

REGENERATION, COMMUNITY AND CULTURE OVERVIEW AND SCRUTINY COMMITTEE

1 JUNE 2010

LOCAL AIR QUALITY MANAGEMENT

Report from: Robin Cooper, Director of Regeneration, Community and Culture

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Summary

To inform the committee of the outcome of the detailed assessment of air quality in Medway produced in August 2009 and the outcome of the 12-week statutory consultation which ended on 26 March 2010 on the declaration of three Air Quality Management Areas (including the revocation of the existing six AQMAs).

1. Budget and Policy Framework

- 1.1 The recommendations of this report are within council's policy and budget framework.
- 1.2 Air Quality Management links to the current Local Transport Plan - improving air quality is one of the four shared priorities for transport. The development of the third Local Transport Plan (LTP3) will also have an over-arching priority of 'Contributing to better safety, security and health'. Cabinet considered a report about LTP3 on 3 November 2009.
- 1.3 The topic also links to the Clean and Green priority set out in the Council Plan. The cost of air quality monitoring and the review and assessment process will be met from existing budgetary provision.
- 1.4 There are no National Indicators for Local Air Quality Management.

2. Background

2.1 Part IV of the Environment Act 1995 places a statutory duty on local authorities to review and assess the air quality within their area and take account of Government guidance when undertaking such work.

2.2 The National Air Quality Strategy contains standards and objectives for the following eight key air pollutants, which have been demonstrated to have adverse effects on human health: -

- benzene
- 1,3 butadiene
- carbon monoxide
- lead
- nitrogen dioxide
- sulphur dioxide
- particulates
- ozone

2.3 The locations where the objectives apply typically include residential properties and schools/care homes for annual mean pollutant objectives and high streets for short-term pollutant objectives.

2.4 In areas where air quality objectives are not likely to be met by the relevant target date, local authorities are required to declare an Air Quality Management Area (AQMA) and develop an action plan in pursuit of the air quality objectives.

2.5 How do we measure air pollution?

Medway has a network of 25 nitrogen dioxide diffusion tube sites and three continuous air quality monitoring stations which provide us with an indication of nitrogen dioxide levels in these areas. The three continuous air quality monitoring sites are designated as an urban roadside site which is located at Chatham Girls Grammar School, an urban background site which is located at Luton Junior School and a rural background site which is located at Stoke Primary School. Total coverage of the Medway area is not feasible so diffusion tube monitoring is undertaken at locations which have been identified as potential hot spots.

Dispersion modelling is also used when hot spot locations have been identified and a more detailed assessment is needed. This computer modelling uses data on topography, meteorology, traffic composition, vehicle speeds and the locations of sensitive receptors to predict pollutant concentrations.

2.6 Medway's air pollution

The objectives for seven out of the eight pollutants are being met across Medway. However, concentrations of nitrogen dioxide have been confirmed to exceed the 2005 **annual mean objective value of 40 µg/m³** at several locations across Medway.

2.7 What is causing the air pollution?

The principal source of the pollutant nitrogen dioxide has been identified as arising from vehicle exhausts. Medway is not unusual in having a problem with meeting the annual mean nitrogen dioxide objective; in fact the majority (221 out of 237) of AQMA declarations across the country are for this pollutant.

The main source of air pollution in the district is road traffic emissions from major roads, notably the M2, A2, A228, A229, A230, A231, A278 and A289.

Because of the domination of traffic sources, annual mean nitrogen dioxide levels are highest close to busy roads and in large urban areas. Medway has high traffic flows along routes that are lined with residential properties positioned very close to the kerbside. These two factors mean that exposure to high annual means of nitrogen dioxide occurs in these areas.

2.8 Medway's existing AQMAs

The following areas are part of the Medway Air Quality Management Area declared in 2002 and amended in 2004: -

Chatham Centre Sections of Railway Street, New Road Avenue and Best Street in Chatham Town Centre.

Cuxton Road Road between the junctions with Hawthorn Road and London Road.

Frindsbury Road Frindsbury Road between the junctions with Godington Road and Bill Street Road.

