

Air Quality and Dust Monitoring Monthly Report – January 2021

London Borough of Ealing



Department for Transport

High Speed Two (HS2) Limited has been tasked by the Department for Transport (DfT) with managing the delivery of a new national high speed rail network. It is a non-departmental public body wholly owned by the DfT.

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A report prepared by EWCs and MWCCs on behalf of HS2 Ltd.

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Monthly Summary

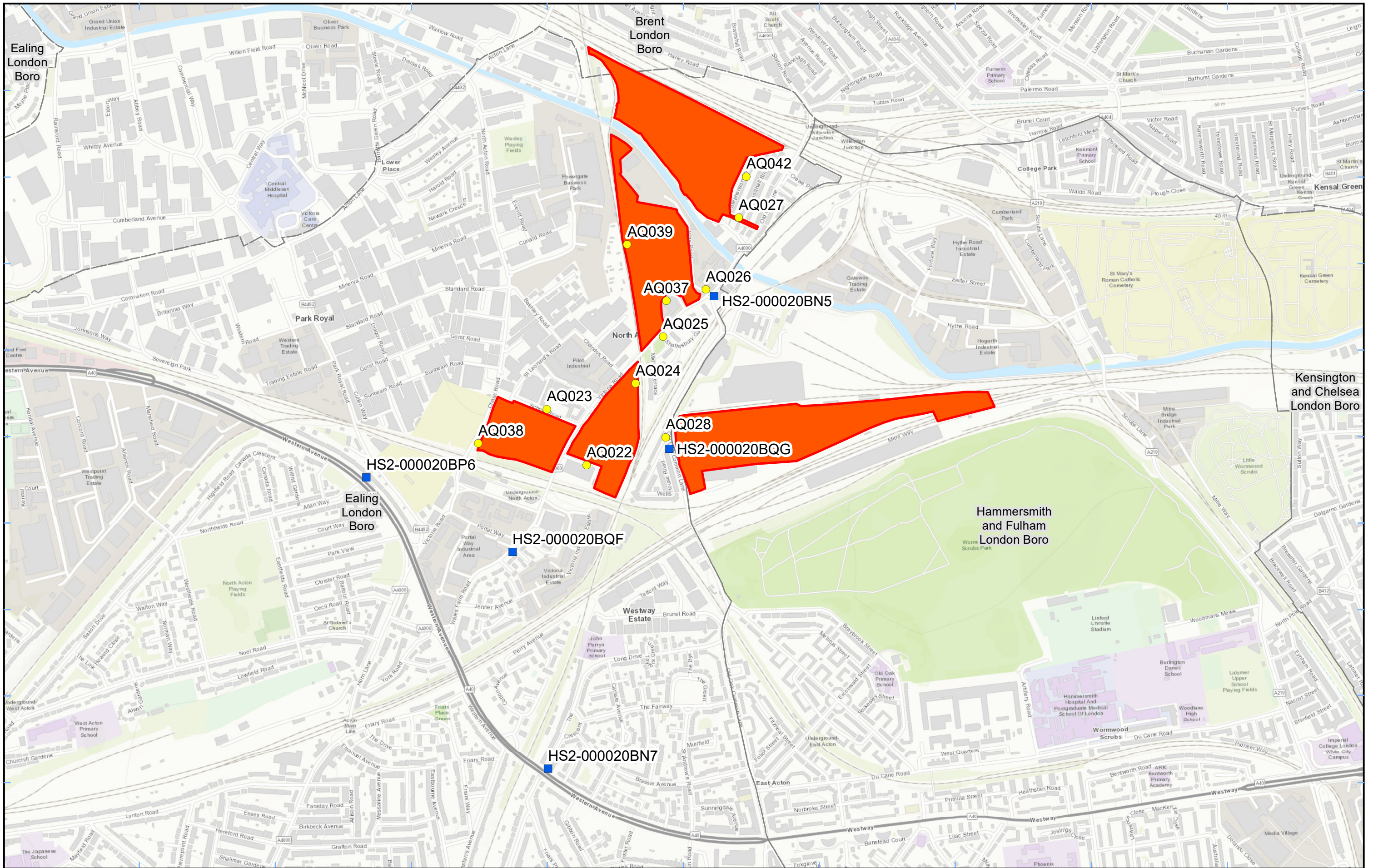
- 1.1.1 This Summary Report is published in fulfilment of commitments detailed in the High Speed Rail (London-West Midlands) Environmental Minimum Requirements, Annex 1: Code of Construction Practice, for the nominated undertaker to present the results of air quality and dust monitoring undertaken in the London Borough of Ealing (LBE) during December 2020 and January 2021 respectively.
- 1.1.2 Figure 1 to Figure 3 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 worksites, as presented in Appendix A, Figure 1 to Figure 3, include:
- Old Oak Common Depot (located in the London Borough of Hammersmith and Fulham) mobilisation and new site set up for the station works contractors;
 - Victoria Road Crossover Box and Flat Iron Site –groundworks, piling and utilities works;
 - Willesden Euro Terminal – groundworks;
 - Atlas Road– site set up and groundworks;
 - Green Park Way Vent Shaft – mobilisation and site set up; and
 - Mandeville Road Vent Shaft – mobilisation and site set up.
- 1.1.5 Twelve (12) dust monitors are installed around worksites, where works are underway. These sites returned a medium 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 in Figure 4. 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 for PM₁₀ concentrations of 190 µg/m³, 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 was one (1) dust trigger alert recorded during the monitoring period (January 2021). However, following an investigation it was noted that this exceedance was not related to HS2 site activities, as no dusty activities were being undertaken at the time. Trigger alerts are presented in Appendix B, Table 2. All other results were in line with expected ranges.
- 1.1.9 Data capture for monitor AQ027 was below 90% for the month of January 2021 due to a fault in the monitor and its subsequent replacement on the 15th of January 2021.
- 1.1.10 Diffusion tube monitoring of Nitrogen Dioxide (NO₂) is undertaken at six (6) locations around highways within the LBE as part of the management of air quality where significant effects may occur as a result of the scheme.
- 1.1.11 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.
- 1.1.12 NO₂ monitoring locations and results are presented in Appendix C, Table 3, together with the 2020 running mean.
- 1.1.13 There were no (0) complaints received, relating to dust or air quality, during this reporting period (January 2021).

