

Air Quality and Dust Monitoring Monthly Report – October 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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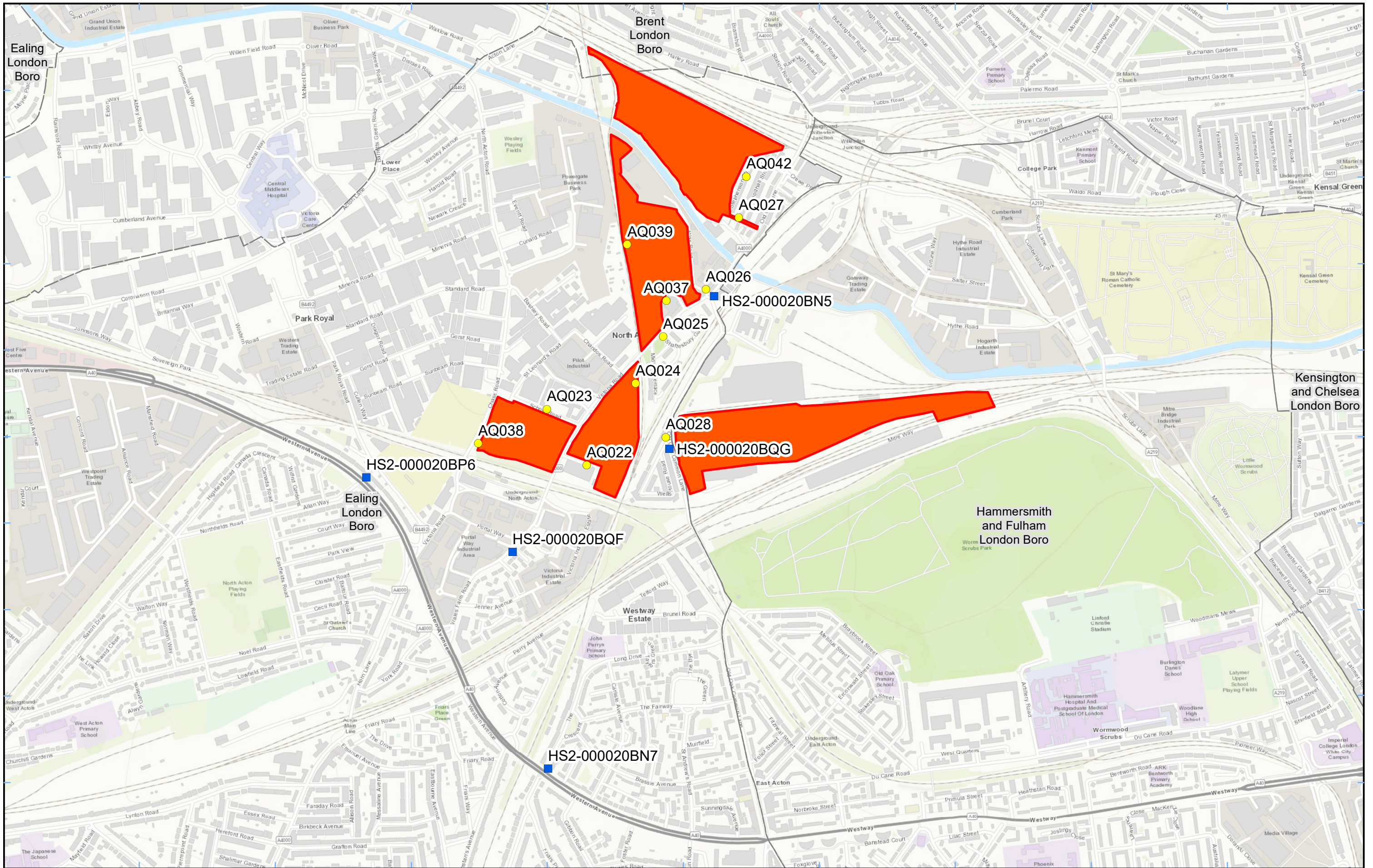
Monthly Summary

- 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 September and October 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, D-wall works, site level reduction, Hex depot demolition and new site set up for the station works contractors;
 - Victoria Road Crossover Box and Flat Iron Site – groundworks and piling operations;
 - Willesden Euro Terminal – excavated material spoil management;
 - Atlas Road – piling operations and groundworks;
 - Green Park Way Vent Shaft – site set up and groundworks and piling operations;
 - Mandeville Road Vent Shaft – site set up and groundworks and piling operations; and
 - Westgate Vent Shaft – site set up and groundworks and piling operations.