Maidstone Road A length of Maidstone Road in Chatham between Greenway and the Asda store traffic lights.

Rochester Centre Star Hill and sections of New Road and Corporation Street in Rochester.

Strood Centre High Street, Strood from the junction with London Road and Cuxton Road up to and including the junction with the north-western end of Commercial Road.

2.9 Latest Review and Assessment

Medway's progress report published in 2008 identified that there were exceedences of the nitrogen dioxide objective at four locations outside of the existing AQMAs. After consultation with Defra it was agreed that a Detailed Assessment would be produced in 2009.

The Detailed Assessment was submitted on 17 August 2009 and was accepted by Defra on 22 October 2009. It reviewed the existing AQMAs and considered the following additional areas: -

- High Street, Rainham
- Luton Road, Chatham
- High Street, Chatham
- Pier Road, Gillingham

2.10 The findings of the Detailed Assessment are: -

1. Exceedences of the annual mean nitrogen dioxide objective were predicted in the four newly identified hotspots and along Chatham Hill. It is therefore necessary to declare these areas as Air Quality Management Areas;

2. Exceedences of the annual mean nitrogen dioxide objective were predicted in five of the six existing AQMAs and confirm the need for continuance of these AQMAs

- Chatham Centre AQMA;
- Rochester Centre AQMA;
- Strood Centre AQMA;
- Cuxton Road AQMA;
- Frindsbury Road AQMA.

Additionally, the Council should consider amending the boundaries of the AQMAs in light of the predicted exceedences outside the declared areas.

3. There were no predicted exceedences of the annual mean nitrogen dioxide objective within the Maidstone Road Chatham AQMA. Concentrations were predicted to be less than $30\mu\text{g}/\text{m}^3$ in 2008. This is in line with monitoring data for the past three years, which indicate compliance with the annual mean objective at residential property facades in the AQMA. It is therefore recommended that the Maidstone Road Chatham AQMA be revoked.

2.11 **Why have new areas been identified?**

Monitoring began in 2008 in the new areas following the findings of the earlier progress report. The level of nitrogen dioxide in these areas was previously unknown.

The technical guidance for review and assessment has recently changed to require that roads with lower vehicle flows be assessed. For example, Luton Road was previously not assessed due to the relatively low vehicle flows.

2.12 **Why do the existing AQMAs need extending?**

The previous modelling was undertaken over 5 years ago and since then there have been changes in modelling methodology and with the data used to estimate emissions from the vehicle fleet. Therefore any new modelling will be more accurate and will produce a more reliable reflection of air quality.

The modelling takes into account the most up-to-date traffic flows and diffusion tube monitoring results and so will reflect a different situation to when the previous modelling was undertaken.

3. Medway's New AQMA

- 3.1 On 24 November 2009 Cabinet agreed to undertake a public consultation on the proposed revocation of the six current AQMAs and the declaration of three new AQMAs. These are shown on the maps in Appendix A and are described below: -
- 3.2 One large central AQMA which includes the existing AQMAs of Frindsbury Road, Cuxton Road, Strood Centre, Rochester Centre and Chatham Centre which have been slightly extended following the results of the detailed assessment but also includes the new areas of Luton Road, Chatham, High Street, Chatham and Rainham Road, Chatham.
- 3.3 Two smaller AQMAs at Pier Road, Gillingham and High Street, Rainham.
- 3.4 There are no rules as to determining the boundaries of an AQMA. Whilst the legislation requires authorities to designate AQMAs where objectives are not being achieved, or are not likely to be achieved, drawing boundaries necessarily involves an element of judgement.
- 3.5 Following consultation and discussion with Integrated Transport it is proposed that the declarations keep to the same format as before, by highlighting the roads rather than including the individual residential properties affected. This approach has been adopted by a number of local authorities where AQMAs have been declared.