Appendix A – Worksites and Monitoring Locations

Figure 1 to 3: Worksites and monitoring locations within the LBE





Legend

- Diffusion Tube
- Worksite
- Dust Monitor
- District Borough Unitary Boundaries

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Map Number

Map Name

**Worksite and Monitoring Locations
In LBE (Sheet 1)**

London Borough of Ealing

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Legend
■ Diffusion Tube District Borough Unitary Boundaries
■ Worksite

Map Number
 Map Name
**Worksite and Monitoring Locations
 In LBE (Sheet 2)**
 London Borough of Ealing

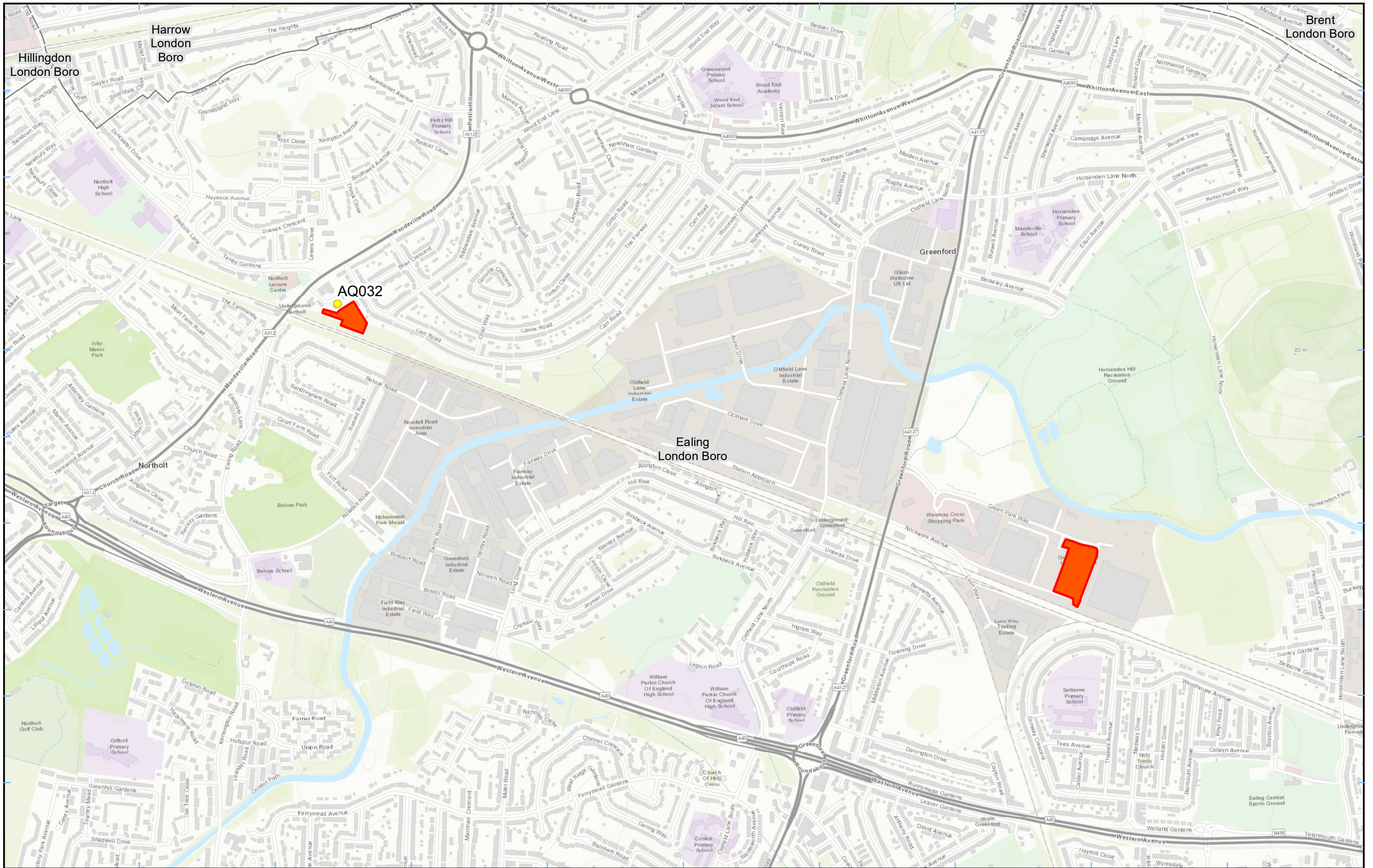
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- Legend**
- Dust Monitor
 - District Borough Unitary Boundaries
 - Worksite

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Map Number
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**Worksite and Monitoring Locations
 In LBE (Sheet 3)
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Appendix B – Dust Monitoring Results

