

Air Quality and Dust Monitoring Monthly Report – January 2020

London Borough of Ealing



SKANSKA



Department for Transport

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Monthly Summary

- 1.1.1 This Summary Report is published in fulfilment of commitments detailed in the High Speed Rail (London-West Midlands) Environmental Minimum Requirements, Annex 1: Code of Construction Practice, for the nominated undertaker to present the results of air quality and dust monitoring undertaken in the London Borough of Ealing (LBE) during December 2019 and January 2020 respectively.
- 1.1.2 Figure 1 and Figure 2 in Appendix A indicate the current worksites together with air quality and dust monitoring locations.
- 1.1.3 This summary should be read in conjunction with the overview monitoring report available from www.gov.uk/government/collections/monitoring-the-environmental-effects-of-hs2, which highlights: the applicable standards and guidance, as well as the air quality and dust monitoring methodologies to be implemented by nominated undertakers throughout construction.
- 1.1.4 The current phase of construction works commenced in October 2019 and is expected to be completed by 2025. The current and completed worksites, as presented in Appendix A, Figure 1 and Figure 2, include:
- Current -
- Demolition and groundworks at Old Oak Common Depot (located in the London Borough of Hammersmith and Fulham), worksite ref. S004-WS01;
 - Victoria Road Crossover Box and Flat Iron Site mobilisation, site set up and groundworks, works site ref: S002-WS01; and
 - Willesden Euro Terminal mobilisation and site set up, works site ref: S001-WS03.
- Completed -
- Demolition of buildings on Atlas Road, worksite ref. S001-WS05;
 - Demolition of buildings on Victoria Road, worksite ref. S002-WS01;
 - Demolition works at Willesden Euro Terminal, worksite ref. S001-WS03; and
 - Demolition of buildings at Mandeville Road Pumping Station, worksite ref. S002-WS02.
- 1.1.5 Nine (9) dust monitors are installed around worksites, where works are underway. These sites returned a medium or high dust risk rating.
- 1.1.6 Dust monitoring locations and results are presented in Appendix B, Table 1, together with line charts of monthly data from each dust monitor. All continuous dust monitoring is undertaken using indicative monitors. Despite being Environment Agency (MCERTS) certified, indicative monitors carry a higher level of uncertainty than reference monitors, and therefore cannot be

