



Horsham District Council

Air Quality Action Plan

In fulfilment of Part IV of the Environment Act 1995

Local Air Quality Management

2026

Horsham District Council

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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 Horsham District between 2025-2030. The AQAP sets out how the local authority will exercise its functions in order to secure the achievement of the air quality objectives.

This action plan is a draft version and will be adopted in its final version following public consultation.

Implementing the outlined measures will ensure that the relevant objective(s) continue to be attained.

The relevant Air Quality Management Area (AQMA) addressed by this action plan is outlined below:

- Horsham AQMA No1: Storrington town centre – declared for exceedances of the annual mean objective for nitrogen dioxide (NO₂) in December 2010.

The Horsham Cowfold AQMA was revoked in February 2026, so has not been included in this action plan.

2024 was the first year in which annual mean NO₂ concentrations in Storrington did not exceed the air quality objective. Concentrations are expected to remain compliant, and it is therefore anticipated that the Storrington AQMA will be revoked during the lifetime of this Action Plan.

This action plan replaces the previous action plans for Storrington which ran from 2020. Projects delivered through the past action plan are fully described in Section 2.3 of this document, and include:

- Increase active travel, support mode shift, and reduce the need to travel
- Encourage and support uptake of ultra-low and zero exhaust vehicles
- Reduce emissions from buildings and new development
- Improve monitoring and public awareness
- Partnership working
- Traffic schemes

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 less affluent^{1,2}.

The UK Health Security Agency (formally Public Health England) has estimated that the costs of air pollution in England to health and social care services could reach between £5.3 and 18.6 billion between 2018 and 2035³. Horsham District Council is committed to reducing the exposure of people in Horsham District to poor air quality in order to improve health.

We have developed actions that can be considered under five broad topics:

- Alternatives to private vehicle use
- Policy guidance and development control
- Promoting low emission transport
- Public information
- Traffic management

Our priority is working with stakeholders to identify measures that can lead to improvement in air pollution levels, and with planning policy and development control to secure air quality mitigation from new development and progressing delivery of traffic management / congestion improvement schemes as identified in Table 5-1.

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), but for

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 Public Health England. Estimation of costs to the NHS and social care due to the health impacts of air pollution: summary report, May 2018

which we may have useful evidence, and so we will continue to work with regional and central government on policies and issues beyond Horsham District Council's direct influence.

Responsibilities and Commitment

Part IV (Sections 80 to 91) and Schedule 11 of the Environment Act set out the legal obligations on local authorities in relation to LAQM. The Environment Act 2021 amends Part IV of the Act to clarify duties and enable greater cooperation between different levels of local government, neighbouring authorities and other relevant public authorities in the preparation of AQAPs so that a more strategic view is taken in respect of the achievement of air quality objectives.

This AQAP was prepared by the Environmental Health Department of Horsham District Council with the support and agreement of officers from across council services, input from partner organisations, highways authorities.

Steering group members included:

- HDC Environmental Health
- West Sussex County Council's (WSCC) Highways, Transport and Planning
- Storrington and Sullington Parish Council
- Elected Councillors

This AQAP has been submitted for appraisal by the Corporate Management Team and Portfolio holder for Environment and Sustainability and by the Director for West Sussex Public Health.

This AQAP will be subject to an annual review, appraisal of progress. Progress each year will be reported in the Annual Status Reports (ASRs) produced by Horsham District Council, as part of our statutory Local Air Quality Management duties. All ASRs will be published on [HDC's website](#).

If you have any comments on this AQAP, please send them to ehl@horsham.gov.uk or Environmental Health, Horsham District Council, Albery House, Springfield Road, Horsham, West Sussex RH12 2GB.

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1 Introduction

This report outlines the actions that Horsham District Council will deliver between 2026-2030 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. The purpose of the report is to set out how the local authority will exercise its functions in order to achieve the relevant air quality objectives. This action plan is a draft version and will be adopted following its approval.

It has been developed in recognition of the legal requirement on the local authority to achieve and maintain Air Quality Objectives under Part IV of the Environment Act 1995, as amended by the Environment Act 2021, 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 Horsham District Council's air quality ASR, the reports will be published on [HDC's website](#).

2 Summary of Current Air Quality in Horsham District

2.1 Air Quality Management Area

Air quality in Horsham has improved each year as concentrations of NO₂ decrease. Due to 5 years of compliance with the air quality objectives, in 2026 HDC made the decision to revoke the Horsham Cowfold Air Quality Management Area (AQMA). The only remaining AQMA in the district is Horsham AQMA No1 in Storrington.

The relevant AQMA addressed by this AQAP is outlined below.

Table 2-1 – Relevant declared Air Quality Management Areas

AQMA Name	Date of Declaration	Pollutants and Air Quality Objectives	One Line Description	Is air quality within the AQMA influenced by National Highways roads?	Level of Exceedance: Declaration	Level of Exceedance: 2024	Number of Years Compliant with Air Quality Objective
Horsham AQMA No1	Declared 01/12/2010	NO ₂ Annual Mean	Storrington town centre incorporating West Street, the High Street, and part of School Hill and Manley's Hill.	NO	50.2 µg/m ³ (Storrington 1,2)	32.7 µg/m ³ (Storrington 19n) – No exceedance	5* (2020-2024)

* The LAQM TG (2022) states “Where NO₂ monitoring is completed using diffusion tubes, to account for the inherent uncertainty associated with the monitoring method, it is recommended that revocation of an AQMA should be considered following three consecutive years of annual mean NO₂ concentrations being lower than 36 µg/m³ (i.e. within 10% of the annual mean NO₂ objective).” In Storrington, NO₂ monitoring is undertaken mainly with diffusion tubes, and of the 5 years of compliance, 2024 was the first year to have concentrations below 36 µg/m³, which is why it has not yet been proposed to be revoked.

Currently, there are 363 AQMAs in England declared for Nitrogen Dioxide, with 342 for exceedances of annual mean objective and 21 for exceedances of 1-Hour and annual mean⁴. 94.6% of AQMAs in England (excluding London) were declared on the basis of road transport sources, 1.7 % were declared for industrial sources, and 0.2% (only one AQMA) declared based on domestic sources. 3.3% were declared for a combination of transport and industrial source or transport, industrial and domestic sources.

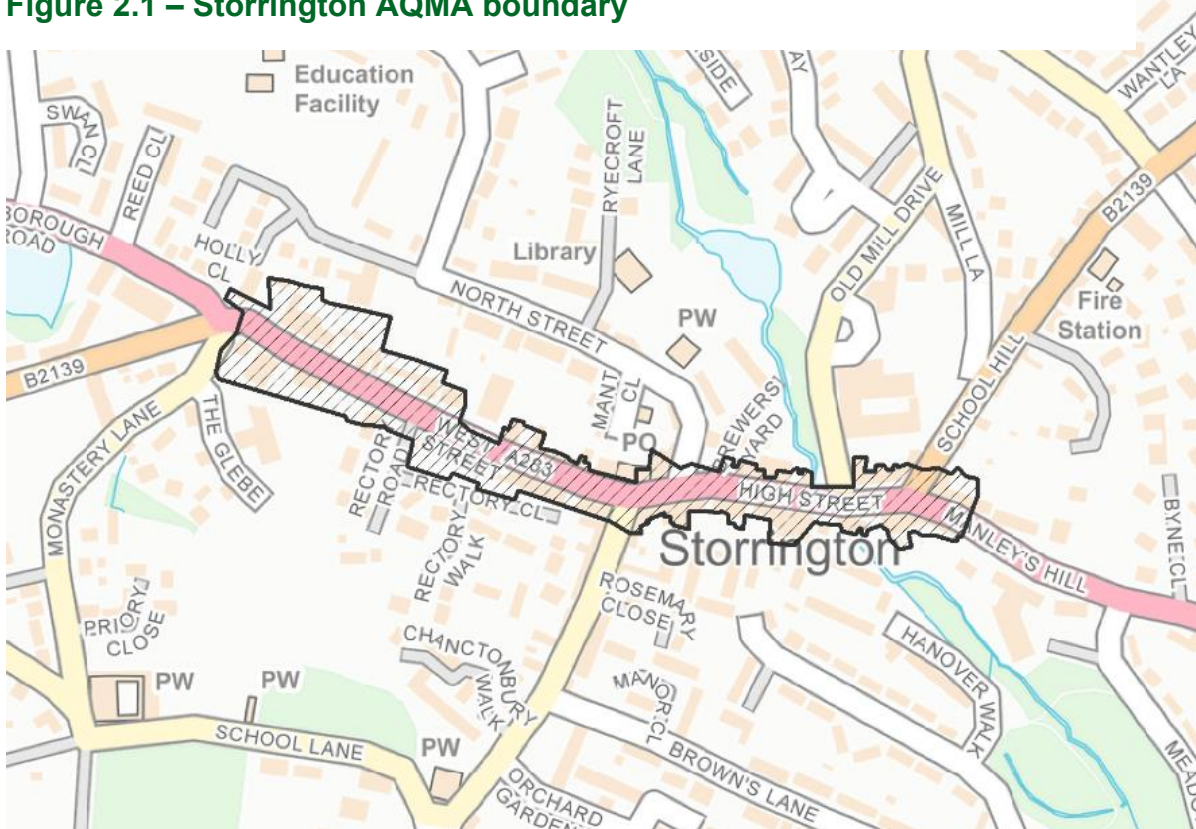
Storrington AQMA (**Figure 2.1**) has been declared for the exceedances of the annual mean objective for nitrogen dioxide (NO₂), a gas that is mainly produced during the combustion of fossil fuels. The main source of of NO₂ air pollution locally is road traffic emissions from major roads, and an important contributor to traffic is drivers travelling east-west to avoid the A27, which is often heavily congested through Lancing and Worthing, and around Arundel. The AQMA concentrations receive approximately a third of road-attributable pollutant concentrations from through traffic. This contribution is even greater along Amberley Road, where approximately half the road contribution of NO₂ concentrations originates from through traffic.

Monitoring is carried out using diffusion tubes at 16 locations within Storrington, of which 8 are within the AQMA, as seen in **Figure 2.2**. Concentrations at all monitoring sites within the AQMA have shown an overall decreasing trend in NO₂ since the AQMA was declared.

In 2023, the monitoring site Storrington 19n, located at the junction of Manley's Hill and School Hill within the Storrington AQMA, was the only location still recording NO₂ concentrations within 10% of the annual mean objective (above 36 µg/m³). This mini roundabout has consistently remained within this threshold since 2019. However, in 2024 no monitoring sites within Storrington reported NO₂ levels exceeding the 10% threshold of the annual mean objective. This marks the first recorded year of full compliance across all monitoring locations.

⁴ <https://uk-air.defra.gov.uk/aqma/summary>

Figure 2.1 – Storrington AQMA boundary



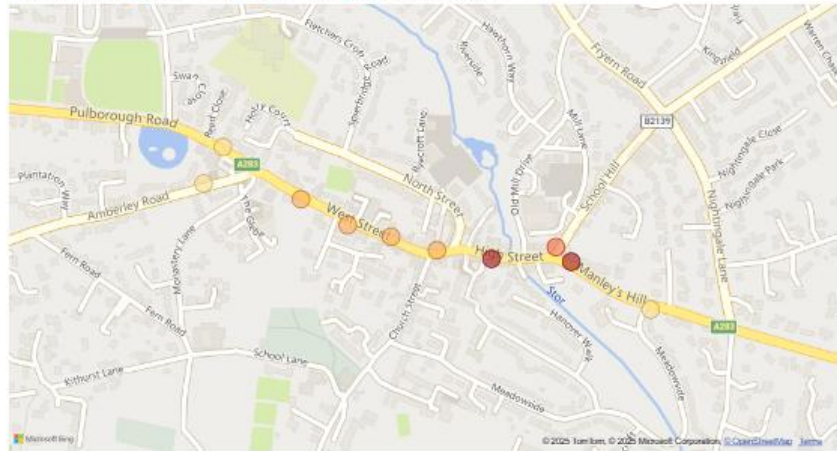
It should be noted that due to the COVID-19 pandemic, the monitoring results for 2020 and 2021 are not representative of typical air quality conditions. However, all the long-term sites showed a continued overall downward trend in measured concentrations of NO₂ over the last fifteen years, which applies both to roadside and background locations. This can be attributed to decreasing background concentrations and is also indicative of a gradual improvement in fleet emissions.

Technically, HDC could proceed to revoking the West Street/High Street part of the Storrington AQMA, which has for several years been in compliance with the annual mean objective for NO₂. However, continued action aimed at reducing traffic flows and congestion on the High Street has benefited the air quality within the whole of the AQMA. As such, no changes are proposed at present and the boundaries of the Storrington AQMA can remain unchanged. It should be noted that NO₂ concentrations are expected to remain compliant with the objectives, and it is therefore anticipated that the Storrington AQMA will be revoked during the lifetime of this Action Plan.