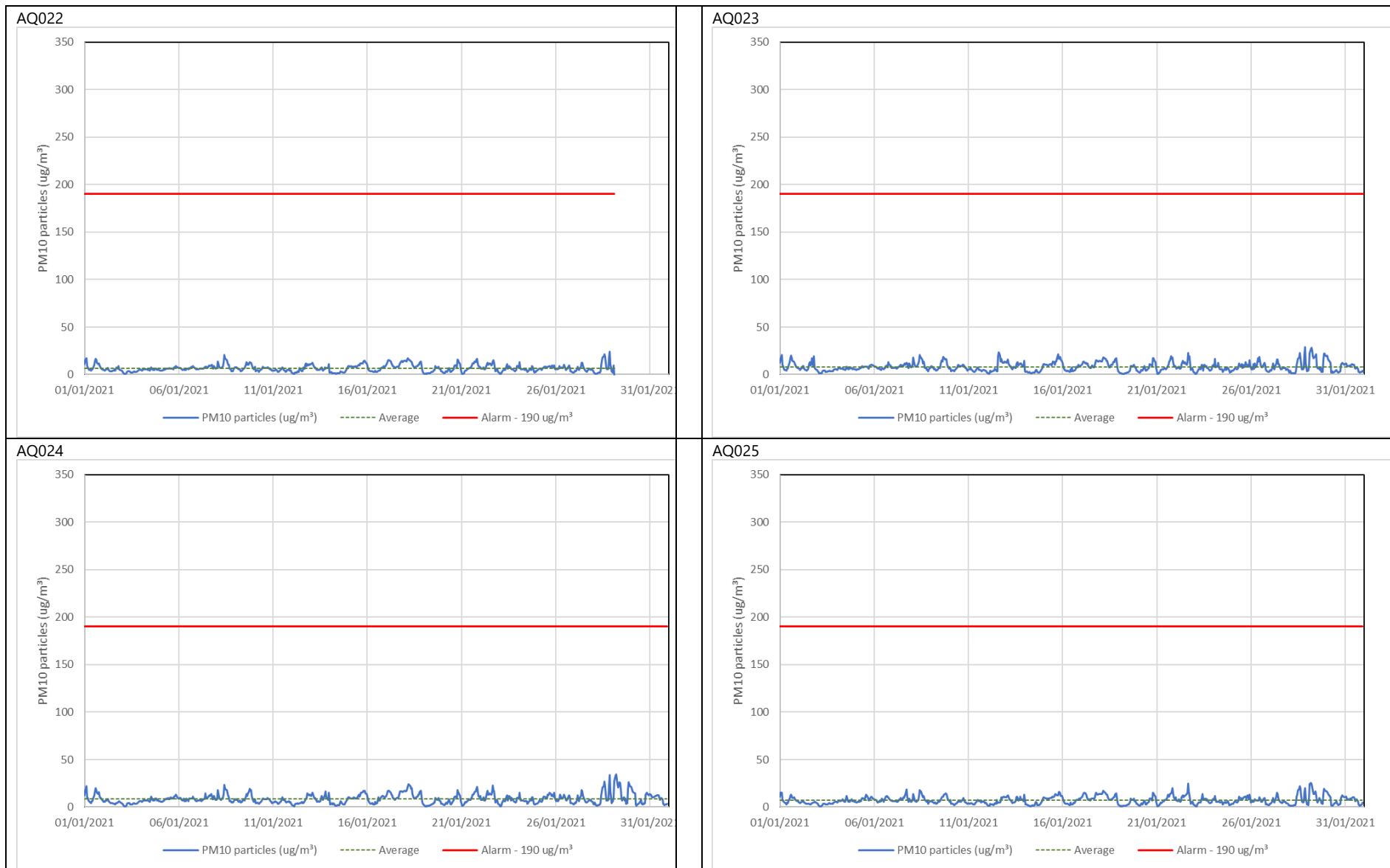
Table 1: Dust monitoring locations and January 2021 results

