

<b>Report to:</b>	Climate and Environment Advisory Committee 7 December 2023
<b>Lead Cabinet Member:</b>	Lead Cabinet Member for Environment - Cllr Brian Milnes
<b>Lead Officer:</b>	Head of Climate, Environment & Waste - Bode Esan

## Air Quality Update

### Executive Summary

1. South Cambridgeshire District Council have an adopted Air Quality Strategy to cover the period 2021-2025. This report presents an update on the progress made in line with that air quality strategy. Updates include:
  - a. Details of new continuous monitors and the intention to remove older monitors.
  - b. Update on the 2023 Annual Status Report
  - c. Update on school studies using the ‘Zephyr’ monitor and other planned promotional work such as supporting Clean Air Night
2. Conclusion on the study into the use of Public Space Protection Orders to prevent vehicle idling
3. Officers are also seeking a decision on updating the strategy early to allow two key elements to be incorporated into a revised strategy before bringing a final strategy to the Climate and Environment Advisory Committee for scrutiny.
  - a. Investigate the opportunity for a joint strategy with Cambridge City Council (CCC)
  - b. The adoption of the World Health Organisation (WHO) global air quality guidelines as long-term aspirational targets.

### Recommendations

4. The committee are recommended to:
  - a. Review and comment upon the updates on the Air Quality Strategy
  - b. Note the conclusions of the use of Public Space Protection Orders and recommend to the Lead Cabinet Member to progress a positive engagement campaign rather than enforcement of vehicle idling
  - c. Recommend to the Lead Cabinet Member to progress an early revision of the South Cambridgeshire District Council Air Quality Strategy as a joint Greater Cambridge Air Quality Strategy with Cambridge City Council with the finalised strategy coming before committee in Spring 2024

- d. Recommend to the Lead Cabinet Member to adopt World Health Organisation (WHO) Air Quality Guidelines as the air quality standard to work towards across Greater Cambridge

## Background

5. Local authorities are required to monitor key pollutants across their district under the Local Air Quality Management (LAQM) framework. If key pollutants exceed objective levels (see table 1 below) then an Air Quality Management Area (AQMA) must be declared alongside an Air Quality Action Plan (AQAP) outlining how pollutants will be reduced.
6. New national legally binding PM<sub>2.5</sub> targets have been set, which comprise an annual mean target of 10µg/m<sup>3</sup> as well as a population exposure reduction of 35% on a 2018 baseline, both to be achieved by 2040. The National Air Quality Strategy (2023) sets out how local authorities are expected to contribute to delivering these targets. Whilst it is acknowledged within the strategy that not all sources of PM<sub>2.5</sub> originate from within a local authority district the strategy expects local authorities to consider those that are.
7. The Environment Act 2021 require local authorities to produce an Air Quality Strategy where LAQM objective levels are being achieved. Local Authorities are expected to be pro-active, not re-active to ensure that good air quality is maintained including how they will help deliver the national PM<sub>2.5</sub> targets.
8. Pollutant levels across South Cambridgeshire District have been reducing and are now typically below LAQM objective levels. The SCDC AQMA along the A14 was revoked in January 2022.
9. Air pollution is associated with a number of adverse health impacts. It is recognised as a contributing factor in the onset of heart disease and cancer. Additionally, air pollution particularly affects the most vulnerable in society: children, the elderly, and those with existing heart and lung conditions.

## Air quality strategy update

10. The adopted Air Quality Strategy outlines 3 focussed actions which are presented below:
  - a. Action A: air quality is monitored and understood district wide and appropriate measures are introduced to meet air quality objectives.
  - b. Action B: policies are in place to minimise impacts from future developments
  - c. Action C: public engagement is aimed at increasing local knowledge and supporting better choices in reducing daily impact on air quality.
11. A summary of progress made on each action since the last update to CEAC in March 2022 (report reference is provided below:

### Action A: air quality is monitored and understood district wide and appropriate measures are introduced to meet air quality objectives

12. Air quality is monitored using a number of methods in SCDC, including diffusion tubes, continuous monitor and 'Zephyr' sensors. A full update on current monitoring and further detail on the below points is provided in **Appendix A**.
13. Significant updates include the expansion of the diffusion tube network, the newly operating continuous monitors in Harston and Northstowe and the decommissioning of the

continuous monitors at Girton and Orchard Park with full reasoning for this in Appendix A. The Zephyr sensors are also continuing to operate well with a number of six-month monitoring projects ongoing.