Figure 2.2 – Storrington AQMA and nearby NO₂ monitoring sites and annual mean concentrations in 2010 - 2024

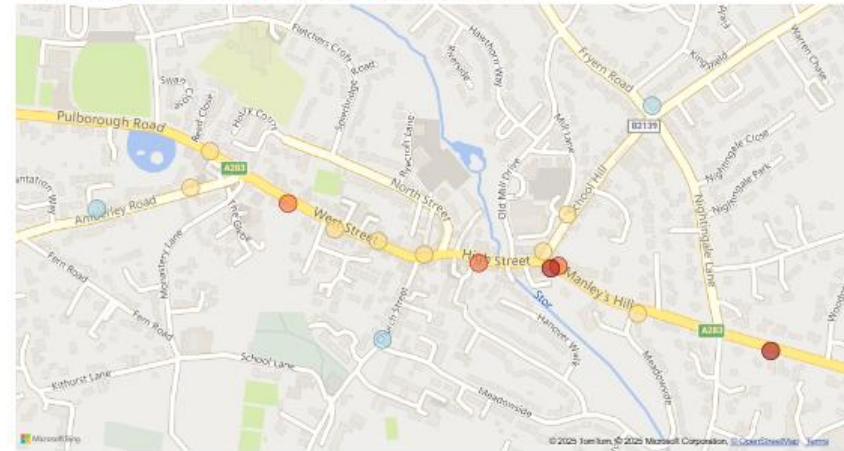
NO₂ concentrations (µg/m³): 2010

● 20.0 - 30.0 ● 30.0 - 36.0 ● 36.0 - 40.0 ● 40.0 and above



NO₂ concentrations (µg/m³): 2015

● 10.0 - 20.0 ● 20.0 - 30.0 ● 36.0 - 40.0 ● 40.0 and above



NO₂ concentrations (µg/m³): 2020

● 0.0 - 10.0 ● 10.0 - 20.0 ● 20.0 - 30.0 ● 30.0 - 36.0 ● 36.0 - 40.0



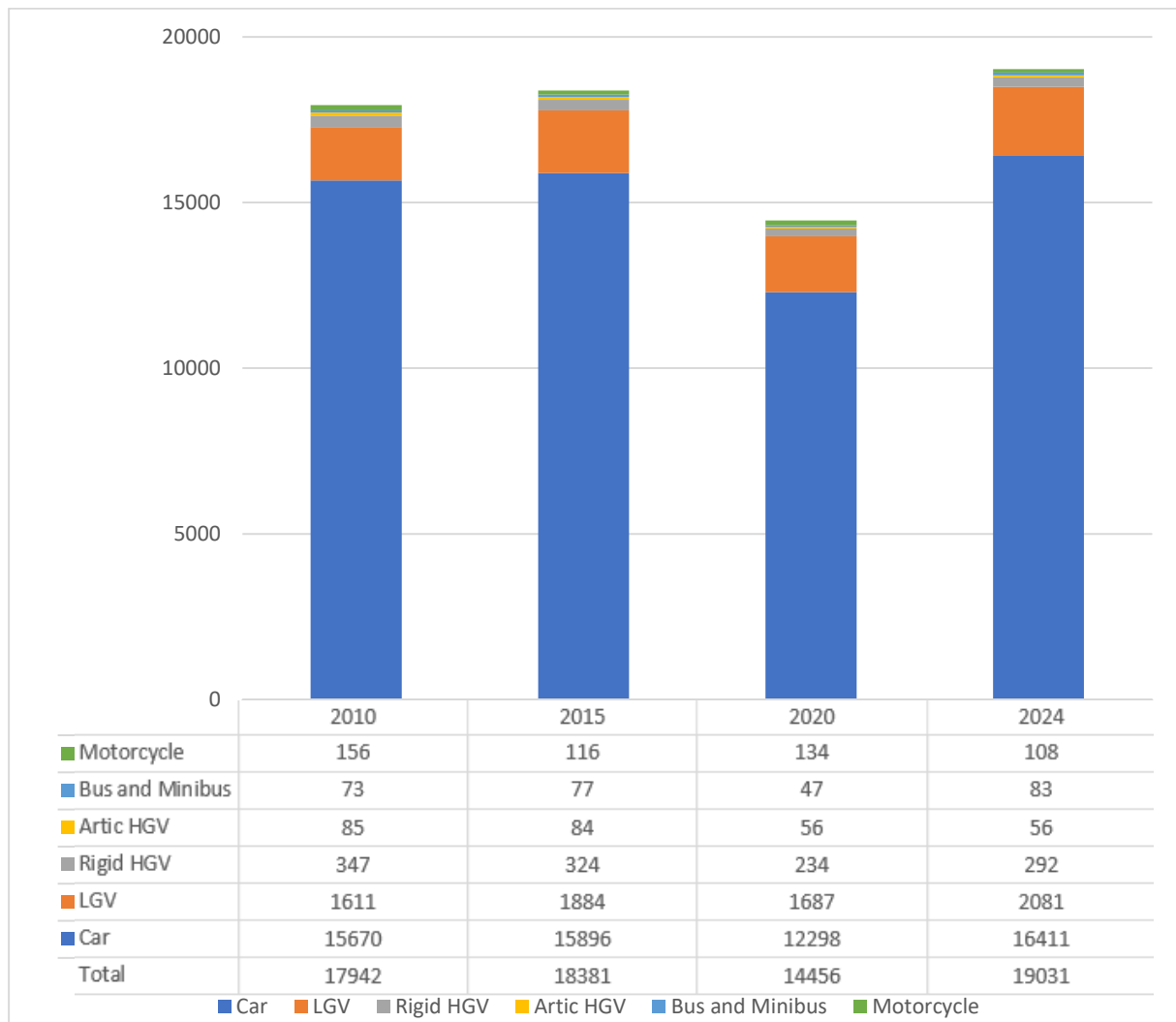
NO₂ concentrations (µg/m³): 2024

● 0.0 - 10.0 ● 10.0 - 20.0 ● 20.0 - 30.0 ● 30.0 - 36.0



Road traffic is the most significant local source of NO₂ in the AQMA, and there are no industry or other point or local diffuse sources of emissions in the area. The total number of vehicles has slightly increased since 2010 (**Figure 2.3**). There is a downward trend in the number of HGVs, but an upward trend of LGVs and cars. The Covid pandemic had an impact on the average weekday flow. In 2020, the volume of traffic was 23% lower than what would have been expected for that same year if the same trend was applied.

Figure 2.3 – Annual average weekday traffic at Storrington, A283 West Street, exit of Rectory Road from 2010-2024 (WSCC permanent traffic counter)



2.2 Public Exposure

To understand the number of the population exposed to poor air quality, a review of the estimated population of the AQMA has been undertaken. This has been completed using the Office for National Statistics 'Lower Super Output Area' (LSOA) information and Local Knowledge of the area using Google Maps. Information from the Indices of Multiple Deprivation (IMD) are also included. The number for the IMD are based on deciles of multiple factors of deprivation with the least deprived decile being the 10th. The larger the score, the more deprived the area.

Storrington AQMA is located on the High Street, with mainly commercial buildings i.e. shops, post office, pubs etc, as well as residential dwellings. It is estimated that 110 people live within the AQMA.

According to the IMD, the households within the AQMA are all within the 5th or 9th decile. The roundabout between the high street and Manley's Hill which has been identified as a hotspot for air pollution is within the 5th decile.

2.3 Delivery under the previous AQAPs

Most of the measures described in this chapter will continue to be delivered as part of this action plan.

2.3.1 Increase active travel, support mode shift, and reduce the need to travel

Horsham District's residents are currently heavily reliant on private vehicles for transport. This is largely because of the rural nature of the district, meaning amenities and services are further than 15-minutes' walk or cycle away, and due to infrequent public transport systems, that are viewed as inconvenient and unreliable by local people. More people using active transport or lower carbon options through behaviour change initiatives and improvements in sustainable transport services and infrastructure would have a direct impact on air quality as well as net zero efforts.

2.3.1.1 Cycling and Walking Infrastructure

Cycling and walking are low-cost modes of travel that have the potential to replace a significant proportion of short-distance motorised journeys. The [West Sussex Active Travel Strategy 2024-2036](#) sets out the county council's vision for active travel and outline our approach to identifying, prioritising and delivering walking, wheeling and cycling improvements. The West Sussex Local cycling and walking infrastructure plan (LCWIP), which forms part of our Active Travel Strategy, features 6 long-distance routes. It is designed to complement aspirations identified in the LCWIPs developed by some of the district and borough councils.

In 2020, [HDC published its first LCWIP](#) focused on cycling and walking routes within Horsham town, and routes into the town from surrounding settlements with an aim to enable people to locomote when making utility trips.

2.3.1.2 Storrington Minibus

The [Storrington minibus](#) is run by a team of volunteers and offers a door-to-door service covering the areas Storrington, Sullington, Thakeham and West Chiltington. There are 3 minibuses, 2 in Storrington and 1 in West Chiltington, with wide access and storage for shopping and mobility aids. Regular trips include Storrington, Pulborough, Holmbush, Horsham, Chichester and Worthing.

Other schemes promoted to encourage active travel during the past years were:

- Smarter Choices – encourage walking and cycling
- Co-operation with schools to enhance school travel plans

2.3.2 Encourage and support uptake of ultra-low and zero exhaust vehicles

2.3.2.1 Electric Vehicle Strategy

In cooperation with Sussex-Air Partnership, Horsham DC has supported the development and maintenance of the “Energise” eV charge point network. Funding for Energise and the eV South East Network Partnership project has ceased in 2017, so the priority was to form a new partnership to continue with the project and the

expansion of the regional EV charging network (previously known as the Energise network). In March 2020 HDC approved its [Electric Vehicle \(EV\) Charge Point Strategy](#) which aims to enable the provision of EV infrastructure.

In December 2019, [West Sussex County Council approved an Electric Vehicle Strategy](#) that aims to achieve 70 per cent of all new cars in the county to be electric by 2030; to put a sufficient charging infrastructure in place to support the vehicles predicted to be reliant on public infrastructure charge points; and, to ensure a renewable energy source for all charge points is enabled by WSCC .

A partnership with WSCC, Adur and Worthing District Councils, Arun District Council, Crawley Borough Council, Horsham District Council and Mid Sussex District Council was formed to achieve these strategies⁵. Connected Kerb won the tender to install thousands of charge points across the county within the subsequent ten years.

The number of electric vehicles sales has gone up and it is important that developers consider the likely demand for EV charging within new developments. [WSCC Guidance on Parking at New Developments \(September 2020\)](#) outlines key principles for parking in both residential and non-residential developments. One principle addresses EV Charging Infrastructure, requiring a minimum number of 'active' charging points based on the total number of parking spaces. Additionally, where appropriate, ducting must be installed at all remaining spaces to allow for future upgrades, providing 'passive' provision.

⁵ Chichester District Council subsequently joined the partnership.

Figure 2.4 – Electric Vehicle charging point at Storrington Library car park



2.3.2.2 Defra funded Taxi Project

Sussex Air was successful with their bid for the 2021/2022 Air Quality Grant which included a Taxi Study. The aim of the proposed taxi engagement project was to facilitate a transition to EV by taxi drivers and to help the district build an infrastructure that is convenient, reliable and works for the taxi trade and which will drive the progression of taxi licensing policies for EV drivers.

In 2022, two mini forums were organized in partnership with Energy Saving Trust (EST). The first, in October, for licensing officers across Sussex and the second, in November, for Councillors and elected members across Sussex. EST explained how EVs work, how to charge them and addressed some common misconceptions. They also covered the business case for making the switch to EVs and examined some of the EV market offerings for taxi and private hire drivers.

In 2023, two surveys – East Sussex and West Sussex – were available to gauge opinions about electric vehicles from the taxi and private hire trade across Sussex. The outcomes of the study were passed to Connected Kerb to follow on with technical and financial feasibility surveys to enable installations at the proposed sites. A summary of the results from the surveys are available on [Sussex Air Taxi Project page](#).

In 2024, leading manufacturers supported an EV event at the Council's Parkside premises in Horsham (**Figure 2.5**). The event provided an opportunity for visitors to learn about zero emission transport and to test drive EVs in the town centre. The Cabinet Member for Climate Action and Nature Recovery chaired presentations and a Q&A session at Parkside. These included speakers from Connected Kerb, who are responsible for the roll-out of EV charging points throughout West Sussex, as well as experts from the Energy Savings Trust, who shared information on grants and funding available to help individuals and businesses make the EV switch.

Figure 2.5 – Discover Electric event poster



Other schemes related to promoting electric vehicles in the district were:

- Working with local businesses to encourage alternative refuelling options; encourage home deliveries; investigate opportunities for local and shared deliveries; improve local bus service; promote transport plans; encourage the use of LEVs for deliveries within AQMA.
- A desktop feasibility study on the Electric Vehicle Charging Infrastructure commissioned by HDC has provided information on the typical costs of charging point installations at several car parks in Horsham, Southwater, Cowfold, Henfield, Steyning and Storrington. HDC is currently considering all funding options for its EV strategy.
- Horsham District Council has successfully bid for support from the Department for Transport (DfT) under Phase Two of the Ultra-Low Emission Vehicle Readiness Project. The grant covered 75% of the cost of eV vehicle leases for three vehicles: two Nissan e-NV200 vans and one Nissan Leaf car, as well as the costs of the installation and maintenance of one charge point per vehicle - located at Swan Walk car park, Chesworth Depot HDC and Hop Oast Depot HDC.
- Replacement of HDC Neighbourhood Wardens vehicle fleet from petrol to hybrid vehicles.
- Horsham Car Club implemented in 2014, since then three cars (one eV/petrol hybrid) are currently available in Horsham.
- Expansion of the “Energise” electric vehicle charge point network by adding two rapid eV charging points in Storrington and Billingshurst.
- Development of the Emission Reduction Strategy to provide locations within the district to house electric vehicle rapid charge points in 2015.

2.3.3 Reduce emissions from buildings and new development

2.3.3.1 Air Quality and Emissions Mitigation Guidance for Sussex (2021)

The *Planning Advice Document: Air Quality and Emissions Reduction Guidance* was completed in 2014 and published the following year. In 2019 the *Air Quality and*

Emissions Mitigation Guidance for Sussex was integrated with HDC environmental policy and updated in 2020 and 2021.

Developers are required to adhere to the [Air Quality and Emissions Mitigation Guidance for Sussex](#) (2021). The document provides clarity to how authorities intend to interpret relevant Local Plan policies and offers advice for developers and their consultants on how to assess and mitigate the impact that new developments may have on local air quality for several air pollutants. It aims to have a consistent approach by developers and Local Planning Authorities (LPAs) to address impacts on local air quality, ensure optimum scheme design to reduce emissions and/or exposure and avoid unnecessary delays in the planning process.

2.3.3.2 Clean Burn Sussex

Research has shown that wood burning is a large contributor to primary emissions of PM_{2.5}. Unsurprisingly, solid fuel burning has had a significant contribution to the concentrations of PM_{2.5} in the Southeast region. That contribution has been quantified by King's College at 6 to 9% annually, averaged across urban areas⁶. In 2018 HDC was successful in securing Defra's funding towards the Clean Burn Sussex project, aimed at the promotion of least polluting fuels and stoves. The project was a collaboration of 15 authorities in Sussex to raise awareness about domestic burning and promote better burning methods and choices. A dedicated [website for clean burning](#) has been in operation from November 2019, it provides summary findings from the project.

⁶ King's College London. (2017). Airborne particles from wood burning in UK cities. London: Department for Environment, Food and Rural Affairs (Defra).

2.3.4 Improve monitoring and public awareness

2.3.4.1 NO₂ monitoring

Since the last Air Quality Action Plans, HDC have expanded their diffusion tube network to increase monitoring across the district. There are 15 diffusion tubes in Storrington, 8 of which are within the AQMA.

The council currently has 49 diffusion tubes spread across the district, they are simple cost-effective ways to measure monthly NO₂, derive annual concentrations and identify long-term trends.

Additionally, there are reference analysers in Storrington and Park Way, Horsham to continuously monitor NO₂, and low-cost sensors at Storrington mini-roundabout, Cowfold and North of Horsham.