- 1.1.5 Fifteen (15) dust monitors were 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 One (1) dust trigger alert was recorded during the monitoring period (October 2021) and is reported in Appendix B, Table 2.
- 1.1.9 Diffusion tube monitoring of Nitrogen Dioxide (NO₂) is undertaken at ten (10) 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.
- 1.1.10 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 NO₂ monitoring locations and results are presented in Appendix C, Table 3, together with the 2021 running mean.
- 1.1.12 There were no (0) complaints received during this reporting period.

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

Map Number
 Worksite and Monitoring Locations
 In LBE (Sheet 2)

London Borough of Ealing

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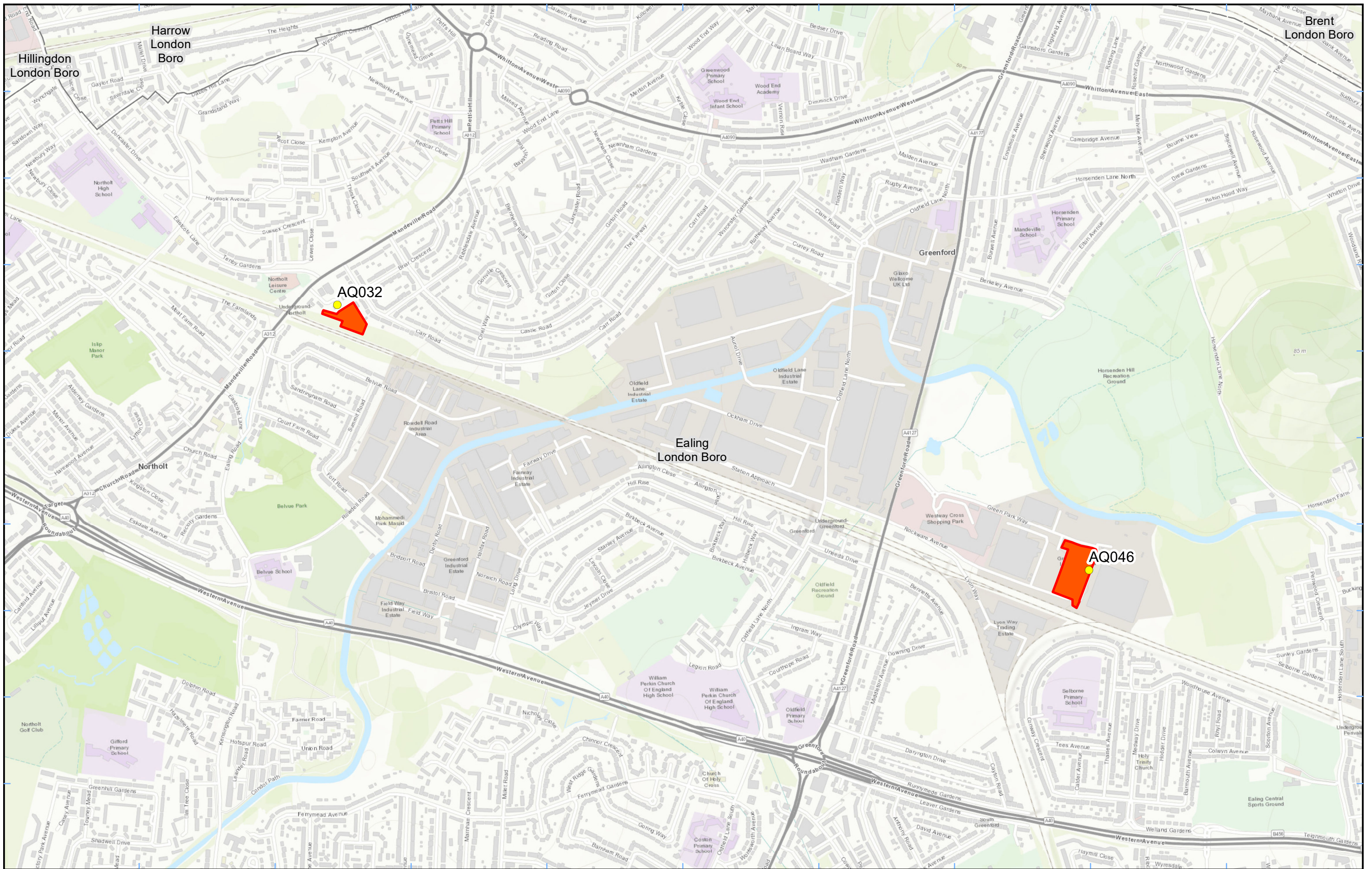
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- Legend**
- Dust Monitor
 - District Borough Unitary Boundaries
 - Worksite

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Map Number
 Worksite and Monitoring Locations
