

December 2019

In response to the 'Review of Redmore Environmental's Air Quality Monitoring Results' we have provided the following comments which relate to the three conclusions provided on page 6 of the document. For ease of reference each comment has been included with our response shown immediately underneath in blue.

1. The dataset (3 monthly readings per site) is too small to draw any firm conclusions.

The timescale utilised was determined based on the clients requirements for monitoring alongside their financial budget for the works. There are significant costs associated with undertaking extended monitoring works due to laboratory fees and site attendance. In order to reduce these costs, the monitoring period was reduced as far as practicable. The client specified that results were required prior to the GMSF consultation closing on the 18th March 2019. In order to ensure the data recorded prior to this date was representative, annualisation of the values was required. The Department for Environment, Food and Rural Affairs (DEFRA) guidance 'Local Air Quality Management TG(16)' indicates in paragraph 7.124 that for annualisation to be completed there must be three months of monitoring data available. As such, this was the minimum period possible for the project.

2. Several aspects of the robustness of the data are questioned:

a. Some sites apparently contravene Defra TG16 (paragraph 7.181) guidance regarding tubes being mounted greater than 10 metres from bushes or trees overhanging or surrounding the tube location.

The positioning of the diffusion tubes was based on locations outlined by the client, and the availability of street furniture identified on the day of installation. The client provided preferred locations for monitoring, determined after discussions with local residents who were happy to have tubes installed in the vicinity of their property. These positions were reviewed prior to the site visit and agreed with the client. On the day of installation the most appropriate location was utilised based on the availability of suitable infrastructure.

b. Bias adjustment was not done with tubes co-located at the local continuous monitoring site (by the side of the A6 near Stepping Hill hospital); instead it was done using national data from 2017 [ref. 10, cited in ref. 1, paragraph 3.5.5, p.11 of PDF].

The use of the DEFRA spreadsheet for bias adjustment is an accepted method in accordance with the Local Air Quality Management TG(16) guidance. The use of 2017 data was considered acceptable as the 2018 spreadsheet had not been released at the time of analysis.

It is noted that there would have been additional costs associated with further monitoring at another site. In order to keep fees to a minimum for the client, the use of the national bias adjustment spreadsheet was considered to be more appropriate.

c. Annualisation adjustments include one site (Glazebury), which appears to have a low percentage (75%) of data capture for the 2018/19 period in question, i.e. below the recommended minimum of 85%.

We are unsure as to the determination of 75% data capture. The monitoring data for all continuous monitors was downloaded from the Air Quality England website (<https://www.airqualityengland.co.uk/>) for the relevant time period. With regard to Glazebury, the

annual mean indicated 100% data capture for the period 1/1/2018 – 31/12/2018 (annual mean) and 91% data capture for the period 1/2/2019 – 30/4/2019 (period mean). Both values are significantly higher than the recommended 85% data capture outlined in DEFRA guidance and are therefore suitable for use during annualisation.

3. The low commonality of the selected site locations between the Redmore and Atkins studies means that it is difficult to compare them.

The scope of works was based on the client's request to undertake Air Quality Monitoring in order to determine baseline conditions and identify potential issues along a stretch of the A6 road network. We were not made aware of any previous studies or requested to undertake monitoring in line with earlier work. The monitoring locations were determined based on discussions with the client, as discussed previously.

I hope the above provides sufficient clarification of the works undertaken. Please don't hesitate to get in touch should you have any further questions or would like to discuss any of our responses further.