2.3.4.2 Particulate Matter Monitoring

At the end of 2016, Storrington Automatic Urban and Rural Network (AURN) ceased monitoring PM₁₀ and PM_{2.5} when Defra re-located the analysers to an area of lower coverage. In the end of April 2022 three particulate matter analysers were installed in Storrington as part of Defra's Particulate Matter research study, in 2023 HDC were able to keep the Fidas analyser after the one-year study in Storrington, and in July 2024 the analyser was incorporated into the AURN.

In 2022, Sussex air was successful on Defra's Air Quality Grant and additional particulate analysers were installed across Sussex, including Horsham (Cowfold), to further enhance the database and provide a more detailed and substantive understanding of particulate concentrations across the region. This data will be used in our public engagement projects.

2.3.4.3 Low-cost Sensor network

In 2024 HDC joined The Brighton & Hove and Sussex Real-Time Project, and three EarthSense Zephyr® sensors were installed in the district. These monitor a wide range of pollutants, including NO₂, NO, PM₁₀, PM_{2.5}, PM₁, H₂S, SO₂, CO, CO₂, and O₃, as well as pressure, temperature & relative humidity. The sensors are located at:

- Langhurst Wood Road, North Horsham
- Cowfold – co-located with the automatic analyser
- Manley’s Hill mini-roundabout, Storrington (**Figure 2.6**)

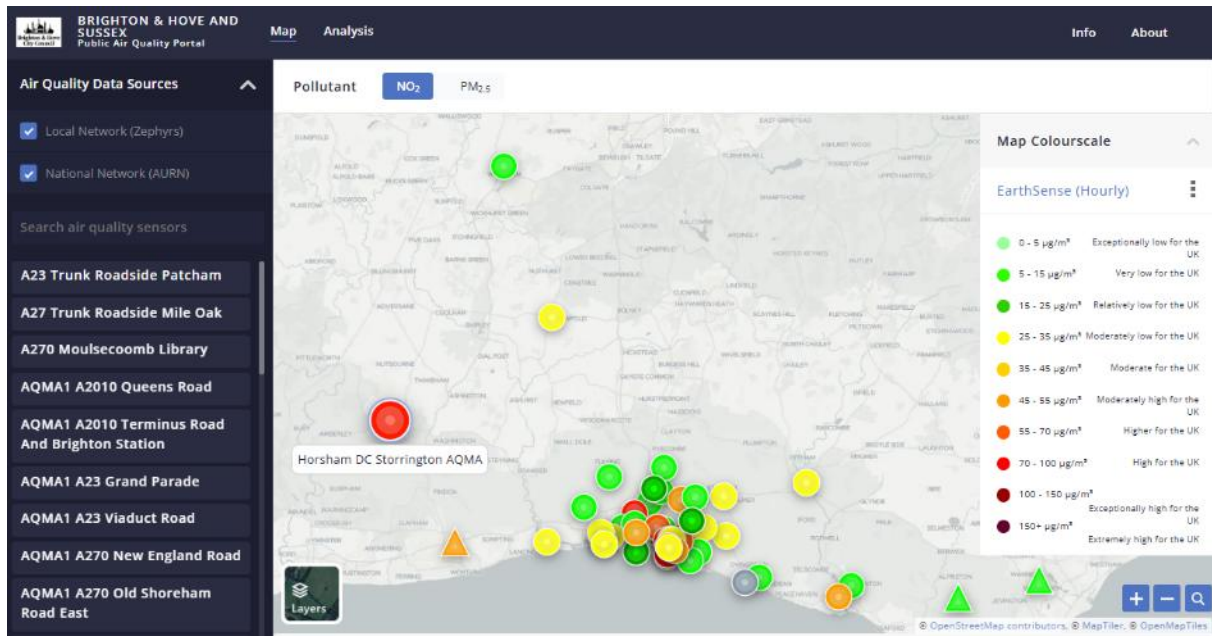
Figure 2.6 – EarthSense Zeyphyr® sensor on the building façade at the Manley’s Hill mini-roundabout in Storrington.



Typically, these instruments represent a lower capital investment cost when compared to more complex continuous methods of monitoring, and their use can reduce the extent of running costs over a yearly period. As such, they are an attractive option that allows measurements to be undertaken at improved spatial and temporal resolutions. However, this comes with a trade-off on the accuracy and precision of the measurements being made.

Live air quality data can be accessed in close to real time on the [Brighton & Hove and Sussex Real-Time Air Quality Portal](#) (**Figure 2.7**). The portal provides an indication of local air quality for awareness raising and community engagement and has been funded by the DEFRA air quality grant and the city council’s Carbon Neutral Fund in support of the BHCC part.

Figure 2.7 – Snapshot of the Brighton & Hove and Sussex Public Air Quality Portal



2.3.4.4 Sussex-air website

The Sussex Air Quality Network was established in 1995 to support the local authorities across Sussex in their duties to monitor and report air quality under the LAQM framework requirements as set out under Part IV of the Environment Act 1995.

The network was developed by the Sussex Air Quality Partnership, which is made up from the Sussex local authorities and Public Health bodies. Since it was established, the Partnership has developed a comprehensive regional monitoring network, which currently (Aug 2025) has 15 continuous air quality monitoring stations (AQMS) in operation. The network also incorporates data from 6 national AURN air quality monitoring stations located in Sussex: this enhances the network to a total of 21 air quality stations across Sussex (**Figure 2.8**).

Figure 2.8 – Sussex Air Network

The full list of site information and all “live” and historical data is provided on the Sussex-air website: <http://www.sussex-air.net>.

2.3.4.5 Air Quality Alert

The Sussex Air Quality Alert service was established over 15 years ago to provide a Sussex-wide air pollution forecasting and free alert service to support vulnerable persons such as those with respiratory and heart conditions and the public. The service was enhanced from March 2022 to provide a more detailed forecasting service to 32 locations across Sussex, a higher spatial resolution than the previous regional approach, which focused on three broad sub-regional areas. Local alerts in Horsham district became available for Billingshurst, Horsham, Storrington and Steyning.

The Air Alert service ended on 31 March 2025. This was due to a low uptake, meaning a high cost per user. Most weather apps and websites, such as the MetOffice, include a description of the air quality now too, making information more readily available.

Individuals can view the latest air quality levels and forecasts for a location or postcode at <https://check-air-quality.service.gov.uk/>. This service also provides health advice and explains how different air pollutants may affect your health.

2.3.4.6 Walk to School Week

Walk to School Week is a five-day challenge promoted by [Living Streets](#) to celebrate walking to school in May. Walk, cycling or scooting to school is good for:

- Physical health
- Mental health
- Local air quality
- Environment
- School Safety

In 2023, Environmental Health, Parking and Neighbourhood Wardens teams met up with West Sussex Fire & Rescue Service and Sussex Police to talk with parents and pupils about the benefits of walking to school. Arunside Primary School organised a walking bus and parents were advised to park a little away from the school, which reduced congestion and air pollution at the school gates and improved road safety for everyone (**Figure 2.9**).

In 2025, Environmental Health contacted primary schools throughout the district to highlight Walk to School Week and provided some material to be used in assemblies to advertise the challenge.

Figure 2.9 – West Sussex County Times Article 8th June 2023: Walk to School Week



Source: WSCT 8 June 2023 available at <https://www.pressreader.com/uk/west-sussex-county-times/20230608/textview>

2.3.4.7 Storrington and Sullington Parish

In May 2023 HDC officers also participated in the Storrington Annual Parish Meeting. They delivered a presentation containing information about how air pollutants are measured and monitored and where to find information; measures implemented by the Steering Group to address air quality and air quality trends in Storrington AQMA. Following the presentation members of the public expressed their concerns and there was a Q&A session. The meeting agenda, minutes and the air quality presentation are available on the [Storrington and Sullington Parish Council website](#).

2.3.5 Partnership working

Horsham cannot tackle air quality alone, and pollution experienced is often created outside of the district boundaries. Working with neighbouring authorities is key to improving air quality across the whole region.

- Attending Defra workshops and other webinars for Local Air Quality Management, which provides important information about new technologies and changes in legislation.
- HDC is a member of the Sussex Air Quality Partnership (Sussex Air) which benefits from the co-ordinated monitoring of air pollutants across the region, and knowledge and best-practice sharing. Members work collaboratively to develop and deliver projects to improve local air quality and to reduce people's exposure to poor air quality.

2.3.6 Traffic schemes

2.3.6.1 Low Emission Zone

Storrington AQAP Steering Group and the Sussex Air Quality Partnership implemented a trial project in 2013 utilising a LEZ system designed by Siemens plc. The trial incorporated the use of 4 'Automatic Number Plate Recognition' (ANPR) cameras positioned at strategic locations on Pulborough Road, Amberley Road, Washington Road, and School Hill. The system showed not to be appropriate in the rural setting of Storrington due to problem with data collection and the incongruence

of the collected data. Aside from the data collection problems, there also remained unresolved practical issues related to management, enforcement and exemptions for any vehicle restrictions which might have been associated with establishment of the LEZ. A report of this project can be found at the [Storrington air quality management webpage](#).

2.3.6.2 Prohibition of lorries turning right into School Hill from Manley's Hill within the Storrington AQMA

Although Storrington is not on [WSSC Lorry Route Network](#) of strategic and local roads recommended for use by lorries and heavy goods vehicles, the annual average weekday traffic of HGVs going through West Street in 2024 was approximately 350 per day. Although it should be noted that it is unknown what proportion of these vehicles are serving local needs.

In 2022 West Sussex County Council and Storrington & Sullington Parish Council undertook a review of the 7.5T weight limit restriction on the B2139 School Hill and 283 Manley's Hill in Storrington. This restriction is marked "Except for Access" with an additional plate, where this refers solely to any side road access, delivery, or collection point between the restriction signs. The restriction has been in place since 2019 as one of the measures implemented to improve air quality within the designated AQMA.

As part of this review, a CCTV traffic survey was undertaken of Goods Vehicles entering from either end of the restriction and an additional CCTV camera was located within the restriction length. After the survey, 51 letters were sent to companies that were breaching the 7.5T weight limit restriction and more signs were installed (**Figure 2.10**).

Figure 2.10 – Weight restriction signs in Storrington



In 2025 HDC appointed Air Quality Consultants to carry out a study of air quality in Storrington, one of the aims of the study was to assess compliance with the School Hill weight restriction. **Table 2-2** shows that on an average weekday there were 16 vehicles per day which were classified as breaching the weight restriction on School Hill. Of these movements, the majority of breaches were from vehicles travelling up School Hill compared to vehicles travelling down. On Saturday and Sunday there were significantly fewer breaches of the weight restriction.

Table 2-2 - Vehicle counts of HGVs >7.5 tonnes breaching the weight restriction on School Hill

Date	Day	Total Breaches	Breaches travelling up School Hill	Breaches travelling down School Hill
05/11/2025	Wednesday	16	11	5
06/11/2025	Thursday	21	16	5
07/11/2025	Friday	12	9	3
08/11/2025	Saturday	2	1	1
09/11/2025	Sunday	0	0	0
10/11/2025	Monday	14	9	5
11/11/2025	Tuesday	18	15	3
Weekday Average		16	12	4

There are challenges with enforcement of breaches of weight restriction for HGVs accessing B2139 School Hill. Local Transport Authorities can now apply for 'Part 6' powers to enforce 'moving traffic offences' which would include Traffic Regulation Order breaches such as in relation to this weight restriction. WSCC has now adopted these powers and has confirmed initial back-office procedures to support these. However, for the time being, the only utilisation of the powers is for bus gates implemented across West Sussex as part of residential developments. In terms of other moving traffic offences, such as weight restrictions, these will not be considered until such time as a Moving Traffic Enforcement Policy has been adopted by the County Council. There is no confirmed timetable for preparation of this policy at this time.

2.3.6.3 Review of on-street car parking and loading bay provision

Parking issues within the village have been identified as contributing to congestion within the Storrington AQMA. One issue at the western end of the village near to the Amberley Road mini roundabout was resolved in 2019 by a Traffic Regulation Order to remove a parking bay that was causing congestion. As a result, the monitoring site Storrington 11n showed a significant decrease in NO₂ concentrations in 2019 compared to the previous year 2018.

Other parking areas have been identified as causing congestion on a regular basis. Further detailed evaluation could be considered to understand the causes of congestion through the High St/West St related to the interactions of the pedestrian crossings, junctions, parking and deliveries. The scheme could entail re-designation of on-street car parking spaces as dedicated loading bays, to better manage arrangements for goods vehicles stopping on the carriageway.

West Sussex County Council has a programme of reviews in relation to on-street parking management it is undertaking across larger towns across West Sussex and a light touch version of this could be an avenue through which to progress this evaluation further. The purpose of this would be to consider the longer-term strategy for parking management within the village, evaluate both the current and future demands for parking space provision and investigate optimised use of available spaces and look at options for improvement.

Progression of a parking review for Storrington would be dependent on the availability of a local funding resource, as the county's current programme resources (and hence funding resources) are already allocated elsewhere.

2.3.6.4 Review two pedestrian crossings along the High Street/West Street in Storrington

Both crossings have previously been upgraded to Puffin crossings (they use kerbside detectors to cancel demands when the crossing movement is no longer required). The crossings use 'vehicle actuation' technology and were linked in 2017 during peak traffic flow times in attempt to smooth vehicle flow. This means that during peak times if both crossings are called, they should only switch to the pedestrian green/vehicle red phase at the same time as each other.

It has been reported that, due to the narrow pavements, pedestrian demands have on occasion been cancelled when waiting pedestrians step aside to allow others to pass. However, there are doubts about how much any further benefits could be realised from changing the operation of these crossings because of blocking back caused by the other mini-roundabout and traffic interactions along the High Street.

Conversion to Zebra crossings may be challenging due to the presence of vulnerable users; therefore, the existing Puffin crossings are considered to provide a safer and more appropriate solution in this location.

2.3.6.5 Other traffic schemes in the district

- Promotion of a prohibition of loading and unloading at any time on sections of North Street and prohibition of waiting on sections of The Square and West Street Storrington (completed summer 2019).
- Time restrictions for goods vehicle loading/delivery within the AQMA during peak periods.

