SUBJECT:	*Motorway Air Quality Monitoring Station in South Bucks*
REPORT OF:	*Healthy Communities Portfolio Holder – Councillor Paul Kelly*
RESPONSIBLE OFFICER	*Ben Coakley – Environmental Health Manager*
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WARD/S AFFECTED	*Denham, Iver Heath, Iver Village, Gerrards Cross.*

1. Purpose of Report

To propose that the existing motorway continuous air quality monitor situated close to the M25 in Gerrards Cross is decommissioned, allowing the Council to refocus on other hot spots in the District.

The PAG is asked to advise the Portfolio Holder on the following recommendation(s):

RECOMMENDATION to Cabinet:

a. That the current motorway air quality monitoring station is decommissioned.
b. That the existing allocated budget is retained to undertake enhanced monitoring / action in other hot spot areas as identified in the statutory review and assessment of air quality in the District.

Cabinet to consider the advice of the Portfolio Holder and any comments arising from the PAG.

2. Reasons for Recommendations

It is clear from the statutory guidance that local authorities should take the opportunity to review the effectiveness and suitability of its monitoring strategy over time. A review of the current automatic monitor has identified that:

- The current annual running costs are approximately £5,800 each year.
- The kit is now over 15 years old and more likely to fail.
- The current location is not optimal
- The Council has obtained useful detailed long term trend data since 2001 which will remain valid even if the station closed.
- The existing budget could be more effectively utilised in monitoring other hotspot areas.
- There is an opportunity to better engage and inform local residents
- It would also be an opportunity to consider the potential for $PM_{2.5}$ monitoring in the district, which is now an indicator in the Public Health Outcomes Framework.
- New base line data could be established to support the review & assessment process in other areas of the district such as Iver.

3. Content of Report

This report seeks approval to decommission the existing motorway monitor. The location of the monitor can be seen in appendix 1.

There is no capital expenditure to continue its use, however, there are annual running costs and due to the age of the equipment, these will increase as equipment begins to fail and become more costly to repair, (and the parts may not be obtainable).

Although the station could potentially provide further useful data with regard to changes on the motorway in relation to new infrastructure projects in the District, there remain some practical issues with the existing site.

It is often difficult to position a monitor in the most optimum position and the station is some distance away from receptors and in a cutting. On cold, still days where pollution does not disperse and concentrations build up; the emissions will concentrate on the M25 and not in the surrounding areas. Although in the past few years the monitoring station has measured an annual mean slightly exceeding the NO_2 objective, under revised guidance, this should be linked to relevant exposure. The distance between the monitor and nearest receptor is far enough that the concentration of pollutants may have reduced to below the objective level by the time it reaches a relevant receptor.

As it is a motorway site, officers have explored the possibility of Highways England taking over the running of the station; however they have confirmed they are not interested in doing so.

Closing the monitoring station would cost approximately £1000. There is a possibility that the TEOM could be sold for approximately £500, however a buyer has not been identified at the time of writing this report.

The preferred choice is therefore to decommission the current site and redeploy the savings to look at other hot spot areas in the district.

Under the Environment Act 1995 all district authorities are obliged to review and assess air quality in line with the Government's air quality strategy. The Council needs to robustly demonstrate any existing problem locations and work through the air quality assessment process with a view to confirming the need for an Air Quality Management Area (AQMA) designation.

A 2016 detailed assessment in Iver has demonstrated that there *could* be exceedences where there is relevant exposure. Consequently more diffusion tubes have been added to the network. At least one year of monitoring data will be required before a decision could be made on the requirement to declare an AQMA.

A new roadside monitor would provide more precise data than a diffusion tube. Currently we are only measuring concentration as monthly means. The monitor would measure concentrations to at least 15 minute means. This would provide evidence of how concentrations vary throughout the day, week or month, which could inform future decisions (i.e. construction traffic times etc.).

The precise siting of any new continuous monitor would depend on a number of factors including space, (at least 1500cms x 1500cms x 750cms), and access to power.

A number of projects have been running nationally where research has been carried out using air pollution sensors and members of the public. Whilst Defra will not accept the declaration of an AQMA based on monitoring sensors alone they can be used to work with members of the public, workplaces and schools to illustrate what is otherwise an invisible phenomenon. Research work at Cambridge University and Colocation studies with Defra approved equipment has so far been positive.

Officers are also keen to consider measures that compliment the NICE guidance "Air pollution - outdoor air quality and health" through raising awareness and also those that can assist in demonstrating the impact of major infrastructure projects.

Examples of alternative monitors:

AQ Mesh. The AQ mesh can be used to monitor NO2, NO, O3, PM10, PM2.5 and PM1. It weighs 2kg and is attached to lampposts. The main advantages are its low purchase and running costs and manoeuvrability.

AirSensa. The AirSensa takes readings of key air pollutants (NO2, NO, O3, CO, PM10,2.5,1), as well as relevant atmospheric conditions and noise levels. 10-second means are calculated and the data is transmitted and processed for calibration, removal of cross-interference, and interpretation, with the results available in near real-time (maximum 15-minute delay). This uses the same sensors as the AQ mesh but is even more portable. If installed in schools it comes with a teaching pack.

4. Options

a. To mothball the AQMS and leave in situ pending further review (would still require some maintenance)

b. To Decommission the AQMS and use the resultant savings to tackle other hotspot areas in the district.

c. To continue with the existing arrangements of monitoring

5. *Corporate Implications*

5.1 ***Financial*** *- Funding of the AQMS is already in the base budget.*

5.2 ***Legal -*** *Local authorities have a duty under section 83(1) of the 1995 Act to designate those areas where the air quality objectives are unlikely to be, or are not being, met as Air Quality Management Areas (AQMAs). These areas have to be designated officially by means of an 'Order'. The European Commission has formally launched infraction proceedings against the UK for breach of nitrogen dioxide limit values under the EU Air Quality Directive. Defra has recently reminded Local Authorities of the discretionary power in Part 2 of the Localism Act under which the Government could require responsible authorities to pay all or part of an infraction fine. The procedures are set out in a policy statement published by DCLG.*

5.3 ***Environmental Issues and Sustainability*** *- Air pollution is both an environmental and health issue*

6 Links to Council Policy Objectives

We will strive to conserve the environment and promote sustainability

- *Conserve the environment*
- *Promote sustainability*

List of Background Papers:
Environment Act 1995
South Bucks Progress Report 2015
Local Air Quality Management Technical Guidance (16) Defra
Local Air Quality Management Policy Guidance (16) Defra