 In LBE (Sheet 3)

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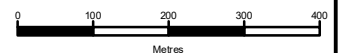
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Appendix B – Dust Monitoring Results

Table 1: Dust monitoring locations and October 2021 results

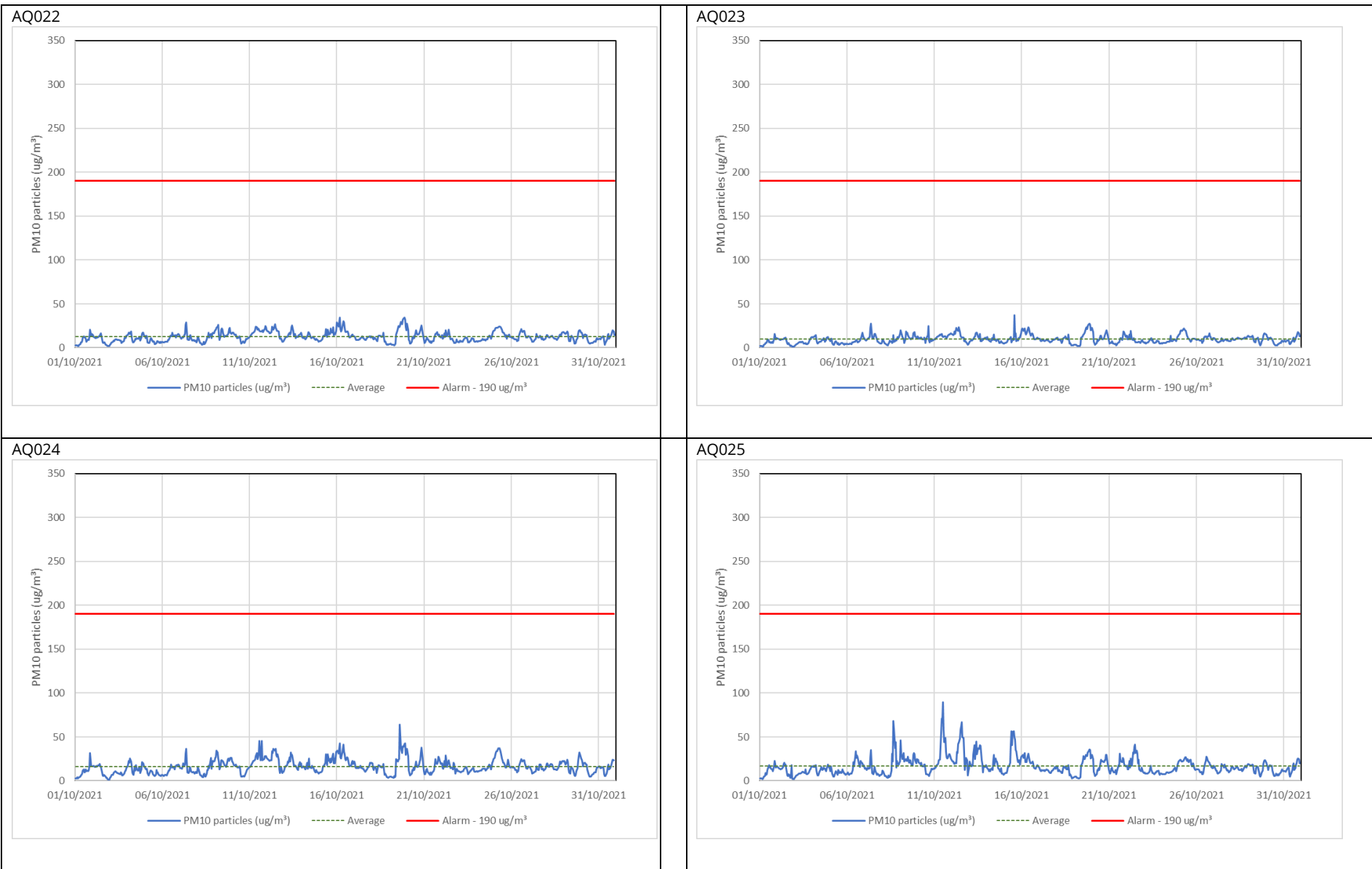
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM ₁₀ concentration (µg/m ³)	Minimum 1-hour PM ₁₀ concentration (µg/m ³)	Maximum 1-hour PM ₁₀ concentration (µg/m ³)	Number of 1-hour periods exceeding trigger level of 190 µg/m ³	Data capture (%)
