

REPORT TO THE MEETING OF THE EXECUTIVE 21 SEPTEMBER 2011

PORTFOLIO: ENVIRONMENT

REPORT FROM HEAD OF ENVIRONMENTAL SERVICES

SUBJECT: AIR QUALITY MANAGEMENT IN RAYLEIGH TOWN CENTRE

1 DECISION BEING RECOMMENDED

- 1.1 To approve in principle the proposal for an Air Quality Management Area (AQMA) in Rayleigh town centre, in line with the Council's statutory Local Air Quality Management duties.
- 1.2 That the Head of Environmental Services be authorised to undertake a public consultation exercise regarding the extent of the proposed Air Quality Management Area.

2 FORWARD PLAN REFERENCE No: 9/11

3 REASON/S FOR RECOMMENDATION

- 3.1 Recent detailed analysis of air quality monitoring in Rayleigh Town Centre shows that there is an exceedance of the prescribed level for nitrogen dioxide within an area incorporating Arterial Road (A127); Brook Road; High Road; High Street; Eastwood Road; and Crown Hill.
- 3.2 The Detailed Assessment carried out by Air Quality Consultants Ltd, dated May 2011, was submitted to Defra for approval in June 2011. A copy of this has been placed in the Members' Library for reference. This Detailed Assessment has subsequently been approved by Defra, which now requires that an AQMA be declared.
- 3.3 Attached at Appendix 1 is a map of the area considered to be above the permitted level of nitrogen dioxide. Appendix 2 indicates the area that our consultants have recommended be considered for inclusion in an AQMA.
- 3.4 Shown at Appendix 3 is a Nitrogen Dioxide factsheet giving examples of where air quality objectives should/should not apply together with sources of pollutants and their health effects.
- 3.5 Once the public consultation process is completed, a further report will be submitted to the Executive early next year.

4 SALIENT INFORMATION

- 4.1 For over ten years, officers have carried out assessments of air quality at various locations across the District. This monitoring has formed part of the

periodic reviews that the Council is obliged to carry out under the Environment Act 1995 in accordance with the National Air Quality Strategy.

- 4.2 The Council's first AQMA was designated at Rawreth Industrial Estate in May 2010. This was for an exceedance of the number of days that levels of fine particulate matter exceed a permitted amount.
- 4.3 Officers have carried out air quality monitoring in High Street, Rayleigh and surrounding roads since 2004 due to the potential for nitrogen dioxide (NO₂) to be above nationally prescribed levels. Nitrogen dioxide is closely associated with vehicle exhaust emissions.
- 4.4 A report regarding nitrogen dioxide in Rayleigh Town Centre has previously been presented to the Executive (Min. 257, 19 July 2007). At that time, the result of short-term monitoring and modelling work predicted that there was a slight exceedance of the nitrogen dioxide annual mean target, but that it would be met before 2010, without any Council intervention, because of improvements in vehicle emission standards.
- 4.5 Since then, data from passive monitoring has shown that this anticipated reduction in nitrogen dioxide levels has not materialised. Following the recommendations of the 2009 Updating and Screening Assessment that was accepted by Defra, officers decided to carry out a further Detailed Assessment.
- 4.6 At that time, Officers were successful in securing grant funding for an automatic analyser to be put in High Street, Rayleigh, at the junction with Eastwood Road. This detailed form of monitoring took place between September 2009 and February 2011.
- 4.7 Modelling work was subsequently commissioned to determine whether nitrogen dioxide is exceeding the prescribed annual mean level at relevant locations and the extent of any resulting Air Quality Management Area (AQMA). It is this modelling work that produced the maps shown in Appendix 1 and 2.
- 4.8 As the area being analysed abuts the Southern boundary of the district, there may be air quality implications for Castle Point Borough Council (CPBC) to consider.
- 4.9 Officers have already been in touch with their Environmental Health colleagues at CPBC to advise them of the findings and we will be working closely with them and Essex County Council (Highways) to address the issues.

Essex Perspective

- 4.10 At the time of writing, there are 16 AQMAs within 7 Essex local authorities, including Rochford. One of these identifies 15 separate locations where nitrogen dioxide exceeds the prescribed annual mean level.

- 4.11 Examples of similar circumstances to those found in Rayleigh include: Wilson's Corner, Brentwood; High Street, Saffron Walden; and High Street, Epping.

