
AQS	Air Quality Strategy
ASR	Air quality Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
DDC	Dover District Council
EU	European Union
KMAQP	Kent and Medway Air Quality Partnership
LAQM	Local Air Quality Management
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
PM ₁₀	Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less
PM _{2.5}	Airborne particulate matter with an aerodynamic diameter of 2.5µm or less

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