4. Consultation Process

- 4.1 The Council is required to consult all the relevant statutory stakeholders, local stakeholders, businesses and members of the public on the declaration of any AQMAs.
- 4.2 The consultation took place for a period of 12 weeks from 4 January to 26 March 2010. An internet page was published and information leaflets were made available to make members of the public and business aware of the proposed declaration. The information was also circulated internally. 6,000 leaflets were distributed to leisure centres, libraries, Council buildings including the contact points and to every elected member.
- 4.3 A total of three responses to the consultation were received. Sevenoaks Council and the Environment Agency responded with no comments. The main points and responses are provided in the following table.

Point	Response
The information in the reports refers to data from 2008 and there is no information about projections for the future.	The assessment published in 2009 used the most recent available data which at the time was from 2008. The technical guidance the Council is required to follow prescribes the method of assessment. There is no requirement to predict for future years. However, the further assessment and action planning work will look to the future.
The documentation fails to comment on the significant increase in road traffic which is predicted to occur by 2020.	This was not a requirement of the reports. However, the further assessment and action planning work will look to the future.
The documentation makes no reference to respiratory illnesses, such as asthma.	Information on the health effects of poor air quality is available through the links on the Council's air quality page.
Inadvisability of new developments in congested areas.	Environmental Health comment on planning applications for developments with air quality implications to mitigate the impact of development and to reduce exposure to poor air quality.
Data shows an increasing air quality problem in New Road, Chatham. Documentation shows no appreciation that this is a residential and conservation area.	The proposed new central air quality management area includes New Road Chatham, as there are residential properties (relevant exposure) along New Road. The legislation does not provide for additional consideration in conservation areas.

5. What next?

- 5.1 It is anticipated that a declaration will be made in July 2010, following a report to Cabinet.
- 5.2 The Environment Act 1995 also requires that local authorities carry out a Further Assessment of existing and likely future air quality in an air quality management area within 12 months of declaration. Medway's current air quality action plan will also need to be updated within 12 to 18 months following the declaration.

6. Advice and analysis

- 6.1 The declaration of three AQMAs including one large central AQMA will provide a clear focus on the hot spot locations within Medway.
- 6.2 Combining the AQMAs to form one central AQMA reduces the likelihood of having to extend individual AQMAs after undertaking future reviews and assessments of air quality.

6.3 Designating two smaller AQMAs outside the urban centre will provide an opportunity to demonstrate progress in these areas, when there is evidence that air quality has improved.

7. Diversity Impact Assessment

7.1 A Diversity Impact Assessment (DIA) screening exercise has been completed and no adverse impact was identified. This will be kept under review during the course of developing the Action Plan.

8. Risk Management

Risk	Description		Action to avoid or mitigate risk
Declaration of new AQMA	Failing to declare an AQMA will mean that the Council is not complying with its statutory air quality management duties. This risk is rated - D2		Declaration of the new AQMA in July 2010.
	Likelihood A Very high B High C Significant D Low E Very low F Almost impossible	Impact 1 Catastrophic (Showstopper) 2 Critical 3 Marginal 4 Negligible	

9. Financial and legal implications

9.1 There are no direct costs in designating an Air Quality Management Area, but there are future financial implications as the next step of the process is a further assessment within 12 months of declaration and the development of an air quality action plan. This is intended to identify possible courses of action to improve air quality and needs to be completed within 12 to 18 months of declaration.

9.2 It is anticipated that the costs of the further assessment and associated action plan will be met from the existing air quality management budget.

9.3 Local authorities have a duty under section 83 (1) of the Environment Act 1995 to designate those areas where the Air Quality Objectives are unlikely to be met as Air Quality Management Areas. These areas have to be designated officially by means of an 'order'.

9.4 Failure to declare an AQMA would contravene this duty.

10. Recommendations

- 10.1 The committee is asked to recommend that the current Air Quality Management Areas (AQMAs) are revoked and the three new AQMAs including a large central AQMA, as set out in the report, are declared.