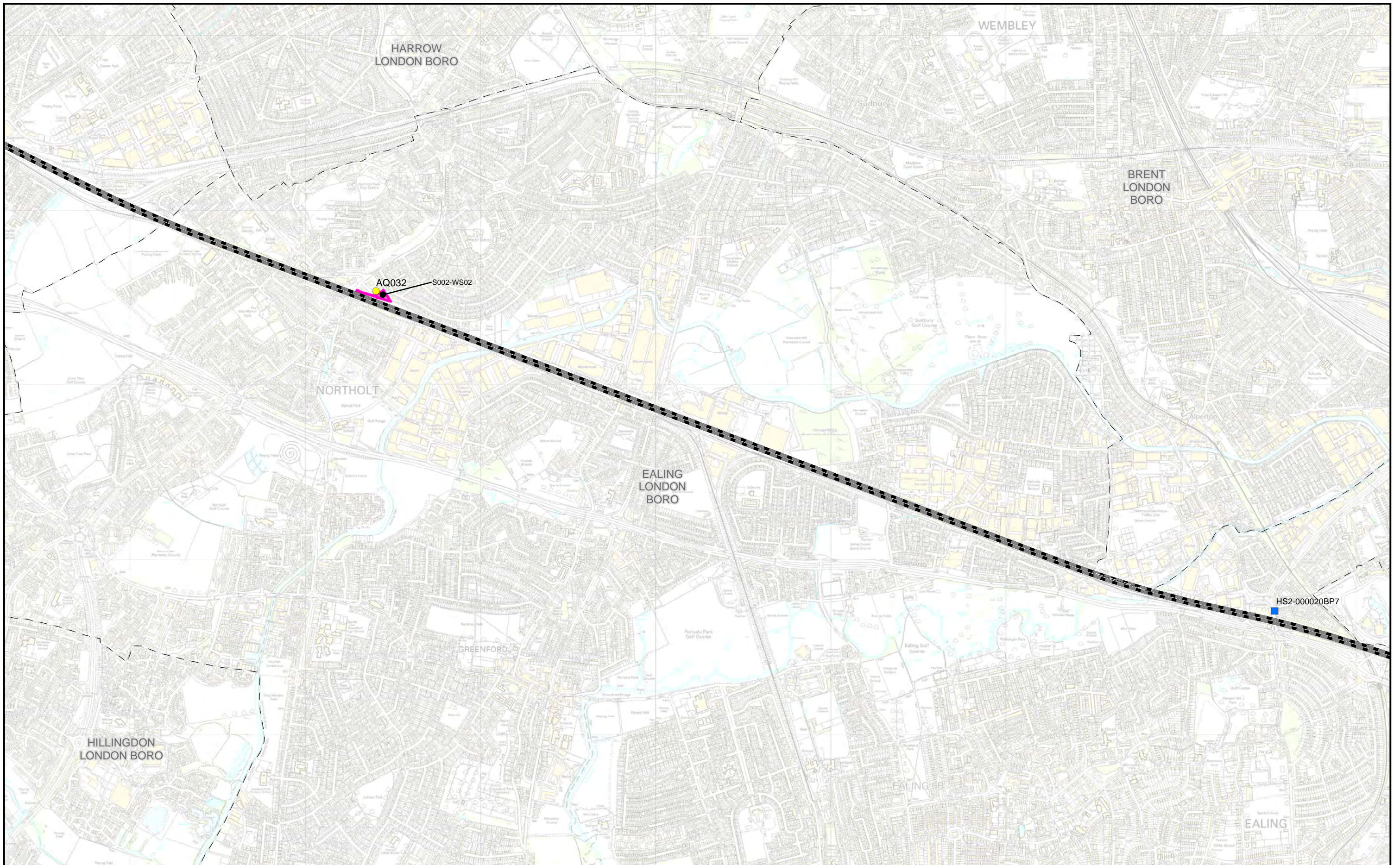
strictly compared with Air Quality Standards for human health and the environment. The purpose of the monitoring undertaken is to ensure the effectiveness of the on-site mitigation.

- 1.1.7 The trigger level of $190 \mu\text{g}/\text{m}^3$, over a 1-hour period, in accordance with the updated guidance document '*Guidance on Monitoring in the Vicinity of Demolition and Construction Sites (October 2018)*' has been applied.
- 1.1.8 There were no (0) dust trigger alerts recorded during this monitoring period (January 2020). All results were in line with expected ranges.
- 1.1.9 Diffusion tube monitoring of Nitrogen Dioxide (NO_2) was undertaken at six (6) locations in December 2019, around highways within the LBE as part of the management of air quality where significant effects may occur as a result of the scheme.
- 1.1.10 Diffusion tube monitoring results are provided from the laboratory analysis, and therefore still require various analysis and adjustments to be undertaken. Final corrected results will be presented and described in the annual report. However, based on the results to date, no unexpected values were recorded during the monitoring period.
- 1.1.11 NO_2 monitoring locations and results are presented in Appendix C, Table 2, together with the 2019 running mean.
- 1.1.12 There were no complaints received, relating to air quality, during this monitoring period (January 2020).

Appendix A – Worksites and Monitoring Locations

Figure 1 and 2: Worksites and monitoring locations within the LBE





Legend

- District/Borough boundary
- Route in tunnel
- Route on surface
- HS2 Chainage Markers

- Diffusion tube monitoring location
- Mandeville Road Pumping Station
- Dust monitoring location

