



Horsham  
District  
Council



Horsham District Council  
Storrington Air Quality Action Plan  
(Storrington Air Quality Management Area)

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

December (2020)

|                         |  |
|-------------------------|--|
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| Report Reference number | Storrington AQAP                                   |
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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 Council.

This action plan replaces the previous action plan which ran from 2012. Projects delivered through the past action plan include:

- Introduction and implementation of Air Quality And Emissions Mitigation Guidance;
- Participation in the AirAlert service to residents;
- Co-operation with schools to enhance school travel plans;
- Procurement of three ultra-low emission vehicles for the HDC fleet with the ULEV Readiness Grant.

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

The annual health cost to society of the impacts of particulate matter alone in the UK is estimated to be around £16 billion<sup>3</sup>. Horsham District Council is committed to reducing the exposure of people in the Horsham district to poor air quality in order to improve health.

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

- Alternatives to private vehicle use
- Environmental permits
- Freight and delivery management
- Policy guidance and development control
- Promoting low emission transport
- Promoting travel alternatives
- Public information
- Transport planning and infrastructure

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<sup>1</sup> Environmental equity, air quality, socioeconomic status and respiratory health, 2010

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

<sup>3</sup> Defra. Abatement cost guidance for valuing changes in air quality, May 2013

- Traffic management
- Vehicle fleet efficiency

Our priorities are working 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 Section 5.

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

## **Responsibilities and Commitment**

This AQAP was prepared by the Environmental Health Department of Horsham District Council with the support and agreement of the following officers and departments: planning, Public Health England, West Sussex County Council (WSCC) highways, neighbouring districts, Sussex-Air Partnership and the Environment Agency.

This AQAP has been approved by: the Head of Planning at Horsham District Council.

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.

If you have any comments on this AQAP please send them to Environmental Health at:

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# 1 Introduction

This report outlines the actions that Horsham District Council will deliver in order to reduce concentrations of air pollutants and exposure to air pollution in the Storrington Air Quality Management Area (AQMA); thereby positively impacting on the health and quality of life of residents and visitors to the area.

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

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

## 2 Summary of Current Air Quality in Horsham District Council.

Horsham district is primarily agricultural in character and does not incorporate a significant heavy industrial base or major transport hubs. The main source of air pollution locally are road traffic emissions from major roads, notably the A24, which intersects the district north – south; A264 to the north of Horsham; A272 and A281 at Cowfold; and A283 at Storrington. Two Air Quality Management Areas (AQMAs) have been declared in the district in the village of Cowfold and town centre of Storrington, both for the exceedances of the annual mean objective for nitrogen dioxide (NO<sub>2</sub>). Air Quality Action Plans (AQAP) were prepared for both AQMAs; the Storrington AQAP was submitted to Defra in 2012 and the Cowfold AQAP in 2013.

## 3 Horsham District Council's Air Quality Priorities

### 3.1 Public Health Context

To ensure that Directors of Public Health are briefed on the status of air quality in the Horsham district, the ASRs produced are sent each year to Public Health at West Sussex County Council.

Public Health West Sussex have contributed to the delivery of behavioural campaigns in the region, such as the Clean Air Day.

### 3.2 Planning and Policy Context

The Environmental Protection and Air Quality policies have recently been amended in the process of finalising the next draft of HDC's Local Plan review. The wording of the policies has been strengthened requiring developers to adhere to the *Air Quality and Emissions Mitigation Guidance for Sussex (2020)*, which outlines the steps required to assess and mitigate the impact that new developments may have on local air quality for a number of air pollutants.

The policies 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.

### 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 Council's area.



A source apportionment exercise was carried out by Horsham District Council in 2012. This identified that within the AQMA, the percentage source contributions were as follows<sup>4</sup>. Due to significant changes to emission rates that have occurred since 2012 those findings are now outdated. A new source apportionment should be undertaken as soon as it is feasible.

- Emissions from HGVs accounted for approximately 30% of vehicle NOx emissions; and
- Emissions from HGVs accounted for 17% to 22% of total NO<sub>2</sub> concentrations;
- Emissions from cars and LGVs accounted for approximately 70% of vehicle NOx emissions; and
- Emissions from cars and LGVs accounted for 45% to 58% of total NO<sub>2</sub> concentrations.

### **3.4 Required Reduction in Emissions**

A new source apportionments needs to be carried out to determine the required reduction in vehicle emissions.

Based on the monitoring results from the diffusion tube monitoring site Storrington 19n, the required reduction in NO<sub>2</sub> concentrations at the mini-roundabout of Manley's Hill and Scholl Hill is approximately 8µg/m<sup>3</sup>.

### **3.5 Key Priorities**

- Working with planning policy and development control to secure air quality mitigation from new development;
- Completion of the Defra-funded Clean Burn Sussex project;
- Installation of CCTV equipment at the mini-roundabout of School Hill and Manley's Hill to enforce breaches of the weight restriction for HGVs using School Hill;
- Progression of a Freight Delivery Partnership / Fleet Operator Recognition Scheme Standard: Encourage use of WSCC advisory lorry route rather than A283 through Storrington AQMA for longer distance lorry movements; and
- Progressing delivery of traffic management / congestion improvement schemes for Storrington and Cowfold as identified in sections below.

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<sup>4</sup> HDC (2012) *Further Assessment Report Storrington Air Quality*. Prepared March 2012

## **4 Development and Implementation of Horsham District Council's 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.

## 4.2 Steering Group

A Steering Group, made up of Environmental Health Officers, Parish Council's Members and WSCC Transport Planners, was set up early in the action planning process.

The Group have contributed to the development of the Action Plan and is the decision making body for the action plan measures to be taken forward.

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

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

The original Action Plan for Storrington was submitted to DEFRA and published in October 2012. The action plan appraisal report was received from DEFRA in November 2012 with the draft plan accepted as fulfilling the requirements of the Local Air Quality Management policy guidance (LAQM PG (16)). Most of the actions set out in the 2012 Plan have either been completed or retracted due to low effectiveness or low feasibility. The most recent review of the identified measures took place in June 2017. The review note, produced by the officers of HDC and the County Council can be found in Appendix A.

The review identified a number of schemes for further consideration. Following further evaluation a decision was taken by the Storrington Air Quality Steering Group to prioritise the progression of three schemes:

- Prohibition of lorries turning right into School Hill from Manley's Hill within the Storrington AQMA;
- Advisory lorry route signage improvements within the Storrington AQMA; and
- Time restrictions for goods vehicle loading/delivery within the AQMA during peak periods around the North Street/A283 High Street junction.

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

The scheme sought the prohibition of lorries turning into or out of B2139 School Hill and A283 Manley's Hill. Lorries turning into School Hill block traffic on Manley's Hill, which exacerbates congestion on Manley's Hill and the High Street. Furthermore, the mini-roundabout of School Hill and Manley's Hill lacks the space for lorries turning so a turning ban was believed to have a positive impact on safety in addition to reducing congestion. However, there were complications in the way in which such a prohibition could be legally worded as there are no permitted variants of signs that relate specifically to banning certain classes of vehicles from making specific movements. Subsequently, a wider scheme to ban all goods vehicles over 7.5 tonnes movements from B2139 School Hill between the A283 High Street/Manleys Hill and the access to Hill Lane Car Park (except for access) has been progressed. The scheme included the provision of prohibitory signs at the junctions and advance lorry routing signs on the access roads into Storrington, including A283 Washington Road and B2139 Thakeham Road. The scheme was completed in May 2019.

### **Enforcement of breaches of the weight restriction for HGVs accessing School Hill**

HDC in conjunction with Storrington Parish Council is looking to install CCTV equipment at the mini-roundabout of School Hill and Manley's Hill to enforce the weight restriction for lorries using School Hill. It follows the Neighbourhood Wardens having witnessed several breaches of the restrictions since the prohibitory signs were installed.

### **Advisory lorry route signage improvements within the Storrington AQMA**

In terms of advisory lorry route signage, there is a current voluntary agreement in place with Waitrose for delivery lorries coming from the A24 to use Water Lane to access the village centre. In addition local signage directs lorries to the Water Lane Trading Estate to use Water Lane. The goods vehicle prohibition above included additional HGV lorry routing signs so it is not certain what further improvements can be made, but any further suggestions from the Steering Group will be monitored and addressed as appropriate.

## **Time restrictions for goods vehicle loading/delivery within the AQMA during peak periods**

Parking on double yellow lines remains an issue in the town centre. The most affected area is North Street near the junction with the A283 West Street. It was envisaged that prohibition of loading/unloading in that area would reduce congestion and have a positive impact on safety. The installation works to implement double yellow lines and road signs prohibiting waiting, loading and unloading, took place in summer 2019. The scheme is now fully implemented and has shown to have a positive impact on air quality. The monitoring site Storrington 11 has shown a significant decrease in NO<sub>2</sub> concentrations in 2019 on the previous year.

## **Other Measures**

There are a number of other schemes considered potentially viable, which may be progressed at a later date, depending on funding and scheme feasibility; these include:

- Review of on-street car parking and loading bay provision;
- Review of two pedestrian crossings along the High Street/West Street;
- 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;
- Smarter Choices – encourage walking and cycling.

## **Review on-street car parking and loading bay provision**

Parking issues within the village which have been identified as contributing to congestion within the AQMA. Two 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 Road Space Audits 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 Road Space Audit 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.

### **Review two pedestrian crossings along the High Street/West Street**

Both crossings have previously been upgraded to Puffin crossings (they use kerbside detectors to cancel demands on the crossing 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. The crossings do not include microprocessor technology (Microprocessor Optimised Vehicle Actuation - MOVA). This technology has the potential to enable green/red phase timings to react to periods of high air quality sensitivity and to prioritise traffic movement at peak times. To progress the scheme, a site study is needed to explore if MOVA technology is technically feasible to be delivered. However, there are doubts about how much any further benefits could be realised because of blocking back caused by the other mini-roundabout and traffic interactions along the High Street.

### **Working with local businesses**

- Alternative Refuelling Options: Encourage provision of electric vehicle charging points at local business and public car parking spaces. Ensure compatibility of EV charging points to enable link to "Charge your Car" pay as you go network. Encourage development of Compressed Natural Gas (CNG) refuelling network across the district via private companies and as part of a district alternative fuel strategy (See District-wide AP measures).