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Background papers

The Environment Act 1995

The Air Quality (England) (Amendment) Regulations 2002

Local Air Quality Management Policy Guidance (PG09)

Detailed Assessment, August 2009

Appendix A - High Street, Rainham AQMA



High Street, Rainham Air Quality Management Area

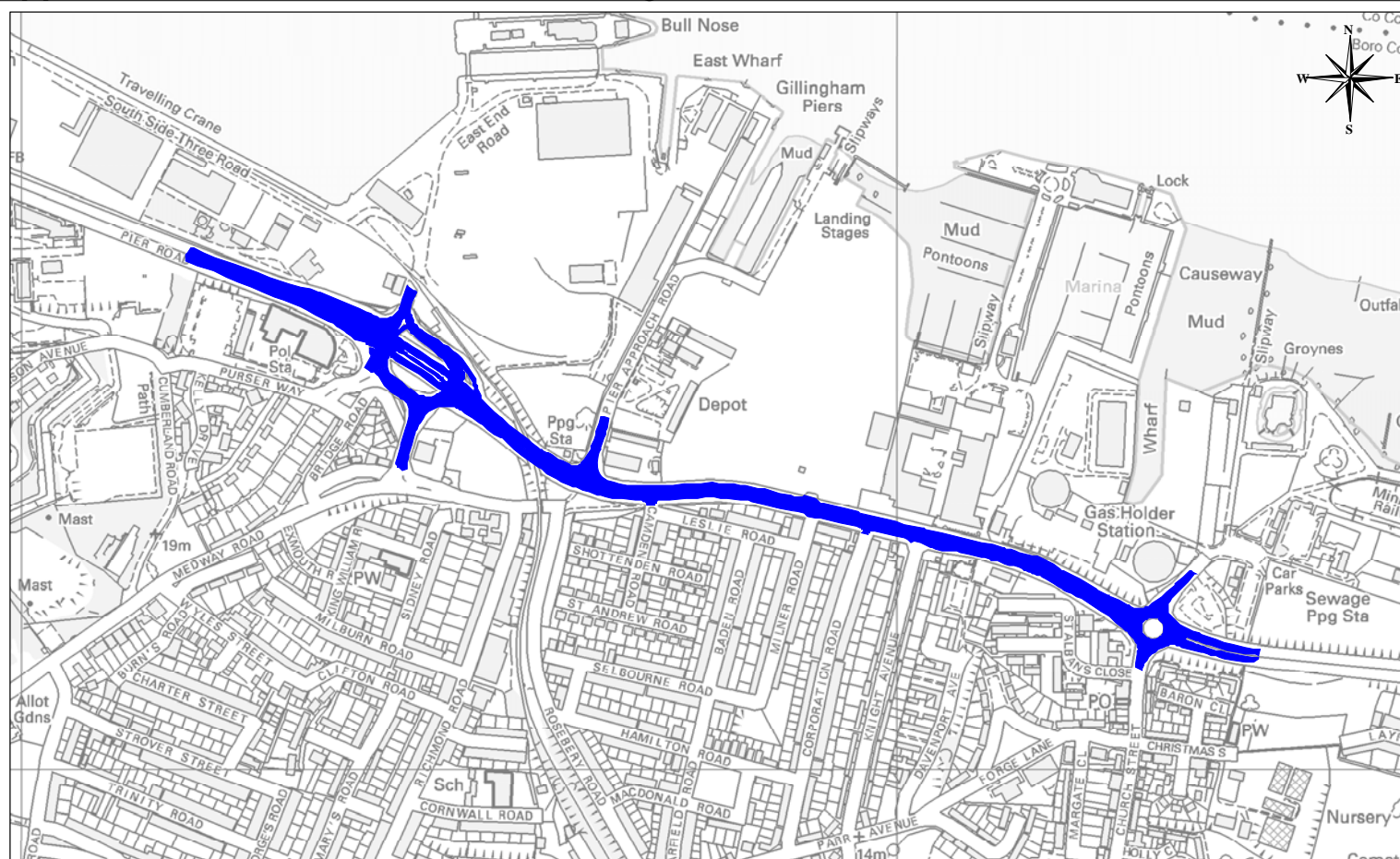


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Appendix A continued - Pier Road, Gillingham AQMA