5 THE AIR QUALITY MANAGEMENT AREA (AQMA) PROCESS

- 5.1 An AQMA is a formalised procedure set out by the Government by which the Local Authority actively assesses, plans and carries out remedial action.
- 5.2 To begin this process the Council must initially consult the public and businesses within the vicinity of the elevated nitrogen dioxide levels.
- 5.3 All those in the area of concern will be written to in order to obtain their views. Consultation is likely to take place over a six-week period this autumn with responses able to be submitted in writing, by e-mail and online.
- 5.4 Consultees will include:-
- Rochford District Council – Planning, etc
 - Essex County Council – Highways, Environment, Education etc.
 - Environment Agency
 - Locally-operating businesses/representative bodies
 - Residents/landowners
 - Neighbouring local authorities
 - Parish/Town Council(s)
- 5.5 Whilst this is being done, further continuous monitoring will be arranged. This will commence early in 2012 for a period of at least one year.
- 5.6 Once the consultation responses have been considered and the final area determined, a final report will be submitted to the Executive to officially declare the AQMA. The Council then has up to a maximum of eighteen months to create an Action Plan, explaining how it will address the identified issues, with the Action Plan having to be subject to its own public consultation.
- 5.7 On conclusion, the Action Plan is submitted to Defra for approval, following receipt of which it can be implemented.

6 ALTERNATIVE OPTIONS CONSIDERED

- 6.1 Neither of the following options are considered appropriate:-
- (a) To not declare an AQMA, but continue monitoring nitrogen dioxide and track levels.
 - (b) To rely solely on the outcome of the Rayleigh Town Centre Action Plan to deliver improvements in air quality within the area concerned.

7 RISK IMPLICATIONS

- 7.1 The Council is required to declare an AQMA where the national air quality objectives are exceeded, the aim of which is to improve the health and quality of life of the residents of, and visitors to, the area and to help protect our environment.
- 7.2 It should be appreciated that there may be unquantifiable financial implications for business operators and property owners within the designated area.

8 ENVIRONMENTAL IMPLICATIONS

- 8.1 The levels of nitrogen dioxide will continue to exceed national objectives without an action plan created in the light of an AQMA Order for the area.

9 RESOURCE IMPLICATIONS

- 9.1 To date, the Council has only carried out continuous monitoring on a periodic basis with hired equipment. The 12-month hire of an analyser with housing can be expected to cost circa £10,000 plus maintenance and electricity costs. There is a potential option for capital purchase and officers are currently giving consideration to the most financially advantageous method to proceed. All costs will be contained within existing budgets.
- 9.2 Following negotiation by Officers, the previous hire company have agreed to leave their housing in place, free of charge, until January 2012 in order to assist the Council preserve the monitoring location and reduce expenditure on de-commissioning (and subsequent re-commissioning) of the site.
- 9.3 Any additional workload arising from this activity will be prioritised amongst the Environmental Health Team's other work.

10 LEGAL IMPLICATIONS

- 10.1 The Secretary of State for Defra is responsible for the attainment of national air quality objectives. The Council has a duty in law to monitor the air quality in its district.
- 10.2 The Council is required to declare an AQMA where a National air quality objective is exceeded. It must consult with the public and other relevant parties in order to create and implement an action plan to improve the air quality within that AQMA.
- 10.3 Should a Council fail to declare an AQMA where there is an exceedance of an objective, then Defra can direct a local authority to do so.
- 10.4 Once the relevant air quality objective has been met consistently, the AQMA Order can be revoked, subject to approval by Defra.

I confirm that the above recommendation does not depart from Council policy and that appropriate consideration has been given to any budgetary and legal implications.

SMT Lead Officer Signature: _____

Head of Environmental Services

Background Papers:

Detailed Assessment of Air Quality in Rayleigh for Rochford District Council, May 2011, Air Quality Consultants