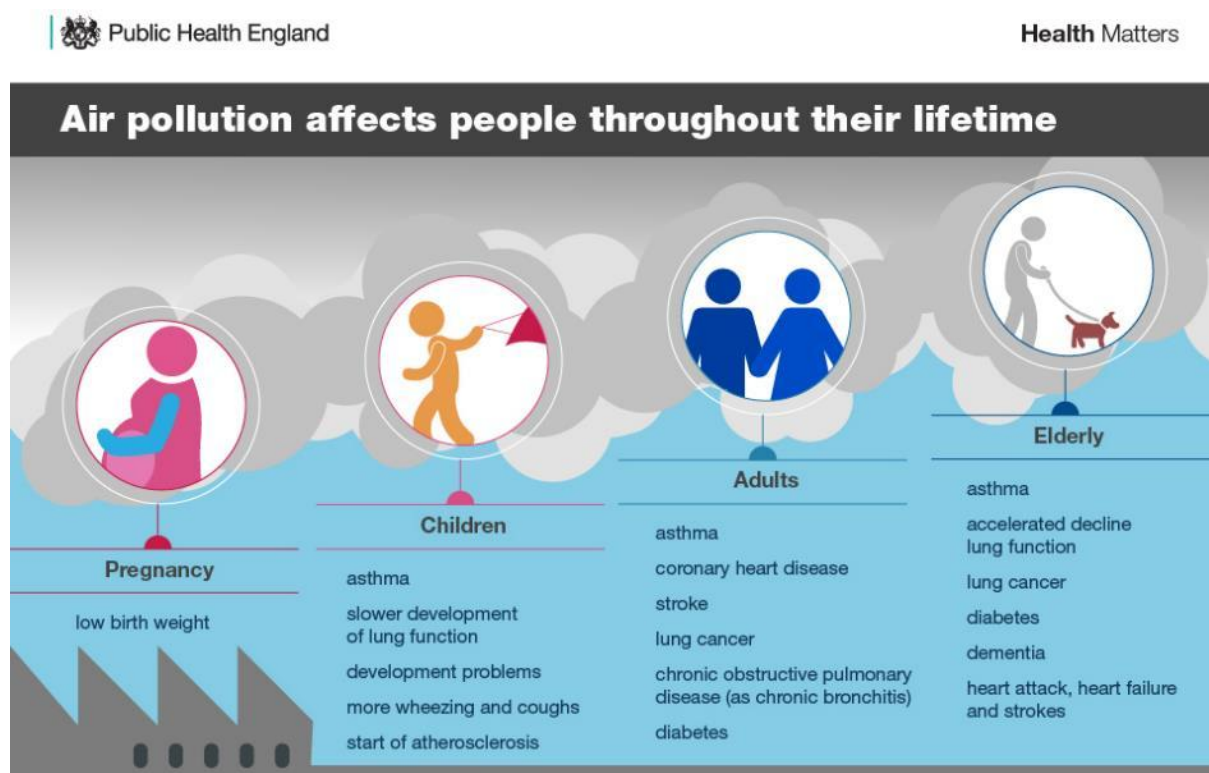
3 Horsham District Council's Air Quality Priorities

3.1 Public Health Context

Air pollution is a major public health risk ranking alongside cancer, heart disease and obesity (**Figure 3.1** – Impact of air pollution across a person's lifetime). A review by the World Health Organisation (WHO) concluded that long-term exposure to air pollution reduces life expectancy by increasing the incidence of lung, heart, and circulatory conditions. These have led to the WHO describing air pollution as a global health emergency. Poor air quality can affect health at all stages of life. Those most affected are the young and old. Maternal exposure to air pollution during pregnancy can impact foetal development and has been linked to low birth weight, premature birth and miscarriage. In the development of children, there is evidence of reduced lung capacity, asthma, and impact on blood pressure, cognitive abilities, inattention and hyperactivity, mental health and illness. Impacts in adulthood can include early death, cardiac health, stroke, brain and mental health, respiratory health, cancer, multiple chronic illness.

The [Public Health Outcomes Framework](#) includes an indicator which quantifies the estimated fraction of mortality attributable to long-term exposure to current levels of anthropogenic PM_{2.5}. In 2023 this fraction was 4.8% for Horsham, this is slightly below the percentage in the Southeast (5.1%) and in England (5.2%). The annual average metric is a summary of typical environmental conditions and the population weighting accounts for human exposure. In addition to this indicator, other air pollutants (such as NO₂), as well as indoor air pollutants, are also considered important. However, methodological considerations make it impractical to include these in a health outcomes indicator at present.

Figure 3.1 – Impact of air pollution across a person’s lifetime



3.2 Planning and Policy Context

The achievement of congestion improvement measures in Storrington has been challenging as there are no easy solutions, and many of the solutions fall outside the power of HDC to implement. Horsham District Council continues to work with WSCC to explore traffic management measures to reduce congestion and improve air quality. This has included revisiting and reviewing the evidence from all previous measures identified to understand what impacts these would be likely to have in terms of improving air quality, and whether the measures would be deliverable and provide value for money. A number of these measures are continuing to be explored. The identification of schemes that are feasible, deliverable and can generate a positive business case remain the principal challenges for progressing measures to improve air quality.

The current policies in the district strongly endorse affirmative action towards air quality improvement, which includes:

- Sustainable design and construction

- Reducing traffic and congestion through access to sustainable transport modes, maximising the provision for cycling and pedestrian facilities
- Encouraging the use of cleaner transport fuels, including through the provision of electric car charging points in accordance with both the District and County Electric Vehicle Strategies
- Mitigating the impact on the amenities of users of the site and surrounding land to an appropriate level, where development creates or results in pollution including particulates, dust, smoke, pollutant gases or odour
- Ensuring that the cumulative impact of all relevant committed developments and / or its associated traffic is appropriately assessed
- Working with planning policy and development control to secure air quality mitigation from new development

The most relevant policies and strategic documents are detailed below.

3.2.1 West Sussex County Council Transport Plan 2022-2036

[The West Sussex Transport Plan \(WSTP\)](#) is the County Council's main policy on transport and supports delivery of Our Council Plan and its priorities. It was adopted on 1 April 2022. The WSTP sets out how the County Council intends to address key challenges by improving, maintaining and managing the transport network in the period up to 2036, of which the some of the objectives are:

Objective 2: Support development and regeneration plans across the County by enabling local living and through strategic investments, particularly in sustainable modes of transport, at the right time and place to ensure the transport network is fit for the future.

Objective 4: Avoid where possible and minimise air, noise and light pollution from use of the transport network to minimise impacts on public health and well-being.

Objective 7: Enable the transport network to achieve net zero carbon emissions by 2050.

Objective 8: Avoid where possible and minimise the impacts of the transport network on natural resources and on the natural, built and historic environment.

Objective 11: Reduce the need to travel by car by enabling local living.

Objective 12: Improve the efficiency of the County Strategic Road Network, particularly east-west routes including the A27, through targeted improvements to address congestion, pollution, rat-running and road safety issues on strategic or local routes.

Objective 14: Ensure the rail network is an attractive option for travel between West Sussex towns and to surrounding cities by improving the speed and quality of West Coastway and Arun Valley Line services, capacity on the Brighton Main Line and integration with other modes of transport.

Objective 15: Improve bus network efficiency and integration by reducing the effects of congestion into and within West Sussex towns, particularly where there are gaps in the rail network.

Objective 16: Ensure the bus network is customer focussed and integrated with other modes of transport to provide an attractive option for journeys to nearby towns.

Objective 17: Extend and improve the network of active travel facilities so it is coherent and high quality enough to make active travel an attractive, safe option for short distance trips and to transport interchanges.

3.2.2 West Sussex Active Travel Strategy 2024-2036

The [West Sussex Active Travel Strategy 2024-2036](#) builds upon the WTSP, and provides further detail about the approach to active travel and how improvements will be prioritised for delivery. To support the government's aspirations for active travel, 'everyday journeys' such as commuting to work and travelling to school are a key priority for the county council.

3.2.3 West Sussex County Council Breathing Better Action Plan

The [West Sussex County Council Breathing Better Action Plan](#) was first published in 2019 and last updated in 2023. It is planned to be a live document with an action-

oriented summary of the partnership approach to improving outdoor air quality in West Sussex.

3.2.4 West Sussex Bus Service Improvement Plan – 2024

The [West Sussex Bus Service Improvement Plan](#) (BSIP) covers from 2024 to 2036, will be updated again in 2025, in line with DfT BSIP Guidance, and is aligned with the WSTP. The 2024 BSIP update builds upon the 2021 BSIP to continue to stimulate and drive significant improvements to local bus services. These improvements are intended to:

- Allow people greater opportunity to live more active lives, combat social isolation and have a positive effect on health and well-being
- Support an active and vibrant local economy, by providing access to work, leisure, health and other services
- Reduce transport emissions, both from the buses themselves and by attracting trips from less sustainable modes of travel

WSCC and the local bus operators, acting together through the West Sussex Enhanced Partnership, have set themselves the mission to ensure that West Sussex residents and visitors enjoy continuously improving and high-quality bus services, with decreasing carbon emissions. In future, services will provide an affordable, frequent, and comprehensive travel choice with better reliability through priority measures. Doing so will make an increasingly positive contribution to the county's economic, social, and health wellbeing, enhance job opportunities, contribute to improved transport sustainability, and deliver better air quality.

3.2.5 West Sussex County Council: Guidance on Parking at New Development

The guidance outlines the minimum and maximum requirements for car and cycle parking at new developments within the county, including guidance on electric vehicle charging point provision.

3.2.6 Air Quality and Emissions Mitigation Guidance for Sussex Guidance

The [Air Quality and Emissions Mitigation Guidance for Sussex](#), developed by Sussex-air and implemented in 2021, takes a low emission strategies' approach to avoiding health impacts of cumulative development. Under this guidance new developments are required to implement mitigation measures based on their size and predicted emissions of NO₂ and PM_{2.5}.

Where mitigation is not integrated, it is secured through planning conditions or Section 106 (S106) agreements.

3.2.7 Horsham District Local Plan

The current Local Plan was adopted in 2015, and within it there is one policy that refer to air quality:

- *Policy 24 - Strategic Policy: Environmental Protection The high quality of the district's environment will be protected through the planning process and the provision of local guidance documents. Taking into account any relevant Planning Guidance Documents, developments will be expected to minimise exposure to and the emission of pollutants including noise, odour, air and light pollution and ensure that they:*
 4. *Minimise the air pollution and greenhouse gas emissions in order to protect human health and the environment;*
 5. *Contribute to the implementation of local Air Quality Action Plans and do not conflict with its objectives;*
 6. *Maintain or reduce the number of people exposed to poor air quality including odour. Consideration should be given to development that will result in new public exposure, particularly where vulnerable people (e.g. the elderly, care homes or schools) would be exposed to the areas of poor air quality;*

3.2.8 Climate Change

In June 2023, the Council declared a climate and ecological emergency. The Council aims to be at net zero for some of its emissions by 2030 and for the district to be net zero by 2050. HDC has produced a Council Carbon Reduction Action Plan (April 2022 to March 2025) to start to reach these targets. In implementing the Action Plan, HDC is leading the district's decarbonisation efforts and hoping to inspire others to reduce their own carbon emissions.

In January 2024, HDC published Horsham District's Climate Action Strategy. This Strategy provides an overarching 10-year plan (with regular review periods) for the area to decarbonise, whilst delivering multiple co-benefits to local businesses and communities. Implementing the Strategy will bring numerous opportunities and benefits, such as job creation, improvements to health and wellbeing, better access to open spaces and nature, as well as reducing poor air and water quality.

More information is available on [HDC Climate and environment page](#).

3.2.9 Air Quality Strategy 2023

In August 2023, the DEFRA [Air Quality Strategy](#) superseded the previous Air Quality Strategy (2008). This AQS sets out a framework to enable local authorities to deliver for their communities and contribute to our long-term air quality goals, including ambitious new targets for fine particulate matter (PM_{2.5}):

- Annual mean concentration:
 - $\leq 10 \mu\text{g}/\text{m}^3$ by 2040
 - Interim target: $12 \mu\text{g}/\text{m}^3$ by January 2028
- Population exposure reduction:
 - 35% reduction by 2040 (vs. 2018 baseline)
 - Interim target: 22% reduction by January 2028

These targets reflect a shift toward reducing exposure across all communities, not just in areas exceeding legal limits.

3.2.10 Environmental Improvement Plan 2023

The DEFRA [Environmental Improvement Plan 2023](#) is the first review of the 25 Year Environment Plan (25YEP), which set out to help the natural world regain and retain good health. To achieve its vision, the 25YEP set ten goals – goal 2 is “clean air”.

Air quality in the UK has improved significantly in recent decades, but it continues to be the biggest environmental risk to human health and a source of harm to the natural environment.

To address this, the Environmental Improvement Plan states they will:

- Cut overall air pollution by tackling the key sources of emissions, including reducing the maximum limits for domestic burning appliances in Smoke Control Areas.
- Tackle specific hotspots by challenging councils to improve air quality more quickly, while supporting them with clear guidance, funding, and tools.
- Reduce ammonia emissions (crucial for sensitive natural habitats) by using incentives in our new farming schemes, investing £13 million in slurry storage infrastructure in 2023 and considering expanding environmental permitting conditions to dairy and intensive beef farms.

3.3 Source Apportionment

The AQAP measures presented in this report are intended to be targeted towards the predominant sources of emissions within Horsham District’s area with particular emphasis on the AQMA.

To understand the contribution of all sources of emissions to exceedances of the air quality objectives within the AQMA a source apportionment was carried out using an air dispersion model (**Figure 3.2**). Source Apportionment is the identification of ambient air pollution sources and the quantification of their contribution to pollution levels.

The methodology to achieve this involves dispersion modelling of road traffic emissions. Traffic flows and fleet compositions has been collated by compiling the data recorded in the ANPR survey and from [Automatic Traffic Count sites run by WSCC](#) for the same period (5th – 11th November 2025). The [Emissions Factors Toolkit \(EFT\)](#) version 13.1 developed by Defra was used. Road-NO_x contributions for each source type at receptor locations were then modelled using Cambridge Environmental Research Consultants ADMS-Roads dispersion model (version 5.1).

The source apportionment analysis indicates that road traffic is the dominant contributor to NO₂ concentrations at identified hotspot locations. To better understand these impacts and ensure that proposed measures are effectively targeted, further detailed analysis was undertaken. This included disaggregation by vehicle type and an assessment of the relative contribution of local traffic compared with through traffic.

Full details of the source apportionment and dispersion modelling, including the methodology applied, are available on the Council's website at <https://www.horsham.gov.uk/environmental-health/air-quality/horsham-districts-air-quality-management-areas-agmas>. The approach adopted was aligned with the requirements of the TG22 Technical Guidance.

