

Healthy Communities PAG

SUBJECT:	<i>Update on Major Infrastructure - Cumulative Impacts with a focus on air quality in Iver</i>
REPORT OF:	<i>Cabinet Member for Healthy Communities – Councillor Paul Kelly</i>
RESPONSIBLE OFFICER	<i>Martin Holt – Head of Healthy Communities</i>
REPORT AUTHOR	<i>Tracy Farrell - 01494 732756, tfarrell@chiltern.gov.uk</i>
WARD/S AFFECTED	<i>Iver Heath, and Iver Village & Richings Park</i>

1. Purpose of Report

In October 2015, Officers provided an update to Cabinet on the potential cumulative environmental impacts as a result of forthcoming national infrastructure projects in the Iver area. Major infrastructure includes HS2, HEX, GWRL and the M4 smart Motorway.

This is an issue that many Members are aware of and there is a high interest from local residents. Officers have been working hard to raise these concerns with the various delivery companies such as HS2 where they are able to.

It was resolved that £20k be set aside for future challenges against infrastructure projects, including commissioning and establishing environmental baselines where required. Whilst the spending has been delegated to the Head of Healthy Communities, it is considered beneficial to provide a further update and in particular an overview of the air quality implications at this time.

RECOMMENDATIONS

- To note that Officers from across the Council – Planning Policy, Environmental Health and the HS2 team are in dialogue on each of the proposed infrastructure projects providing critical feedback on proposals.
- To note the statutory framework in relation to air quality and the increased potential for air quality deterioration in the Iver area as a result of major national infrastructure projects.
- To endorse the use of £2,750 from the already allocated funding for a Detailed Air Quality Assessment in Iver.
- To acknowledge the process for engagement with local and statutory bodies if the air quality assessment indicates that an AQMA should be designated.
- To note the intention to investigate the proposed purchase of a FIDAS PM₁₀ PM_{2.5} PM₁ air quality monitor for Iver, using the funding already agreed to provide robust and conclusive data for the area and also provide this to relevant stakeholders including the public, Bucks County Council and national project developers.
- To note that officers will undertake a review of the effectiveness of the current motorway Air Quality Monitor (NO₂ analyser and PM₁₀ monitor) including the potential of transferring the management to Highways England, moving the monitor

Healthy Communities PAG

or indeed decommissioning. The monitor is currently under contract until April 2017, at which point a decision would be made.

- To note the intention to reserve a proportion of the allocated funding for future analysis of noise assessments following further negotiations with external stakeholders to improve their proposals and associated mitigation.

2. Executive Summary

There is the potential for Iver and the surrounding area, to be particularly impacted by infrastructure developments (such as Crossrail development, HS2, a potentially expanded Heathrow Airport and Smart Motorways) in the immediate future.

In terms of noise, officers continue to work with agencies and relevant stakeholders to highlight the noise impacts of construction activities in the Iver area. This takes the form of stakeholder meetings, negotiation bi-laterals, HS2 team involvement, critical challenge and highlighting key issues. It is the officer's current opinion that this approach should continue with regard to the noise element and funding should be safeguarded for when more detailed information is provided by external stakeholders.

In terms of air quality, at this point, the Council needs to robustly demonstrate the 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. This process is statutorily set out in the Environment Act 1995.

3. Reasons for Recommendations

The recommended option will fulfil the statutory air quality guidance for monitoring and allow base line data to be established. It will also provide definitive data to support future challenges to the adequacy of proposed mitigation and technical challenge.

4. Content of Report

Background

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 published in 2000 (updated in 2007 and 2016).

The National Air Quality Strategy sets out objectives (see Appendix 1), for a range of pollutants and local authorities are required to work towards meeting these objectives.

The objective level for both Nitrogen dioxide and PM₁₀ is 40µgm³ measured as an annual mean, with a further objective for the 24 hour mean for PM₁₀ of 50 µgm³. Where a new potential exceedence is identified, a Detailed Assessment must be carried out. Should the exceedence be confirmed by the study, then an Air Quality Management Area (AQMA) must be declared.

The Department for Environment, Food and Rural Affairs (DEFRA) is the national lead, and closely supervises the work of local authorities in relation to their air quality duties.

Existing Air Quality Management Areas

South Bucks has one Air Quality Management Area (AQMA) covering the 3 roads M25, M40 and M4 (Appendix B). The AQMA was declared in October 2005 due to projected exceedences of Nitrogen Dioxide (NO₂). These exceedences are largely associated with motorway road traffic and therefore any effective action is subject to negotiation and agreement by Highways England. Opportunities will be taken to feed into any available projects or negotiations with them as they arise.

Monitoring

SBDC currently has a network of 20 diffusion tubes (Appendix 2) measuring Nitrogen Dioxide throughout the district. The locations and annual mean trends for 2014 & 2015 are shown in Appendix 3. Diffusion tubes are a relatively cheap, but useful as a screening tool for Nitrogen Dioxide levels.