Figure Number

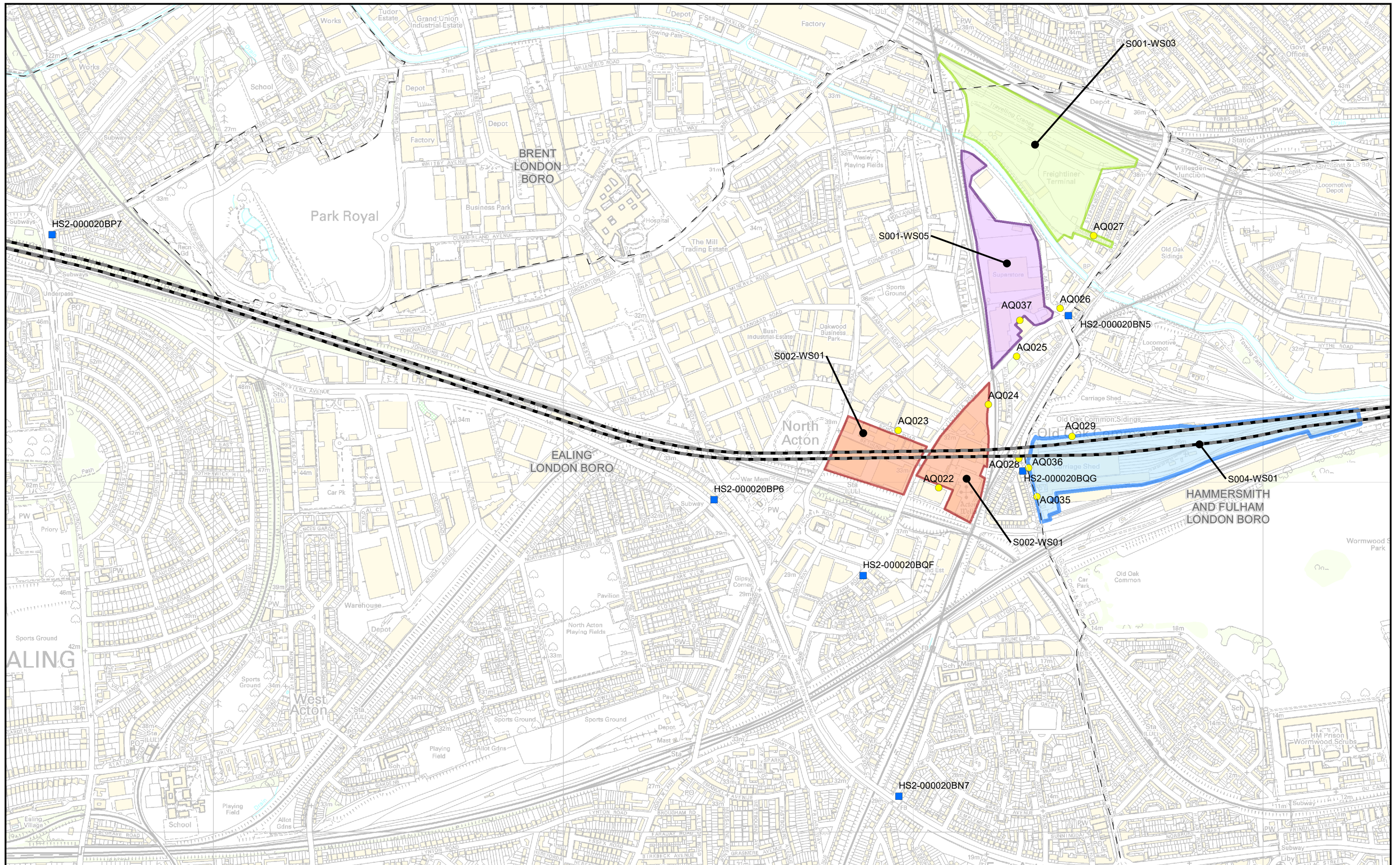
Figure Name
Worksites and Monitoring locations in LBE
 (sheet 1)

London Borough of Ealing

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- Legend**
- Route in tunnel
 - Route on surface
 - Diffusion tube monitoring location
 - Dust monitoring location
 - Willesden Euro worksite
 - Victoria Road worksite
 - Old Oak Common worksite
 - Atlas Road worksite

Figure Number
 Figure Name
Worksites and Monitoring locations in LBE
 (sheet 2)