While road traffic emissions represent the primary source of NO₂, it is acknowledged that at background locations other sources, such as emissions from buildings, may also make a notable contribution. Measures to address these sources have therefore been included within the Action Plan, including the application of the Sussex Air Quality Guidance to new developments.

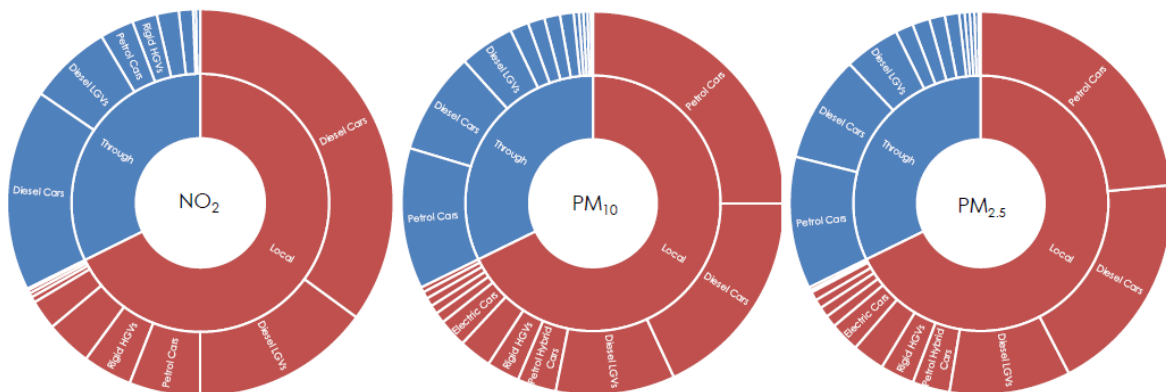
Within the AQMA at the hotspot location (**Figure 3.2**), the percentage source of NO₂ contributions were as follows:

- 21% Background, which the authority is unable to influence or should have some influence over; and
- 79% Road traffic, which will add to the background to give rise to the hotspot area of exceedances. These are the principal sources for the local authority to control within the Action Plan.

- 32 % of road traffic is from through traffic, with the largest contribution coming from diesel cars and LGVs.
- Local traffic is responsible for the remaining 68% with largest contribution also from diesel cars and LGVs.
- Diesel cars and LGVs were the largest contributors to NO₂ concentrations, while petrol cars contributed the most to PM₁₀ and PM_{2.5} concentrations from road traffic.

For PM₁₀ and PM_{2.5} road transport contributed to 24 and 28% of the total concentrations retrospectively.

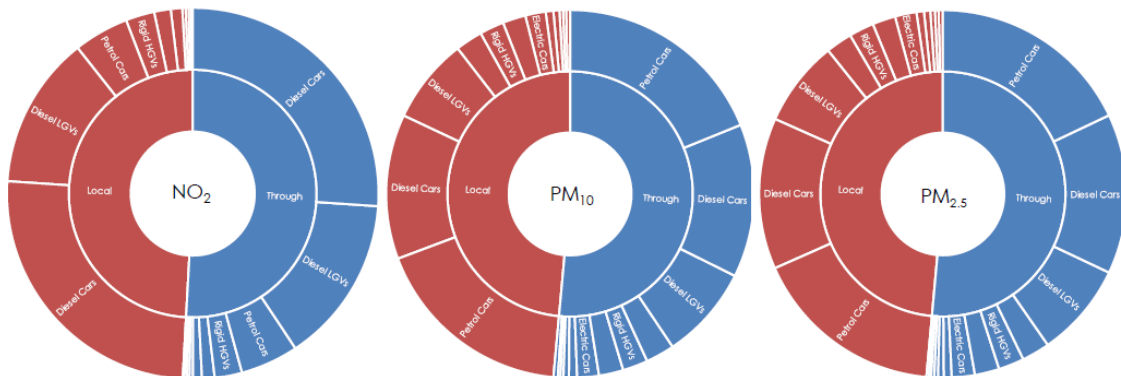
Figure 3.2 – Source apportionment of road transport contributions to NO₂, PM₁₀, and PM_{2.5} concentrations at Manley’s Hill (hotspot location).



Amberley Road lies outside the AQMA, but almost all through-traffic travels along it, and it showed the highest relative contribution from this type of traffic. Around half of the NO₂, PM₁₀ and PM_{2.5} concentrations on Amberley Road were attributable to through-traffic emissions (**Figure 3.3**).

Over the one-week monitoring period, an average of 71% of vehicles entering Storrington via Amberley Road were recorded leaving via Washington Road within 30 minutes, indicating they were through-traffic.

Figure 3.3 – Source apportionment of road transport contributions to NO₂, PM₁₀, and PM_{2.5} concentrations at Amberley Road.



There are many components that contribute to the uncertainty of modelling predictions. The road traffic emissions dispersion model used in this assessment is dependent upon the traffic data that have been input, which will have inherent uncertainties associated with them. There are then additional uncertainties, as models are required to simplify real-world conditions into a series of algorithms.

3.4 Required Reduction in Emissions

Table 3-1 presents the improvements required in road NO_x emissions at monitoring sites that have recorded NO₂ annual mean values above the air quality objective since 2010. As monitoring at these locations is completed using diffusion tubes, to account for the inherent uncertainty associated with the monitoring method, a concentration of 36ug/m³ (i.e. within 10% of annual mean objective) was considered.

Table 3-1 – Percentage decrease in road NO_x required to meet annual mean NO₂ objective at Storrington monitoring sites (µg/m³) in 2024

Diffusion Tube ID	Location	NO ₂ Improvement between 2010 – 2024 (%)
Storrington 1*	Manley’s Hill, Storrington	-43.0
Storrington 3*	3 School Hill, Storrington	-48.4
Storrington 4*	22 High Street, Storrington	-44.6
Storrington 11n*	53 West St, Storrington	-42.2
Storrington 14	Cobden, Washington Rd, Storrington	-48.7 <i>(Improvement between 2011 – 2023)</i>
Storrington 19n*	Manley’s Hill, Storrington – opp. Storrington1,2	-45.4 <i>(Improvement between 2016 – 2024)</i>

* Within the AQMA

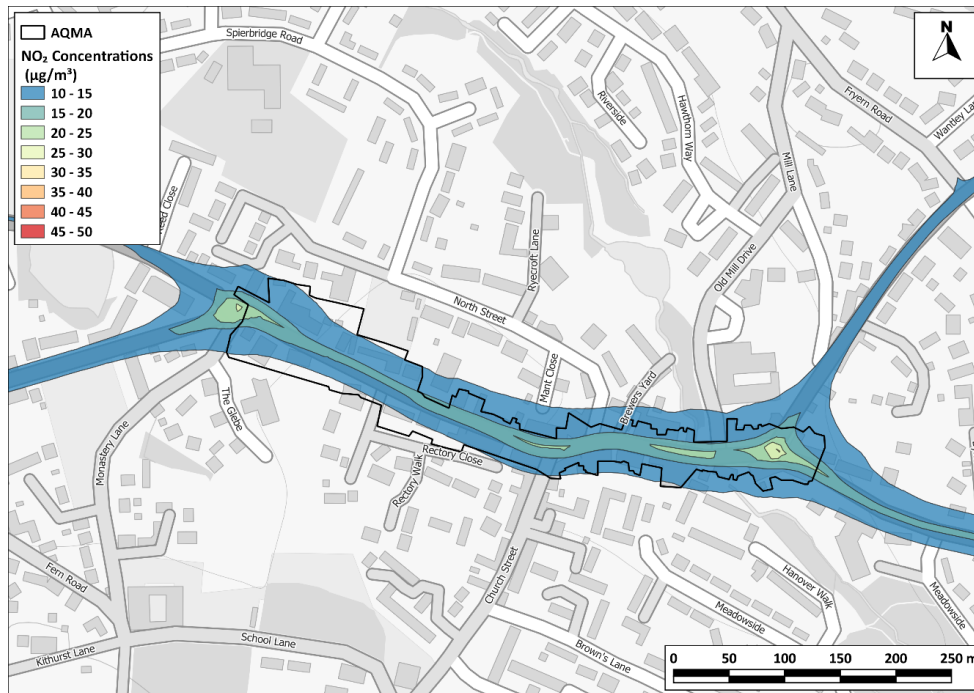
All sites in Table 3-1 have already reduced their emissions and recorded concentrations lower than 36 µg/m³ in 2024. Although monitored concentrations of air pollutants within the AQMA are currently below the current national Air Quality Objectives (AQOs), revocation of the AQMA can only be considered following three consecutive years of annual mean NO₂ concentrations being lower than 36 µg/m³ (i.e. not within 10% of the annual mean NO₂ objective due to uncertainties and yearly variations).

In addition, concentrations remain above the more stringent 2021 World Health Organization (WHO) guidelines, which is 10 µg/m³. This highlights that, while progress has been made, significant improvements are still needed to protect public health, within the AQMA and across other urban areas more generally to meet these WHO guidelines.

Figure 3.4 resents the 2035 modelling results, which account for the natural turnover of the vehicle fleet as older vehicles are gradually replaced by newer models that meet tighter emissions standards or are electric. The results indicate that NO₂ concentrations at all modelled receptors are expected to fall below 20 µg/m³, with the exception of the receptor located at the bottom of Manley’s Hill — currently our

hotspot location — which is projected to be $22.7 \mu\text{g}/\text{m}^3$. This is well below the current air quality objective of $40 \mu\text{g}/\text{m}^3$.

Figure 3.4 - 2035 Modelled NO_2 concentrations considering organic fleet evolution



3.5 Key Priorities

Although pollutant concentrations in Storrington are now below the Air Quality Objectives, the AQAP will continue to prioritise reducing traffic emissions and influencing local sources to protect public health and maintain compliance. All priority measures are intended to work together to support ongoing improvements in air quality and health outcomes.

Five alternative scenarios were developed and tested in ADMS (**Table 3-2**). Each scenario reflects a different set of changes to traffic volumes and fleet composition that might be delivered through one or more interventions. The interventions considered include a range of traffic- and fleet-related measures aimed at reducing emissions within the study area.

Table 3-2: Assessment scenarios considered

Scenario	Parameters	Vehicle types	Possible Interventions
Sc1 Target local traffic	5% traffic removal (cars) and 2% EV share increase (cars and LGVs)	Local/destination traffic only. No change to through traffic or EVs in through component.	20 mph with calming; Active travel / car share; EV charging; Parking management; Public transport
Sc2 Target through traffic	20% removal (all vehicle types in through traffic component)	Through traffic only.	HGV access restriction; Signage / routing; Access management / filters; Freight and servicing management
Sc3 Combined	Sc1 + Sc2 combined	Both local and through components as above.	All of the above in combination.
Sc4 Euro standard upgrade	90% diesel cars and LGVs Euro 6; 95% HDVs Euro VI	All traffic (fleet composition change only; no volume change).	Emissions-based access charging (CAZ-type scheme).
Sc5 Organic fleet evolution	Using EFT inbuilt projections to modify the baseline fleet to year 2035	All traffic	Do nothing but wait until 2035.

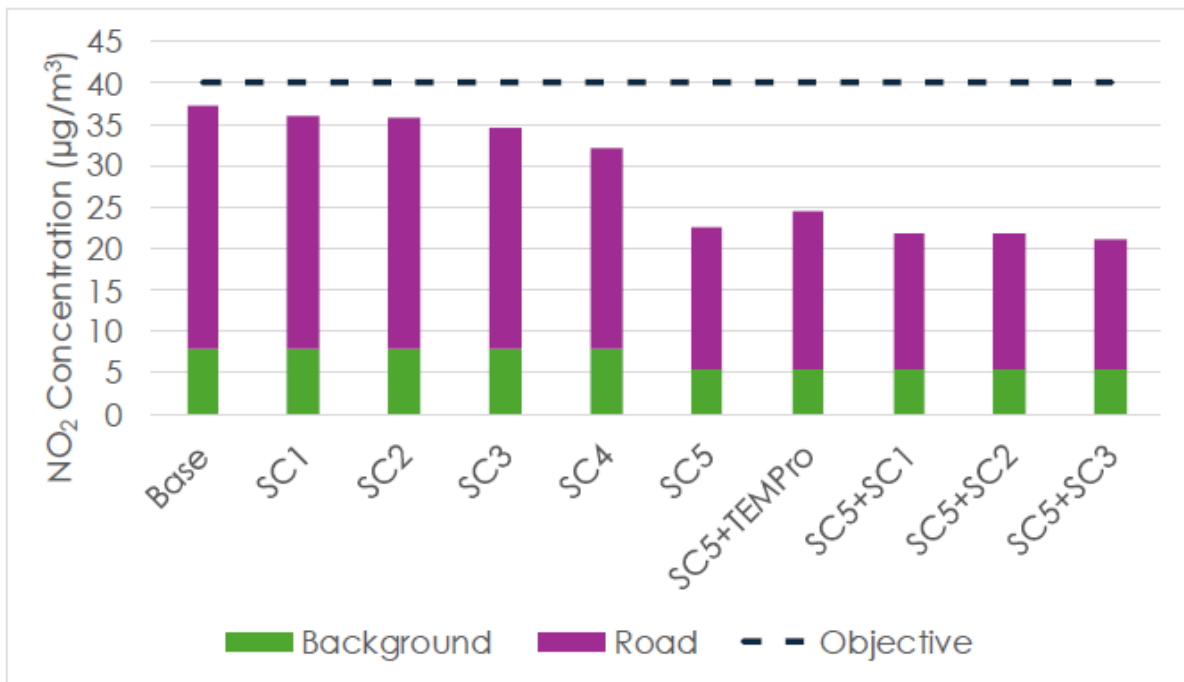
Modelling results showed that even substantial local measures are likely to have relatively modest impacts when compared with the reductions expected from natural fleet evolution over the coming years (**Figure 3.5**). It is important to note that direct comparison of intervention scenarios with Scenario 5 is not straightforward, as future baselines will be shaped by ongoing fleet changes. As a result, interventions that reduce overall traffic volumes may deliver combined benefits alongside fleet turnover, while those that primarily encourage fleet renewal will see diminished co-benefits in future years.

Additionally, the sensitivity test ('SC5+TEMPro') looks at air quality in 2035 assuming normal vehicle replacement over time, with additional growth in traffic included. The traffic growth was estimated using TEMPPro data for the Storrington area. Although adding traffic growth increases emissions compared to a scenario without growth, nitrogen dioxide levels are still much lower than in the main ("core") scenarios.