- Home delivery scheme: Encourage through businesses use of low emission delivery vehicles with possible link to district Compressed Natural Gas (CNG) refuelling strategy.
- Community minibus – enhance existing Storrington minibus service by replacing existing diesel fleet with Low /Zero emission vehicles. Funded by local businesses or new developments via planning contributions, possible link to CNG refuelling strategy.
- Improve local bus service – Liaise with local PSV operators to restrict vehicles entering AQMA to Euro IV/V standard. Consider subsidising strategic bus services to village schools via grant funding/Section 106 contributions to address ‘school-run’ traffic peaks. Investigate provision of local real-time bus information at bus stops to promote use.
- Transport Plans/ Travel Plans: Promote to existing businesses and new developments innovative solutions: e.g. low emission incentives; driver training; car share schemes; car clubs.
- Freight Delivery Partnership / Fleet Operator Recognition Scheme Standard: Encourage use of WSCC advisory lorry route rather than A283 through Storrington AQMA for longer distance lorry movements; investigate opportunities for local and shared deliveries; Encourage use of low emission delivery vehicles to local stores within AQMA, provide links to CNG refuelling strategy.

These schemes are being investigated through various delivery avenues, and are subject to different feasibility and value for money considerations.

### **Smarter Choices – encourage walking and cycling; work with schools**

Sussex-air have been successful in the 2020/21 bid to Defra for funding to work with primary and secondary schools to tackle school travel emissions. The project will involve air quality monitoring and may include school street closures. This a continuation of the programme that was delivered in 2018-19 to work with primary schools in or near Sussex AQMAs.



A number of Local Transport Investment Programme (LTIP) schemes to improve walking paths and pedestrian crossings around schools have been considered by WSCC. These include:

- Pedestrian safety improvements to Water Lane roundabout to allow safe crossing. This scheme was completed in March 2020.
- Improvements (hard surfacing) for the Riverside route from Water Lane (West Wantley Farm) to Storrington Primary School / Leisure Centre. Monitoring undertaken during 2018 at school times found that there was no use of this path by pupils at school times, so this is not being progressed further at this stage. If future development shows a use of this path, this scheme can be revisited in future.

In addition, work continues on school travel plans, the below are examples of measures being investigated by Storrington Primary School:

- Crossing for the Leisure Centre on Spierbridge Road / Hormare Crescent. A school crossing patrol (SCP) count was carried out at this location and it did not meet the criteria for a paid SCP position. The location of a formal crossing here would not be on the desire line for pupils crossing the road here. The school has been encouraged to find a volunteer to carry out the SCP role to meet the needs of pupils crossing here.
- Cycling racks for Storrington Primary School.
- Rear access to Storrington Primary School including improvements to Love Lane path. This land is not owned by WSCC or HDC, the level of local resident support for the scheme is unclear, while there are flooding/drainage issues with this scheme, with the scheme awaiting more engagement from the school community.
- New School Keep Clear Markings were put in place in 2018 to ensure the markings meet the schools needs.

The final measure that should be discussed in this section is the A27 Improvements Scheme (Arundel bypass). This is not a scheme that the Council is directly involved

in (as it is managed by Highways England), however HDC supported the proposals in their response to the 2017 consultation.

### **A27 Improvements (Arundel bypass)**

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 is expected to reduce traffic flows through Storrington where longer distance traffic is avoiding the A27 due to congestion. Following consultation in late summer 2017, Highways England made a preferred route announcement for a modified Option 5A for the Arundel bypass which was HDC's preferred option, also supported by WSCC and the majority of local authorities and business groups who responded. The modified Option 5A involved a new dual carriageway between Crossbush junction and Ford Road. It would then continue to intersect the fringes of the South Downs National Park and Binsted Woods, before re-joining the existing A27 near Yapton Lane. This Option was modelled to bring a reduction in the total vehicle numbers on the A283 route through Storrington - which is currently used by drivers wanting to avoid traffic on the A27.

Following further development of the scheme and the discovery of new information about the decision, a further options consultation took place in 2019 as well as a further review period in early 2020. A new Preferred Route Announcement is expected later in 2020.

Whilst the measures stated above and in Table 2.3 will help to contribute towards achievement of the AQOs, Horsham District Council anticipates that further additional measures at the national level not yet prescribed will be required in subsequent years to achieve compliance and enable the revocation of the Storrington AQMA. This conclusion is drawn on the basis of current monitoring results from Storrington 19 - the worst-case monitoring location in the Storrington AQMA.

Table 5.1 – Air Quality Action Plan Measures

| Measure No. | Measure   | EU Category                             | EU Classification                        | Lead Authority | Planning Phase | Implementation Phase | Key Performance Indicator   | Target Pollution Reduction in the AQMA | Progress to Date   | Estimated Completion Date | Comments   |
|-------------|---|---|--|----------------|----------------|----------------------|---|--|--|---------------------------|--|
| 1           | Planning Advice Document: Air Quality & Emissions Reduction Guidance      | Policy Guidance and Development Control | Air Quality Planning and Policy Guidance | HDC            | 2013-14        | May-14 – to date     | 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.   | 1%                                     | The updated guidance, Air Quality And Emissions Mitigation Guidance for Sussex (2019) has been published on HDC website and its application is tested in HDC and neighbouring districts within Sussex. | Ongoing                   | As the Local Plan is currently under review, this presents an opportunity to strengthen the wording of HDC’s air quality policy. The Council is also looking to adopt the Air Quality and Emission Mitigation Guidance as a Supplementary Planning Document (SPD).   |
| 2           | District Emission Reduction Strategy District Emission Reduction Strategy | Promoting Travel Alternatives           | Development of alternative fuel strategy | HDC            | 2013           | 2013 – to date       | At least one alternative refuelling option in all new/refurbished filling stations. One public EV charging point in each village in Horsham district. EV rapid charge points for Energise network. Work with local businesses to develop CNG refuelling infrastructure for local commercial fleet operators | 1%                                     | Final version of the Electric Vehicle Strategy for West Sussex 2019-2030 got published in December 2019.   | Ongoing                   | Small initial impact on emissions but aim to facilitate the uptake of more LE vehicles. Planning guidance requires EV charging points for all developments as mitigation measure. Review of potential LE fuel assets within district e.g. biomethane from existing landfill/anaerobic digestion plant ongoing as part of strategic planning. |

| Measure No. | Measure                              | EU Category                      | EU Classification   | Lead Authority                                  | Planning Phase | Implementation Phase | Key Performance Indicator  | Target Pollution Reduction in the AQMA | Progress to Date  | Estimated Completion Date | Comments   |
|-------------|--------------------------------------|----------------------------------|---|---|----------------|----------------------|--|--|---|---------------------------|--|
| 3           | Incentivising Low Emission Transport | Promoting Low Emission Transport | Public Vehicle Procurement – Prioritising uptake of low emission vehicles | HDC Funding for ULEV vehicle leases: HDC & OLEV | 2013/14        | 2013 - ongoing       | Introduction & increase % of ULEV's into Council's vehicle fleet.<br>-Condition requiring latest Euro standard for all new taxis through licensing condition.<br>-buses entering AQMAs to be best available Euro standard vehicle within the company fleet. Achieved via negotiation/LEZ | 1%                                     | ULEV Readiness Grant was secured in 2015. Three ultra-low emission vehicle have been delivered to the HDC fleet. Most of the cost of vehicle leases is to be reimbursed by OLEV for 24 months. Taxi/private hire vehicle licence conditions under review. Current vehicles comply with latest Euro standard. Ongoing liaison with bus companies serving routes through AQMAs to reduce engine idling at bus stops. Brighton Bus LEZ introduced in | 2013 - ongoing            | Small initial impact on emissions but aim to facilitate the uptake of more LE vehicles. Benefits of Brighton LEZ vehicle emission improvements will extend to areas outside Brighton |

| Measure No. | Measure                                       | EU Category        | EU Classification                               | Lead Authority | Planning Phase      | Implementation Phase | Key Performance Indicator   | Target Pollution Reduction in the AQMA | Progress to Date  | Estimated Completion Date | Comments  |
|-------------|---|--------------------|---|----------------|---------------------|----------------------|---|--|---|---------------------------|---|
|             |   |                    |   |                |                     |                      |   |  | Jan 2015.   |                           |   |
| 4           | AirAlert                                      | Public Information | Via other mechanisms                            | Sussex-Air/HDC | Service operational | Ongoing service      | Increase in subscriptions to pollution alert service within Horsham district.   | No reduction in emissions.             | Health study continuing. Increase in subscriptions. Cold and heat alerts added to service over the recent years.  | Ongoing service           | No direct impact on emission reductions but optimising use of monitoring network data for health associated benefits. |
| 5           | Clean Burn Sussex                             | Public Information | Via other mechanisms                            | Sussex-Air/HDC | 2018-20             | 2018-20              | Number of survey forms returned; Number of visitors to the website; Number of suppliers participating in the project. | <1%                                    | Data collected in survey has been analysed. Participants in survey were sent information on how to reduce emissions from burning through using cleaner stoves and fuels. A dedicated website has been added to the Sussex Air domain and running from November 2019 | Sep-20                    | Community participation is crucial to the project's success.  |
| 6           | Enforcement of weight restriction prohibiting | Traffic Management | Strategic highway improvements, Re-prioritising | HDC / WSCC     | 2019                | 2019 - ongoing       | Reduction in nitrogen dioxide concentrations in Storrington.  | 1%                                     | Road signs prohibiting all goods vehicles over  | Ongoing                   | There have been incidences of large lorries making turning movements between  |

