

Title of meeting: Environment and Community Safety Portfolio Decision Meeting

Date of meeting 13th August 2015

Subject: Assessment of Air Quality

Report by: Director of Regulatory Services, Community Safety and Troubled Families

Wards affected: ALL

Key decision: No

1. Purpose of report

- 1.1. In 2013, with the aid of funding from DEFRA (Department for Environment Food and Rural Affairs), Environmental Health and officers from the Transport and Environment Service carried out an ambitious city wide project named ORTMCS (Optimisation of Road Traffic Management Control Systems (ORTMCS) to understand and qualify the impact that local road traffic management control systems has on local road traffic congestion and the resultant levels of air pollution it causes.
- 1.2. This pioneering desk top study, took the form of a set of complex feasibility studies focused on testing ways to regulate and improve road traffic fluidity management to achieve an improvement in local air quality without creating new air pollution hotspots.
- 1.3. Following completion of the project in 2015 the results of ORTMCS have been used to complete a Detailed Assessment of air quality for submission to DEFRA in accordance with Part IV of the Environment Act 1995.
- 1.4. Following the declaration of 13 Air Quality Management Areas (AQMA) in 2005 as a result of levels of Nitrogen Dioxide (NO₂) above those prescribed by the National Air Quality Objectives (NAQO) and the revocation of seven of these areas in 2010, the information obtained from ORTMCS has enabled PCC to publish the first assessment of air quality in Portsmouth since 2011.
- 1.5. The conclusions reached therefore have some considerable significance in relation to the Council meeting its objective, as set out with the 2010 Air Quality Action Plan (AQAP), to deliver cleaner air across the city and to target the 'hotspot' areas where pollution is highest.

2. Recommendations

- 2.1. **That the cabinet member for environment & community safety:**

- a) **Acknowledges the conclusions reached in respect to ORTMCS and how changes in the management of traffic control systems could improve air quality. Appendix 1;**
- b) **Acknowledges the conclusions reached in respect to the Detailed Assessment of air quality in Portsmouth and approves its submission to DEFRA. Appendix 2;**
- c) **Acknowledges the need to continue to review and assess the quality of air in Portsmouth in accordance with statutory requirements and adequately resource our ability to validate the modelled conclusions of ORTMCS with monitored data.**

3. Background

- 3.1. In 2010, PCC the published the AQAP in response to the declaration of AQMAs across the city. A key measure adopted in the Plan was to review the existing traffic management systems in Portsmouth in order to ensure that road traffic is 'maintained at maximum fluidity and that transport-related pollution is kept to a minimum'.
- 3.2. In 2013, PCC launched ORTMCS aimed at investigating ways of improving traffic flow across five predetermined areas across the city, termed "corridors". The project was delivered in three consecutive packages to:
 1. conduct extensive road traffic surveys at pre-selected junctions;
 2. undertake vehicle microsimulation modelling to assess the impact of each proposed scenario and to produce estimates of road traffic generated pollutant;
 3. undertake dispersion modelling to assess the air quality impact of each proposed scenario.
- 3.3 ORTMCS was designed to explore the possibilities of improving road traffic flow management and thereby improve air quality within the existing and revoked AQMAs without either deteriorating or creating new air pollution hotspots elsewhere. ORTMCS focused upon assessing the potential advantages of a number of different scenarios:
 - Baseline Scenario 2013
 - Do Minimum Scenario (which includes all changes implemented or planned between 2013 and 2015)
 - Do Something 1 Scenario
 - Do Something 2 Scenario
 - Do Something 3 Scenario
- 3.4. Each Scenario put forward a package of realistic measures which could be incorporated to better manage the movement of traffic through the

predetermined corridors and so could potentially improve air quality. Such measures included combinations of:

- signalisation of roundabouts and / or junctions;
- redefining junction exits and approaches;
- amendment of bus stops - e.g. conversion of stops on carriageway into laybys;
- the improvement of junction layouts;
- optimising signal timing;
- implementing geometric improvements;
- altering lane allocations;
- removing off street parking.