The next three sensitivity tests ('SC5+SC1', 'SC5+SC2', and 'SC5+SC3') explore what reductions might be achieved in 2035 if behavioural measures were in place. These apply the improvements seen in the core scenarios to a lower 2035 baseline.

Because this baseline is already cleaner, the overall reductions are smaller than those shown in the core scenarios. Scenario 4 was not included in this approach, as most of its fleet improvements are expected to occur naturally by 2035.

Figure 3.5 - Modelled NO₂ concentrations at the hotspot location for each scenario.



3.5.1 Smooth Traffic, Increase Active Travel, Support Mode Shift and Reduce the need to travel

Source apportionment within the AQMA indicates that 79% of NO₂ concentration stem from road traffic – this includes traffic going in, and through, Storrington. Reducing reliance on private cars by increasing the numbers of public transport, cycling and walking journeys is central to tackling poor air quality in the district. Better sustainable travel infrastructure can also improve access to jobs, education and facilities, enhance economic vitality, improve mental wellbeing, reduce social isolation and improve environmental air quality of our towns and villages.

Measures delivered since the last AQAP are described in section 2.3.1.

Key measures are listed below. More details are available in **Table 5-1** and expected reduction in the AQMA in **Table 6-1**.

- Speed reduction schemes in Storrington to facilitate active travel and improve air quality, safety and noise
- Walking and Cycling Measures
- Improve bus service and information
- Reduce single occupancy car use by supporting carpool and car sharing schemes, and other modes of transport
- [Storrington] Community minibus
- [Storrington] Walk to School / Active Travel

3.5.2 Promoting low emission transport

Diesel cars and LGVs contribute approximately 74% of the NO₂ concentration within the AQMA. Increasing the uptake of electric vehicles offers substantial potential to reduce roadside emissions—particularly NO_x—by eliminating exhaust emissions. Currently, it is estimated that only 6.4% of vehicles travelling through the AQMA are electric.

HDC will continue to support the transition to electric mobility across all transport modes, including the expansion of the public charging network, while also exploring alternative low-carbon fuel options to further reduce emissions.

Measures delivered since the last AQAP are described in section **2.3.2**.

Key measures are listed below. More details are available in **Table 5-1** while the expected reduction in emissions in the AQMA are noted in **Table 6-1**.

- Electric vehicle charging network
- Replacement of HDC vehicle fleet
- Car Club – Billingshurst and Horsham

3.5.3 Reduce emissions from buildings and new development

Effective spatial planning plays a key role in improving air quality and public health. By applying strong local planning policies and best-practice design standards, the council can reduce both pollutant emissions and human exposure. Locating new

developments near essential services and public transport helps limit car dependency, while high building standards can cut emissions from heating and hot water systems—an increasingly important focus as transport emissions are addressed. This approach ensures air quality is considered throughout the planning process and supports long-term environmental and community well-being.

The council also recognises the growing impact of domestic wood burning on air quality. Research shows that wood burning is a major source of PM_{2.5} emissions. In the UK, domestic wood burning emissions have more than doubled over the past decade. Horsham District faces particular challenges due to its semi-rural nature, with a high proportion of non-gas dwellings (23% ⁷). Many properties rely on oil or electric heating, and the district's ageing population adds further complexity. These factors make it essential to address emissions from domestic heating as part of a broader strategy to improve air quality and protect vulnerable residents.

Measures delivered since the last AQAP are described in section **2.3.3**.

Key measures are listed below. More details are available in **Table 5-1** and expected reductions in emissions in the AQMA are noted in **Table 6-1**.

- Air quality and emissions mitigation guidance for Sussex
- Travel Planning
- Explore implementing a Smoke Control Area

3.5.4 Improve monitoring and public awareness

Expanding air quality monitoring is crucial for understanding how pollution levels vary across different locations and identifying areas most affected. This deeper insight helps determine pollution sources and supports evidence-based decision-making, allowing the council to prioritise actions where they will have the greatest impact.

⁷ <https://www.gov.uk/government/statistics/sub-national-estimates-of-households-not-connected-to-the-gas-network>

Air Quality information should be accessible, fit for purpose, and trusted, ensuring that communication comes from credible sources. Expanding communication through familiar channels, such as the council's website and Walk to School Week and promoting tools that allow residents to check air quality and access health advice, can increase public understanding. Making information easy to consume empowers communities and stakeholders to take meaningful action, supports behaviour change, and contributes to long-term air quality improvement.

Measures delivered since the last AQAP are described in section **2.3.4**.

Key measures are listed below. More details are available in **Table 5-1** and expected reductions in emissions in the AQMA are noted in **Table 6-1**

- Expansion of the monitoring network
- Sussex Air and HDC website

3.5.5 Traffic management

LGVs and HGVs contribute to 29% of NO₂ concentrations in the AQMA. Actions targeting these vehicles can help improve air quality.

Measures delivered since the last AQAP are described in section **2.3.6**.

Key measures are listed below. More details are available in **Table 5-1** and expected reductions in emissions in the AQMA are noted in **Table 6-1**

- [Storrington] Review on-street car parking and loading bay provision
- Strategic improvements to the A24 Worthing-Horsham corridor
- HGV/LGV Routing
- [Storrington] Enforcement of the weight restriction for HGVs accessing School Hill.

4 Development and Implementation of Horsham District Council AQAP

4.1 Consultation and Stakeholder Engagement

In developing/updating this AQAP, we have worked with other local authorities, agencies, businesses and the local community to improve local air quality. Schedule 11 of the Environment Act 1995, as amended by the Environment Act (2021), requires local authorities to consult:

- The Secretary of State
- Environment Agency;
- National Highways;
- All local authorities neighbouring the local authority in question;
- The County Council (if a District Council);
- Any National Park authority as appropriate;
- Other public authorities as appropriate; and
- Bodies representing local business interests and other organisations as appropriate

The response to our consultation stakeholder engagement will be incorporated in the final version of the AQAP.

4.2 Steering Group

An Air Quality Steering Group was formed following the declaration of the Storrington AQMA. It includes Councillors and officers from Horsham District Council, West Sussex County Council, and representatives from the Parish Council. The group serves as the decision-making body for AQAP measures, meeting regularly to guide development and delivery, address implementation challenges, and review ongoing schemes. The group usually meets twice a year, with regular communication and information sharing maintained via email between formal meetings.

The notes from the latest meetings and traffic schemes proposal review for the AQMA can be accessed at [Horsham District's Air Quality Management Areas \(AQMAs\)](#).

5 AQAP Measures

Table 5-1 shows the Horsham District Council's AQAP measures. It contains:

- A list of the actions that form part of the plan (the top three priorities shaded in yellow);
- The departments/organisations responsible for delivering this action;
- Estimated cost of implementing each action;
- Expected benefit in terms of pollutant emission and/or concentration reduction;
- The timescale for implementation; and
- 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	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments/Potential Barriers to Implementation
1	Speed Reduction Schemes in Storrington to improve air quality and facilitate active travel	Traffic management	Reduction of speed limits, 20mph zones, UTC, Congestion management, traffic reduction	2025	2030	Storrington and Sullington Parish Council / HDC / WSCC	WSCC / Lane rental scheme / Community Highway Scheme / S106	Not funded	£50k - £100k	Planning	NO ₂ emission reduction from local and through traffic	Improve noise, pollution and safety. Improve active travel. Improved traffic flow / reduction in traffic congestion. Reduction of emissions at hotspots.	Storrington and Sullington Parish Council have installed Speed Indicator Devices around the village	<p>Lower speed limits can encourage shifts towards more sustainable transportation, such as walking and cycling increased feelings of safety. Areas where 20mph speed limits have been implemented often see a reduction in vehicle numbers or changes in driving patterns, contributing to overall reductions in emissions and improvements in air quality.</p> <p>Potentially use S106 to match fund or provide more detailed evidence. Storrington Traffic & Transport Committee meetings</p> <p>This measure also aims to reduction from 60mph to 40mph on B2139. Storrington Traffic & Transport Committee meetings</p> <p>Schemes need demonstrate clear local support for speed reduction measures such as 20mph speed limits.</p>
2	Air quality and emissions mitigation guidance for Sussex	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance	2014	Ongoing	HDC / Sussex Air	HDC	Funded	<£10k	Implementation	NO ₂ reduction from development (traffic and building emissions)	Reduction in emissions from transport associated with new development through mitigation and compensation. Assessment of emissions from development required with application. Scheme of mitigation required.	The updated guidance (2021) has been published on HDC website and its application is tested in HDC and neighbouring districts within Sussex. It provides advice to developers on how to address local air quality when making a planning application.	Sussex Air partners are reviewing the guidance.
3	Electric vehicle charging network	Promoting Low Emission Transport	Other	2020	2031	HDC / WSCC	Connected Kerb	Funded	£500k - £1million	Implementation	NO ₂ emission reduction from local traffic Small initial impact on emissions but aim to facilitate the uptake of more LE vehicles.	Increase % of charging points installed on streets	Contract with Connected Kerb which will enable the large scale to roll out of thousands of public electric vehicle charge points across the district within the next decade was signed in 2021.	Over 45 on street charge points have been installed in Horsham District, with works planned for an additional 28 charge points in council car parks. More information available on HDC Electric cars and charging points webpage

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments/Potential Barriers to Implementation
4	[Storrington] Walk to School / Active Travel	Promoting Travel Alternatives	School Travel Plans	2013	Ongoing	WSCC	WSCC/Section 106	Partially Funded	£50k - £100k	Ongoing	NO ₂ emission reduction from local traffic	Increase active travel in Schools	<p>Local Transport Improvements Programme is looking at active travel routes between key parts of Storrington and primary routes. Engaged with local area head teachers to update their travel plans.</p> <p>Spierbridge Road Active Travel to School Scheme has passed moderation and is progressing to detailed design in 2026/27, with construction anticipated in 2027/28. Data collected by school wardens, the school travel plan, and further community engagement will be used to shape a robust and evidence-based active travel improvement scheme. The project is now included within the published Active Travel Delivery Plan (ADP).</p>	<p>Considering closure of Browns Lane junction with Church Lane to a pedestrian/cycle route to reduce rat run issue and make route safer for pupils.</p> <p>Survey of all houses in Spierbridge to see what level of support there would be for a one-way route between North Street Junction with Spierbridge Lane toward Hormare side of Fryern Close (North Street remaining two way). This would encourage use of car parks to park and stride to primary school and prevent rat running and poor driving behaviour both in front of the school and in North Street.</p> <p>Findings from a monitoring study on Spierbridge Road identified the highest pedestrian counts occur at ~8am and ~3pm on weekdays, aligned with Storrington Primary School's start and finish times. Estimates suggest around one-third of weekday traffic is related to school trips, with car use more common in the morning drop-off than the afternoon pick-up.</p> <p>West Sussex County Council recognised for commitment to Active Travel</p>
5	Reduce single occupancy car use by supporting carpool and car sharing schemes, and other modes of transport.	Alternatives to private vehicle use	Car & lift sharing schemes	2023	Ongoing	HDC	Local Authority	Not funded	< £10k	Implementation	NO ₂ emission reduction from local traffic	Reduction in single occupancy car use	<p>Direct impact on air quality issues in the short to medium are not likely to be significant, however they form part of a wider approach of promoting a culture of using alternative travel options to single occupancy car use</p> <p>West Sussex Car Share scheme Co-Wheels car sharing club</p>	

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments/Potential Barriers to Implementation
6	[Storrington] Review on-street car parking and loading bay provision	Traffic Management	UTC, Congestion management, traffic reduction	2013	On hold	HDC/WSCC	WSCC	Not Funded	< £10k	On Hold	NO ₂ emission reduction from local traffic	Reduction in nitrogen dioxide concentrations in Storrington. Improved traffic flow / reduction in traffic congestion.	Some issues related to the scheme: The potential impact of congestion related air quality issues associated with deliveries and parking is not known; Potential sensitivities regarding changes to availability of parking; The need to meet the needs of local businesses requiring deliveries.	A more detailed air quality assessment of changes to and re-designation of parking-bays and loading bays could be investigated further. Progression of a review will likely require local support and identification of resource to support this.
7	Sussex Air and HDC website	Public Information	Via the Internet	2012	Ongoing	Sussex Air / HDC	Local Authority	Funded	£50k - £100k	Implementation	No direct impact on emission reductions but optimising use of monitoring network data	Increase access to the website	Information on how to help improve air quality, air quality projects, health advice, health effects and real time air quality information	www.sussex-air.net https://www.horsham.gov.uk/environmental-health/air-quality
8	Walking and Cycling Measures	Promoting Travel Alternatives	Other	2012	Ongoing	HDC / WSCC	HDC / WSCC Lane rental scheme Community Highway Scheme	Partially Funded	£1million - £10 million	Implementation	NO ₂ emission reduction from local and through traffic	Increase in active travel		Direct impact on air quality issues in the short to medium are not likely to be significant, however they form part of a wider approach of promoting a culture of using alternative travel options to single occupancy car use. West Sussex Active Travel Strategy 2024-2036 Horsham's Local Cycling and Walking Infrastructure Plan Horsham District Council Infrastructure Delivery Plan (IDP) – July 2024 Cowfold Neighbourhood and Infrastructure Development Plans
9	Expansion of the monitoring network	Public Information	Via the internet	2025	Ongoing	HDC/Sussex Air	S106 HDC CIL	Partially Funded	£10k - £50k	Planning	None	Upgrading analysers and expanding the number and sites for monitoring	3 AQMS and 3 real-time air quality sensors providing live information to the public.	Road permission to install monitors and use street lighting is not always permitted.
10	Replacement of HDC vehicle fleet	Vehicle Fleet Efficiency	Vehicle Retrofitting programmes	2013	Ongoing	HDC	HDC	Partially Funded	£500k - £1million	Implementation	NO ₂ emission reduction from local traffic	Introduction & increase % of ULEV's into Council's vehicle fleet.	Replacement of HDC Neighbourhood Wardens vehicle fleet from petrol to hybrid vehicles. Vehicles that ran on diesel were switched to sustainable-sourced	

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments/Potential Barriers to Implementation
													Hydrogenated Vegetable Oil (HVO) fuel. All electric sweepers for Horsham's town centre.	
11	[Storrington] Enforcement of the weight restriction for HGVs accessing School Hill.	Traffic Management	Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	2019	On going	HDC/Storrington & Sullington Parish Council	WSCC	Partially Funded	£50k - £100k	Implementation	NO ₂ emission reduction from through traffic	Reduction in nitrogen dioxide concentrations in Storrington. Improved traffic flow / reduction in traffic congestion.	WSCC have no powers to use ANPR cameras to issue Penalty Charge Notice and the cost estimates for CCTV ANPR camera equipment obtained in 2020 were found prohibitively high.	WSCC have now adopted 'Part 6' powers and have confirmed initial back-office procedures to support these. However, for the time being, the only utilisation of the powers is for bus gates implemented across West Sussex as part of residential developments. In terms of other moving traffic offences, such as weight restrictions, these will not be considered until such time as a Moving Traffic Enforcement Policy has been adopted by the County Council. There is no confirmed timetable for preparation of this policy at this time.
12	[Storrington] Community minibus	Vehicle Fleet Efficiency	Vehicle Retrofitting programmes	2013	Ongoing	HDC / WSCC	Section 106	Funded	£50k - £100k	Ongoing	1 % in the AQMA	Enhance existing Storrington minibus service by replacing existing diesel fleet with Low /Zero emission vehicles.	Liaise with local bus operators to improve the emissions standards of buses operating through the AQMA. Explore opportunities to improve and create new community-led transport schemes. Community Minibus in Thakeham and Ashington More information at: https://www.westsussexminibus.org.uk/storrington/	
13	HGV/LGV Routing	Traffic Management	Strategic highway improvements, Re-prioritising Road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	2026	Ongoing	WSCC	WSCC, S106	Not funded	£50k - £100k	Planning	NO ₂ emission reduction from through traffic	Reduction in number of LGVs and HGVs driving through the AQMA	An advisory lorry route and services map is available on the West Sussex County Council website. The map is part of the County Council's approach to freight management which also includes providing real-time traffic information to support efficient freight movement and supporting major improvements on key lorry routes such as the A27 to reduce rat running.	A signing and routing strategy that directs longer-distance and freight traffic, including using sat-nav systems, towards the A27 / A24 and presents the town-centre corridor mainly as access to local destinations might reduce nonlocal traffic.