AQ022	521072, 181985	Boden House	M	Yes	N	12.6	1.9	34.4	0	100.0
AQ023	520956, 182149	School Road	M	Yes	N	9.8	1.2	37.0	0	100.0
AQ024	521214, 182223	Braitrim House	M	Yes	N	16.3	1.6	64.0	0	100.0
AQ025	521295, 182360	Victoria Road	M	Yes	N	16.9	2.1	89.7	0	100.0
AQ026	521419, 182497	Old Oak Lane	M	Yes	N	12.5	1.3	51.8	0	100.0
AQ027	521515, 182706	Channel Gate Road	M	Yes	N	18.0	1.8	148.6	0	100.0
AQ028	521302, 182067	Wells House Road	M	Yes	N	21.4	1.6	194.9	1	100.0
AQ032	513402, 184536	Badminton Close	M	Yes	N	7.8	0.8	47.2	0	100.0
AQ037	521304, 182464	Atlas Road	M	Yes	N	10.9	1.1	47.1	0	90.7
AQ038	520756, 182049	Chase Road	M	Yes	N	13.1	1.5	44.9	0	100.0
AQ039	532417, 181198	Atlas Road 2	M	Yes	N	10.6	2.6	48.0	0	100.0
AQ042	521537, 182826	Stephenson Road	M	Yes	N	13.3	1.7	152.5	0	99.9

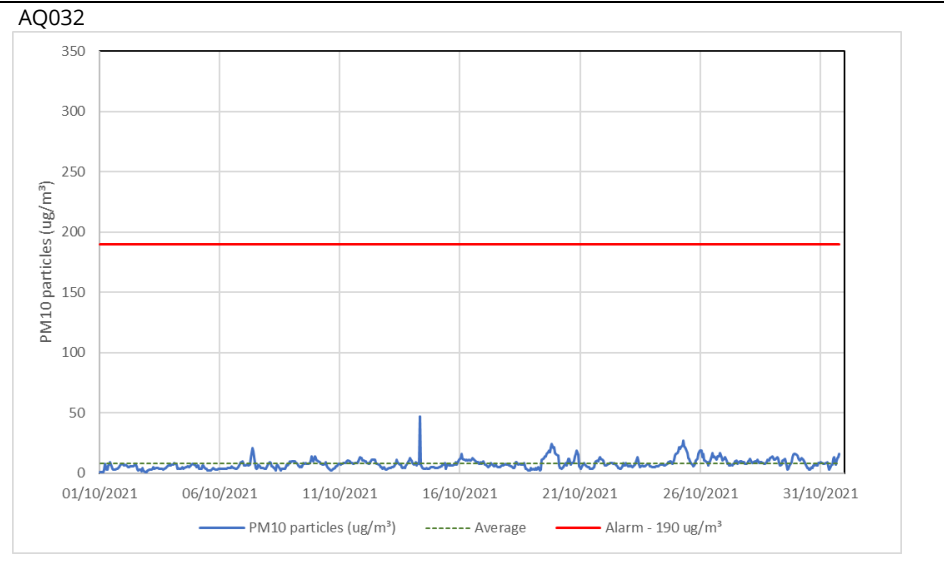
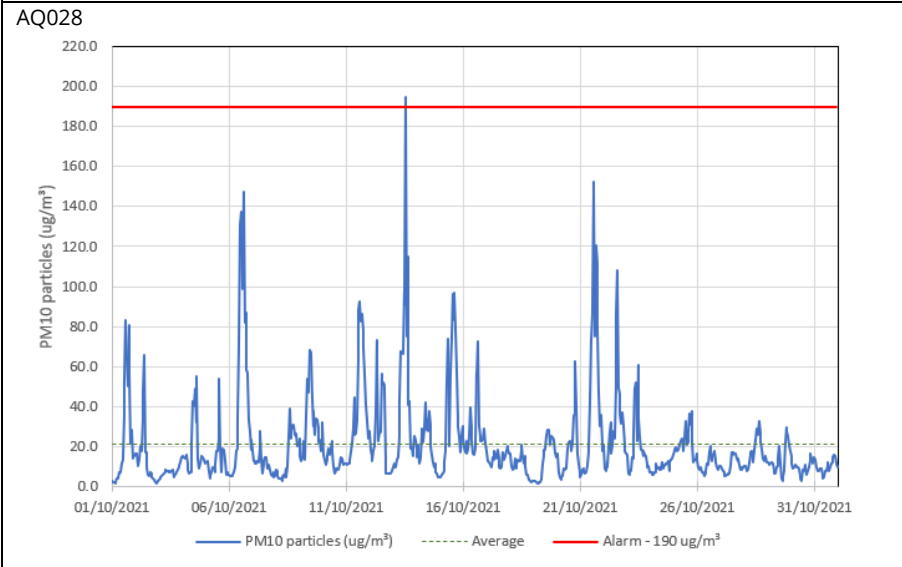
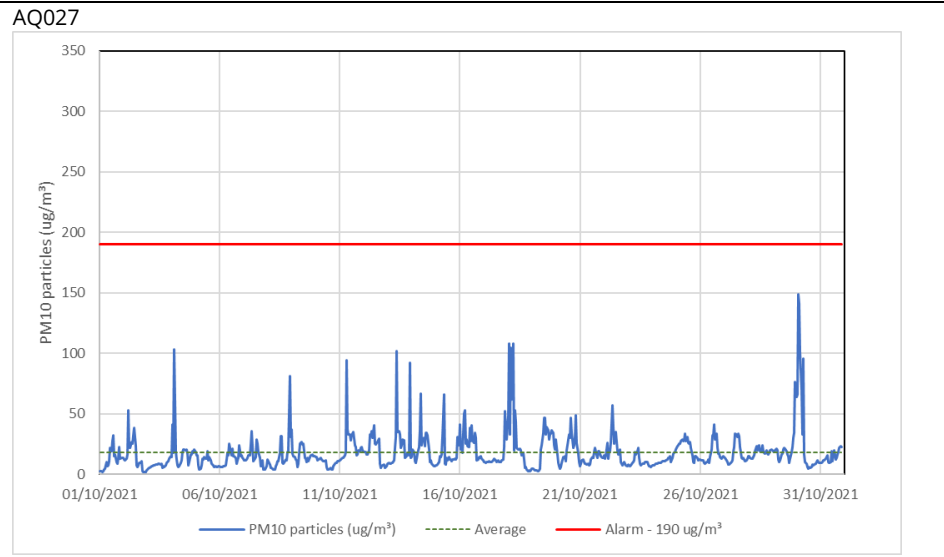
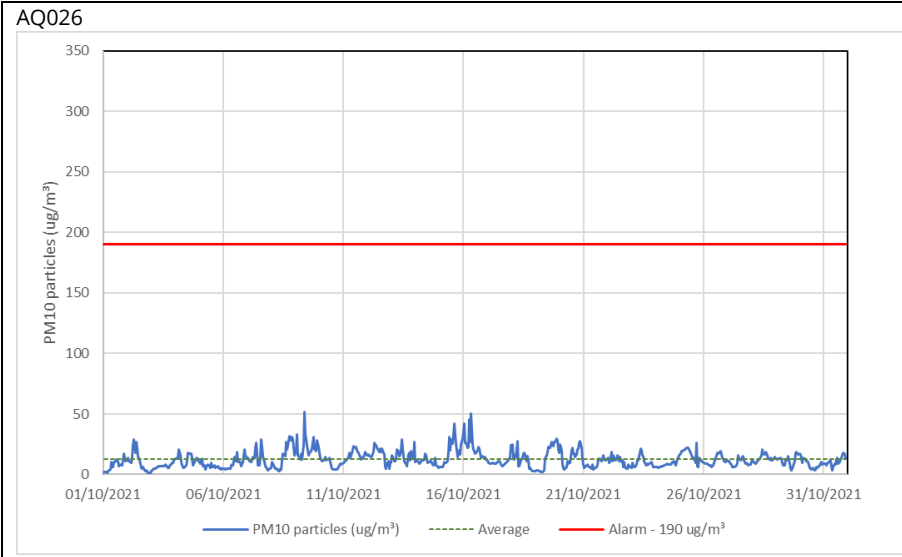
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM ₁₀ concentration (µg/m ³)	Minimum 1-hour PM ₁₀ concentration (µg/m ³)	Maximum 