4. Conclusions in terms of air quality

4.1. The projects findings can be summarised as follows:

- Road traffic micro simulation modelling (VISSIM) enabled the modelling of the various packages of measures in terms of fluidity. Emission modelling (AIRE) enabled a determination of VISSIM in terms of air quality improvement. A wider air quality impact assessment (AQIA) then considered the wider impacts in terms of pollution in each area and compliance with the NAQO. AQIA enabled the Detail Assessment of air quality to be finalised. When considering the results of each of the above, for all five corridors, they are found to be consistent and support each other's findings.
- The change in predicted NO₂ annual mean for any of the modelled scenarios, at any modelled receptor location, in any of the five route corridors, in both assessment years 2013 or 2015 is so insignificant that it is considered negligible. In terms of improving air quality the implementation of any of the Do Something Scenarios is therefore considered to be a negative value proposition and is not consequently recommended.
- There are no predicted exceedances of the annual mean NO₂ NAQO for any of the modelled scenarios, at any modelled receptor location, in any of the five route corridors, in both of the assessment years 2013 or 2015.

5. Future assessments

5.1. It will be necessary to assess the validity of the modelled data which formulates the above conclusions with monitored data. This process is likely to take several years. This will enable PCC to ensure the predictions accurately reflect the actual situation and provide evidence in respect to long term decreases in pollutant level.

5.2. Although there are no predicted exceedances of the NAQO annual mean NO₂ any potential further revocation of AQMAs will not take place until the data has

been adequately verified. Even before revoking an AQMA on the basis of measured pollutant concentrations, PCC will need to be reasonably certain that any future exceedances are unlikely.

6. Equalities Impact Assessment

- 6.1. An equality impact assessment is not required as the recommendations do not have a negative impact on any of the protected characteristics as described in the Equality Act 2010.

7. City Solicitor's comments

- 7.1. The timetable for Review and Assessment Reports is provided in Box 1.3 of the Local Air Quality Management Technical Guidance 2009. PCC acknowledges that it has not complied with the timetable as prescribed. PCC has however fully engaged with DEFRA with respect to the delays in publishing reports caused by the delivery of ORTMCS.
- 7.2. The aim of the assessment of air quality is to identify with reasonable certainty whether or not a likely exceedance of the NAQO will occur. The Air Quality (England) Regulations 2000 (SI 928) and The Air Quality (England) (Amendment) Regulations 2002 (SI 3043) make it clear that likely exceedances of the objectives should be assessed in relation to the quality of the air at locations which are situated outside of buildings or other natural or man-made structures, above or below ground, and where members of the public are regularly present. It is particularly important that our assessments focus on those locations where members of the public are likely to be regularly present and are likely to be exposed for a period of time appropriate to the averaging period of the objective.

8. Director of Finance comments

- 8.1. The costs of continuing to review and assess air quality in Portsmouth will need continue to be met from within existing budgets. The service is currently undertaking a procurement exercise to secure a three year contract to provide the air quality monitoring services within Portsmouth. Upon the cessation of this three year contract, the service identified that it will not have sufficient funding to continue to provide these services at this level.

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Signed by: Rachael Dalby, Director of Regulatory Services, Community Safety
and Troubled Families

Appendix 1: ORTMCS (Optimisation of Road Traffic Management Control Systems)

Appendix 2: Detailed Assessment of Air Quality 2015

Background list of documents: The following list of documents discloses facts or matters, which have relied upon to a material extent by the author in preparing this report:

Title of Document	Location
NIL	NIL

The recommendations set out above in 2.1 above were approved/ approved as amended/ deferred/ rejected by the Cabinet Member for the Environment and Community Safety on 13th August 2015

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Signed by: Councillor Robert New, Cabinet Member for Environment and Community Safety