

Review of Air Quality Monitoring in Maidstone

Final Decision-Maker	Strategic Planning, Sustainability and Transportation Committee
Lead Head of Service/Lead Director	John Littlemore, Head of Housing and Communities
Lead Officer and Report Author	Dr Stuart Maxwell, Senior Scientific Officer
Classification	Public
Wards affected	All

Executive Summary

The council has been unable to undertake continuous air quality monitoring in the town centre since the Fairmeadow monitoring station was closed in 2016. There have been difficulties in identifying and securing a suitable location for the existing equipment. A new location in Upper Stone Street, belonging to KCC, has now been identified for siting a permanent air quality station and we are currently trying to obtain permission to use it. However negotiations to use a site identified previously were very protracted and there is currently no indication from KCC that permission will be given or when any legal agreements will be completed. The station would then need to be purchased and installed. It has been established that a contractor could provide an interim station on the same or nearby site which could be operating in the near future and could be replaced by the permanent station if required.

This report makes the following recommendations to this Committee:

1. That a contractor be appointed to install a monitoring station and undertake monitoring at Upper Stone Street for a period of one year.
2. That a site for longer term monitoring be investigated, with the preferred site being at Jubilee Church.

Timetable

Meeting	Date
Strategic Planning, Sustainability and Transportation Committee	6 February 2018

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1. INTRODUCTION AND BACKGROUND

- 1.1 Following long delays to the relocation of the Fairmeadow Air Quality Monitoring Station, members of the SPST committee requested information about the air quality monitoring provision in the Maidstone district and possible options for the future. A review of Air Quality Monitoring provision within the Borough is also one of the actions of MBC's recently approved Low Emission Strategy (LES).
- 1.2 This report gives an overview of the various issues. More details are provided in the Briefing Note which accompanies this document at Appendix One.
- 1.3 Until recently, Maidstone had two continuous monitoring stations in the Borough; A rural background monitoring site at Detling, and a town centre monitoring site at Fairmeadow. Both stations measured Particulate Matter (PM₁₀) and nitrogen dioxide (NO₂).
- 1.4 In 2016, as a result of KCC's improvements to the gyratory system, it became necessary to relocate the Fairmeadow station. KCC's original intention was to move the station a few feet, however, NO₂ levels can change dramatically over short distances, meaning that the continuity with many previous years of data would be lost.
- 1.5 At this time, Environmental Health officers were keen to start continuous monitoring in the area of Upper Stone Street. Diffusion tube monitoring has suggested that pollution levels are highest in Upper Stone Street, and officers saw an opportunity to move the Fairmeadow Monitoring Station, with KCC meeting a significant part of the expense. Following a meeting with the KCC project manager for the road scheme, KCC agreed, in principle, to relocate the station to the Upper Stone Street area. At that time, Environmental Health officers expected that the station would be relocated before the existing Fairmeadow site became unviable due to the road works.
- 1.6 The station was decommissioned in June 2016, and a proposed site identified outside Miller Heights. In the intervening months, there has been a string of delays, mostly to do with getting a suitable lease agreement with the landlord, with the necessary easements for access and electricity supply etc. On the verge of completion of the lease agreement, the landlord decided to sell the property and is not prepared to finalise the lease until the sale has been completed. It will then be necessary to begin negotiating with the new owner before the lease can be completed.
- 1.7 A potential new site has now been identified for a walk-in cabin on the grass verge area outside the Jubilee Church in Upper Stone Street. This site belongs to KCC and permission to use it is currently being sought.
- 1.8 However there has been no indication from KCC that permission will be given for the permanent siting of the station or when this will be given. The

experience of the proposed relocation to Miller Heights suggests that this may take a significant amount of time.

- 1.9 The contractor who currently supplies service and maintenance for the air quality stations has confirmed that they are willing to negotiate a small temporary station with KCC and provide local site operator (LSO) functions for a year. This could be achieved quickly and enable monitoring to be started. The monitoring would include PM₁₀ and PM_{2.5} and nitrogen dioxide and provide a baseline for decisions on future continuous monitoring to be made.
 - 1.10 Upon completion of the contract, the council could decide to completely or partially discontinue continuous monitoring using the intervening period to complete negotiations with KCC should a permanent station be required.
 - 1.11 There is no specific legal requirement for the council to operate a continuous monitoring station as part of its responsibilities under the Local Air Quality Management regime. The current and extensive network of diffusion tubes will be maintained. However it is possible the hourly mean concentration for NO₂ is being breached on Upper Stone Street and use of a continuous analyser is the only way to establish if this the case. Diffusion tubes do not measure particulates and so use of a continuous analyser is necessary to monitor these emissions.
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2. AVAILABLE OPTIONS