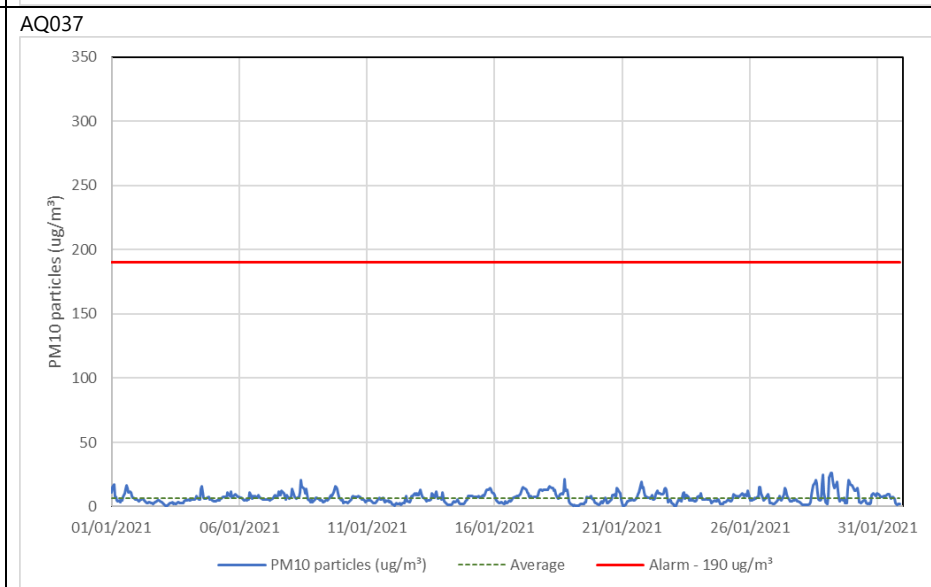
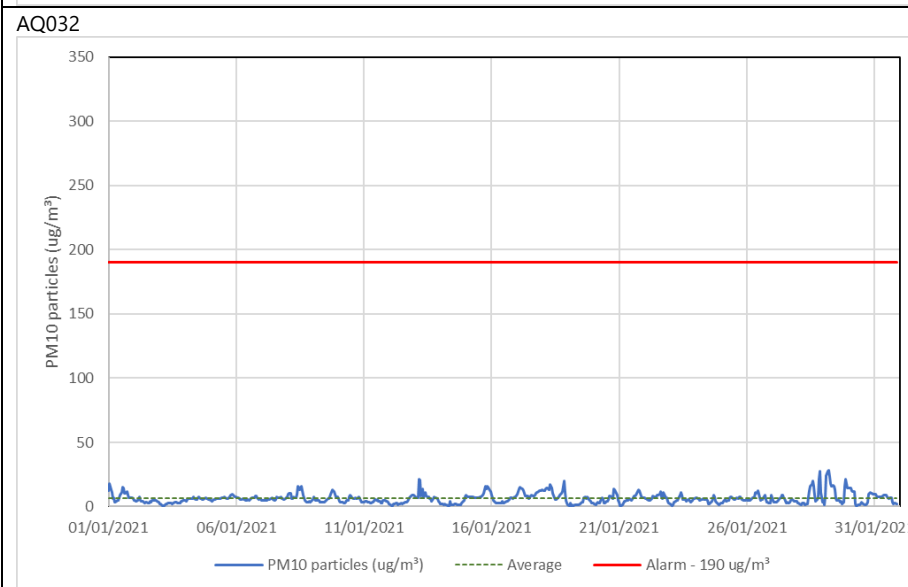
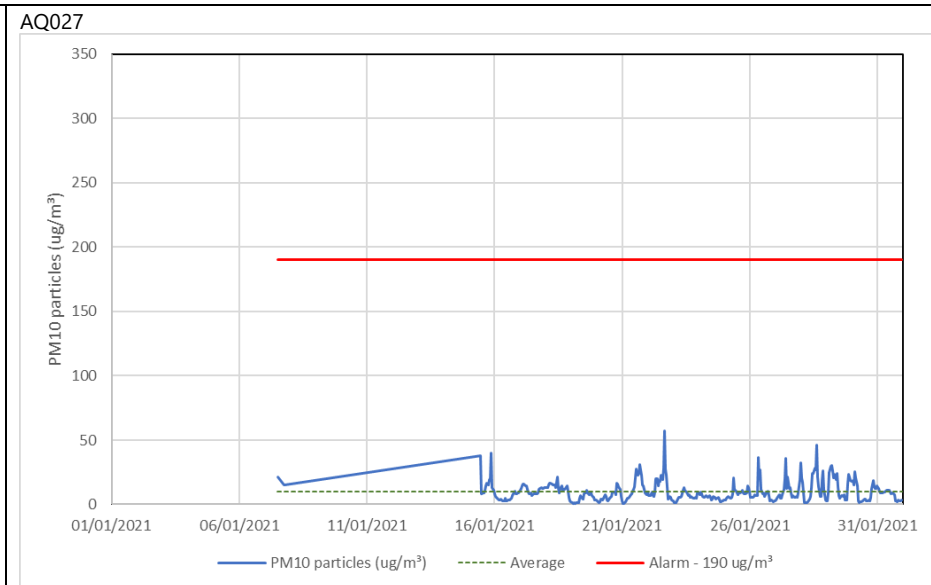
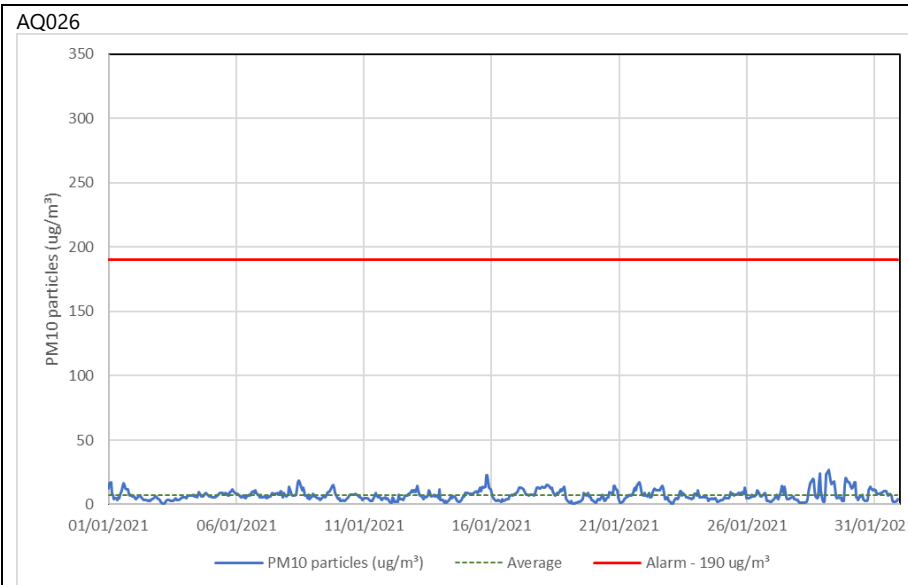
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM ₁₀ concentration (µg/m ³)	Minimum 1-hour PM ₁₀ concentration (µg/m ³)	Maximum 1-hour PM ₁₀ concentration (µg/m ³)	Number of 1-hour periods exceeding trigger level of 190 µg/m ³	Data capture (%)
AQ022	521072, 181985	Boden House	M	Yes	N	6.7	0.6	24.2	0	90.9
AQ023	520956, 182149	School Road	M	Yes	N	8.2	0.6	29.1	0	99.9
AQ024	521214, 182223	Braitrim House	M	Yes	N	8.7	1.0	34.7	0	100.0
AQ025	521295, 182360	Victoria Road	M	Yes	N	7.2	0.8	25.5	0	100.0
AQ026	521419, 182497	Old Oak Lane	M	Yes	N	7.2	0.8	26.8	0	100.0
AQ027	521515, 182706	Channel Gate Road	M	Yes	N	9.9	0.9	57.5	0	53.6
AQ028	521309, 182085	Wells House Road	M	Yes	N	7.0	0.8	72.2	0	100.0
AQ032	513402, 184536	Badminton Close	M	Yes	N	6.4	0.6	28.5	0	100.0
AQ037	521304, 182464	Atlas Road	M	No	N	6.9	0.7	26.5	0	100.0
AQ038	520756, 182049	Chase Road	M	Yes	N	8.3	0.7	212.2	1	95.0
AQ039	51.5142, -0.09310	Atlas Road 2	M	Yes	N	7.4	0.8	28.3	0	100.0
AQ042	521537, 182826	Stephenson Road	M	Yes	N	8.1	0.9	168.2	0	100.0