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments/Potential Barriers to Implementation
14	Travel Planning	Promoting Travel Alternatives	Personalised Travel Planning	2013	Ongoing	WSCC/HDC	Developers	Funded	£50k - £100k	On-going	NO ₂ emission reduction from local traffic	Increase in active travel and reduction in single occupancy car use	Staff in WSCC/HDC can apply for an easitCARD. The card offers a range of benefits including a 15% discount on off-peak and peak-time travel with Southern rail services, as well as reduced bus fares.	Travel plans for significant/major developments, Schools and Workplaces
15	Speed Reduction Schemes across the district to improve air quality and facilitate active travel	Traffic management	Reduction of speed limits, 20mph zones, UTC, Congestion management, traffic reduction	2025	2030	Parish Council / HDC / WSCC /	WSCC / Lane rental scheme / Community Highway Scheme / S106	Not funded	£50k - £100k	Planning	NO ₂ emission reduction from local and through traffic	Improve noise, pollution and safety. Improve active travel. Improved traffic flow / reduction in traffic congestion. Reduction of emissions at hotspots.		Lower speed limits can encourage shifts towards more sustainable transportation, such as walking and cycling increased feelings of safety. Areas where 20mph speed limits have been implemented often see a reduction in vehicle numbers or changes in driving patterns, contributing to overall reductions in emissions and improvements in air quality.
16	Explore implementing a Smoke Control Area	Policy Guidance and Development Control	Air Quality Planning and Policy Guidance			HDC / WSCC	S106 / HDC / WSCC	Not Funded	£100k - £500k	Planning	PM _{2.5}	Reduction of PM _{2.5} concentrations from heating		
17	[Storrington] Freight Delivery Partnership	Promoting Low Emission Transport	Public Vehicle Procurement – Prioritising uptake of low emission vehicles	2013	Ongoing	HDC / WSCC	-	Not Funded	£100k - £500k	Ongoing	Unknown but expected low	Emission reductions sought through partnership working with local businesses to minimise impact of deliveries etc. on the village.	Encourage use of WSCC preferred lorry route rather than A283 through Storrington AQMA.	In practice, this intervention would require significant levels of engagement outside of the local area, making it challenging to implement. For local traffic, freight and servicing management might reshape how goods are delivered within a town, potentially reducing trip numbers and changing vehicle mix. Lorries to use a sticker Friends of Storrington and request they follow a 20mph speed limit within Storrington

Measure No.	Measure	Category	Classification	Estimated Year Measure to be Introduced	Estimated / Actual Completion Date	Organisations Involved	Funding Source	Funding Status	Estimated Cost of Measure	Measure Status	Target Reduction in Pollutant / Emission from Measure	Key Performance Indicator	Progress to Date	Comments/Potential Barriers to Implementation
18	Strategic improvements to the A24 Worthing-Horsham corridor	Traffic Management	Strategic highway improvements, Re-prioritising Road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	2015	Unknown	Highways England / WSCC	Highways England	Not Funded	£1 million – £10 million	Planning	Unknown but expected low-medium	Reduction in nitrogen dioxide concentrations. Improved traffic flow / reduction in traffic congestion.	WSCC has undertaken a feasibility study of the A24 corridor between Worthing and Horsham including a package of traffic junction and sustainable transport measures. These proposals intended to encourage longer distance traffic flows to stay on the A27, A280, A24 and A264 corridors for journeys for example to and from the south west and north east of the county, and to avoid use of less suitable routes such as the B2139/A283/A272 through Amberley, Storrington and Cowfold.	This scheme is in the early stages of development and requires the further develop of designs, consultation, development of business case and securing of funding to deliver the package of measures.
19	Improve bus service and information	Alternatives to private vehicle use	Other	2013	Ongoing	WSCC / Local Bus Operators	DfT	Not funded	> £10 million	Ongoing	NO ₂ emission reduction from local traffic	Work with local bus service to utilise best available Euro standard vehicles for AQMA routes. Promote use of transport /travel plans to increase use of sustainable transport.	Real Time Passenger Information screens; Bus Stop Improvements; Bus fare discount scheme; Digital Demand Responsive Transport	Better bus services can support reductions in local car use, particularly for commuting and shopping trips where the service quality is high relative to the car alternative Latest updates at; West Sussex Bus Service Improvement Plan

5.1 Timescales of the AQAP Measures

Several measures outlined in Table 5-1 involve physical infrastructure changes or the adoption of new technologies. These typically require higher investment and have longer implementation timescales. Progress on such measures can be influenced by West Sussex County Council's assessment and prioritisation process, which may require proposals to be revised to meet specific criteria. Funding from developments, such as Section 106 contributions, can help accelerate delivery of these projects.

In contrast, measures aimed at raising awareness or encouraging behavioural change tend to be ongoing. These are more adaptable and can evolve over time in response to new data, scientific findings, legislation, and updated guidance. Their flexible nature allows for continuous refinement to ensure relevance and effectiveness.

5.2 Air Quality Partners

The organisations responsible for implementing the measures outlined in Table 5-1 are represented within the Steering Group. This group meets regularly to identify effective solutions for improving air quality, oversee the implementation of agreed measures, and ensure ongoing progress. They also review outcomes, make adjustments where necessary, and explore opportunities to expand or enhance existing initiatives.

5.3 Maintaining Safe Air Quality

Although air quality concentrations within the district are currently below national objectives and expected to remain below in the future, they remain above the more stringent 2021 WHO guidelines. Horsham District Council is committed to maintaining and further improving air quality through a proactive and long-term approach.

Most of the behaviour change measures already in place will continue, as ongoing public engagement and education are key to sustaining improvements. The Council will also maintain and expand its air quality monitoring network (both in terms of

pollutants measured and monitoring locations) while enhancing how data is shared with the public to promote transparency and awareness.

In line with national guidance, the Council prioritises early preventative action to avoid future exceedances and reduce long-term health impacts. This includes favouring pollution prevention and reduction strategies over reactive interventions, which can be more costly and less effective.

Upon revocation of the AQMA, an Air Quality Strategy will be developed and implemented to guide future actions. Collaboration with air quality partners will continue, supporting long-term projects and shared goals.

Air Quality Mitigation Guidance will remain in use for all relevant developments, applying a low-emission strategy approach to minimise cumulative impacts from traffic and buildings. Sustainable, long-term changes, such as improvements in vehicle fleets driven by government and local incentives, will also support continued reductions in air pollution.

6 Quantification of Measures

Concentrations within the AQMA are, as of 2024, below the relevant air quality objectives. However, Horsham District Council is committed to further improving air quality and ensuring that pollutant levels remain below the objective thresholds. The implementation of the outlined measures is intended to support continued compliance and help maintain these improvements over the long term.

The assessment of interventions can be challenging for several reasons. A common challenge is that interventions rarely occur in isolation from other changes that affect air quality, making it difficult to detect and quantify changes, especially if the interventions are small. Indeed, interventions may not be detectable or quantifiable in terms of changes in pollutant concentrations or health outcomes, even using sophisticated analysis techniques. Moreover, some interventions rely on behavioural change for both adoption and benefits to be realised, for which there remains considerable uncertainty regarding the extent to which such changes will be enacted.

Although the ANPR survey and scenario modelling quantified air quality improvements within the AQMA, it does not consider the improvements to quality of life the measures could have. Reductions in traffic volumes, smoother traffic flow, and a shift toward more sustainable travel modes have the potential to create a more pleasant, safer, and more accessible environment for residents, businesses, and visitors. These wider benefits, such as reduced noise, improved perceptions of safety, and increased opportunities for active travel, represent meaningful outcomes that extend beyond pollutant concentrations alone. As such, the overall value of the measures is likely to be greater than indicated by air quality modelling alone.

Additionally, some emissions reduction estimates were calculated by the model assuming all measures are delivered together. If these measures were implemented individually, their standalone emissions reductions would be smaller.

Partnership working with organisations such as WSCC may result in variations in prioritisation for air quality improvements, reflecting broader strategic and operational considerations.

Using the LAQM.TG(22) Supplementary Guidance: England (excluding London) – Determining the Impact of Air Quality Improvement Measures (2024)⁸, a cost benefit analysis was undertaken. This assessment has been used to rank the measures; however, it does not represent the order in which measures will necessarily be prioritised for delivery. This is because the estimated emissions reductions are subject to uncertainty, as some modelled reductions are based on the combined implementation of multiple measures. As a result, individual concentration reductions could not be derived for certain measures, which has led to an overestimation of their prioritisation scores. Additionally, as mentioned before, there are some benefits from measures that cannot be quantified or are not considered using the cost benefit analysis – such as improved quality of life.

The three priority measures selected by HDC have therefore been retained at the top of the list, with the remaining measures ranked according to their prioritisation scores. The methodology used for the calculations is set out below, with the LAQM tables in **Figure 6.1**.

Prioritisation score (P) = cost score (C) x benefit score (B) x feasibility score (F)

NB: The contents of the brackets refer to the headings in Table 6-1.

⁸ <https://laqm.defra.gov.uk/wp-content/uploads/2024/09/Guidance-for-Determining-the-impacts-of-air-quality-improvement-measures.pdf>

Figure 6.1 - LAQM TG22 tables to calculate cost, benefit, and feasibility scores

Costs	
Score	Approximate Cost (£)
7	<10k
6	10k – 50k
5	50k – 100k
4	100k – 500k
3	500k – 1 million
2	1 million – 10 million
1	>10 million

Air Quality Impacts	
Score	Indicative Reduction in NO ₂ Concentrations
7	>5 µg/m ³
6	4-5 µg/m ³
5	3-4 µg/m ³
4	2-3 µg/m ³
3	1-2 µg/m ³
2	0.5-1 µg/m ³
1	<0.5 µg/m ³

Feasibility Score	Feasibility Description
7	Measure has already been started and just requires progressing
6	Very easy to implement, and political support, sufficient resources
5	Relatively easy to implement, resources available
4	Possible to implement but may require some learning/campaigning, moderately time intensive
3	Challenging but still feasible, may require additional support and resources
2	Difficult to implement, no political appetite, time and resource intensive
1	Very difficult to implement, no political appetite, time and resource intensive

Table 6-1 – Assumptions around quantification of measures

Measure No.	Measure	Assumption for Quantification	Assumed reduction in AQMA	Other impacts	Prioritisation score			
					C	B	F	P
1	Speed Reduction Schemes in Storrington to improve air quality and facilitate active travel	Speed reduction schemes can reduce NO ₂ by improving driving behaviour (smoother acceleration/braking), encouraging some shift to walking and cycling, and influencing route choice for through-traffic. Where supported by stronger traffic-calming and placemaking measures, greater reductions in through-flows are possible, especially when viable alternative routes exist. For local trips, lower speeds can discourage short car journeys and support active travel uptake.	In conjunction with other measures targeting local and through traffic, this could contribute to a reduction of 2.5µg/m ³	Positive impact on climate emissions and noise Minor positive impact on social value	5	4	4	80
2	Air quality and emissions mitigation guidance for Sussex	The guidance provides a framework for assessing and mitigating air quality impacts from new developments, but it does not specify a fixed or average reduction in NO ₂ concentrations expected from its implementation. Instead, it emphasizes a case-by-case approach.	<0.5µg/m ³	Positive impact on climate emissions Positive impacts on health, sustainable transport and safety Typically low cost	7	1	7	49
3	Electric vehicle charging network	Improved local provision may change car purchasing choices, but it is unlikely to significantly affect car purchasing timing, and so any effect on local fleets will be	0.5µg/m ³	Positive impact on climate emissions	3	2	7	42

Measure No.	Measure	Assumption for Quantification	Assumed reduction in AQMA	Other impacts	Prioritisation score			
					C	B	F	P
		relatively slow and modest. Scenarios 1 and 3 therefore apply a 2-percentage point increase in EV share across cars and LGVs in the local traffic component, taking the local EV car share from approximately 6% to approximately 8%. Car purchasing decisions are complex and not driven by a single factor and so achieving this outcome solely with local measures is unlikely to be straightforward, but similarly local measures are highly likely to be helpful.		Minor positive impacts on health Minor positive impacts on noise High risk of impact on vulnerable communities Typically high cost				
4	[Storrington] Walk to School / Active Travel	This measure has the potential to encourage behavioural change and promote more sustainable travel practices. However, there is uncertainty regarding the extent to which these changes will be adopted in practice.	In conjunction with other measures targeting local and through traffic, this could contribute to a reduction of 2.5µg/m ³	Positive impact on climate emissions Positive impacts on health Minor positive impacts on social value	5	4	3	60
5	Reduce single occupancy car use by supporting carpool and car sharing schemes, and other modes of transport.	This measure has the potential to encourage behavioural change and promote more sustainable travel practices. However, there is uncertainty regarding the extent to which these changes will be adopted in practice.	In conjunction with other measures targeting local and through traffic, this could contribute to a reduction of 2.5µg/m ³	Positive impact on climate emissions Positive impacts on vulnerable communities and minor positive	7	4	2	56

