

FAREHAM

BOROUGH COUNCIL

Report to Public Protection Policy Development and Review Panel

Date **8 March 2016**

Report of: **Director of Planning and Regulation**

Subject: **AIR QUALITY ACTION PLAN UPDATE**

SUMMARY

The mandatory air quality review and assessment process, which commenced in 1998, resulted in the declaration of two Air Quality Management Areas (AQMAs) in Fareham, one for a section of Gosport Road, Fareham and one for Portland Street, Fareham. Both AQMAs are due to high levels of nitrogen dioxide (NO₂) from vehicular exhaust emissions.

Since the last report to the Panel in March 2015, the Council has submitted to the Department for Environment, Food and Rural Affairs (Defra), the 2015 Air Quality Updating and Screening Assessment (USA 2015). This concluded that the Council will have to slightly extend the current Gosport Road AQMA or declare a new AQMA, to include the residential properties at the junction of Mill Road and Gosport Road Fareham.

Defra has recently finished its two year consultation on Local Air Quality Management (LAQM). This will invoke changes to the local authority reporting procedure, allow for the fast-tracking of AQMAs and introduce a local authority responsibility for the air pollutant, PM_{2.5}.

RECOMMENDATION

That the Panel notes the content of this report and the progress that has been made to date in respect of LAQM.

INTRODUCTION

1. The Environment Act 1995 requires local authorities to regularly review and assess air quality in their areas and to determine whether or not mandatory air quality objectives are likely to be achieved for seven air pollutants including NO₂, particulates (PM₁₀) and sulphur dioxide (SO₂). Where exceedences are considered likely, the local authority must then declare an AQMA and prepare an Air Quality Action Plan (AQAP) with a view to reducing pollution levels in the AQMA.
2. The mandatory air quality review and assessment process has resulted in the declaration of two AQMAs in Fareham, one for a section of the Gosport Road Fareham (Appendix A) and one for Portland Street Fareham (Appendix B). Both AQMAs are due to an exceedance of the mandatory annual mean objective for NO₂ (40ug/m³), associated with vehicular exhaust emissions.
3. Nitric oxide (NO) is mainly derived from road transport and rapidly oxidises to NO₂. The latter can irritate the lungs and lowers resistance to respiratory infections such as influenza. Continued or frequent exposure to higher than normal levels can increase the incidence of acute respiratory illness in children.
4. Particles from combustion sources such as road traffic are measured in a number of size fractions according to their mean aerodynamic diameter. PM₁₀ means particles with a diameter of less than 10 micrometres; PM_{2.5} (fine particles) are smaller, with a diameter of less than 2.5 micrometres and the cause of a hazy atmosphere. These particles can be carried deep into the lungs where they can cause inflammation and a worsening of the condition of people with heart and lung diseases.
5. The evidence associating NO₂ with health effects has strengthened substantially in recent years as noted by the Committee on the Medical Effects of Air Pollutants (COMEAP). It is estimated that the effects of NO₂ on mortality are equivalent to 23,500 deaths annually in the UK. Many of the sources of NO₂ are also sources of particulate matter. The impact of exposure to particulate matter pollution (PM_{2.5}) is estimated to have an effect on mortality equivalent to nearly 29,000 deaths in the UK. The combined impact of these two pollutants represents a significant public health challenge.
6. The economic cost from the impacts of air pollution in the UK is estimated at £9-19 billion per year which is comparable to the economic cost of obesity (£10 billion).

AIR QUALITY IN FAREHAM

7. Monitoring information for the LAQM process in Fareham consists of two continuous air quality monitoring stations and over 30 diffusion tubes. The monitoring stations are at the junction of Gosport Road and Elms Road Fareham and on Portland Street Fareham. The diffusion tubes are scattered throughout the Borough with emphasis on the location the AQMAs.
8. The monitoring stations accurately monitor the levels of NO₂ in the AQMAs and the results can be used to assess the impact of any local air quality improvement measures contained in the AQAP.
9. The passive diffusion tubes provide monthly and subsequently, annual mean nitrogen dioxide concentrations for all sites. The tubes are mainly located on the facades of private properties, close to busy roads. They are left in place for a month before being analysed by an external laboratory for NO₂ concentrations. They are the most efficient

method of obtaining information on possible hot spots for NO₂. If people have concerns about air quality, they can have a tube fitted at their home for a few months.