2007 Detailed Assessment of Air Quality for the Rochford District Council, September 2007, King's College London

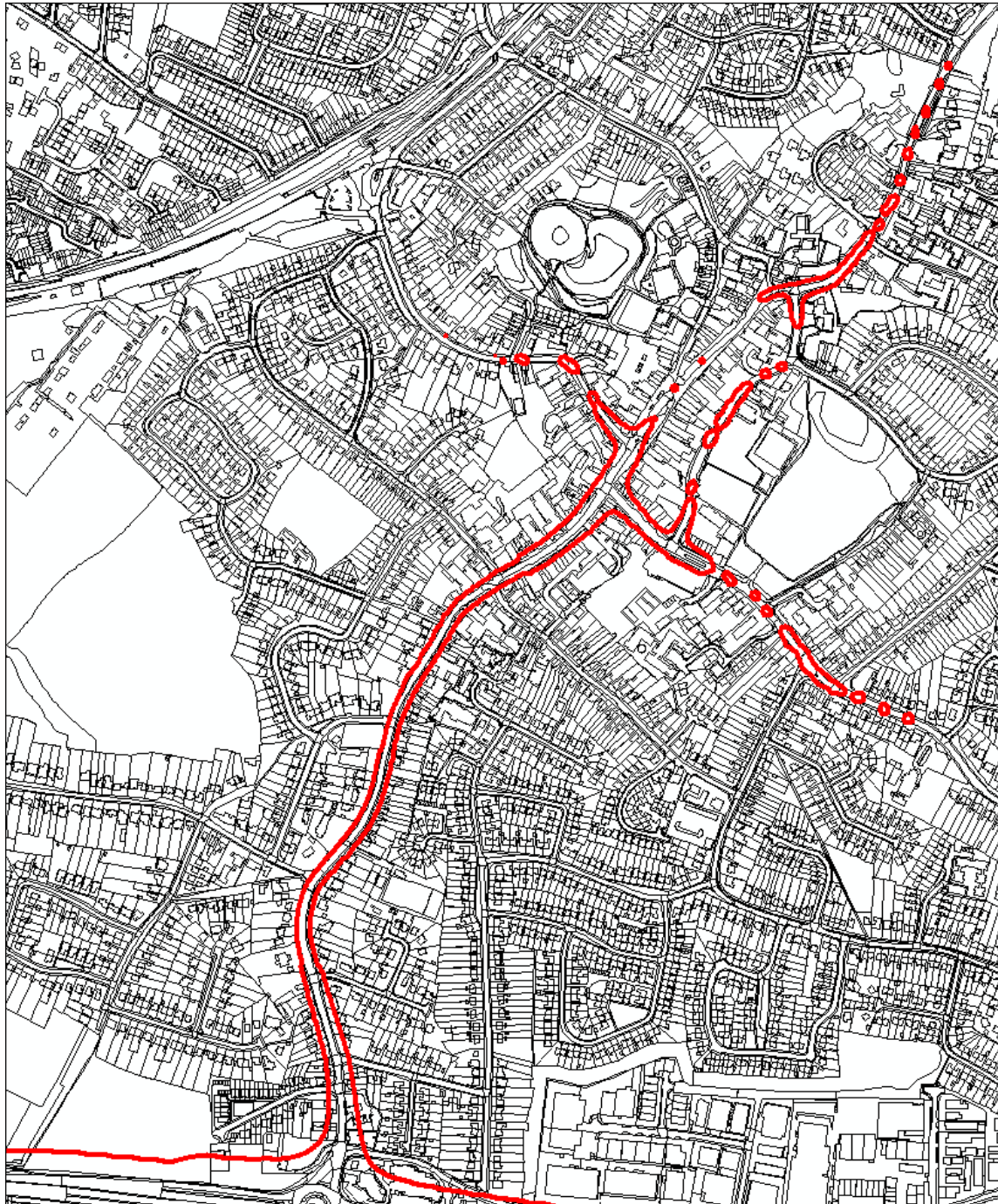
<http://www.essexair.org.uk/>

For further information please contact Martin Howlett (Principal Environmental Health Officer) on:-

