



Fulbourn – Air Quality Zephyr Study

Introduction to Study

SCDC were contacted with concerns about air quality in Fulbourn during the winter months due to domestic solid fuel burning (e.g. log burners/ open fireplaces). A Zephyr was erected in a residential area, Haggis Gap between October 2025 and April 2026. The Zephyr monitored NO₂, PM₁₀ and PM_{2.5}.

Background

Solid fuel burning releases Particulate Matter (PM₁₀ and PM_{2.5}). Particulate matter is harmful to human health, as it enters the body some particles are so small they enter the bloodstream.

Particulate matter has been linked to a range of long-term health conditions, including lung disease, heart disease and cancers. SCDC has an aim to reduce particulate matter levels across the district as set out within the [Greater Cambridge Air Quality Strategy](#).

Results of the Study

The results show that all pollutants measured are within national air quality objective limits. Graph 1 shows that PM₁₀ and PM_{2.5} levels at the Zephyr location in Fulbourn were very similar or below pollutant levels recorded at our three automatic air quality monitoring sites in Impington, Northstowe and Harston over the same time. This shows that solid fuel burning in Fulbourn is not causing increased Particulate Matter levels at Haggis Gap, when compared to the rest of South Cambridgeshire. Whilst the results are positive, SCDC acknowledge that there is further work to be done to reduce the levels of PM_{2.5} across the district.

The results also show higher than expected levels of Nitrogen Dioxide (NO₂) along Haggis Gap as shown in Graph 2. NO₂ is primarily associated with vehicle exhaust emissions. SCDC already monitor NO₂ along Cambridge Road, Fulbourn (DT50) as part of their diffusion tube monitoring network. Graph 2 clearly shows that NO₂ emissions are higher along Haggis Gap than Cambridge Road over the same time. As a result of this study, our NO₂ diffusion tube will be moved to Haggis Gap in 2017, to ensure our network monitors the highest concentrations of air pollution within the local area.