- 2.1 Option 1: Do not replace the Fairmeadow Station at all, and leave the continuous monitoring at Detling Station and the diffusion tubes unchanged.
 - 2.2 Option 2: Discontinue all continuous monitoring, i.e., to decommission the Detling site, and to continue monitoring by diffusion tubes only.
 - 2.3 Option 3: The status quo. Continue looking for a permanent new site for the Fairmeadow Station and work towards recommissioning it in a new location in or near Upper Stone Street. In considering this option, members may wish to take account of the age of the existing equipment and if monitoring is expected to continue in the long term, the equipment may need replacement at some point.
 - 2.4 Option 4: Employ a contractor to undertake monitoring on our behalf, in Upper Stone Street, for an initial period of one year. The contractor would install the monitoring station and undertake all necessary maintenance, repairs, calibrations, and servicing, which would allow monitoring to restart fairly quickly. Officers would continue to progress securing the Jubilee Church site for longer term monitoring.
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3. PREFERRED OPTION AND REASONS FOR RECOMMENDATIONS

- 3.1 Option 4: Hire a contractor to undertake monitoring for a period of 12 months.

- 3.2 The advantage of this option is that could be started very quickly. Although there is a cost to this option, (approximately £16,000, plus data management) this would be partly offset by the cost of servicing our own in house station (about £3,300 plus data management) and would save approximately 1 day of officer's time per month. More details are given in the Appendix.
- 3.3 The equipment used would all be of the types approved by DEFRA for the purposes of Local Air Quality Monitoring and reporting. The £16,000 cost of this option can be funded within existing budgets. The pollutants measured would be NO₂, PM₁₀, and PM_{2.5}. The data obtained would be used to inform longer term decisions about monitoring in the area, by, for example, alerting us to exceedances of other air quality objectives, such as the PM₁₀ annual mean or NO₂ hourly mean objectives. At the end of the 12 month period, a further review of the long term continuous monitoring undertaken would be made based upon the data gathered.
- 3.4 A further advantage is that the monitoring would include PM_{2.5}. The Council does not currently monitor PM_{2.5} and has no suitable instrument for doing so.
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4. RISK

- 4.1 The main risks relate to the discontinuation of all monitoring. The Council may then be seen to be failing to comply with its statutory obligations.
- 4.2 Poor air quality continues to gain a significantly higher public profile both nationally and locally. Discontinuing air quality monitoring completely would therefore carry a reputational risk for the Council. Conversely, including PM_{2.5} in the monitoring contract would not greatly increase the cost and would demonstrate that the Council is taking the issue of air quality very seriously.
- 4.3 The high levels of NO₂ measured by diffusion tubes in Upper Stone Street, might indicate an exceedance of the hourly mean objective for NO₂ and there is no way to confirm this other than by using continuous analysers.
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5. CONSULTATION RESULTS AND PREVIOUS COMMITTEE FEEDBACK

- 5.1 This review of air quality monitoring was undertaken in response to a request from the Chairman of SPST at the previous meeting on 5th December 2017.
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6. NEXT STEPS: COMMUNICATION AND IMPLEMENTATION OF THE DECISION

- 6.1 A suitable contractor will be engaged to set up a temporary monitoring station in Upper Stone Street in the shortest possible time. MBC Officers will continue to pursue securing a permanent location with KCC.
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7. CROSS-CUTTING ISSUES AND IMPLICATIONS

Issue	Implications	Sign-off
Impact on Corporate Priorities	Keeping Maidstone Borough an attractive place for all – by seeking to improve the air quality and the health of residents and visitors to the borough.	[Head of Service or Manager]
Risk Management	Refer to section 4 of the main report.	[Head of Service or Manager]
Financial	There is currently no budget for the preferred option estimated at £16000. This can be met by an identified underspend in the AQ budget.	[Section 151 Officer & Finance Team]
Staffing	Management of the preferred option will be within current staff levels. Delivery will be absorbed through project funding. There are no additional staffing costs.	[Head of Service]
Legal	Accepting the recommendations will fulfil the Council’s duties under the local air quality regime. Failure to undertake monitoring in Upper Stone Street may place the Council in breach of its statutory obligations	Cheryl Parks, Lawyer (Planning), Mid-Kent Legal Services
Privacy and Data Protection	The action listed is unlikely to result in the gathering of personal data. All air quality monitoring data is made available publicly.	Legal Team
Equalities	The recommendations do not propose a change in service. However, following the initial 12 month monitoring period and	Equalities and Corporate Policy Officer

	prior to a decision been taken an EqIA should be undertaken.	
Crime and Disorder	No issues identified	[Head of Service or Manager]
Procurement		[Head of Service & Section 151 Officer]

8. REPORT APPENDICES

- Appendix 1: Briefing Note for Members Regarding Air Quality Monitoring in Maidstone