## Horsham District Council

| Measure No. | Measure  | EU Category        | EU Classification   | Lead Authority                              | Planning Phase | Implementation Phase | Key Performance Indicator   | Target Pollution Reduction in the AQMA | Progress to Date  | Estimated Completion Date   | Comments  |
|-------------|--|--------------------|---|---|----------------|----------------------|---|--|---|---|---|
|             | lorries turning right into School Hill from Manley's Hill and turning left into Manley's Hill from School Hill.  |                    | road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane   |   |                |                      | Improved traffic flow / reduction in traffic congestion.  |  | 7.5t from using School Hill between the A283 and the Mill Lane car park access road were installed in May 2019 on the access routes into Storrington, Manleys Hill and School Hill. |   | School Hill and Manley's Hill and vice versa causing congestion at the mini-roundabout due to the constrained junction. Emission reductions anticipated as a result of reduced congestion caused by blockages on High Street / West Street. |
| 7           | Installation of CCTV equipment at the mini-roundabout of School Hill and Manley's Hill to enforce the weight restriction for HGVs accessing School Hill. | Traffic Management | Workplace Parking Levy, Parking Enforcement on highway  | HDC/Storrington & Sullington Parish Council | 2019           | 2020/21              | Reduction in nitrogen dioxide concentrations in Storrington. Improved traffic flow / reduction in traffic congestion  | 1%                                     | Quotations sought   | Requests for quotations were sent to suppliers before the coronavirus lockdown in March 2020. | 2021  |
| 8           | Time restrictions for goods vehicle loading/delivery within the AQMA during peak periods.  | Traffic Management | Strategic highway improvements, Re-prioritising road space away from cars, including Access management, Selective vehicle priority, bus priority, high vehicle occupancy lane | 2013-17                                     | HDC / WSCC     |                      | Reduction in nitrogen dioxide concentrations in Storrington. Improved traffic flow / reduction in traffic congestion. | 1%                                     | A Traffic Regulation Order was progressed to prohibit waiting, loading and unloading at any time on sections of North Street, The Square and West Street in Storrington.            | Completed in summer 2019  | Parking on double yellow lines remains an issue in the town centre. The most affected area is North Street near the junction with the A283 West Street.   |

| Measure No. | Measure  | EU Category        | EU Classification                             | Lead Authority | Planning Phase | Implementation Phase | Key Performance Indicator   | Target Pollution Reduction in the AQMA | Progress to Date   | Estimated Completion Date | Comments  |
|-------------|--|--------------------|---|----------------|----------------|----------------------|---|--|--|---------------------------|---|
| 9           | Review on-street car parking and loading bay provision             | Traffic Management | UTC, Congestion management, traffic reduction | HDC / WSCC     | 2013           | 2020                 | Reduction in nitrogen dioxide concentrations in Storrington. Improved traffic flow / reduction in traffic congestion. | 1%                                     | The steering group would like to prioritise schemes 2), 3) and 5) ahead of this one as parking in bays is not as much of an issue in terms of increased congestion as e.g. lorry turning into School Hill or vehicle parking on double yellow lines. | 2020                      | A more detailed air quality assessment of changes to and re-designation of parking-bays and loading bays could be investigated further. This could be a combined assessment of some of the other measures discussed in this document, including a review of the pedestrian crossings and junctions. |
| 10          | Review two pedestrian crossings along the High Street/West Street. | Traffic Management | UTC, Congestion management, traffic reduction | HDC / WSCC     | 2013           | 2019-20              | Reduction in nitrogen dioxide concentrations in Storrington. Improved traffic flow / reduction in traffic congestion. | 1%                                     | - A site study needed to explore if MOVA technology is technically feasible to deliver will cost £500-£1000 to assess site specific circumstances including speed of traffic, detection points, visibility, interactions to side roads, etc.         | 2018/19                   | Funding is a major constraint to the progress of this scheme.   |

| Measure No. | Measure | EU Category | EU Classification | Lead Authority | Planning Phase | Implementation Phase | Key Performance Indicator | Target Pollution Reduction in the AQMA | Progress to Date   | Estimated Completion Date | Comments |
|-------------|---------|-------------|-------------------|----------------|----------------|----------------------|---------------------------|--|--|---------------------------|----------|
|             |         |             |                   |                |                |                      |                           |  | Such assessment will provide a view on the likely benefit of the scheme as well as recommendations on changes to the operation of the crossings (e.g. timings) under the current technology to promote smoother traffic flow. A more detailed study giving more certainty about the degree of benefit from MOVA is likely to cost in the region of £5000 due to the high survey costs in on-ground operatives trying to manually recreate the operational benefits of the technology |                           |          |



| Measure No. | Measure   | EU Category                      | EU Classification  | Lead Authority | Planning Phase | Implementation Phase | Key Performance Indicator   | Target Pollution Reduction in the AQMA | Progress to Date  | Estimated Completion Date | Comments   |
|-------------|---|----------------------------------|--|----------------|----------------|----------------------|---|--|---|---------------------------|--|
|             |   |                                  |  |                |                |                      |   |  | by controlling the current crossings.   |                           |  |
| 11          | Promotion of Alternative Transport / Fuelling options | Promoting Low Emission Transport | Procuring alternative refuelling infrastructure to promote Low Emission Vehicles | HDC / WSCC     | 2013           | 2013 – ongoing       | Standard eV charging points to be upgraded to rapid charge. Review car parking charging to encourage LE vehicles as part of Energise network. Review transport links/car parking facilities associated with Pulborough main-line station. | 1%                                     | Measure incorporated into Planning Advice Document. Review undertaken of HDC vehicles at Storrington transport depot to establish opportunities for upgrading/ replacing with low emission vehicles. Rapid EV charger installed in Storrington in 2015. | 2013 – ongoing            | Emission reductions anticipated as a result of reduction in local car journeys and increase in LE vehicles & improved sustainable transport options. |
| 12          | Public/commercial vehicle fleet improvement           | Promoting Low Emission Transport | Public Vehicle Procurement – Prioritising uptake of low emission vehicles        | HDC / WSCC     | 2013           | 2013 – ongoing       | Encourage use of LE home delivery vehicles. Incentivise use of LE vehicles by Community minibus service. Work with local bus service to utilise best available Euro standard vehicles for AQMA routes.                                    | 1%                                     | Review of Council Depot vehicles underway by EST to establish Euro standard, replacement schedule and opportunities for   | 2013 – ongoing            | Emission reductions sought through partnership working with local businesses to minimise impact of deliveries etc. on the village.                   |

| Measure No. | Measure  | EU Category                           | EU Classification   | Lead Authority | Planning Phase | Implementation Phase | Key Performance Indicator  | Target Pollution Reduction in the AQMA | Progress to Date   | Estimated Completion Date | Comments   |
|-------------|--|---------------------------------------|---|----------------|----------------|----------------------|--|--|--|---------------------------|--|
|             |  |                                       |   |                |                |                      | Promote use of transport /travel plans to increase use of sustainable transport.   |  | upgrading to low emission fuels.   |                           |  |
| 13          | Promotion of Alternative Lorry delivery Routes | Promoting Low Emission Transport      | Public Vehicle Procurement – Prioritising uptake of low emission vehicles | HDC / WSCC     | 2013           | 2013 – ongoing       | Encourage use of WSCC preferred lorry routes. Facilitate links for local shared deliveries. Encourage use of LE delivery vehicles in AQMAs. Provide links to EV/CNG refuelling facilities. | 1%                                     | LEZ trial initiated in December 2014. Waitrose agreed for delivery lorries coming from the A24 to use Water Lane to access the village centre. Local signage directs lorries to the Water Lane Trading Estate to use Water Lane. The options for further advisory signage for lorries are considered by Storrington AQAP Steering Group. | 2013 – ongoing            | Emission reductions sought through partnership working with local businesses to minimise impact of deliveries etc. on the village. |
| 14          | Smart Choices                                  | Transport Planning and Infrastructure | Other Car Clubs   | HDC / WSCC     | 2013           | 2013 – ongoing       | Promote bike rental scheme with local supplier.  | 1%                                     | Preliminary review of current facilities.  | 2013 – ongoing            | Emission reductions sought through encouraging the use of sustainable transport  |

| Measure No. | Measure             | EU Category                         | EU Classification   | Lead Authority | Planning Phase | Implementation Phase | Key Performance Indicator   | Target Pollution Reduction in the AQMA | Progress to Date  | Estimated Completion Date | Comments  |
|-------------|---------------------|-------------------------------------|---------------------|----------------|----------------|----------------------|---|--|---|---------------------------|---|
|             |                     | Alternatives to private vehicle use |                     |                |                |                      | Investigate funding streams for improvements to local walking & riding paths. – Improve signage –Investigate funding for secure bike storage at local car parks. Undertake feasibility study for introduction of car club in Storrington following success of initiative in Horsham town. |  | Further meeting with Parish Council to be arranged. Feasibility study to be considered to assess suitability of car club in Storrington by looking at demographics etc.   |                           | options within the towns and villages.  |
| 15          | School Travel Plans | Promoting Travel Alternatives       | School Travel Plans | WSCC/ HDC      | 2013           | Ongoing              | Work with WSCC to enhance school travel plans. Identify safety improvements to encourage walking/cycling. Contribute to air quality awareness education programmes.   | 1%                                     | School travel improvements considered as part of planning applications for new residential developments in Storrington. Work continues on school travel plans. Storrington Primary School and WSCC have been working to investigate options for | Ongoing                   | Emission reductions sought through working with schools, parents and pupils to encourage the use of safe and sustainable transport to and from schools, and reduce the number of local car trips. |

| Measure No. | Measure                               | EU Category        | EU Classification              | Lead Authority        | Planning Phase | Implementation Phase | Key Performance Indicator   | Target Pollution Reduction in the AQMA | Progress to Date  | Estimated Completion Date             | Comments  |
|-------------|---------------------------------------|--------------------|--------------------------------|-----------------------|----------------|----------------------|---|--|---|---------------------------------------|---|
|             |                                       |                    |                                |                       |                |                      |   |  | pedestrian crossing and cycling improvements in and around the school (see main text) |                                       |   |
| 16          | A27 Improvements (Arundel Bypass)     | Traffic Management | Strategic highway improvements | Highways England/WSCC | 2013           | 2013 – ongoing       | Improvements to A27 now programmed by Highways England. Key indicator of AP measure will be for HE to agree scheme and implement. | 2.5%                                   | WSCC A27 Action campaign launched to seek improvement to A27.                         | Construction start estimated at 2022. | Improvements to the A27 are one of the key priorities of the current West Sussex Transport Plan (LTP3). |
| 17          | A27 Improvements (Worthing & Lancing) | Traffic Management | Strategic highway improvements | Highways England/WSCC | 2015           | 2015 – ongoing       | Key indicator of AP measure will be for HE to agree scheme and implement.   | 2.5%                                   | WSCC A27 Action campaign launched to seek improvement to A27.                         | Unknown                               | Improvements to the A27 are one of the key priorities of the current West Sussex Transport Plan (LTP3). |

## Appendix A: Storrington Air Quality Management Area scheme proposals review, June 2017

This review note has been prepared by officers from Horsham District Council and West Sussex County Council for the Storrington Air Quality Steering Group. It reviews the previous measures and assessments undertaken for all of the identified measures proposed to address air quality issues in Storrington. This includes traffic management related measures, and other measures as listed below which are drawn from the Storrington Air Quality Action Plan (October 2012), the previously commissioned Ricardo-AEA Traffic Management Feasibility Study (January 2013) as well as other proposals highlighted by the Steering Group.