Phone:- 01702 318049

Email:- martin.howlett@rochford.gov.uk

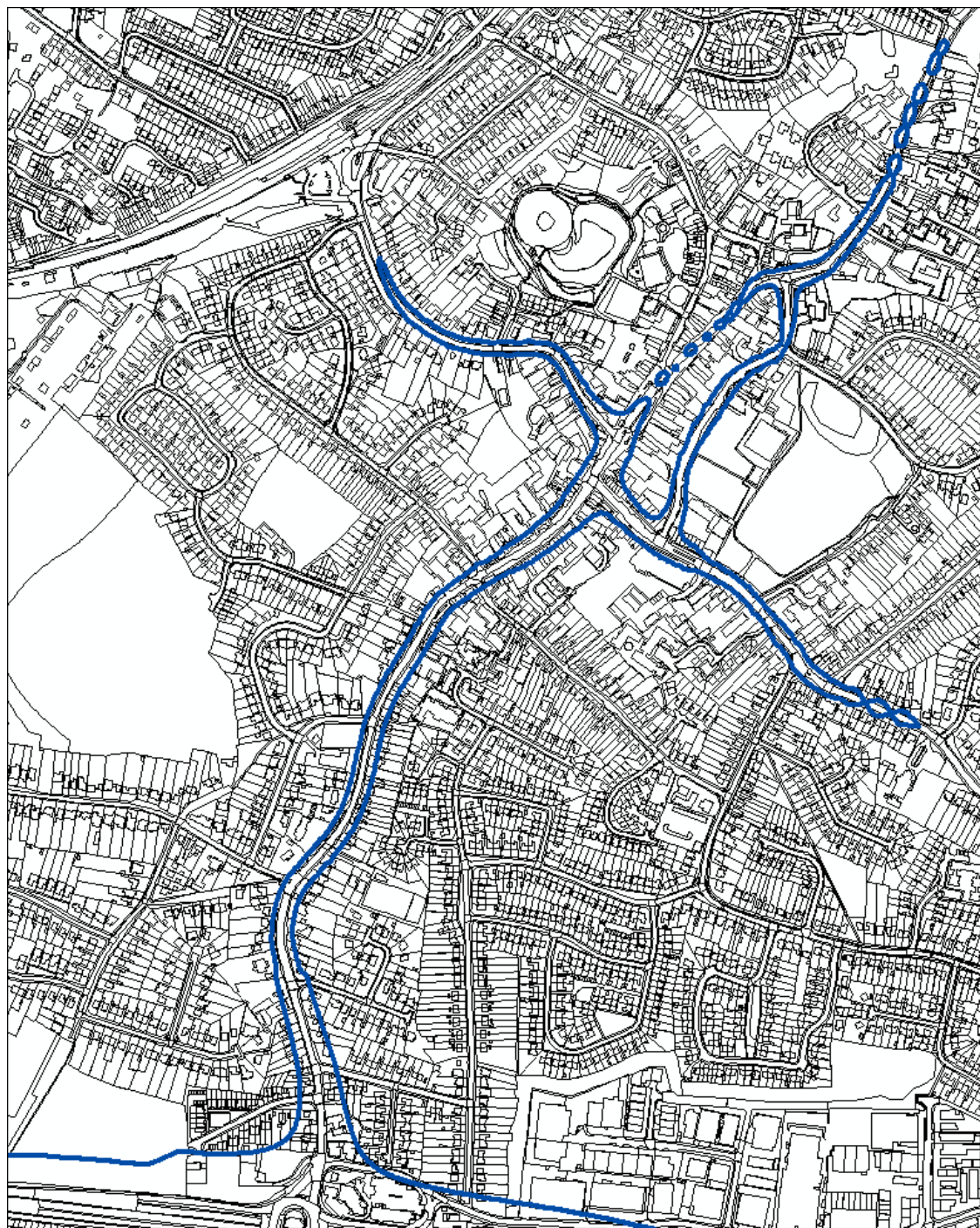
If you would like this report in large print, Braille or another language please contact 01702 318111.

Appendix 1 – Area of Rayleigh modelled for nitrogen dioxide concentrations

KEY:

--- 40µg/m³ contour (area considered to be above the permitted level of nitrogen dioxide).

Appendix 2 – Area of Rayleigh modelled for nitrogen dioxide concentrations



KEY:

--- 36µg/m³ contour (proposed area to be consulted upon)

Appendix 3 - Nitrogen Dioxide Factsheet**Examples of where air quality Objectives should/should not apply**

| Averaging Period | Objectives should apply at: | Objectives should generally not apply at: |
|-------------------------|---|---|
| Annual mean | All locations where members of the public might be regularly exposed. Building facades of residential properties, schools, hospitals, care homes etc. | <p>Building facades of offices or other places of work where members of the public do not have regular access.</p> <p>Hotels, unless people live there as their permanent residence.</p> <p>Gardens of residential properties.</p> <p>Kerbside sites (as opposed to locations at the building facade), or any other location where public exposure is expected to be short term</p> |

Sources of pollutants and their health effects

| Pollutant | Sources | Health Effects |
|-------------------------|--|--|
| Nitrogen Dioxide | <p>Nitric oxide (NO) is mainly derived from road transport emissions and other combustion processes such as the electricity supply industry. Nitric oxide is not considered to be harmful to health. However, once released to the atmosphere, NO is usually very rapidly oxidized, mainly by ozone (O₃), to nitrogen dioxide (NO₂), which can be harmful to health. Nitrogen dioxide and NO are both oxides of nitrogen and together are referred to as nitrogen oxides (NO_x).</p> | <p>NO₂ is associated with adverse effects on human health. At high levels, NO₂ causes inflammation of the airways. Long term exposure may affect lung function and can enhance the response to allergens in sensitive individuals.</p> |

Extracts taken from Defra Technical Guidance document LAQM.TG(09)