London Borough of Ealing

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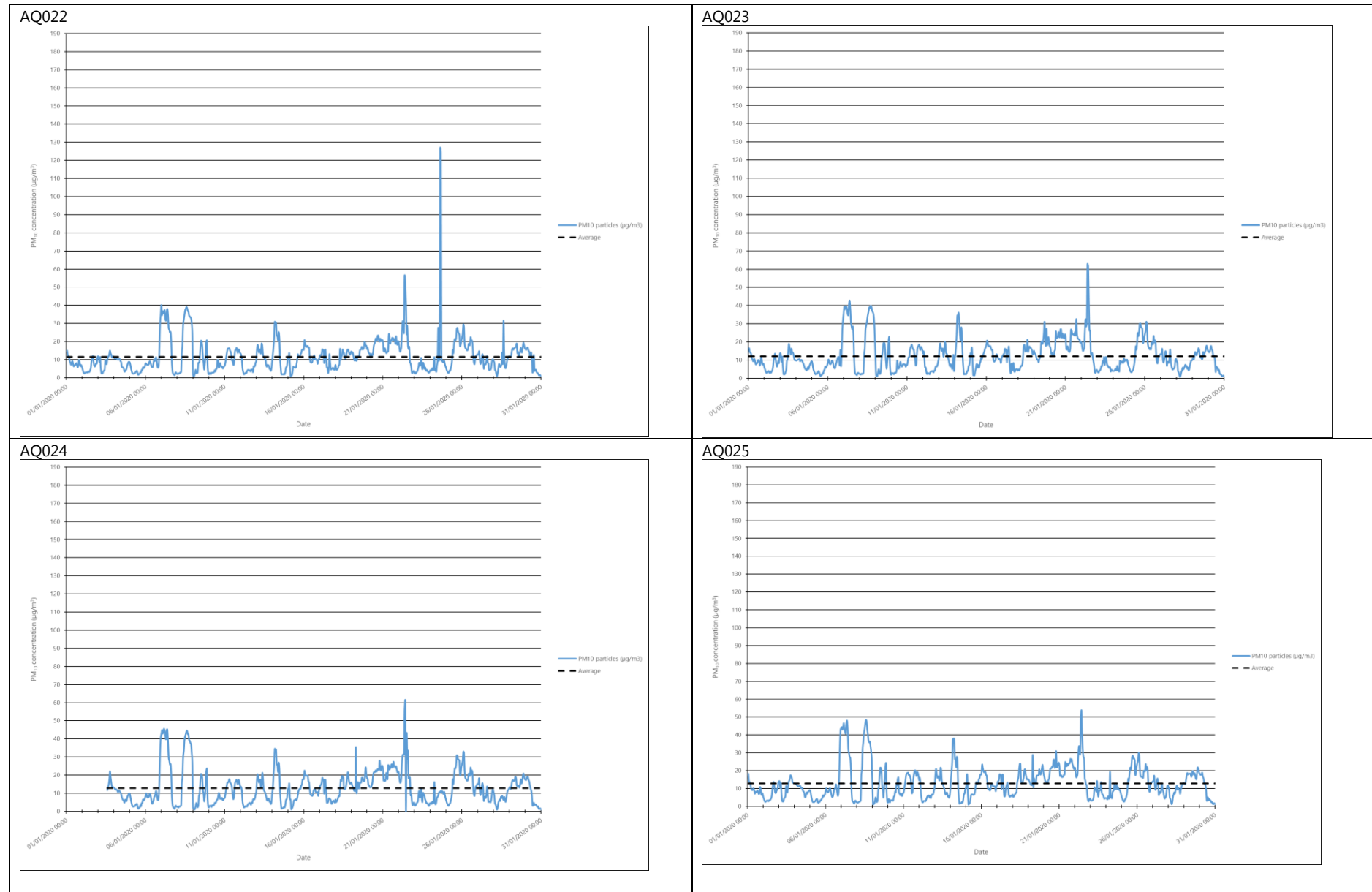
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Appendix B – Dust Monitoring Results