### Summary

The recommendations of this review note in terms of next steps are that further assessment is undertaken at the local level for the following issues – the operation of the junctions along the High Street and West Street, the operation of the two pedestrian crossings, and parking and loading. This could use video camera analysis to understand more about the causes of vehicle delay and congestion through the village understood to result in air pollution problems. This could explore the impact of the following types of potential initiatives:

- what difference installing a High Street/North Street mini-roundabout would make;
- what benefits might arise from linking together the pedestrian crossings on the High Street and at West Street, and whether these could be intelligently linked to live traffic conditions and high likely incidents of air quality problems – for example, giving increased vehicle green time at peak times when air quality issues are known to be worse.
- how much of a problem parking and delivery related congestion issues are throughout an average week and whether measures can be implemented to address these issues.

### Main review

The following list of measures have been reviewed in this document:

#### List of traffic management related measures reviewed:

- Prohibition of lorries turning right into School Hill from Manley's Hill and turning left into Manley's Hill from School Hill
- Review impact of imposing time restrictions for goods vehicle loading/delivery within the AQMA during peak periods
- Improvements to advisory lorry route signage around Storrington
- Review on-street car parking and loading bay provision
- Review two pedestrian crossings along the High Street/West Street
- Mini-roundabout at North Street/High Street
- Use of variable message signage (VMS) on strategic routes outside the village
- The impact of diverting HGV traffic to Old Mill Drive and Mill Lane, rather than School Hill
- Review Car Parking incentives
- Assess impact of Low Emission Zone (LEZ) in Storrington
- Assess impact of imposing a restriction on heavy goods vehicles
- Weight limit restriction on B2139 Houghton Bridge, near Amberley
- Assess impact of changing Old Mill Drive to a shared surface





- Assess impact of re-opening Nightingale Lane
- Assess impact of traffic gating option
- Assess impact on air quality of imposing a 20mph speed restriction in the village
- Improvement of the A27
- Review rail station parking

**List of other measures reviewed:**

- The development of a local Air Quality Planning Policy Guidance document.
- The adoption of a District Emission Reduction Strategy.
- Air Alert service
- Working with local businesses
- ‘Storrington in Bloom’
- Smarter Choice Measures

Measures have been assessed based on their anticipated air quality benefit for the Storrington Air Quality Management Area (AQMA) on a low/medium/high (L/M/H) basis. Next step recommendations are provided in relation to each measure for the Steering Group, based on the red-amber-green scoring definitions below. Please note that none of the schemes are marked ‘green’ as they do not combine being a scheme that has a clear air quality benefit, and a scheme which is also deliverable.

**Next steps conclusions scoring definitions**

-  Scheme has a clear air quality benefit and appears to be deliverable. Scheme should be investigated further.
-  Scheme appears that it may have an air quality benefit, however the scale of this benefit is unknown, and/or the deliverability of the scheme is unclear. The scheme could potentially be investigated further
-  Scheme is expected to have little or no expected air quality benefit and/or is not viable
-  Scheme is being developed through other delivery mechanisms

**Table A.1 – Assessed Traffic Management Measures**

|   | Scheme   | Description  | What do we know about this scheme?  | What are the main issues associated with this scheme?   | Anticipated AQMA air quality benefit (L/M/H) | Next steps recommendations                               | Supporting Evidence references                    |
|---|--|--|---|---|--|--|---|
| 1 | Prohibition of lorries turning right into School Hill from Manley’s Hill and | - There have been incidences of large lorries making turning movements between | - Advisory signage already exists for lorry traffic entering Storrington from the A283 Washington Road needing to access “Water Lane Trading estate”, | There are a number of known issues with this scheme:<br><br>- There are complications in the manner | Unknown but expected Low                     | The scheme has been programmed for design in 2017/18 and | Traffic Management Feasibility Study: Ricardo-AEA |

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| Scheme   | Description  | What do we know about this scheme?   | What are the main issues associated with this scheme?   | Anticipated AQMA air quality benefit (L/M/H) | Next steps recommendations   | Supporting Evidence references  |
|--|--|--|---|--|--|---|
| turning left into Manley's Hill from School Hill | School Hill and Manley's Hill and vice versa causing congestion at the mini-roundabout due to the constrained junction. This measure proposes banning this turning movement for lorries. | <p>whilst all traffic for West Chiltington and Thakeham are advertised to use Water Lane.</p> <ul style="list-style-type: none"> <li>- A voluntary agreement exists for Waitrose deliveries to access Waitrose via Water Lane, Thakeham Road, and School Hill.</li> <li>- This scheme has not been assessed specifically in air quality terms. However, some conclusions may be drawn by considering analysis undertaken by Ricardo-AEA regarding an alternative proposal for reopening Nightingale Lane to the east.</li> <li>- This study used analysis of an origin-destination traffic survey conducted in May 2012 indicated that during the survey approximately 7% of the cars/LGV heading in to Storrington on School Hill turned left onto Manleys Hill; and approximately 2% of the cars/LGV heading west on Manleys Hill turned right onto School Hill. This scenario was modelled and reductions of up to 0.7 µg/m<sup>3</sup> in NO<sub>2</sub> annual mean concentrations were predicted for this scenario. Although it is noted that the EPUK guidance classifies a change of 2% (0.8 µg/m<sup>3</sup>) as 'substantial' where annual mean NO<sub>2</sub> concentrations at receptor are equal to or above 44µg/m<sup>3</sup>, the study assumption of a 0.7 µg/m<sup>3</sup> reduction applied to all traffic so an assumption about the level of HGV traffic that would be affected would need to be made</li> <li>- Assessing the impact of any banning of this turning movement would need to make assumptions that excludes local</li> </ul> | <p>in which such a prohibition could be legally worded and signed in accordance with the Traffic Signs Regulations and General Directions as there are no permitted variants of signs that relate specifically to banning certain classes of vehicles from making specific movements.. The only specific option within available legislation that could realistically be achieved is to apply a general weight restriction to all School Hill lorry traffic , though there would be other enforceability and practical challenges with such a general weight restriction.</p> <ul style="list-style-type: none"> <li>- Any prohibition signage in relation to this junction needs to be of at least a minimum size (600mm diameter), be illuminated and sited within the confines of the junction. On Manley's Hill the canyon nature of the narrow street, and the conservation area nature of the buildings means it would be extremely difficult to find suitable locations that meet the legislative requirements.</li> <li>- The enforceability of any specific turning movement ban for lorries by Sussex Police is unclear. Any prohibition would need to retain access for lorries requiring local access, for example to make deliveries to residents on School Hill.</li> <li>- For any lorries that have missed signage to use Water Lane approaching from Washington, consideration would need to be given to where they would make their turning movement to access Water Lane or Thakeham Road and the potential negative impacts of this alternative routing.</li> </ul> |  | <p>delivery in 2018/19. WSCC is investigating if it is feasible to accelerate delivery of the scheme so that implementation is in 2017/18 .</p> <p>The Improvements Team at WSCC is organising a design brief. It is expected that the Team will give feedback on whether the scheme can be prioritised.</p> | Storrington Traffic Management Options Appraisal. Air Quality Assessment (January 2013) |

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| Scheme | Description  | What do we know about this scheme?   | What are the main issues associated with this scheme?   | Anticipated AQMA air quality benefit (L/M/H)  | Next steps recommendations      | Supporting Evidence references  |   |
|--------|--|--|---|---|---------------------------------|---|---|
|        |  | <p>HGV movements making local deliveries, and an assumption about level of compliance.</p>   | <p>However, the scheme is believed to have some environmental benefits including a potential positive impact on air quality in reducing the likelihood of HGV movement related congestion at the mini-roundabout. It also shows a positive impact on safety. As such, the scheme has been progressed on the IWP list of projects scheduled for 2017/18.</p>   |   |                                 |   |   |
| 2      | <p>Review impact of imposing time restrictions for goods vehicle loading/delivery within the AQMA during peak periods.</p> | <p>Timing restrictions on loading/delivery restrictions in the AQMA at peak times.</p>   | <ul style="list-style-type: none"> <li>- Parking on double yellow lines remains an issue in the town centre. The most affected area is North Street near the junction with the A283 West Street.</li> <li>- Prohibition of loading/unloading, either 24 hours or at specific times, in that area would reduce congestion and have a positive impact on safety.</li> <li>- This would require a Traffic Regulation Order (TRO) to be legally enforceable and consultation with the local community and local businesses.</li> <li>- The impacts on congestion and air quality are not known at this time.</li> </ul> | <p>- The key issue with this scheme would be the impact on local businesses if delivery slots were missed. However, it has been noted that some businesses (estate agents) would not object to the ban.</p>         | <p>Unknown but expected low</p> | <p>Meeting to be held by WSCC with the Parish Council to discuss the extent of the loading ban.</p>   | <p>Storrington Air Quality Action Plan (October 2012) - Congestion Improvement Measures</p> |
| 3      | <p>Improvements to advisory lorry route signage around Storrington</p>   | <p>Possible improvements to advisory lorry route signage, particularly with regard to access from Washington Road to the east of Storrington</p> | <ul style="list-style-type: none"> <li>- Advisory signage already exists for lorry traffic entering Storrington from the A283 Washington Road needing to access "Water Lane Trading estate", whilst all traffic for West Chiltington and Thakeham are advertised to use Water Lane.</li> <li>- A voluntary agreement exists for Waitrose deliveries to access Waitrose via Water Lane, Thakeham Road, and School Hill.</li> </ul>   | <p>- It is unclear what improvements could be made to the existing signage which exists at the Washington Road/Water Lane and Water Lane/Thakeham Road junctions and on School Hill for deliveries to Waitrose.</p> | <p>Unknown but expected low</p> | <p>Further dialogue within the Steering Group to understand what improvements could be made to the existing signage to aid movements would be helpful. Following this, if there are limited changes that appear possible then it is not recommended that this scheme is</p> |   |