AIR QUALITY ACTION PLAN (AQAP)

10. The AQAP was approved by the Executive in 2008. With the assistance of the air quality steering group that met many times, many AQAP improvement actions have now been completed. These include:-

- (a) The opening of the Eclipse busway in April 2012; latest passenger figures show that there was an increase of 2.5% between April 2015 - September 2015 compared to the same period in 2014. Projections for October 2015 - March 2016 show a further increase of 0.5%. This equates to an overall increase year on year of 1.3% with passenger numbers increasing from 2.1m annually to 2.2m in 2015/16. New Eclipse buses are likely to arrive later this year.
- (b) The use of the Eclipse busway by cyclists;
- (c) Improved bus shelters including real time information (RTI) screens at bus stops throughout the Fareham-Gosport peninsula;
- (d) Improved cycle paths between Gosport and Fareham;
- (e) The development of the Quay Street "throughabout" reducing the number of vehicles passing close to Portland Street;
- (f) The provision of an air quality monitoring station at Portland Street;
- (g) Monitoring information from both stations on the Fareham Borough Council website together with annual air quality reports;
- (h) The provision of a bus lane on Western Way, Fareham;
- (i) The development of the Western Road, Fareham, bus gate, taking buses away from Portland Street;
- (j) The publication of an air quality and health leaflet;
- (k) The provision of two electric vehicle charging points in Fareham;
- (l) Assisting Hampshire County Council with air quality monitoring for the Yew Tree Drive bus gate planning application;
- (m) Sustainable travel banners on lamp posts in Gosport;
- (n) Liaison in summer of 2015 with the Public Health Team, Hampshire County Council;
- (o) Letter of support from the Council to Hampshire County Council for their Low Emission Bus Scheme application in 2015;
- (p) Air quality assessments through the planning regime eg Daedalus, Longfield Ave, Furze Court;
- (q) Revised Fareham Borough Council's Non-Residential Parking Standards SPD approved September 2015 which may have an impact on private car use;
- (r) Fareham Borough Council's Design Guidance (excluding Welborne) adopted in December 2015 covers issues such as the importance of pedestrian and cycle routes in new developments;
- (s) Hampshire County Council's new draft Walking Strategy approved January 2016;

- (t) New staff bike storage facility provided at Fareham Civic Offices in 2014;
 - (u) Routine inspections as required by the government to permitted installations including the Crematorium, Polycast foundry, vehicle paint resprayers etc;
 - (v) Staff taking part in annual sustainable travel challenges such as My Journey Commuter Challenge in May 2015;
 - (w) Improvements in the Council's refuse fleet eg 12 Euro V refuse vehicles; provision of vehicle tracking devices etc.
11. Highway improvements along the A32 corridor are ongoing. The Newgate Lane (Northern section) scheme is completed and Peel Common Roundabout improvements are progressing well with completion expected in June 2016. Proposed future works to Newgate Lane (Southern section) and Stubbington bypass will hopefully further reduce the impact of vehicles on our AQMAs. The proposals for a multi-modal interchange at Fareham Railway Station / Station Roundabout have advanced well; Hampshire County Council have completed the tendering bid process and are due to award the contract in the coming weeks with a view to commence works on the scheme in April 2016. Further advanced works begin week commencing 29th February 2016. The need to provide good cycling facilities and a bus rapid transit service between Fareham, Welborne and beyond, remains a matter of high importance.