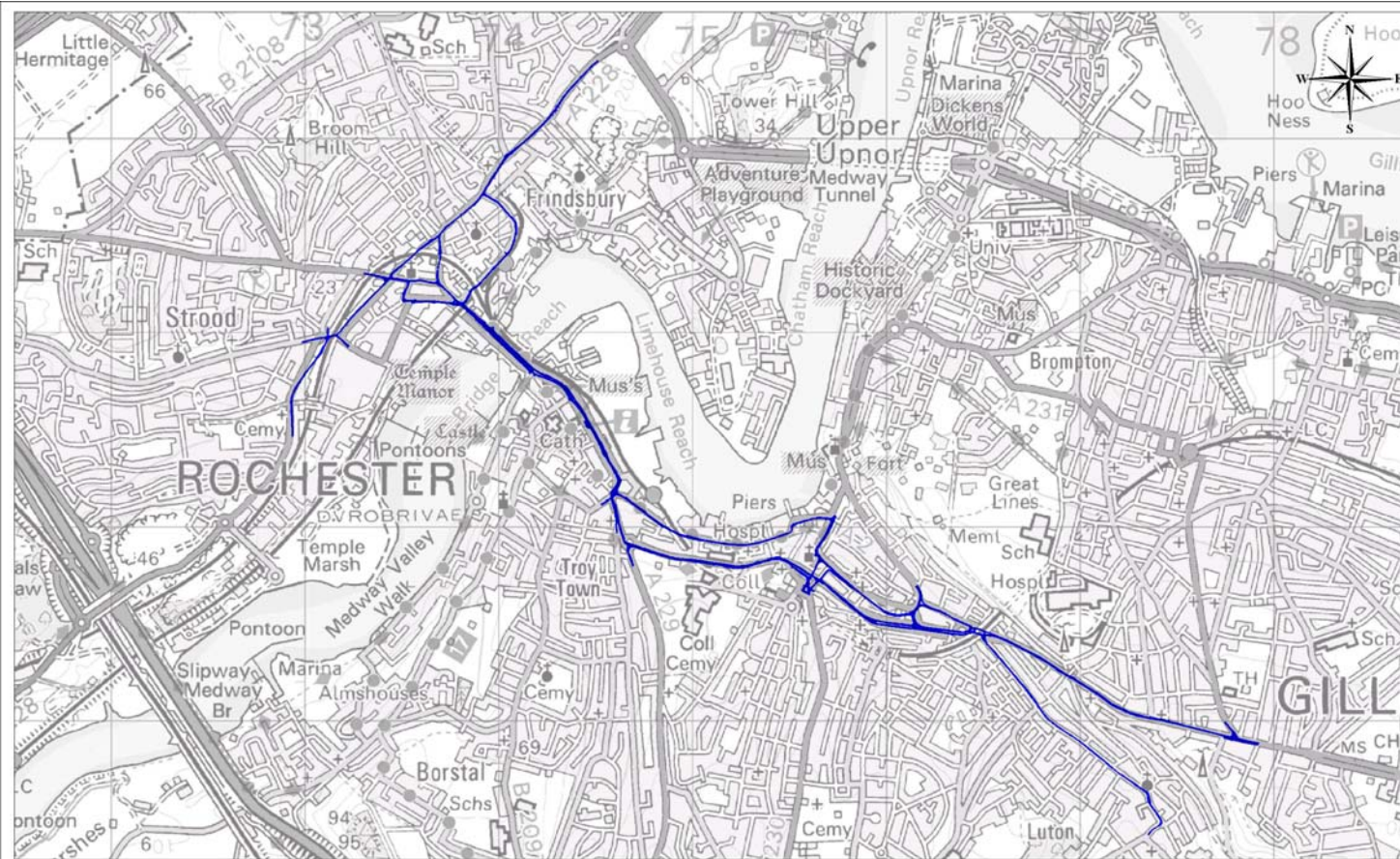
Pier Road, Gillingham Air Quality Management Area



Scale: 1:6000 23/10/09
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Appendix A continued - Central Medway AQMA



Central Medway Air Quality Management Area

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