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| Scheme | Description  | What do we know about this scheme?  | What are the main issues associated with this scheme?   | Anticipated AQMA air quality benefit (L/M/H)  | Next steps recommendations                    | Supporting Evidence references   |  |
|--------|--|---|---|---|---|--|--|
| 4      | Review on-street car parking and loading bay provision             | <p>Possible re-designation of on-street car parking spaces as dedicated loading bays, to reduce number of goods vehicles stopping on the carriageway.</p>         | <ul style="list-style-type: none"> <li>- Two areas of investigation fall under this measure: re-designation of parking bays, and clearer no-parking restrictions and enhanced parking control enforcement.</li> <li>- In terms of parking enforcement, increased enforcement of current parking restrictions would not improve congestion in the High Street / West Street as yellow lines do not stop vehicles parking to load and unload and Blue Badge holders are also permitted to park on yellow lines.</li> <li>- However, re-designation of parking bays has not yet been investigated closely. This includes parking bays at the western end of West Street.</li> <li>- The potential impact of congestion related air quality issues associated with deliveries and parking is not known</li> </ul> | <ul style="list-style-type: none"> <li>- The main issues with changes to provision of parking spaces or dedicated loading bays are:</li> <li>- potential sensitives with regard to changes to availability of parking.</li> <li>- the need to meet the needs of local businesses requiring deliveries.</li> </ul>   | Unknown but likely low as an isolated measure | investigated further.<br>A more detailed air quality assessment of changes to and re-designation of parking-bays and loading bays could be investigated further. This could be a combined assessment of some of the other measures discussed in this document, including a review of the pedestrian crossings and junctions. | Storrington Air Quality Action Plan (October 2012) - Congestion Improvement Measures |
| 5      | Review two pedestrian crossings along the High Street/West Street. | <p>Review two pedestrian crossings along the High Street/West Street to establish whether there is any benefit in coordinating the timings of the red signal.</p> | <ul style="list-style-type: none"> <li>- Both crossings have previously been upgraded to Puffin crossings. They use kerbside detectors to cancel demands on the crossing no longer required (if a person crosses before the green man lights).</li> <li>- The crossings use 'vehicle actuation' technology but do not include microprocessor technology (Microprocessor Optimised Vehicle Actuation - MOVA)</li> <li>- This technology has the potential to be able to link the two crossings and to react to dynamic sensors. For example, this may enable the green/red phase timings to react to periods of high air quality sensitivity and to prioritise traffic movement at peak times.</li> </ul>  | <ul style="list-style-type: none"> <li>- The current impact of pedestrian crossing delays on congestion and air quality through Storrington, and the level of any benefits from technology changes is not known at this time.</li> <li>- A site study needed to explore if MOVA technology is technically feasible to deliver will cost £500-£1000 to assess site specific circumstances including speed of traffic, detection points, visibility, interactions to side roads, etc. Such assessment will provide a view on the likely benefit of the scheme as well as recommendations on changes to the operation of the crossings (e.g. timings) under the current technology to promote smoother traffic flow. A more detailed study giving more certainty about the degree of benefit from MOVA is likely to</li> </ul> | - Unknown but expected Low-Medium             | - A site study is needed to explore if MOVA technology is technically feasible to be delivered.  | Storrington Air Quality Action Plan (October 2012) - Congestion Improvement Measures |

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|   | Scheme                                      | Description  | What do we know about this scheme?  | What are the main issues associated with this scheme?  | Anticipated AQMA air quality benefit (L/M/H) | Next steps recommendations   | Supporting Evidence references   |
|---|---|--|---|--|--|--|--|
|   |   |  |   | <p>cost in the region of £5000 due to the high survey costs in on-ground operatives trying to manually recreate the operational benefits of the technology by controlling the current crossings</p> <p>- The overall expected cost of the MOVA technology is £20k.</p>   |  |  |  |
| 6 | Mini-roundabout at North Street/High Street | <p>- A new mini-roundabout at North Street/High Street could help to improve traffic flows at this junction, by enabling westbound traffic on the High Street to turn more easily into North Street.</p> | <p>- A new mini-roundabout at North Street/High Street was considered in the previous Waitrose Store Extension plans.</p> <p>- The final Sept 2012 air quality assessment report for this Waitrose scheme concluded that (page 8, para 3.6) 'the proposed development includes a new mini-roundabout at the North Street junction. This will assist westbound vehicles turning right into North Street, and will help to reduce westbound queuing along the High Street and back to Manley's Hill, thereby reducing congestion through the village. It is logical to assume there would be a small improvement (i.e. an increase in speeds); this would serve to further reduce emissions of NOx'.</p> <p>- It appears that the main problems with traffic related air pollution relate to westbound traffic travelling down Manley's Hill needing to give way to traffic coming down School Hill at the School Hill/Manley's Hill mini-roundabout and also the stop-start nature of traffic through the High Street and West Street due to the regular calls at the two pedestrian crossings and vehicles parking. Within this context, the relative scale of benefits resulting from the mini-roundabout scheme appear more</p> | <p>There are four known issues at this stage associated with implementing a mini-roundabout at North Street/High Street junction. These are:</p> <p>- A potential reduction in the ease of pedestrians crossing North Street adjacent to the junction due to the widening of the junction which would be necessary to facilitate the introduction of the mini-roundabout.</p> <p>- There is believed to be utility provision under the carriageway on North Street immediately adjacent to the junction. If this is the case, this is likely to significantly increase the costs of any scheme (initially estimated in the order of £40k).</p> <p>- The implementation of a mini-roundabout will change the waiting restrictions at the junction of North Street, therefore businesses around the junction will need to be involved in any consultation on the scheme.</p> <p>- No consideration appears to have been made to date of the potential air quality impact of this measure on eastbound traffic approaching the junction from West Street. Whilst the scale of this potential impact appears more limited,</p> | Unknown but expected Low-Medium              | <p>The scheme did not meet threshold criteria for progression on the IWP list of projects (2017/18). The scheme showed a negative impact on traffic flow and scored low on pedestrian safety and low on environmental benefits.</p> <p>A more detailed air quality assessment by a suitable consultant of the anticipated impacts of this scheme at this junction could help to demonstrate the business case or not for this scheme if the steering group still wished to progress it in the future. This could be a combined assessment of some of the other measures discussed below, including a review of the</p> | Air Quality Assessment: Waitrose Extension, Storrington (September 2012) |

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| Scheme | Description  | What do we know about this scheme?   | What are the main issues associated with this scheme?  | Anticipated AQMA air quality benefit (L/M/H)   | Next steps recommendations   | Supporting Evidence references  |  |
|--------|--|--|--|--|--|---|--|
|        |  | limited.   | this should also be considered.  |  | pedestrian crossings and changes to parking and loading bay provision. |   |  |
| 7      | Use of variable message signage (VMS) on strategic routes outside the village. | <p>- Use of variable message signage (VMS) on strategic routes outside the village to discourage through traffic during periods of congestion within the AQMA.</p> | <p>- Various scenarios have been assessed by Ricardo-AEA to consider the potential impact of using VMS on strategic routes outside of Storrington to discourage through traffic during periods of congestion within the AQMA.</p> <p>- It is difficult to quantify how much of an effect improved signage would have on the number of vehicles passing through Storrington. The effect of 'improved signage' has been modelled for three indicative sub-scenarios each representing a potential reduction in the number of vehicles that enter the village but do not stop. The sub-scenarios modelled were:</p> <p>a) 10% reduction in through traffic<br/>b) 25% reduction in through traffic<br/>c) 50% reduction in through traffic</p> <p>- The results indicated that a 10% reduction in through traffic resulted in a decrease of 1.1-1.4 µg/m3 on Manley's Hill near the Manley's Hill/School Hill mini-roundabout.</p> <p>- The other scenarios would provide more improvement.</p> <p>- However, the report notes (page 35) that 'It is difficult to quantify how much of an effect improved signage would have on the number of vehicles passing through Storrington'. The assessment does not provide any firm assessment of where through traffic diverted from</p> | <p>- Realistic alternative routings to the north via the A24, A272 and A29/A284 or to the south via the A29, A27 and A280/A24 are significantly longer diversions to the route for medium distance traffic flows between Pulborough or Whiteways Cross (A29/A284/B2139 junction) and Washington roundabout (A24) which appear to be the logical positioning of any VMS.</p> <p>- Congestion on the A27 through Arundel and Worthing/Lancing is already believed to result in some longer distance traffic routing through Storrington.</p> <p>- Improvements to the A27 are believed to result in a much more significant impact in influencing the behaviour of long distance 'through traffic' drivers than VMS.</p> <p>- It appears very unlikely that a 10% reduction in traffic flows could be achieved by this measure, and any impact is expected to be very low.</p> | Unknown but expected low   | <p>- As the impact of this measure is expected to be very low, it is not recommended that this measure is investigated further.</p> | <p>Traffic Management Feasibility Study: Ricardo-AEA Storrington Traffic Management Options Appraisal. Air Quality Assessment (January 2013)</p> |

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|    | Scheme  | Description   | What do we know about this scheme?   | What are the main issues associated with this scheme?  | Anticipated AQMA air quality benefit (L/M/H) | Next steps recommendations  | Supporting Evidence references  |
|----|---|---|--|--|--|---|---|
|    |   |   | Storrington would be encouraged to divert to as a result of installation of VMS.   |  |  |   |   |
| 8  | Assess the impact of diverting HGV traffic to Old Mill Drive and Mill Lane, rather than School Hill | In order to remove problems associated with HGV turning movements at the School Hill/Manleys Hill junction, diverting School Hill HGV traffic to use Old Mill Drive and Mill Lane has been suggested  | <ul style="list-style-type: none"> <li>- This scheme has not been assessed specifically in air quality terms.</li> </ul>   | <ul style="list-style-type: none"> <li>- It would not be possible to remove all HGV traffic from School Hill due to exemptions required for local deliveries.</li> <li>- The complex nature of this alternative route (3 additional junctions) and the narrow nature of Mill Lane means that this routing is likely to be an undesirable alternative to School Hill.- Consideration needs to be given as to whether the road construction of these roads is suitable for the use by this class of traffic.</li> </ul>      | Unknown                                      | This alternative routing is not believed to be desirable and is not recommended for further investigation.  |   |
| 9  | Review Car Parking incentives   | Car Parking Standards: Preferential parking for low emission vehicles within AQMA. Graduated price parking permits (based on emission bands).   | <ul style="list-style-type: none"> <li>- Off street car parking tariffs are set by Horsham District Council and those currently do not differentiate between vehicles.</li> <li>- There are no on-street parking permits or charging in Storrington on which to base incentivisation of parking for low emission vehicles.</li> </ul>  | <ul style="list-style-type: none"> <li>- The level of uptake of low emission vehicles in an around Storrington is not known. Further assessment of this would be needed but it appears likely that this would provide a marginal benefit at this point in time given the current low proportion of low emission vehicles across the vehicle fleet.</li> </ul>  | Unknown but expected to be low.              | - Given the current low proportion of low emission vehicles across the vehicle fleet and the marginal incentive benefit anticipated it is not recommended that this measure is a focus of Steering Group further investigation going forward.                                 | Storrington Air Quality Action Plan (October 2012) - Promotion of Alternative Transport Options   |
| 10 | Assess impact of Low Emission Zone (LEZ) in Storrington   | <p>The LEZ would limit access to the village for specific vehicle types not meeting specified emission standards (e.g. Euro V).</p> <p>A scenario was considered where access to the AQMA was restricted so that the vehicle classes met the following standards in 2015:</p> | <ul style="list-style-type: none"> <li>- The proposed LEZ would restrict all HGV's of pre Euro V classification from entering the village. The model predictions indicated that an access restriction on Bus and HGV to Euro V or better could help achieve compliance with the NO2 annual mean objective at all locations within Storrington. It was also noted however that Euro V HGV's NOx emitted, on average greater quantities of NOx than Euro IV HGV's at low speeds.</li> <li>- The model predicted a decrease in the NO2 concentrations of about 2-3 µg/m3</li> </ul> | <ul style="list-style-type: none"> <li>- The trial was undertaken in partnership with Siemens UK using their Greenzone low emission zone solution.</li> <li>- The scheme cannot go ahead due to the Greenzone system not operating well in a rural setting. Signal reception problems affecting the system resulted in significant loss of data.</li> <li>- Additional considerations were needed to be given to the practical enforceability of any LEZ restrictions, whether exemptions were needed for local</li> </ul> | Expected Medium-High                         | <p>The trial was undertaken in partnership with Siemens UK using their Greenzone low emission zone solution.</p> <p>The scheme cannot go ahead due to the Greenzone system not operating well in a rural setting. Signal reception problems affecting the system resulted</p> | Traffic Management Feasibility Study: Ricardo-AEA Storrington Traffic Management Options Appraisal. Air Quality Assessment (January 2013) |