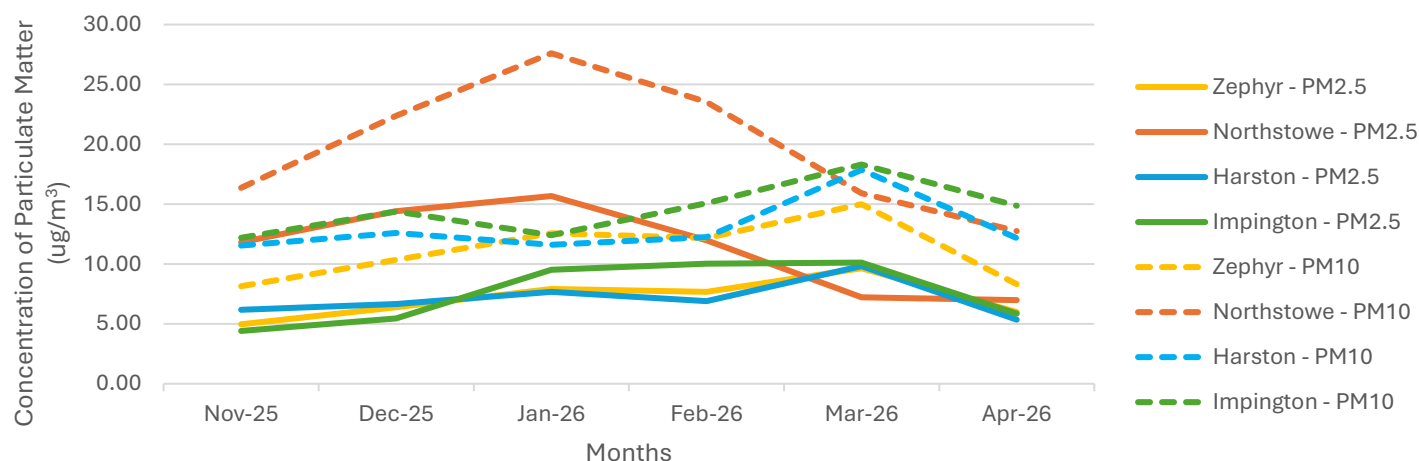


Key:
● - Zephyr Location

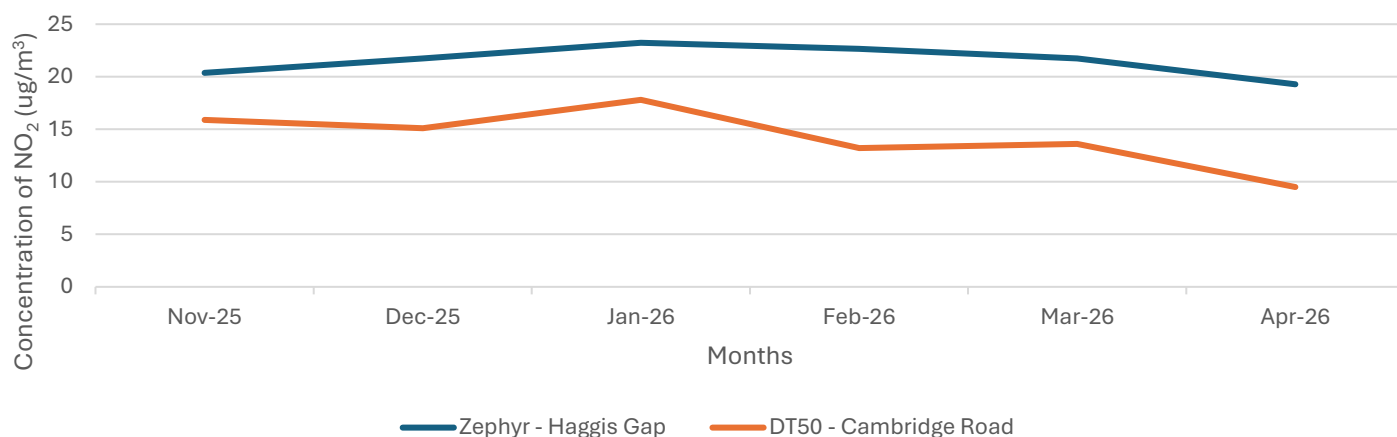
Pollutant	UK Air Quality Standards Regulations Objectives (2010) *To be met by 2024	Greater Cambridge Air Quality Strategy Interim Target (2024) *To be met by 2029	WHO Air Quality Guidelines (2021) *To be met as soon as can be achieved	Zephyr Study Average
Nitrogen Dioxide (NO ₂)	40 ug/m ³	20 ug/m ³	10 ug/m ³	21.60 ug/m ³
PM ₁₀	40 ug/m ³	20 ug/m ³	15 ug/m ³	10.33 ug/m ³
PM _{2.5}	-	10 ug/m ³	5 ug/m ³	6.53 ug/m ³



Graph 1 - Particulate Matter (PM₁₀ & PM_{2.5}) Local data



Graph 2 - NO₂ Fulbourn data



Conclusions

Although the study results showed that air quality is relatively good in Haggis Gap, Fulbourn with concentrations below national objectives, there is growing understanding that there are no 'safe' levels of air pollution.

Particulate matter levels in Haggis Gap, Fulbourn remain comparable to, or lower than, those recorded at other monitoring sites across South Cambridgeshire. This indicates that solid fuel burning in the area is not contributing to elevated particulate pollution at Haggis Gap. However, Particulate Matter reduction remains an area of focus for SCDC as set out within the Greater Cambridge Air Quality Strategy. The results suggest that traffic-related pollution is a more significant concern at this location. In response, SCDC will relocate the existing diffusion tube to Haggis Gap to ensure future monitoring captures the highest local concentrations and supports targeted air-quality improvements.

Overall, the study provides valuable evidence to guide future monitoring, strengthening our monitoring network and understanding of air pollution across the district.

For more information, visit our website [here](#), or contact us on air.quality@scambs.gov.uk