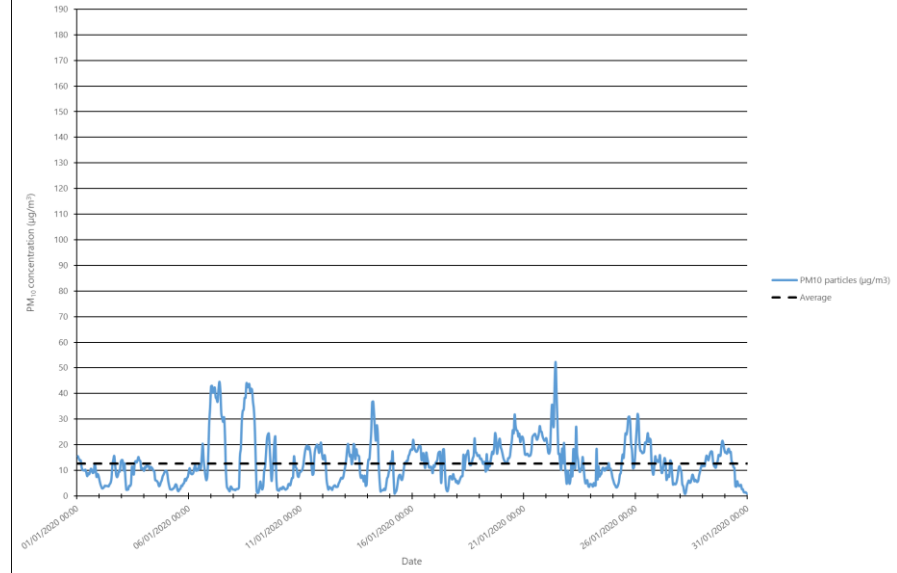
Table 1: Dust monitoring locations and January 2020 Results

Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM ₁₀ concentration (µg/m ³)	Minimum 1-hour PM ₁₀ concentration (µg/m ³)	Maximum 1-hour PM ₁₀ concentration (µg/m ³)	Number of 1-hour periods exceeding trigger level of 190 µg/m ³	Data capture (%)
AQ022	521072, 181985	Boden House	H	Yes	N	11.5	0.8	126.7	0	100.0
AQ023	520956, 182149	School Road	H	Yes	N	12.0	0.6	62.9	0	100.0
AQ024	521214, 182223	Braitrim House	H	Yes	N	12.8	0.8	61.0	0	91.7
AQ025	521295, 182360	Victoria Road	H	Yes	N	12.8	0.7	53.8	0	100.0
AQ026	521419, 182497	Old Oak Lane	H	Yes	N	12.6	0.7	52.3	0	100.0
AQ027	521515, 182706	Stephenson Street	H	Yes	N	12.6	0.6	60.4	0	100.0
AQ028	521302, 182067	Wells House Road	H	Yes	N	12.4	0.9	62.7	0	100.0
AQ032	513402, 184536	Badminton Close	M	Yes	N	8.4	0.5	42.1	0	100.0
AQ037	521304, 182464	Atlas Road	H	No	Y	10.3	0.5	50.7	0	100.0

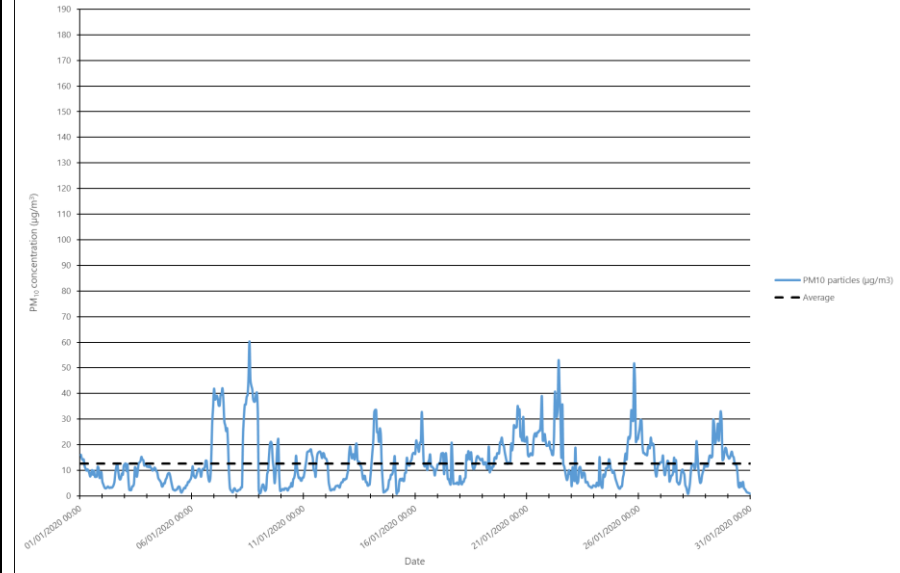
Figure 3: Construction dust 1-hour mean indicative PM₁₀ concentration for dust monitors