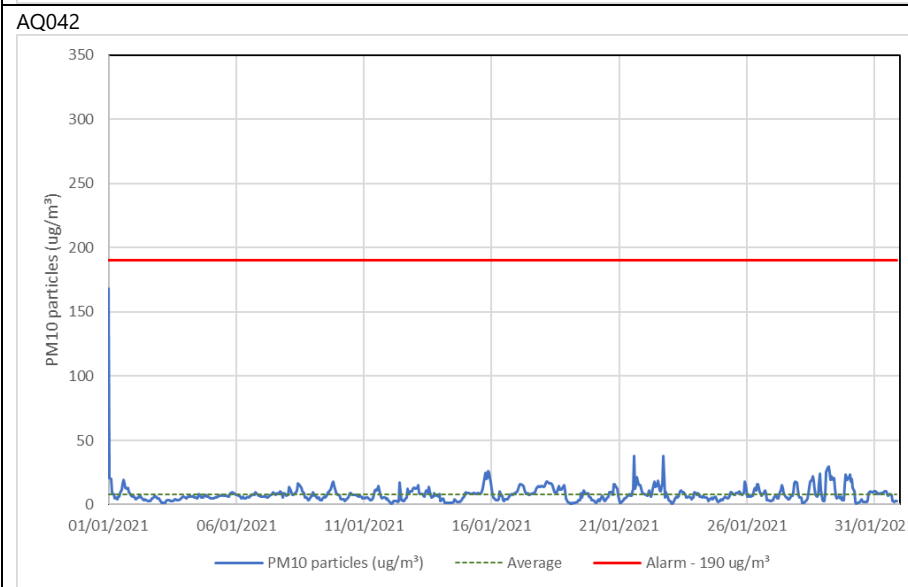
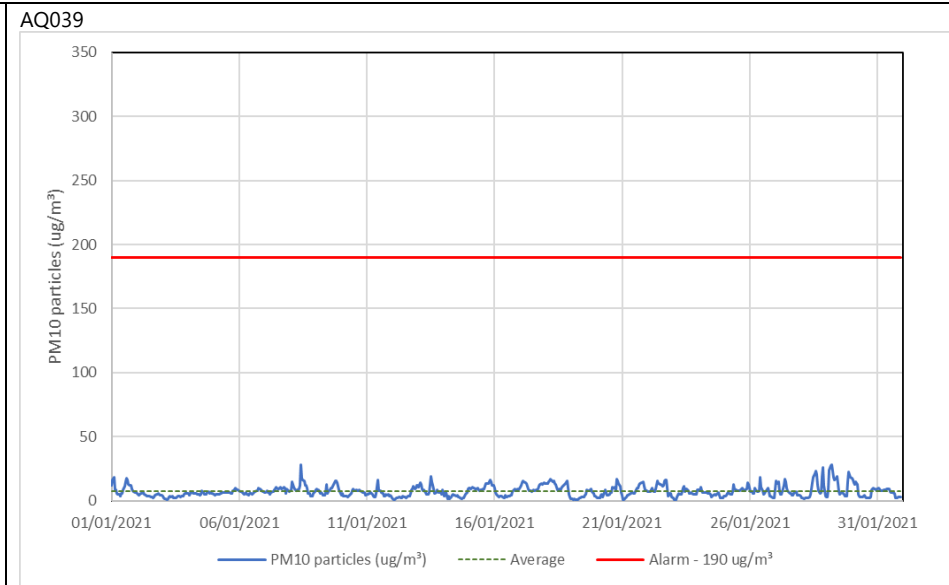
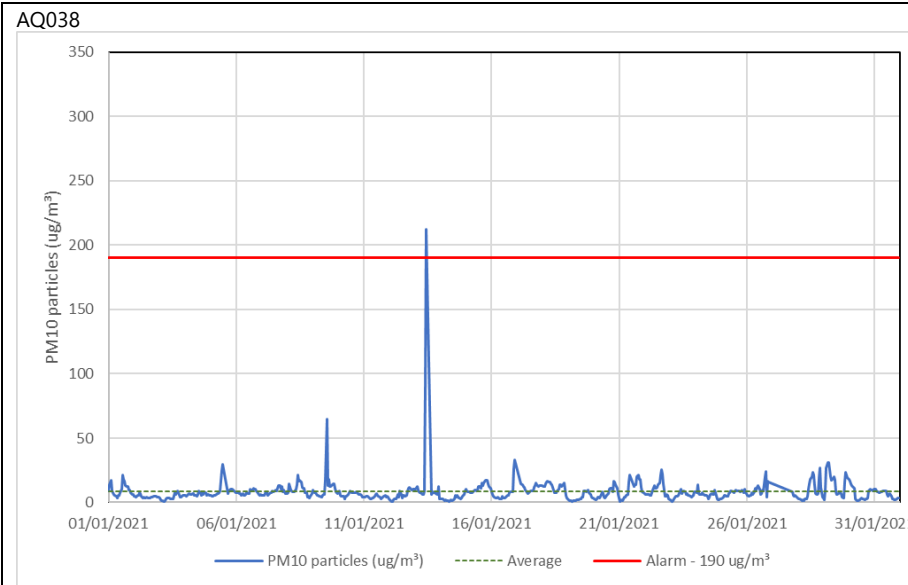
Table 2: Summary of exceedances of trigger level in January 2021