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|        | Scheme   | Description  | What do we know about this scheme?   | What are the main issues associated with this scheme?   | Anticipated AQMA air quality benefit (L/M/H) | Next steps recommendations  | Supporting Evidence references  |
|--------|--|--|--|---|--|---|---|
|        |  | <ul style="list-style-type: none"> <li>• Rigid HGVs : Euro V or better</li> <li>• Articulated HGVs: Euro V or better</li> <li>• Buses: Euro V or better</li> </ul>   | on West street and about 7-9 µg/m3 on Manley's Hill near the mini-roundabout.  | access, and the impacts of the LEZ on local businesses and the local community.   |  | in significant loss of data.  |   |
| 1<br>1 | Assess impact of imposing a restriction on heavy goods vehicles  | Discouraging or preventing heavy goods vehicles accessing the village by means of access restrictions, either by way of height or weight, at strategic locations outside the village was also considered by Ricardo-AEA. This is a more extreme version of the LEZ considerations. | <p>- Four sub-scenarios were modelled to represent varying percentage reductions in HGV traffic passing through Storrington in 2015 as follows:</p> <ul style="list-style-type: none"> <li>• 25% reduction in HGV</li> <li>• 50% reduction in HGV</li> <li>• 75% reduction in HGV</li> <li>• 100% reduction in HGV</li> </ul> <p>- The results indicated that a 25% reduction in HGVs entering Storrington resulted in a decrease of 2-3 µg/m3 on Manley's Hill near the Manley's Hill/School Hill mini-roundabout, however a 75% reduction was needed to achieve compliance with the 40 µg.m3 NO2 annual mean objective at all locations.</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. | High   | As it appears very unlikely that it will be possible to implement or enforce this proposal, it is not recommended that this measure is a focus of Steering Group further investigation going forward.                                 | Traffic Management Feasibility Study: Ricardo-AEA Storrington Traffic Management Options Appraisal. Air Quality Assessment (January 2013) |
| 1<br>2 | Weight limit restriction on B2139 Houghton Bridge, near Amberley | Suggestions have been highlighted to impose a weight limit on the B2139 at Houghton Bridge.  | <p>- There is currently a height restriction of 13ft on this road at the Amberley Station railway bridge.</p> <p>- Neither the B2139 or the A283 through Storrington are part of the West Sussex Advisory Lorry Route network.</p> <p>- The feasibility of imposing a weight limit on the B2139 at Houghton Bridge has been investigated. The condition of the bridge is under regular review by West Sussex County Council in accordance with the County Council's structures inspection strategy and at this</p>   | <p>- The only restriction which could be implemented is a general route restriction between the A29/A284/B2139 junction at Whiteways Cross and Storrington.</p> <p>- This restriction is not believed to be enforceable at this large route scale due to the exemptions that would be required for local access (local buses, farm vehicles, deliveries, etc).</p>  | Expected low/medium                          | <p>There is no technical reason to impose a weight restriction on the B2139 at Houghton Bridge,</p> <p>A general weight restriction is very unlikely to be enforceable at this scale due to exemptions required for local access.</p> |   |

## Horsham District Council

|        | Scheme   | Description  | What do we know about this scheme?  | What are the main issues associated with this scheme?  | Anticipated AQMA air quality benefit (L/M/H) | Next steps recommendations   | Supporting Evidence references   |
|--------|--|--|---|--|--|--|--|
|        |  |  | present time there is no technical reason to impose a weight restriction on this bridge.  |  |  |  |  |
| 1<br>3 | Assess impact of changing Old Mill Drive to a shared surface | <p>Horsham District Council considered a partial closure of Old Mill Drive as part of a regeneration scheme for an existing shopping precinct area. It was agreed that the impact of this proposal should be tested by Ricardo-AEA.</p> <p>The following scenarios were considered:</p> <p>a) All Buses + HGV removed from Old Mill Drive - average speed reduced to 10 mph - 25% of traffic re-routed to School Hill.</p> <p>b) All Buses + HGV removed from Old Mill Drive - average speed reduced to 10 mph - 50% of traffic re-routed to School Hill.</p> <p>c) All Buses + HGV removed - average speed reduced to 10 mph - 75% of traffic re-routed to School Hill.</p> | <p>- Results were presented at specified receptors on Old Mill Drive and School Hill only as there was no change in predicted concentrations at any of the other receptors.</p> <p>- The results indicated that annual mean NO<sub>2</sub> concentrations increased by up to 1 µg/m<sup>3</sup> at some of the specified receptor locations on School Hill but were still below the 40 µg/m<sup>3</sup> objective. The highest concentration was predicted for a receptor in School Hill (near the Manley's Hill/School Hill mini-roundabout) at 36.4 µg/m<sup>3</sup> for scenario c) - increasing from the base of 35.8 µg/m<sup>3</sup>. The concentrations in Old Mill Drive were predicted at about 12 µg/m<sup>3</sup>.</p> <p>- The impact of this proposal was therefore not considered to be significant in air quality terms.</p> <p>- Separate assessment was also undertaken as part of the original submission air quality assessment for the Waitrose extension concerning closing Old Mill Drive to all traffic.</p> <p>- This predicted annual mean NO<sub>2</sub> concentrations to increase by up to 0.6 µg/m<sup>3</sup> on Manley's Hill near the mini-roundabout and decrease by 0.1-0.3 µg/m<sup>3</sup> on the High Street. Receptors at School Hill were shown to increase in the range 1.6-2.3 µg/m<sup>3</sup>.</p> | <p>- The restriction of traffic on this road would necessitate the redistribution of up to 1600 vehicles per day onto adjoining roads within the AQMA.</p> <p>- Restricting buses from using Old Mill Drive would mean that an alternative bus stop would be required somewhere on the High Street. This would contribute to congestion and traffic queuing on the High Street as stopping buses would block westbound traffic; it may also however help reduce congestion as it will reduce the number of buses and HGVs stopping and waiting to turn right onto Old Mill Drive, and hence holding up westbound traffic when approaching from the east. The effects this may have on congestion on the High Street are difficult to quantify.</p> | No benefit                                   | <p>- 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.</p> | <p>Traffic Management Feasibility Study: Ricardo-AEA Storrington Traffic Management Options Appraisal. Air Quality Assessment (January 2013)</p> <p>Air Quality Assessment: Waitrose Extension, Storrington (October 2011)</p> |
|        |  |  | -   |  |  |  | Air Quality Assessment: Waitrose   |

## Horsham District Council

|        | Scheme                                       | Description  | What do we know about this scheme?  | What are the main issues associated with this scheme?  | Anticipated AQMA air quality benefit (L/M/H) | Next steps recommendations   | Supporting Evidence references  |
|--------|--|--|---|--|--|--|---|
|        |  |  |   |  |  |  | Extension, Storrington (October 2011)   |
| 1<br>4 | Assess impact of re-opening Nightingale Lane | - Nightingale Ln is a residential road linking Manley's Hill and School Hill. The road was closed approximately 40 years ago on safety grounds. Ricardo-AEA assessed whether re-opening the road to some vehicles would offer an opportunity to alleviate congestion at the School Hill/Manley's Hill junction.  | - It was proposed to re-open Nightingale Way to cars and light goods vehicles only.<br><br>- The assessment predicted reductions of up to 0.7 µg/m <sup>3</sup> in NO <sub>2</sub> annual mean concentrations (0.7 µg/m <sup>3</sup> reduction for the mini-roundabout of Manley's Hill and School Hill).   | - As Nightingale Road was originally closed to through traffic on safety grounds, this would still be an issue if this road were to be reopened.<br><br>- The impact on local residents of Nightingale Road would be a key consideration.  | Low  | - As the road was originally closed on safety grounds, and the anticipated air quality benefits are low, it is not recommended that scheme is investigated further.                        | Traffic Management Feasibility Study: Ricardo-AEA Storrington Traffic Management Options Appraisal. Air Quality Assessment (January 2013) |
| 1<br>5 | Assess impact of traffic gating option       | Controlling traffic flow through the Storrington AQMA by means of traffic light 'gates' outside the village.<br><br>The likely effect of the gating options on congestion in the town is not known; therefore four sub-scenarios were modelled by Ricardo-AEA to represent varying percentage reductions in congestion times in 2015:<br>a) 25% reduction in queuing during each hour when congestion is known to occur<br>b) 50% reduction in queuing during each hour when congestion is known to occur<br>c) 75% reduction in queuing during each hour when congestion is | - The results indicated that a 25% reduction in queuing resulted in a decrease of 3-4 µg/m <sup>3</sup> on Manley's Hill near the Manley's Hill/School Hill mini-roundabout. The other scenarios would provide even more improvement.<br><br>- The report recommended consulting a traffic engineer for additional assessment of how effective 'gating' can be at reducing congestion in Storrington.<br><br>- Subsequently the implementation of the scheme was investigated, however concerns were raised by Sussex Police. | - Concerns have been raised that this is not practical to implement, in particular 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.<br><br>- The study does not conclude whether it is possible to achieve the theoretical levels of queuing through the village that it assumes. | Medium-High                                  | As it appears very unlikely that it will be possible to implement this proposal, it is not recommended that this measure is a focus of Steering Group further investigation going forward. | Traffic Management Feasibility Study: Ricardo-AEA Storrington Traffic Management Options Appraisal. Air Quality Assessment (January 2013) |