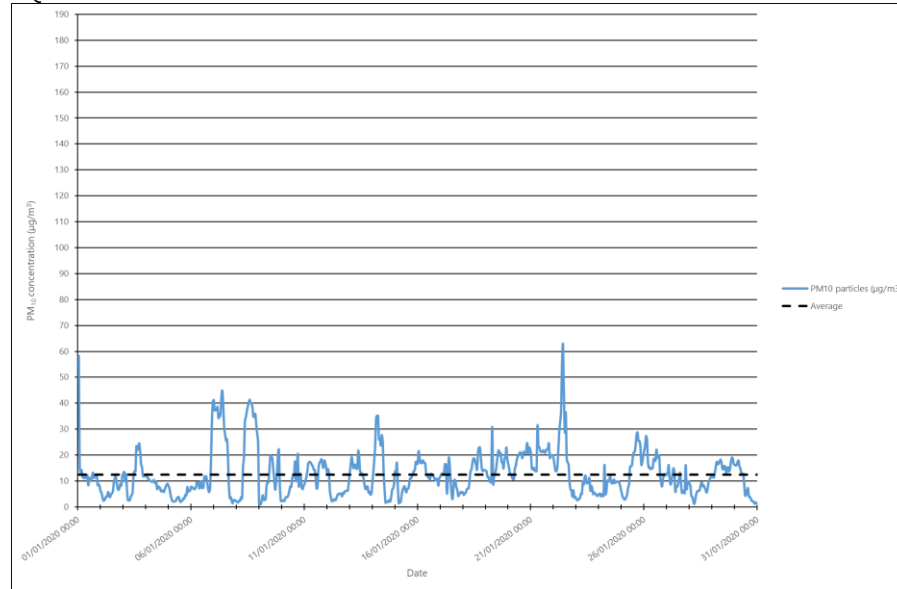
AQ026



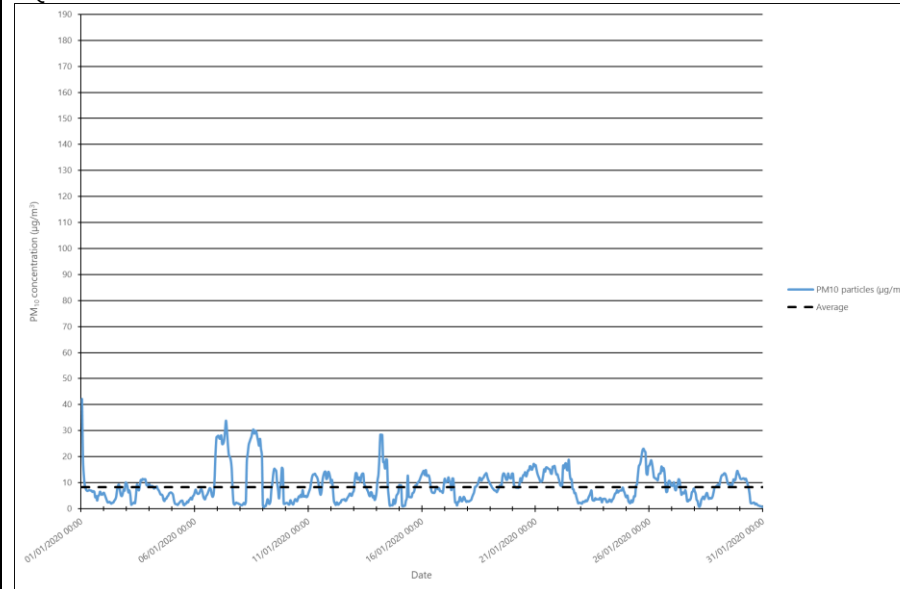
AQ027

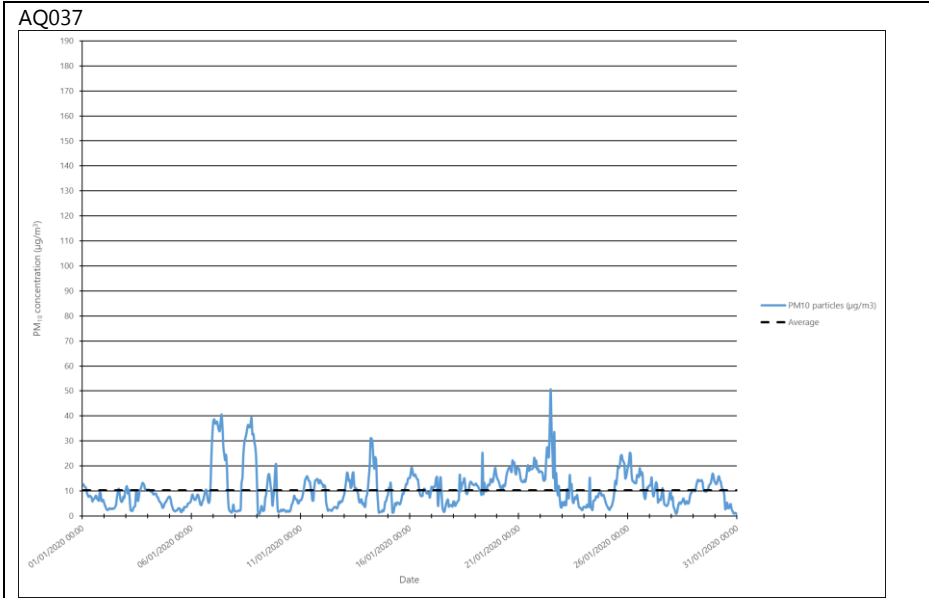


AQ028



AQ032





Appendix C – Air Quality Monitoring Results

Table 2: NO₂ monitoring locations around highways, NO₂ concentrations and monthly monitoring results with running mean for 2019 (µg/m³)

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec ¹	Mean ²
HS2-000020BN5	Sign post on Victoria Road	521443, 182477	63	64	Tube missing	54	38	42	Tube missing	44	48	49	56	55	51
HS2-000020BN7	The Approach street sign	520959, 181102	75	77	66	47	46	27	49	59	53	53	Tube missing	No data	55
HS2-000020BQF	Conway Drive sign post	520856, 181733	69	68	61	59	50	50	48	49	50	58	59	52	56
HS2-000020BQG	Lamp post outside No 1. Wells House Road on Old Oak Common Lane	521312, 182033	69	63	60	49	42	50	41	41	47	51	55	52	52
HS2-000020BP6	Triplicate site next to the Ealing, Western Avenue Acton roadside automatic monitoring station	520430, 181950	68	64	54	45	42	55	45	51	56	53	57	51	53
HS2-000020BP7	Triplicate site next to the Ealing, Hangar Lane Gyrotory roadside automatic monitoring station	518537, 182708	83	80	74	49	56	68	63	73	67	66	59	60	67

¹ Note: several diffusion tubes from the December 2019 batch were incorrectly prepared by the laboratory and could not be accurately analysed. Where this is the case, 'No data' is displayed.

² Note: to aid interpretation and conform with best practice, the monthly measurements in this table are reported rounded to the nearest whole number. The annual mean presented here is calculated based on laboratory data to 4 significant figures, rounded to a whole number, and therefore may differ slightly to a mean derived from averaging the rounded monthly measurements in the table.