SBDC also has an "Air Quality Monitoring Station", with continuous analysers monitoring NO₂ and PM₁₀ (Appendix 4). The continuous analyser data for 2010 – 2014 is shown below. Whilst the continuous analyser is precise, the annual running costs are currently £5,800 per year. Defra is now suggesting that Local Authorities assess their current monitoring strategies and if trends are already well established (e.g. continuous monitoring has taken place for over 5 years), more emphasis could be placed on developing actions as part of the action planning phase.

Therefore, opportunities for the motorway air quality monitoring station will be progressed over the year in order for a decision to be made in April 2017 (current contract end).

A new 'indicative' monitor has recently been commissioned by Iver Parish Council and this data will be utilised as part of the process and support existing diffusion tube data.

Reporting

The national reporting process has recently been amended and strengthened with each authority required to submit an "Annual Status Report" (ASR), the first of which will be submitted to Defra in June 2016.

The Council is also required to undertake annual progress reports against any existing action plans, and submit this to DEFRA for independent external assessment.

PM_{2.5}

PM_{2.5} monitoring has recently been introduced into the new air quality guidance.

For local authorities in England, the technical guidance does not prescribe what the local authority approach should be; it is for the local authority in consultation with its public health officials to consider how it wishes to define this role and what approach to take, based upon the local circumstances and public health priorities. This flexibility of approach is intended to allow authorities to steer towards focussing upon clear actions with attainable targets to tackle PM_{2.5} alongside other air pollutants. PM_{2.5} is now also a department of health indicator and therefore Officers are building links with organisations such as the Clinical Commissioning Groups as a shared priority.

Identifying Areas for PM_{2.5} Action

Due to its extremely small size, PM_{2.5} can travel for long distances in the air and it is estimated that as much as 40% to 50% of the levels found in any given area can be from sources outside a local authority's direct boundary. Nevertheless, this means that the contribution of local sources to total PM_{2.5} levels is significant (typically 50% or more), and therefore local actions to reduce PM_{2.5} emissions will have a significant beneficial impact with regard to overall PM_{2.5} concentrations.

Local authorities are encouraged to make use of all available sources of information to aid the identification of any 'hot-spot' areas of elevated PM_{2.5} concentrations within the local authority area. Such information will aid the direction of actions to specific priority areas that are most in need of reductions in PM_{2.5} levels, and allow measures to be targeted to the identified PM_{2.5} issues. It will also allow progress in reducing PM_{2.5} levels due to local authority action to be benchmarked.

Increased frequency of PM_{2.5} monitoring and/or modelling is encouraged where possible, particularly where it has been identified as a priority. The FIDAS monitor, measures PM₁₀, PM_{2.5} and PM₁ simultaneously. It has a small footprint, does not require local visits and is certified for the Defra networks.

Consultation

For the purpose of the 1995 Act, the Council is required to consult on any proposed AQMAs before they are approved. It also has a statutory duty to consult with other parties in relation to the development of Action Plans and these statutory consultees are set out in Schedule 11 of the Environment Act 1995. (Appendix 5)

The Council should then consider any responses, ahead of the any decision on the content of the Action Plan. It is very important to ensure there is effective consultation and liaison across local authority departments. Steering groups and committee meetings should have the support of the Chief Executive to ensure that air quality is dealt with consistently across the departments, with a clear understanding as to what the legal requirements and policy drivers are.

Developing the Action Plan

If an AQMA is proven to be required and subsequently designated, the Council then has 12 months to develop an Action Plan.

The case in Iver

The diffusion tube data in Iver has shown short term exceedences of the national objective for NO₂, and this will be reported to Defra in June 2016, with a recommendation to proceed to a detailed assessment. Iver is situated in an area already impacted by development.

Due to the cross boundary nature of PM₁₀ and PM_{2.5}, and the increase of these pollutants associated with construction, knowledge of baseline figures is important in considering the impact of developments.

Healthy Communities PAG

It is vital to prove the need for additional mitigation in the area as a result of any new activities and the information will be used by officers in any negotiations available on each of the major infrastructure projects.

5. Corporate Implications

3.1 Financial

Funding has already been agreed by Cabinet on the 13th October 2015. This report updates Cabinet on proposals for the allocation of that funding.

3.2 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.

3.3 Environmental Issues and Sustainability

Air pollution is both an environmental and health issue and the report considers the most effective way of following statutory guidance in order to highlight the air quality issues in the Iver area and provide evidence on the need to mitigate.