14. The live results from continuous monitors are available to the public via the Air Quality England website run by Ricardo ([www.airqualityengland.co.uk/local-authority/?la\\_id=316](http://www.airqualityengland.co.uk/local-authority/?la_id=316)). While the data from the Zephyrs can be accessed via the Zephyr portal (<https://portal.earthsense.co.uk/SouthCambsCouncilPublic/>).
15. All of our collected data is published annually within our Annual Status Report (ASR). The ASR is a statutory requirement and requires sign off by Defra. We can confirm that the 2023 report received approval from Defra on the 20 October 2023 and a copy of the ASR is available on our website as well as being included as **Appendix B** to this report.

#### Action B: policies are in place to minimise impacts from future developments

16. Air quality is consulted on planning applications for major developments where we use low emission strategies to promote and accommodate sustainable transport. In 2023 this has included 55 applications up to the end of October 2023.

#### Action C: public engagement is aimed at increasing local knowledge and supporting better choices in reducing daily impact on air quality

17. Zephyr initiative: monitoring of air quality near primary schools:

The major reason for investigating air quality around primary schools is that children are amongst the most vulnerable to the effects of air pollution. This is due to children's airways and respiratory systems being less developed than an adult's and because they breathe more rapidly than adults. This was reflected by the theme of National Clean Air Day in June 2021 of 'protect our children's health from air pollution'.

18. Studies have been undertaken at six schools (Cambourne, Harston, Histon, Milton, Northstowe and Swavesey) with the reports from each school available on our website. The most recent study, Milton, is included as **Appendix C** to this committee report.
19. Currently other studies involve assessing the impact of domestic burning in a residential area, a school study at Barton primary school and monitoring along the A10 in Waterbeach. Once monitors become available, monitoring is intended to be undertaken at Cottenham and Shelford. The team are inviting further areas of study from either members or the public.
20. Plans are currently being developed to support clean air night, a new campaign aimed at raising awareness of the impacts of domestic burning on air quality. A recent report by [Urban Health](#) has shown that domestic burning is not only bad for air quality but is also more costly than gas central heating when buying approved wood, and emits more carbon dioxide emissions than gas central heating.

### **Public Space Protection Orders for reducing vehicle engine idling**

21. Officers were requested to investigate the use of PSPOs to reduce vehicle idling around schools and a full report is included in **Appendix D**.
22. Having looked at PSPO regulations, other available regulations to control vehicle idling and best practice from other local authority areas, the conclusion is that PSPOs are not an appropriate mechanism to control idling and other legislation, Fixed Penalty Notices

(FPNs) specific to idling, is already available. The FPNs specific to vehicle idling do have some limitations and, where used, are generally only used as a last resort in extreme circumstances.

23. Best practice from other LAs indicates that positive promotional and awareness raising work is generally considered best practice and has proven successful in other areas.
24. The recommendation is for increasing our promotional and educational work around schools using existing resources, with a more in-depth engagement plan presented to CEAC in April 2024.

## **Greater Cambridge Air Quality Strategy and WHO guideline values**

25. Cambridge City Council (CCC) currently have an Air Quality Management Area (AQMA) in the centre of Cambridge; however, they are likely to revoke their AQMA due to the continued compliance with national air quality objectives. Where councils do not have any AQMAs they are required to have an air quality strategy to ensure continued improvements to air quality.
26. CCC will therefore be required to produce an air quality strategy. SCDC already have an air quality strategy. The production of a new joint air quality strategy will have the following benefits:
  - a. Alignment with the emerging local plan and joint Greater Cambridge planning service.
  - b. Allow for better and smoother partnership working on cross boundary infrastructure projects.
  - c. Allow for more streamlined engagement with other key stakeholders, such as Cambridgeshire County Council highways and public health departments, Great Cambridge Partnership and Cambridgeshire Combined Authority.
  - d. Allow for wider and more impactful awareness raising campaigns.
27. CCC have already approved the principle of developing a Greater Cambridge air quality strategy with SCDC.
28. The joint Air Quality Strategy will follow much of the same format as the existing strategy and will not result in a change of direction or significant new burdens on SCDC. The four Key Priorities of the proposed strategy are:
29. Key Priority 1: Policy & Development Control