UPDATING AND SCREENING ASSESSMENT (USA) 2015

12. The Council has submitted the required Updating and Screening Assessment (USA) 2015 to Defra. The report has been approved by Defra.
13. The report shows that the annual mean concentration for NO₂ at the Gosport Road monitor has been below the objective level of 40ug/m³ for the last four years, that is, 33ug/m³ in 2011; 35 ug/m³ in 2012; 34 ug/m³ in 2013 and 32.5 ug/m³ in 2014. The Portland Street monitor was below the annual mean concentration in 2012 (34.9ug/m³) and 2013 (34.6ug/m³) but the annual mean objective was just exceeded in 2014 at 40.4 ug/m³.
14. In terms of the diffusion tubes, six sites exceeded the annual mean concentration for NO₂. Three of the sites are located in the two existing AQMAs and therefore the AQMAs will remain declared. One site is not in a relevant location in terms of human exposure.
15. The two remaining diffusion tubes, located on residential properties close to the junction of Mill Road and Gosport Road, Fareham, are outside the existing Gosport Road, Fareham, AQMA and have shown exceedences in the past at various times. Subject to further detailed air quality assessment in this area, the existing Gosport Road AQMA may be extended to include these locations or a new AQMA declared, to include the residential properties at the junction of Mill Road and Gosport Road Fareham.

NATIONAL AIR QUALITY ACTION PLAN

16. Not only is the air quality objective for NO₂ exceeded in a few locations in Fareham but there are exceedences on a national scale. Recent media reports stated that two monitoring stations in London exceeded their annual hourly limit for NO₂ in the first 19 days of 2016. (The hourly limit of 200ug/m³ can only be exceeded 18 times before an

AQMA has to be declared).

17. The Government was forced by the Supreme Court to publish an updated National Air Quality Plan by the end of 2015 as many national areas, known as zones, were not going to comply with the NO₂ objective by 2015, let alone the original 2010 target date. This plan indicates that the Portsmouth Urban Area (including Fareham), should comply with the air quality objective for NO₂ by 2020, subject to individual Councils pursuing their AQAPs, where appropriate. However, the Southampton Urban Area is unlikely to comply by 2020 unless further steps put forward by the government are taken, including the creation of a Clean Air Zone (CAZ).
18. In order to bring the UK into legal compliance and to reduce concentrations of NO₂ below 40 ug/m³, CAZs will be introduced into 5 cities, that is, Birmingham, Leeds, Southampton, Nottingham and Derby. The CAZs will reduce the pollution in city centres and encourage the replacement of old, polluting diesel vehicles such as buses, lorries, taxis and coaches, with modern, cleaner vehicles. Newer vehicles that meet the latest emissions standards (Euro 6/VI) will not need to pay and no private car will have to pay under the Plan but individual local authorities may include this requirement. London already has plans in place to bring in their Ultra Low Emission Zone in 2020 which will also apply to cars.
19. One of the main reasons the UK continues to face urban air quality problems is the failure of diesel vehicles to deliver expected emission reductions in real world driving conditions. The UK has recently secured agreement in the EU to introduce more stringent emissions testing across the EU, ensuring vehicles live up to their low emission credentials.

FURTHER REVIEW OF LOCAL AIR QUALITY MANAGEMENT

20. Defra have been consulting on proposed changes to the LAQM process since 2013 and it appears that they should be in a position to launch the new scheme by June 2016. The changes include:-
 - (a) There will be a single annual report to Defra to be known as an Annual Status Report (ASR) which will include a public facing executive summary;
 - (b) Option for fast tracking AQMA declarations;
 - (c) A template for writing AQAPs;
 - (d) Removal of requirement for local authorities to report on benzene, carbon monoxide, lead and 1,3 butadiene;
 - (e) PM_{2.5} mandatory role for local authorities to improve public health;
 - (f) Clarification of roles and responsibilities for County Councils and local authorities;
 - (g) Updating policy and technical guidance.
21. The Public Health Outcomes Framework (PHOF) is a Department of Health data tool for England, intended to focus public health action on increasing healthy life expectancy and reducing differences in life expectancy between communities. The PHOF includes an indicator based on the effect of fine particulate matter (PM_{2.5}) on mortality. This indicator is the "fraction of mortality attributable to anthropogenic particulate air pollution (measured as fine particulate matter, PM_{2.5})". The 2013 figure for this indicator for England is 5.4%; the range for all local authorities in England is 2.7% - 8.3%; the figure for Hampshire is 5.0%; the figure for Fareham is 5.2% and for

Gosport, 4.8%.