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

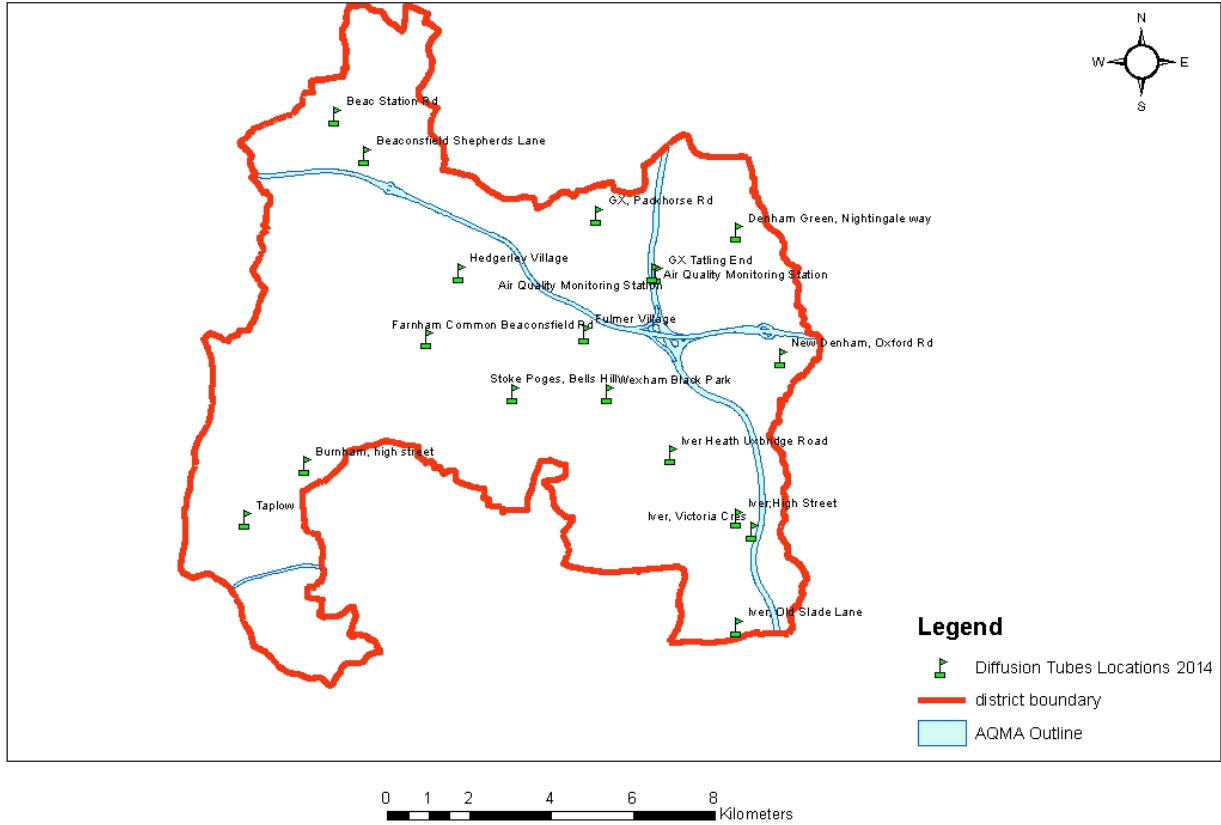
Local Air Quality Management Policy Guidance (16) Defra

Appendix 1

Air Quality Objectives included in Regulations for the purpose of LAQM in England

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 µg/m ³	Running annual mean	31.12.2003
	5.00 µg/m ³	Running annual mean	31.12.2010
1,3-Butadiene	2.25 µg/m ³	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m ³	Running 8-hour mean	31.12.2003
Lead	0.5 µg/m ³	Annual mean	31.12.2004
	0.25 µg/m ³	Annual mean	31.12.2008
Nitrogen dioxide	200 µg/m ³ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 µg/m ³	Annual mean	31.12.2005
Particles (PM₁₀) (gravimetric)	50 µg/m ³ , not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 µg/m ³	Annual mean	31.12.2004
Sulphur dioxide	350 µg/m ³ , not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m ³ , not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 µg/m ³ , not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

