



APPENDIX 2

BREATHE LONDON STATIONARY SENSOR NETWORK DOCUMENTATION

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Stationary Sensor Network Documentation

The following documents provide details on the processes employed to manage the Breathe London stationary network. This includes detailed information on deployment, data quality assurance and quality control procedures, calibration techniques, methodology and verification, and the results of the audit conducted to verify adherence with these procedures.

2A [AQMesh Fixed Sensor Network Data QA/QC Procedures](#)

This document provides a detailed description of the stages of the QA/QC process and data management practices to validate and maintain the performance standards of the AQMesh measurements.

2B [AQMesh Fixed Sensor Network Data QA/QC Audit Report](#)

This report presents detailed methodology and findings of the independent audit conducted by the National Physical Laboratory on fixed sensor network data quality assurance and control procedures carried out in the Breathe London project. It also includes a [response to the nonconformities](#) from the project consortium.

2C [Network Calibration Methodology](#)¹

This document provides a description of the novel, cloud-based network calibration method developed by the University of Cambridge allowing the entire stationary network to be remotely calibrated in near-real time.

2D [Sensor Performance and Calibration Evaluation Using Reference Monitor Co-locations](#)²

This report analyses the performance of Breathe London sensor measurements compared to reference instruments, and evaluates the effectiveness of multiple calibration methods. Comparisons of data scaled with the network calibration method and with “gold pod” co-locations carried out as part of the Breathe London project are presented.

2E [Statistical and Machine Learning Algorithms](#)¹

This report provides details on the technical design of the algorithm for analysing multi-fidelity datasets that use high accuracy reference measurements to characterise lower accuracy and lower-cost sensor measurements.

2F [Microscale Siting Report](#)

Results of a microscale siting study carried out at three Breathe London monitoring sites to determine if positioning of pods near building facades affected measurements.

¹ This report is currently being adapted for publication in a scientific journal and will be available in due course.

² This report is currently being adapted for publication in a scientific journal and will be available in due course. An embargoed version of the report can be shared with interested researchers upon request globalcleanair@edg.org.