22. This indicator is intended to enable Directors of Public Health to prioritise action on air quality in their local area to help reduce the health burden from air pollution. To help with this, the government has introduced a PM_{2.5} role for local authorities, so that alongside measures to tackle NO₂, local authorities also consider action to address PM_{2.5} issues, working with the Director of Public Health, Hampshire County Council.
23. There is no regulatory standard applied to the PM_{2.5} role for local authorities. Local authorities are expected to work towards reducing emissions and concentrations of PM_{2.5} in their areas, as necessary. They are not required to carry out additional monitoring as they can make use of national monitoring. New air quality policy guidance will not prescribe what the local authority role should be; it is for the local authority in consultation with the Director of Public Health to consider how it wishes to define this role. Local authorities will then be expected to set out in the ASR how they have chosen to fulfil their role to work towards reducing PM_{2.5} and any actions they are taking or will take, including any linkages to the PHOF.

RISK ASSESSMENT

24. Under the Environment act 1995, Fareham Borough Council must continue to undertake reviews and assessments of air quality, to declare AQMA as appropriate and action the AQAP in pursuit of achieving the air quality objective for NO₂ at all locations and in the future, to reduce the concentration of PM_{2.5}. The government can take appropriate measures to enforce these requirements.

CONCLUSION

25. Subject to funding, the Council will continue to undertake NO₂ monitoring in the Borough, using both diffusion tubes and the two continuous monitors on Gosport Road, Fareham and Portland Street, Fareham, respectively. The Council is to use the South East Business Portal to establish a new three year service and maintenance contract for the two Fareham stations and the monitoring station in Gosport.
26. The Council will continue to ensure compliance with the timetable of submissions to Defra which, in future, will be the ASR due at the end of April each year. This year the report will include a detailed assessment of the two locations on the Gosport Road, Fareham, close to the junction with Mill Road and currently outside the Gosport Road AQMA. This will most likely result in the extension of the latter or the declaration of a small, new AQMA.
27. Air quality reports will continue to be brought to the Public Protection Policy Development and Review Panel as appropriate. Like previous air quality reports, ASRs will be published on the Council's website together with certain data from the monitoring stations.
28. The Council will continue to progress the AQAP, seeking updates from Hampshire County Council on a regular basis. The Council will also liaise with the Director of Public Health, Hampshire County Council, in respect of it's new duty for reducing PM_{2.5}.
29. The government expects two tier authorities such as Fareham Borough Council and Hampshire County Council, the highway authority, to work together to identify suitable measures to address air quality issues including those in relation to transport and

highways, the main source of problem NO₂ in the Borough. Our AQMAs are associated with emissions from vehicles and as such, the government expects Hampshire County Council to continue to bring forward measures in relation to addressing the transport impacts in it's area, for inclusion in the AQAP.

Appendices

- A.** Gosport Road AQMA
- B.** Portland Street AQMA

Background Papers:

None

Reference Papers:

www.phoutcomes.info

Reports to the Public Protection Policy Development and Review Panel - 10 March 2015
Fareham and Gosport EH Partnership - Local Air Quality Management- Updating and Screening Assessment 2015

Review of LAQM: Changes to Guidance and Reporting- Defra - Nov 2015

Draft LAQM Policy Guidance (PG16) - Nov 2015

Draft LAQM Technical Guidance (TG 16) - Nov 2015

Land Use Planning and Development Control: Planning for Air Quality - EPUK - May 2015

The Mortality Effects of Long Term Exposure to Particulate Air Pollution in the UK - COMEAP (2009)

Estimating Local Mortality Burdens associated with Particulate Air pollution - PHE - April 2014

Improving air quality in the UK - Tackling nitrogen dioxide in our towns and cities - Defra - Dec 2015