## Horsham District Council

|        | Scheme   | Description   | What do we know about this scheme?  | What are the main issues associated with this scheme?  | Anticipated AQMA air quality benefit (L/M/H) | Next steps recommendations  | Supporting Evidence references  |
|--------|--|---|---|--|--|---|---|
|        |  | known to occur<br>d) 100% reduction in queuing during each hour when congestion is known to occur   |   |  |  |   |   |
| 1<br>6 | Assess impact on air quality of imposing a 20mph speed restriction in the village. | Ricardo-AEA study investigated whether imposition of a 20mph speed restriction through the AQMA would improve air quality by smoothing flow and reducing congestion.            | <ul style="list-style-type: none"> <li>- Ricardo-AEA considered it unlikely that imposing a 20 mph speed limit on the AQMA would lead to an improvement in air quality. Numerical model predictions were not included for this scenario.</li> <li>- The average speed of the current traffic through the Storrington AQMA was considered to be around 20 mph during free flowing periods and less than 20 mph during busy periods; this is mainly due to congestion caused by vehicles reducing speed or stopping to allow other vehicles to park/turn. Ricardo-AEA concluded that if traffic in the town centre could flow freely at an average speed of 25 to 30 mph this would give rise to lower vehicle emissions of nitrogen oxides than at 20mph.</li> </ul> |  | None   | No predicted improvement in air quality, so not recommended in air quality terms.   | Traffic Management Feasibility Study: Ricardo-AEA Storrington Traffic Management Options Appraisal. Air Quality Assessment (January 2013)                     |
| 1<br>7 | Improvement of the A27   | - The Road Investment Strategy produced by DfT in March 2015 allocates a budget for the A27 schemes including the A27 Arundel bypass and A27 Worthing and Lancing improvements. | - This is expected to reduce traffic flows through Storrington where longer distance traffic is avoiding the A27 due to congestion.   | <ul style="list-style-type: none"> <li>- Highways England are currently looking at the improvement options and undertaking technical work before consultation expected in 2017.</li> <li>- If approved, construction is currently scheduled to commence in 2021, with completion scheduled for 2023-2024.</li> </ul> | Unknown but expected medium                  | - Highways England are currently looking at the improvement options and undertaking technical work before consultation in 2017. | Storrington Air Quality Action Plan (October 2012) - Road Infrastructure Improvements<br><br>DfT Road Investment Strategy for the 2015/16-2019/20 Road Period |
| 1<br>8 | Review rail station parking  | Arun Valley Railway and Pulborough Parkway parking expansion: Optimise parking facilities at Pulborough main-line   | - There are ongoing development discussions regarding the potential to increase parking at Pulborough Station by providing new facilities accessed from Stopham Road to the west of the railway   | - This scheme would be expected to have a relatively minor impact on air quality issues in Storrington.  | Unknown but expected very low                | As this scheme appears to have minor implications for air quality issues in Storrington no                                      | Storrington Air Quality Action Plan (October 2012) - Promotion of Alternative   |





## Horsham District Council


| Scheme | Description   | What do we know about this scheme? | What are the main issues associated with this scheme? | Anticipated AQMA air quality benefit (L/M/H) | Next steps recommendations  | Supporting Evidence references |
|--------|---|------------------------------------|---|--|---|--------------------------------|
|        | station. Improve public transport links/alternative | line.                              |   |  | specific actions by the Storrington Air Quality Steering Group are recommended. | Transport Options              |

### Other measures

#### Next steps conclusions red-amber-green scoring definitions

 Scheme has a clear air quality benefit and appears to be deliverable. Scheme should be investigated further.

 Scheme appears that it may have an air quality benefit, however the scale of this benefit is unknown, and/or the deliverability of the scheme is unclear. The scheme could potentially be investigated further.

 Scheme is expected to have little or no expected air quality benefit and/or is not viable.

 Scheme is being developed through other delivery mechanisms.

| Scheme  | Description  | What do we know about this scheme?  | What are the main issues associated with this scheme?  | Anticipated AQMA air quality benefit (L/M/H) | Next steps recommendations   | Supporting Evidence references  |
|---|--|---|--|--|--|---|
| The development of a local Air Quality Planning Policy Guidance document. | The guidance provides advice to developers on how to address local air quality when making a planning application in Horsham District. | The Planning Advice Document: Air Quality and Emissions Reduction Guidance has been completed and has been included in the Environmental Protection Policy 24 of the recently adopted Horsham District Planning Framework (HDPF).   | N/A  | Unknown                                      | Horsham District Council is looking to adopt this air quality guidance as a Supplementary Planning Document (SPD). | Storrington Air Quality Action Plan (October 2012) - District-Wide Measures |
| The adoption of a District Emission Reduction Strategy.                   |  | Development of the Emission Reduction Strategy is progressing with a number of key projects being developed in collaboration with partners. Notably Horsham District Council is working with the Sussex Air Partnership and eV South East to provide locations within the District to house electric vehicle rapid charge points. eV South East is a public private partnership connecting eV charge points together to benefit and encourage the growth in electric vehicles | <ul style="list-style-type: none"> <li>- The level of future uptake of low emission vehicles and associated charging infrastructure is difficult to predict.</li> <li>- Levels of impact on Storrington are likely to be minimal in the short to medium term, however these measures can form part of wider promotion of low emission vehicles.</li> </ul> | Unknown                                      | Horsham District Council is progressing this work  | Storrington Air Quality Action Plan (October 2012) - District-Wide Measures |