Minimising emissions through development is key. The Strategy will be integrated into the local plan policy and can be updated in response to evolving national and local policy. Proposed measures will design out air quality impacts during both construction and operation phases to prevent 'creep' as large-scale development comes forward. This may include 'Air quality Neutral' developments, reducing NRMM emissions during construction and EVCP. This is similar to Action B in our existing AQS.
30. Key Priority 2: Infrastructure Improvements

Continuing to work with partners to deliver improved infrastructure; facilitating the uptake of more sustainable transport solutions and active travel options. Planning has a major role to play in infrastructure provision. Examples include support of public transport options, freight consolidation / last mile deliveries, road hierarchy, improvements to cycling and walking infrastructure and facilitating EVCP infrastructure provision.

### 31. Key Priority 3: Community Engagement & Promotion

In parallel to active measures to reduce exposure to pollutants we need to actively promote and engage with residents and visitors enabling access to better information to facilitate behavioural change. This may include anti idling campaigns, better burning campaign, improved public engagement through accessibility of air quality data and promoting awareness on air quality. We will continue to work closely with Public Health. This is similar to Action C in our existing AQS.

### 32. Key Priority 4: Monitoring

Continued monitoring is required given the scale of the future developments and the potential to introduce new hotspots where air quality could be at risk, the need for a robust and up to date monitoring network across the district is a priority. This is similar to Action A in our existing AQS.

33. To allow for the differences between Cambridge City and South Cambridgeshire areas, there will be a series of actions at the rear of the strategy that will either be applicable to both authorities, or to the relevant authority where the issue is localised.

34. The overall aim of the AQS will be to ensure continued improvement of air quality within both South Cambridgeshire and Cambridge City as it is widely accepted that there is no safe level of air pollution, with a shift away from specific levels towards exposure reduction and delivering the known health benefits that these reductions can offer.

35. Research undertaken by the Committee on Medical Effects of Air pollution (COMEAP) concluded that, even low concentrations of pollutants are likely to be associated with adverse effects on health.

36. The World Health Organisation (WHO) produced updated Air Quality Guidelines (AQG) in 2021. These targets are based on the evidence linking concentrations of pollutants in ambient air with adverse effects on health and are targets that protects public health. COMEAP considers these WHO 2021 guidelines as suitable long-term targets.

37. Table 1 compares the LAQM objective levels and national targets for key pollutants against the WHO Air Quality Guidelines 2021.

Table 1: Air quality Objective Levels and WHO guideline values

Pollutant	Averaging Period	Concentration	
		Current UK Limit	WHO 2021
<b>AQ (England) Regulations 2000 (Apply to LAQM)</b>			
PM <sub>10</sub> µg/m <sup>3</sup>	Annual Mean	40 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>
	24 Hour Mean	50 µg/m <sup>3</sup>	45 µg/m <sup>3</sup>
NO <sub>2</sub> µg/m <sup>3</sup>	Annual Mean	40 µg/m <sup>3</sup>	10 µg/m <sup>3</sup>
	24 Hour Mean	200 µg/m <sup>3</sup>	
<b>Environmental Targets (PM) Regulations 2023 (apply to national government)</b>			
PM <sub>2.5</sub>	Annual Mean	10 µg/m <sup>3</sup>	5 µg/m <sup>3</sup>
	Exposure Targets	35% Reduction	

38. Adopting the WHO guideline values will allow for a long term target for air quality improvements in the Greater Cambridge area and will prevent pollution levels from increasing given the scale of development and population increase coming forward in the next 20 years through the emerging Greater Cambridge local Plan.

39. CCC have already approved the principle of working towards the WHO guideline values.

40. Given the ambitious nature of some of the WHO guideline values, it's proposed to have interim targets that may be more achievable in the five year life cycle of the proposed AQS.

41. If the approval to continue with a joint air quality strategy is approved at this meeting the timelines for progressing the proposed joint strategy are:

- a. Public consultation in January and February 2024
- b. Final air quality strategy to be presented to CEAC in April 2024

## Alignment with Council Priority Areas

**Being green to our core**

## Appendices

Appendix A: Update on air quality monitoring network

Appendix B: Annual Status Report 2023

Appendix C: Zephyr Milton School Study

Appendix D: Public Space Protection Orders for reducing vehicle engine idling

## Report Author:

Matthew Axton – Scientific Officer (Air Quality)