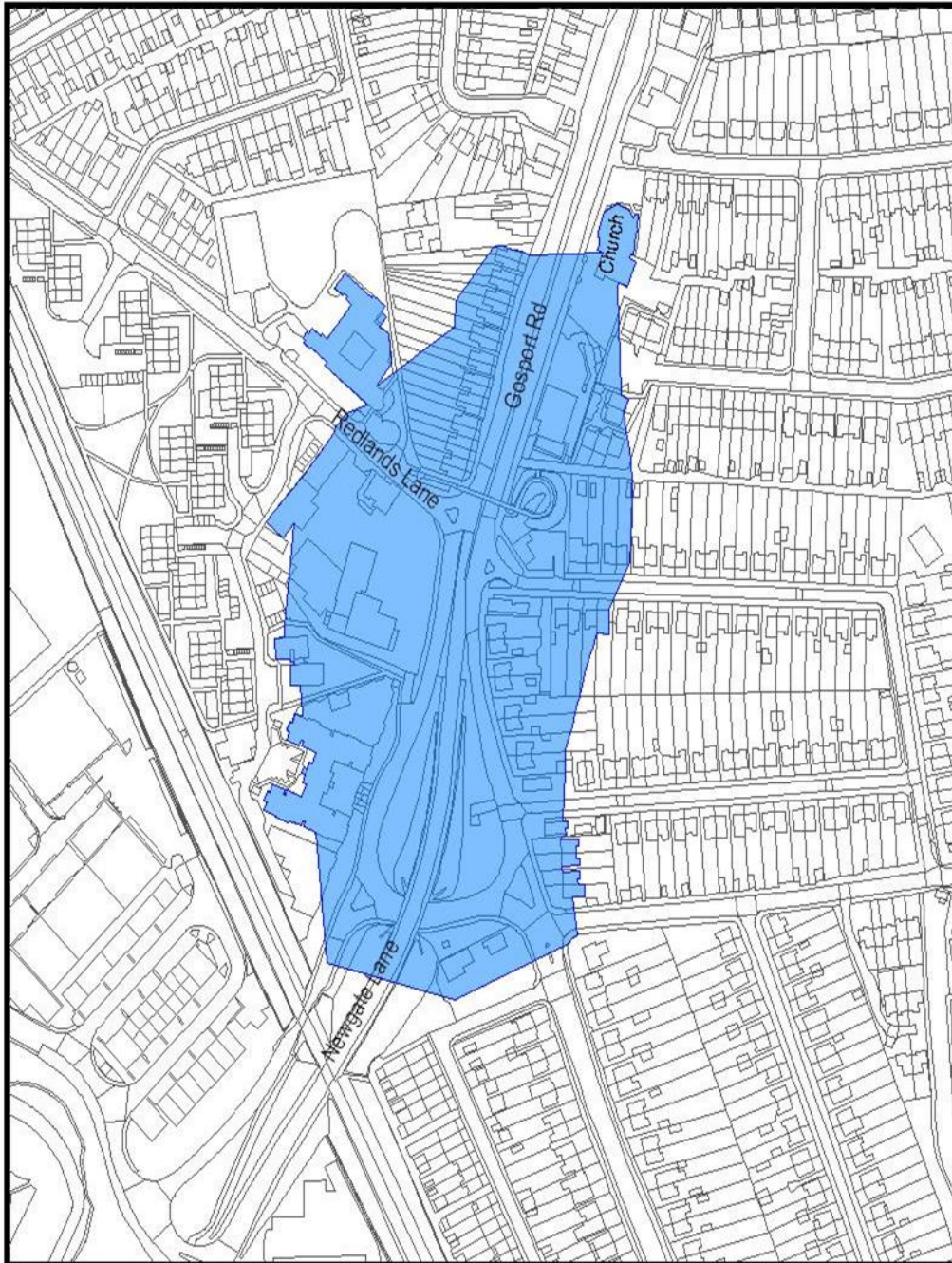
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FAREHAM BOROUGH COUNCIL

CIVIC OFFICES CIVIC WAY FAREHAM HAMPSHIRE



Fareham Borough Council
Air Quality Management Area 2006

Map Ref. AQMA 2006 (1)	Ref. Nitrogen Dioxide
Date 31st January 2006	Scale 1:2500

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Portland Street Air Quality Management Area

Drawing No.
Scale 1:750
Date September 2007

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