## Horsham District Council

| Scheme                                    | Description   | What do we know about this scheme?   | What are the main issues associated with this scheme? | Anticipated AQMA air quality benefit (L/M/H) | Next steps recommendations  | Supporting Evidence references  |    |    |      |    |    |                   |     |     |            |    |    |         |    |    |            |    |     |          |    |    |         |    |    |       |    |     |            |    |    |        |    |    |         |    |    |          |    |    |   |            |  |  |         |   |   |
|---|---|--|---|--|---|---|----|----|------|----|----|-------------------|-----|-----|------------|----|----|---------|----|----|------------|----|-----|----------|----|----|---------|----|----|-------|----|-----|------------|----|----|--------|----|----|---------|----|----|----------|----|----|---|------------|--|--|---------|---|---|
|   |   | (eV) in the region.  |   |  |   |   |    |    |      |    |    |                   |     |     |            |    |    |         |    |    |            |    |     |          |    |    |         |    |    |       |    |     |            |    |    |        |    |    |         |    |    |          |    |    |   |            |  |  |         |   |   |
| Air Alert service                         | Air pollution warning service (website, app, text message) aimed at vulnerable people, schools, health professionals and general public.  | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Subscribers by registered authority</th> <th style="text-align: center;">Active subscribers</th> <th style="text-align: center;">%</th> </tr> </thead> <tbody> <tr><td>Adur</td><td style="text-align: center;">55</td><td style="text-align: center;">7%</td></tr> <tr><td>Arun</td><td style="text-align: center;">46</td><td style="text-align: center;">6%</td></tr> <tr><td>Brighton and Hove</td><td style="text-align: center;">135</td><td style="text-align: center;">17%</td></tr> <tr><td>Chichester</td><td style="text-align: center;">46</td><td style="text-align: center;">6%</td></tr> <tr><td>Crawley</td><td style="text-align: center;">45</td><td style="text-align: center;">6%</td></tr> <tr><td>Eastbourne</td><td style="text-align: center;">76</td><td style="text-align: center;">10%</td></tr> <tr><td>Hastings</td><td style="text-align: center;">49</td><td style="text-align: center;">6%</td></tr> <tr><td>Horsham</td><td style="text-align: center;">49</td><td style="text-align: center;">6%</td></tr> <tr><td>Lewes</td><td style="text-align: center;">82</td><td style="text-align: center;">10%</td></tr> <tr><td>Mid Sussex</td><td style="text-align: center;">61</td><td style="text-align: center;">8%</td></tr> <tr><td>Rother</td><td style="text-align: center;">34</td><td style="text-align: center;">4%</td></tr> <tr><td>Wealden</td><td style="text-align: center;">58</td><td style="text-align: center;">7%</td></tr> <tr><td>Worthing</td><td style="text-align: center;">59</td><td style="text-align: center;">7%</td></tr> <tr><td><b>Total number of active subscribers</b></td><td style="text-align: center;"><b>795</b></td><td></td></tr> </tbody> </table> | Subscribers by registered authority                   | Active subscribers                           | %   | Adur  | 55 | 7% | Arun | 46 | 6% | Brighton and Hove | 135 | 17% | Chichester | 46 | 6% | Crawley | 45 | 6% | Eastbourne | 76 | 10% | Hastings | 49 | 6% | Horsham | 49 | 6% | Lewes | 82 | 10% | Mid Sussex | 61 | 8% | Rother | 34 | 4% | Wealden | 58 | 7% | Worthing | 59 | 7% | <b>Total number of active subscribers</b> | <b>795</b> |  |  | Unknown | Horsham District Council is progressing this work | Storrington Air Quality Action Plan (October 2012) - Air Alert – Air Pollution Early Warning System |
| Subscribers by registered authority       | Active subscribers  | %  |   |  |   |   |    |    |      |    |    |                   |     |     |            |    |    |         |    |    |            |    |     |          |    |    |         |    |    |       |    |     |            |    |    |        |    |    |         |    |    |          |    |    |   |            |  |  |         |   |   |
| Adur                                      | 55  | 7%   |   |  |   |   |    |    |      |    |    |                   |     |     |            |    |    |         |    |    |            |    |     |          |    |    |         |    |    |       |    |     |            |    |    |        |    |    |         |    |    |          |    |    |   |            |  |  |         |   |   |
| Arun                                      | 46  | 6%   |   |  |   |   |    |    |      |    |    |                   |     |     |            |    |    |         |    |    |            |    |     |          |    |    |         |    |    |       |    |     |            |    |    |        |    |    |         |    |    |          |    |    |   |            |  |  |         |   |   |
| Brighton and Hove                         | 135   | 17%  |   |  |   |   |    |    |      |    |    |                   |     |     |            |    |    |         |    |    |            |    |     |          |    |    |         |    |    |       |    |     |            |    |    |        |    |    |         |    |    |          |    |    |   |            |  |  |         |   |   |
| Chichester                                | 46  | 6%   |   |  |   |   |    |    |      |    |    |                   |     |     |            |    |    |         |    |    |            |    |     |          |    |    |         |    |    |       |    |     |            |    |    |        |    |    |         |    |    |          |    |    |   |            |  |  |         |   |   |
| Crawley                                   | 45  | 6%   |   |  |   |   |    |    |      |    |    |                   |     |     |            |    |    |         |    |    |            |    |     |          |    |    |         |    |    |       |    |     |            |    |    |        |    |    |         |    |    |          |    |    |   |            |  |  |         |   |   |
| Eastbourne                                | 76  | 10%  |   |  |   |   |    |    |      |    |    |                   |     |     |            |    |    |         |    |    |            |    |     |          |    |    |         |    |    |       |    |     |            |    |    |        |    |    |         |    |    |          |    |    |   |            |  |  |         |   |   |
| Hastings                                  | 49  | 6%   |   |  |   |   |    |    |      |    |    |                   |     |     |            |    |    |         |    |    |            |    |     |          |    |    |         |    |    |       |    |     |            |    |    |        |    |    |         |    |    |          |    |    |   |            |  |  |         |   |   |
| Horsham                                   | 49  | 6%   |   |  |   |   |    |    |      |    |    |                   |     |     |            |    |    |         |    |    |            |    |     |          |    |    |         |    |    |       |    |     |            |    |    |        |    |    |         |    |    |          |    |    |   |            |  |  |         |   |   |
| Lewes                                     | 82  | 10%  |   |  |   |   |    |    |      |    |    |                   |     |     |            |    |    |         |    |    |            |    |     |          |    |    |         |    |    |       |    |     |            |    |    |        |    |    |         |    |    |          |    |    |   |            |  |  |         |   |   |
| Mid Sussex                                | 61  | 8%   |   |  |   |   |    |    |      |    |    |                   |     |     |            |    |    |         |    |    |            |    |     |          |    |    |         |    |    |       |    |     |            |    |    |        |    |    |         |    |    |          |    |    |   |            |  |  |         |   |   |
| Rother                                    | 34  | 4%   |   |  |   |   |    |    |      |    |    |                   |     |     |            |    |    |         |    |    |            |    |     |          |    |    |         |    |    |       |    |     |            |    |    |        |    |    |         |    |    |          |    |    |   |            |  |  |         |   |   |
| Wealden                                   | 58  | 7%   |   |  |   |   |    |    |      |    |    |                   |     |     |            |    |    |         |    |    |            |    |     |          |    |    |         |    |    |       |    |     |            |    |    |        |    |    |         |    |    |          |    |    |   |            |  |  |         |   |   |
| Worthing                                  | 59  | 7%   |   |  |   |   |    |    |      |    |    |                   |     |     |            |    |    |         |    |    |            |    |     |          |    |    |         |    |    |       |    |     |            |    |    |        |    |    |         |    |    |          |    |    |   |            |  |  |         |   |   |
| <b>Total number of active subscribers</b> | <b>795</b>  |  |   |  |   |   |    |    |      |    |    |                   |     |     |            |    |    |         |    |    |            |    |     |          |    |    |         |    |    |       |    |     |            |    |    |        |    |    |         |    |    |          |    |    |   |            |  |  |         |   |   |
| Working with local businesses             | <p><b>Alternative Refuelling Options:</b> Encourage provision of electric vehicle charging points at local business and public car parking spaces. Ensure compatibility of EV charging points to enable link to “Charge your Car” pay as you go network. Encourage development of Compressed Natural Gas (CNG) refuelling network across the district via private companies and as part of a district alternative fuel strategy (See District-wide AP measures).</p> <p><b>Home delivery scheme:</b> Encourage through businesses use of low emission delivery vehicles with possible link to district Compressed Natural Gas (CNG)</p> | <p>Measure incorporated into Planning Advice Document. Review undertaken of HDC vehicles at Storrington transport depot to establish opportunities for upgrading/ replacing with low emission vehicles.</p> <p>HDC has successfully bid for support from the Department for Transport (DfT) under Phase Two of the ULEV Readiness Project. A grant offer was received in November 2015 from DfT in respect of three vehicles. The grant will contribute 75% of the cost of 24-month eV vehicle leases for three vehicles: one Nissan Leaf car and two Peugeot Partner vans. The grant will also cover the costs of the installation and maintenance of one charge point per vehicle.</p> <p>There is currently a slow EV charger installed in Storrington. A Rapid EV charger to be installed.</p>   |   | Unknown but expected low                     | These schemes are being investigated through various other delivery avenues, and are subject to different feasibility and value for money considerations. | Storrington Air Quality Action Plan (October 2012) - Promotion of Alternative Transport Options |    |    |      |    |    |                   |     |     |            |    |    |         |    |    |            |    |     |          |    |    |         |    |    |       |    |     |            |    |    |        |    |    |         |    |    |          |    |    |   |            |  |  |         |   |   |

## Horsham District Council

| Scheme | Description  | What do we know about this scheme? | What are the main issues associated with this scheme? | Anticipated AQMA air quality benefit (L/M/H) | Next steps recommendations | Supporting Evidence references |
|--------|--|------------------------------------|---|--|----------------------------|--------------------------------|
|        | <p>refuelling strategy.</p> <p><b>Community minibus</b> – enhance existing Storrington minibus service by replacing existing diesel fleet with Low /Zero emission vehicles.<br/>Funded by local businesses or new developments via planning contributions, possible link to CNG refuelling strategy.</p> <p><b>Improve local bus service</b> – Liaise with local PSV operators to restrict vehicles entering AQMA to Euro IV/V standard. Consider subsidising strategic bus services to village schools via grant funding/Section 106 contributions to address 'school-run' traffic peaks. Investigate provision of local real-time bus information at bus stops to promote use.</p> <p><b>Transport Plans/ Travel Plans:</b> Promote to existing businesses and new developments innovative solutions: e.g. low emission incentives; driver training; car share schemes; car clubs.</p> <p><b>Freight Delivery Partnership:</b> Encourage</p> |                                    |   |  |                            |                                |

## Horsham District Council

| Scheme                 | Description   | What do we know about this scheme?  | What are the main issues associated with this scheme?   | Anticipated AQMA air quality benefit (L/M/H) | Next steps recommendations   | Supporting Evidence references                                     |
|------------------------|---|---|---|--|--|--|
|                        | use of WSCC preferred lorry route rather than A283 through Storrington AQMA; investigate opportunities for local and shared deliveries; Encourage use of low emission delivery vehicles to local stores within AQMA, provide links to CNG refuelling strategy.  |   |   |  |  |  |
| 'Storrington in Bloom' | Introducing recognised pollution absorbing plants and planting methods into the village to improve air quality within the AQMA  | It was established that there are no suitable sites for tree planting in West Street or the High Street so the project cannot be progressed.  |   | Unknown                                      | As there are no suitable sites, this strategy cannot be progressed.  |  |
| Smarter Choices        | <p><b>Encouraging walking and cycling:</b> Promote bike rental scheme with local cycle business, seek funding for improvements to local walking and riding paths, improve signage, provision of secure bike storage and bike racks at local car parks, train station car parks, encourage cycling/walking via promotion in local shops e.g. you 'shop we drop' schemes. Liaise with WSCC and Sustrans to improve facilities and encourage uptake.</p> <p><b>Working with schools:</b> Work with WSCC to enhance school travel plans, identify safety improvements to encourage walking,</p> | <p>Preliminary review of current facilities. Further meeting with Parish Council to be arranged. Feasibility study to be considered to assess suitability of car club in Storrington by looking at demographics etc.</p> <p>Measures incorporated into Planning Advice Document for new developments. WSCC School Travel Coordinator identified key walking/ cycling routes requiring improvement. Scoping report in progress for provision of car club to village.</p> | These schemes are being investigated through various delivery routes. Their direct impact on Storrington 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. | Unknown but expected low                     | These schemes are being investigated through various other delivery avenues, and are subject to different deliverability and value for money considerations. | Storrington Air Quality Action Plan (October 2012) – Smart Choices |

## Horsham District Council

|  | Scheme | Description   | What do we know about this scheme? | What are the main issues associated with this scheme? | Anticipated AQMA air quality benefit (L/M/H) | Next steps recommendations | Supporting Evidence references |
|--|--------|---|------------------------------------|---|--|----------------------------|--------------------------------|
|  |        | cycling<br>walking buses etc.<br>Contribute to air quality awareness education programmes. Link to WSCC LTP3 initiatives. |                                    |   |  |                            |                                |

## Glossary of Terms

| Abbreviation      | Description   |
|-------------------|---|
| AQAP              | Air Quality Action Plan - A detailed description of measures, outcomes, achievement dates and implementation methods, showing how the local authority intends to achieve air quality limit values'    |
| AQMA              | Air Quality Management Area – An area where air pollutant concentrations exceed / are likely to exceed the relevant air quality objectives. AQMAs are declared for specific pollutants and objectives |
| AQS               | Air Quality Strategy  |
| ASR               | Air quality Annual Status Report  |
| Defra             | Department for Environment, Food and Rural Affairs  |
| EU                | European Union  |
| HDC               | Horsham District Council  |
| HGV               | Heavy Goods Vehicle   |
| LAQM              | Local Air Quality Management  |
| LGV               | Light Goods Vehicle   |
| NO <sub>2</sub>   | Nitrogen Dioxide  |
| NO <sub>x</sub>   | Nitrogen Oxides   |
| PM <sub>10</sub>  | Airborne particulate matter with an aerodynamic diameter of 10µm (micrometres or microns) or less   |
| PM <sub>2.5</sub> | Airborne particulate matter with an aerodynamic diameter of 2.5µm or less   |
| WSCC              | West Sussex County Council  |

## References

Department for Environment, Food and Rural Affairs (DEFRA) (2018) *Local Air Quality Management Technical Guidance. LAQM.TG(16)*.

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Horsham District Council (HDC) (2012) *Further Assessment Report Storrington Air Quality*. Prepared March 2012.

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