Measure No.	Measure	Assumption for Quantification	Assumed reduction in AQMA	Other impacts	Prioritisation score			
					C	B	F	P
				impacts on social value Typically low cost				
6	[Storrington] Review on-street car parking and loading bay provision	WSCC is developing a revised policy framework and parking management programme. This measure requires further review to determine whether it should be taken forward.	0.5-1 µg/m ³	Positive impact on climate emissions Positive impacts on health, local economy, social value and noise pollution Typically low cost	7	2	3	42
7	Sussex Air and HDC air quality website	This measure has the potential to encourage behavioural change and promote more sustainable practices. However, there is uncertainty regarding the extent to which these changes will be adopted in practice.	<0.5µg/m ³	Behaviour changes Transparency	5	1	7	35
8	Walking and Cycling Measures	This measure has the potential to encourage behavioural change and promote more sustainable travel practices. However, there is uncertainty regarding the extent to which these changes will be adopted in practice.	In conjunction with other measures targeting local and through traffic, this could contribute to a reduction of 2.5µg/m ³	Positive impact on climate emissions Positive impacts on health Minor positive impacts on local	2	4	4	32

Measure No.	Measure	Assumption for Quantification	Assumed reduction in AQMA	Other impacts	Prioritisation score			
					C	B	F	P
		Active travel measures are most effective when combined with other interventions that make the walking and cycling environment safer and more attractive.		economy and social value				
9	Expansion of the monitoring network	This measure has the potential to encourage behavioural change and promote more sustainable practices. However, there is uncertainty regarding the extent to which these changes will be adopted in practice.	<0.5µg/m³	Behaviour changes Transparency Inform data-driven decisions	6	1	5	30
10	Replacement of HDC vehicle fleet	This measure can contribute to emissions reductions and serve as a visible commitment to sustainable transport. While the direct impact within the AQMA may be limited, this measure can support wider district-level behaviour change and improve public perception. The extent of behavioural influence remains uncertain and should be monitored over time.	<0.5µg/m³	Positive impacts on health Minor positive impacts on local economy and social value	3	1	7	21
11	[Storrington] Enforcement of the weight restriction for HGVs accessing School Hill.	The scale of impact will depend on the level of compliance achieved. ANPR survey data indicates that an average of 16 HGVs (> 7.5 tonnes) breach the weight restriction each weekday, with most travelling up School Hill. These breaches contribute to congestion at the Manley's	0.5-1 µg/m3	Positive impact on climate emissions Positive impacts on health and noise pollution	5	2	2	20

Measure No.	Measure	Assumption for Quantification	Assumed reduction in AQMA	Other impacts	Prioritisation score			
					C	B	F	P
		Hill mini-roundabout. Improving compliance is therefore likely to ease congestion and help reduce NO ₂ emissions from queuing vehicles.		Minor positive impacts on local economy Risk of community backlash				
12	[Storrington] Community minibus	This measure has the potential to encourage behavioural change and promote more sustainable travel practices. However, there is uncertainty regarding the extent to which these changes will be adopted in practice.	<0.5µg/m ³	Positive impact on climate emissions Positive impacts on vulnerable communities and local economy Minor positive impacts on health	5	1	4	20
13	HGV/LGV Routing	The survey identified 71% of vehicles using Amberley Road and 45% of vehicles using Washington Road were classed as through traffic. Of this, it was estimated that 20% of weekday through traffic was by HGVs (>7.5 tonnes). By these vehicles using alternative routes, it could reduce the NO ₂ emissions within the AQMA, but exact impact varies depending on compliance level.	0.5-1 µg/m ³	Positive impact on air quality emissions Positive impact on health and noise pollution	5	2	2	20

Measure No.	Measure	Assumption for Quantification	Assumed reduction in AQMA	Other impacts	Prioritisation score			
					C	B	F	P
14	Travel Planning	This measure has the potential to encourage behavioural change and promote more sustainable travel practices. However, there is uncertainty regarding the extent to which these changes will be adopted in practice.	<0.5µg/m³		5	1	4	20
15	Speed Reduction Schemes across the district to improve air quality and facilitate active travel	Speed reduction schemes can reduce NO ₂ by improving driving behaviour (smoother acceleration/braking), encouraging some shift to walking and cycling, and influencing route choice for through-traffic. Where supported by stronger traffic-calming and placemaking measures, greater reductions in through-flows are possible, especially when viable alternative routes exist. For local trips, lower speeds can discourage short car journeys and support active travel uptake.	In conjunction with other measures targeting local and through traffic, this could contribute to a reduction of 2.5µg/m³	Positive impact on climate emissions and noise Minor positive impact on social value	5	4	1	20
16	Explore implementing a Smoke Control Area	This measure has the potential to encourage behavioural change and promote more sustainable practices. However, there is uncertainty regarding the extent to which these changes will be adopted in practice. Exact impact varies depending on compliance level.	<0.5µg/m³	Minor positive impact on emissions and the climate Positive impact on health	4	1	2	8

Measure No.	Measure	Assumption for Quantification	Assumed reduction in AQMA	Other impacts	Prioritisation score			
					C	B	F	P
				Potential to have minor negative impact on vulnerable communities				
17	[Storrington] Freight Delivery Partnership	Exact impact varies depending on compliance level and behaviour change.	<0.5µg/m ³	Positive impact on air quality hotspots and congestion Positive impacts on health Minor positive impacts on noise pollution and climate emissions	4	1	1	4
18	Strategic improvements to the A24 Worthing-Horsham corridor	This scheme is in the early stages of development and requires the further develop of designs, consultation, development of business case and securing of funding to deliver the package of measures.	<0.5µg/m ³	Positive impact on climate emissions Positive impacts on health, local economy, social value and noise pollution Typically high cost	2	1	2	4

Measure No.	Measure	Assumption for Quantification	Assumed reduction in AQMA	Other impacts	Prioritisation score			
					C	B	F	P
19	Improve bus service and information	<p>This measure is unlikely to have a significant impact within the AQMA, although it may influence air quality across the wider district, where effects are currently not considered quantifiable.</p> <p>This measure is not needed to deliver the 5% reduction in local traffic assumed in Scenarios 1 and 3, but could contribute to this reduction if implemented.</p>	<0.5µg/m ³	<p>Positive impact on climate emissions</p> <p>Positive impacts on vulnerable communities and local economy</p> <p>Minor positive impacts on health</p>	1	1	3	3

Appendix A: Response to Consultation

Response to public consultation and stakeholder engagement will be provided in the final AQAP. The table summarising responses will include specific responses to the feedback received, which will be signposted within the document where the consultation comments have been enacted, or otherwise, with supporting justification.

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)
Traffic Management - UTC, Congestion management, traffic reduction	Low Emission Zone in Storrington	A 2014–16 trial with Siemens UK showed significant ongoing enforcement challenges, particularly around managing exemptions for local access. In addition, NO ₂ levels in Storrington have improved in recent years and were fully compliant last year. Given the substantial cost and complexity of implementing and policing an LEZ, and the availability of other AQAP measures (EV uptake, active travel improvements, bus service enhancements, and strengthened HGV/LGV routing) that can deliver compliance more proportionately, alternative measures are preferred.
Traffic Management - Other	Assess impact of traffic gating option in Storrington	Concerns have been raised that this is not practical to implement, because it would be confusing for drivers, and would be likely to lead to driver non-compliance and 'rat running' if long-red phases would be needed to restrict movements. Traffic Management Feasibility Study: Ricardo-AEA Storrington Traffic Management Options Appraisal. Air Quality Assessment (January 2013) - the study did not conclude whether it would be possible to achieve the theoretical levels of queuing through the village that it assumes.
Traffic Management - Strategic highway improvements, Re-prioritising road space away from cars, inc Access management, Selective vehicle priority,	Amend A283 Manley's Hill/B2139 School Hill junction to a priority T junction	This would be expected to result in significant peak time traffic queues on School Hill, and potential other consequences for air quality along School Hill.

Action category	Action description	Reason action is not being pursued (including Stakeholder views)
bus priority, high vehicle occupancy lane		Visibility from a give way line on School Hill to the left-up Manley's Hill for right turn traffic movements into the High Street appears limited and this could raise safety concerns.
Traffic Management - Strategic highway improvements, Re-prioritising road space away from cars, inc Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	Change of the High Street/North Street junction to a mini roundabout	The scheme did not meet threshold criteria for progression on the WSCC Infrastructure Works Programme list of projects (2017/18). And it showed a negative impact on traffic flow and scored low on pedestrian safety and low on environmental benefits.
Traffic Management - Strategic highway improvements, Re-prioritising road space away from cars, inc Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	Assess the impact of diverting HGV traffic to Old Mill Drive and Mill Lane, rather than School Hill	This alternative routing is not believed to be desirable.
Traffic Management - Strategic highway improvements, Re-prioritising road space away from cars, inc Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	Assess impact of imposing a restriction on heavy goods vehicles	<p>Implementing general access restrictions on all HGV vehicle movements through Storrington would be extremely difficult to deliver and enforce. In order to retain viability of businesses in Storrington arrangements would need to be made for smaller vehicles to undertake deliveries, which creates specific logistical problems for those businesses. In addition, consideration needs to be given to how lorries could access businesses on the fringe of Storrington and further beyond, and the impact that rerouting of such vehicles has on other communities.</p> <p>It appears very unlikely that it will be possible to implement or enforce this proposal.</p>

Action category	Action description	Reason action is not being pursued (including Stakeholder views)
Traffic Management - Strategic highway improvements, Re-prioritising road space away from cars, inc Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	Weight limit restriction on B2139 Houghton Bridge, near Amberley	There is no technical reason to impose a weight restriction on the B2139 at Houghton Bridge. A general weight restriction is very unlikely to be enforceable at this scale due to exemptions required for local access.
Traffic Management - Strategic highway improvements, Re-prioritising road space away from cars, inc Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane	Assess impact of changing Old Mill Drive to a shared surface	The results of the feasibility study and Waitrose Extension assessments have shown that the scheme is unlikely to result in air quality improvements within the Storrington AQMA.
Traffic Management - Other	Assess impact of reopening Nightingale Lane	As the road was originally closed on safety grounds, and the anticipated air quality benefits are low.
Promoting Low Emission Planting - Other	'Storrington in Bloom' - Introducing recognised pollution absorbing plants and planting methods into the village to improve air quality within the AQMA	As there are no suitable sites, this strategy cannot be progressed.
Traffic Management - Strategic highway improvements, Re-prioritising Road space away from cars, including Access management,	A27 Improvements	The Road Investment Strategy produced by DfT in March 2015 allocated a budget for the A27 schemes including the A27 Arundel bypass and A27 Worthing and Lancing improvements. This was expected to reduce traffic flows through Storrington where longer distance traffic is avoiding the A27 due to congestion.

Action category	Action description	Reason action is not being pursued (including Stakeholder views)
<p>Selective vehicle priority, bus priority, high vehicle occupancy lane</p>		<p>Options for major improvements have previously been developed by National Highways. However, the Chichester scheme was cancelled in 2017 and the Arundel, Worthing and Lancing schemes were cancelled in 2024.</p> <p>Latest updates at: https://nationalhighways.co.uk/our-roads/south-east/a27-arundel-bypass/</p> <p>In the absence of major A27 improvements, the county council is also continuing to work with National Highways and local planning authorities to bring forward small-scale A27 improvements as planned development takes place. Improvements to the A27 and complementary public transport improvements at these locations are priorities in the West Sussex Transport Plan.</p>

Appendix C: Summary of Air Quality Objectives

Table C.1 – Air Quality Objectives in England⁹

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

Table C.2 – Recommended 2021 WHO Air Quality Guidelines levels¹⁰

Pollutant	Air Quality Objective: Concentration	Air Quality Objective: Measured as
Nitrogen Dioxide (NO ₂)	25µg/m ³ - 99th percentile (i.e. 3–4 exceedance days per year).	24-hour mean
Nitrogen Dioxide (NO ₂)	10µg/m ³	Annual mean
Particulate Matter (PM ₁₀)	45µg/m ³ - 99th percentile (i.e. 3–4 exceedance days per year).	24-hour mean
Particulate Matter (PM ₁₀)	15µg/m ³	Annual mean
Fine Particulate Matter (PM _{2.5})	15µg/m ³ - 99th percentile (i.e. 3–4 exceedance days per year).	24-hour mean
Fine Particulate Matter (PM _{2.5})	5µg/m ³	Annual mean

⁹ The units are in microgrammes of pollutant per cubic metre of air (µg/m³).

¹⁰ <https://www.who.int/news-room/feature-stories/detail/what-are-the-who-air-quality-guidelines>

Table C.3 – Air Quality Objectives Comparison

Pollutant	Averaging period	Concentration		
		Current UK limit	WHO 2021	New target
AQ (England) regulations 2000 (apply to LAQM)				
Nitrogen Dioxide (NO ₂)	Hourly mean	200 µg/m ³	200 µg/m ³	Existing
	Annual mean	40 µg/m ³	10 µg/m ³	Existing
Particulate Matter (PM ₁₀)	24 hour mean	50 µg/m ³	45 µg/m ³	Existing
	Annual mean	40 µg/m ³	15 µg/m ³	Existing
	Daily 8 hour mean	120 µg/m ³	100 µg/m ³	Existing
Environmental Targets (PM) regulations 2023 (apply to national Government)				
Fine Particulate Matter (PM _{2.5})	Annual mean	20 µg/m ³	5 µg/m ³	10 µg/m ³
	Exposure target			35% reduction

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
AQO	Air Quality Objective
AURN	Automatic Urban and Rural Network (UK air quality monitoring network)
ASR	Annual Status Report
Defra	Department for Environment, Food and Rural Affairs
DMRB	Design Manual for Roads and Bridges – Air quality screening tool produced by National Highways
EU	European Union
EV	Electric Vehicle
FDMS	Filter Dynamics Measurement System
HDC	Horsham District Council
LAQM	Local Air Quality Management
NO ₂	Nitrogen Dioxide
WHO	World Health Organisation

References

King's College London. (2017). *Airborne particles from wood burning in UK cities*. London: Department for Environment, Food and Rural Affairs (Defra).

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