South Bucks District Council
Map of Diffusion Tube Monitoring Locations



Healthy Communities PAG

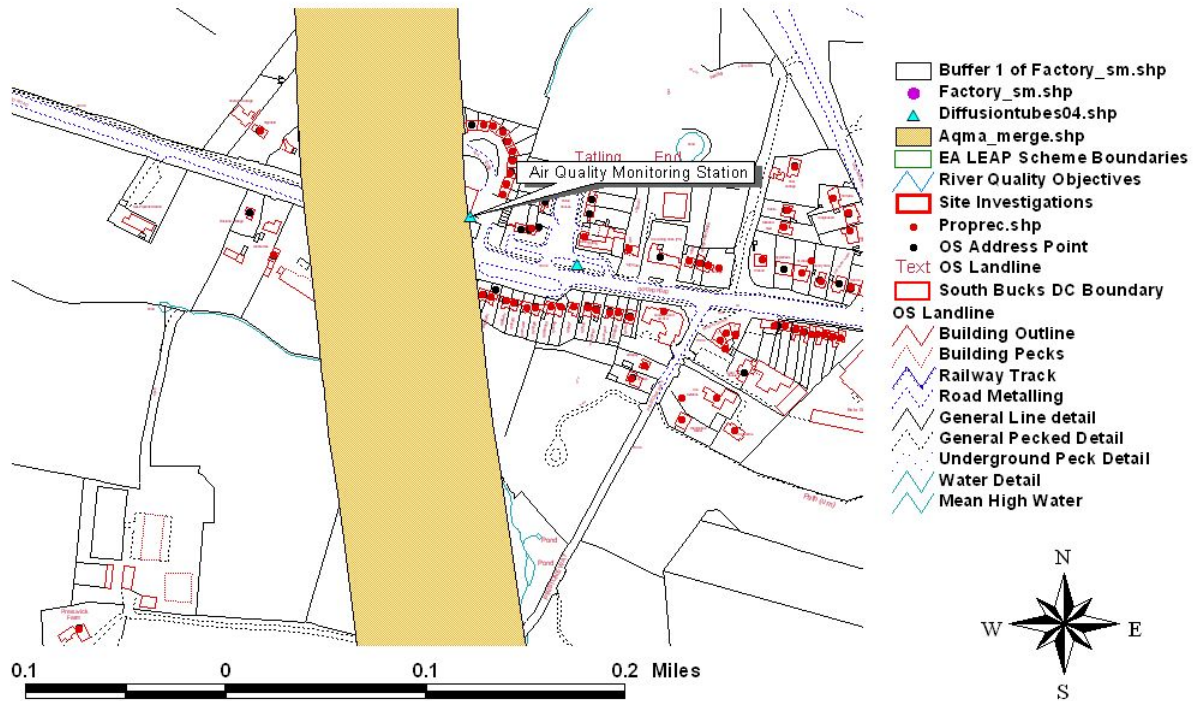
Annual mean nitrogen dioxide data 2014 & 2015 (exceedences of the 40µg/m³ in red)

Location		Bias adjusted average µg/m ³ 2014	Bias adjusted average µg/m ³ 2015
Iver: Old Slade Lane	Kerbside(100m Adj M4)	31.64	27.32
Iver: Victoria Crescent	Kerbside(100m adj M25)	32.63	32.87
Iver: High Street	Kerbside	34.07	36.15
Iver Heath: Uxbridge Road	Kerbside	42.46	43.95
Denham: Knighton Way	Kerbside	32.98	35.45
Denham Green: Nightingale Way	Kerbside	20.91	22.25
Gerrards Cross: A40	Kerbside A40 (50m adj M25)	35.96	38.11
Gerrards Cross: Packhorse Road	Kerbside	32.36	29.85
Fulmer Village: Windmill Road	Kerbside	24.26	24.97
Wexham: Black Park Road	Kerbside	16.29	17.69
Hedgerley: Village Lane	Kerbside	15.90	16.61
Farnham Common: Beaconsfield Road	Kerbside	29.46	29.92
Beaconsfield: Station Road	Kerbside	32.93	36.16
Beaconsfield: North Drive	Kerbside A40	42.46	41.23
Beaconsfield: Shepherds Lane	Kerbside	29.23	30.14
Burnham: High Street	Kerbside	23.13	22.13
Taplow: Bath Road	Kerbside A4	34.35	37.21
GX AQMA	Kerbside (Adj M25)	37.53	38.11
GX AQMA	Kerbside (Adj M25)	38.78	42.28
GX AQMA	Kerbside (Adj M25)	40.98	41.72

Results of Automatic Monitoring of Nitrogen Dioxide:

Site ID	Site Type	Within AQMA?	Annual Mean Concentration µg/m ³				
			2010	2011	2012	2013	2014
Gerrards Cross	Kerbside	Y	41	36	32	40	42

Appendix 4 Air Quality Station Location



Appendix 5 Consultation

Schedule 11 of the 1995 Act requires local authorities to consult:

- The Secretary of State;
- The Environment Agency;
- The highways authority;
- In London, the Mayor (for London authorities only);
- All neighbouring local authorities;
- The county council (if applicable to English local authorities);
- Any National Park authority;
- Other public authorities as appropriate; and
- Bodies representing local business interests and other organisations as appropriate.

Further, paragraph 4 of schedule 11 states that within the Environment Act 1995 there is a provision for public access to information. As well as the Review and Assessment reports on which they are required to consult, local authorities should proactively make available copies of:

- orders designating an air quality management area;
- action plans;
- county council proposals for measures to be included in the action plan; and
- any directions given to the district or county council by the Secretary of State.