Monitoring site ID	Period exceeding trigger alert and concentration recorded	Investigation	Outcomes / Resolution / Remedial measures implemented
AQ038	13/01/2021 10:00 - 11:00: 212.2 µg/m ³	<p>At the time of the trigger alert, works in the SW corner of VRCB were underway including excavation (of wet muddy ground) and placing of reinforcement. Weather conditions were very wet (since 08:00 a.m.).</p> <p>The monitor was indicating an offline status.</p> <p>It is considered a loss of power to the heater was the cause of the trigger alert and/or the pump had powered down was the cause of the trigger, as no dusty works were being undertaken on site.</p>	Monitor maintenance regimes will continue to be followed across sites.

Figure 4: Construction dust 1-hour mean indicative PM₁₀ concentration for dust monitors







Appendix C – Air Quality Monitoring Results

Table 3: NO₂ monitoring locations around highways, NO₂ concentrations and monthly monitoring results with running mean for 2020 (µg/m³)

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar ¹	Apr ¹	May ¹	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean ²
HS2-000020BN5	Sign post on Victoria Road	521443, 182477	Tube missing	46	No data			39	25	40	47	46	60	44	43
HS2-000020BN7	The Approach street sign	520959, 181102	64	55	No data			37	29	37	50	51	61	52	48
HS2-000020BQF	Conway Drive sign post	520856, 181733	61	51	No data			42	28	43	45	41	65	53	47
HS2-000020BQG	Lamp post outside No 1. Wells House Road on Old Oak Common Lane	521312, 182033	68	55	No data			38	27	38	44	51	59	Tube missing	47
HS2-000020BP6	Triplicate site next to the Ealing, Western Avenue Acton roadside automatic monitoring station	520430, 181950	56	46	No data			40	35	42	50	47	61	48	47
HS2-000020BP7	Triplicate site next to the Ealing, Hangar Lane Gyrotory roadside automatic monitoring station	518537, 182708	77	61	No data			56	50	54	55	60	75	53	61

¹ Note: Due to the COVID-19 pandemic and government lockdown it was not possible to conduct diffusion tube air quality monitoring in March, April and May 2020.

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.