1-hour PM ₁₀ concentration (µg/m ³)	Number of 1-hour periods exceeding trigger level of 190 µg/m ³	Data capture (%)
AQ043	513468, 184504	Mandeville Road	M	Yes	N	21.3	4.1	175.7	0	96.4
AQ046	515593, 183764	Green Park Way	M	Yes	N	10.5	1.7	44.3	0	100.0
AQ051	517976, 182823	Westgate	M	Yes	N	10.5	1.5	67.2	0	100.0

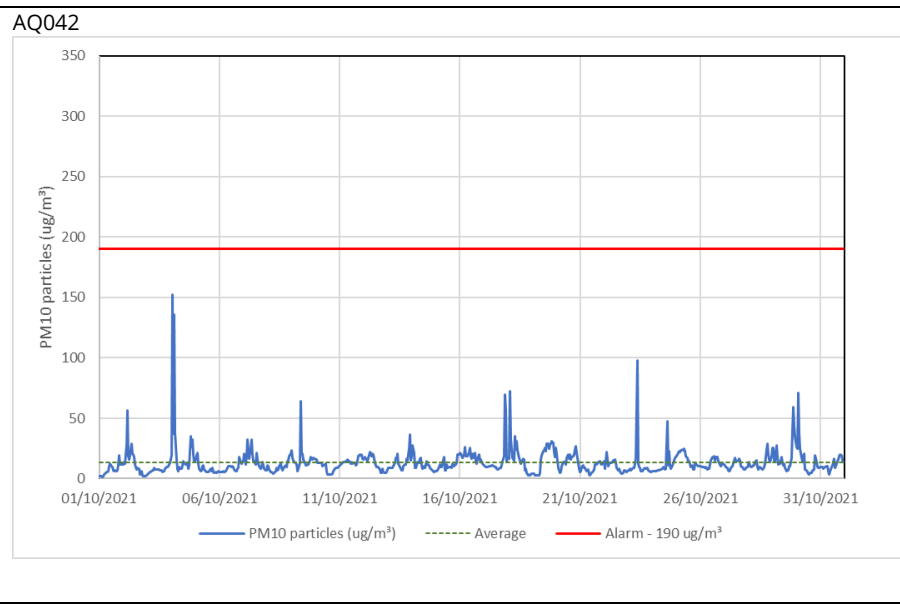
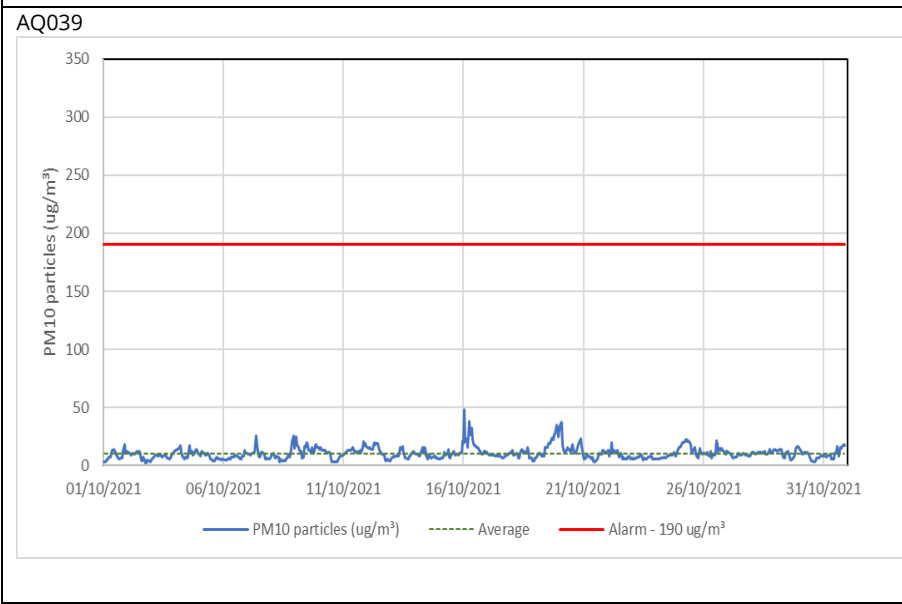
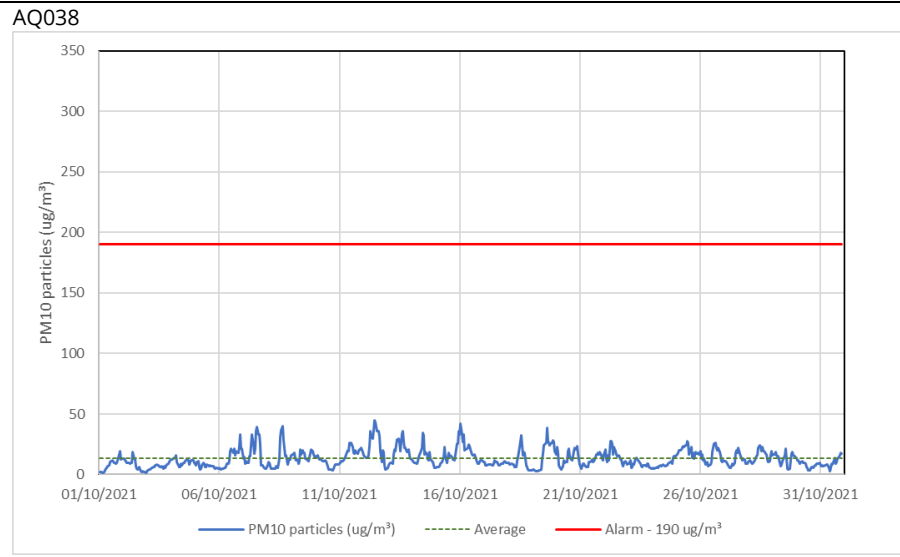
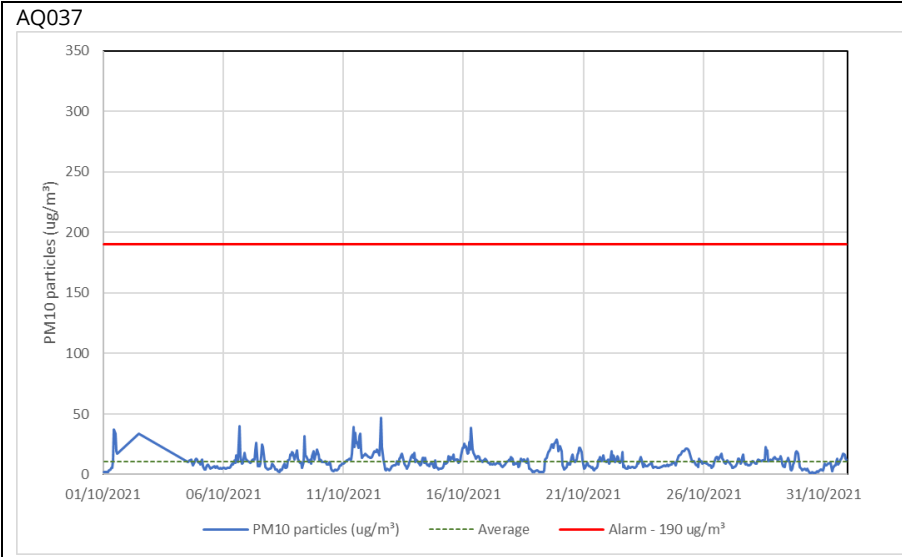
Table 2: Summary of exceedances of trigger level in October 2021

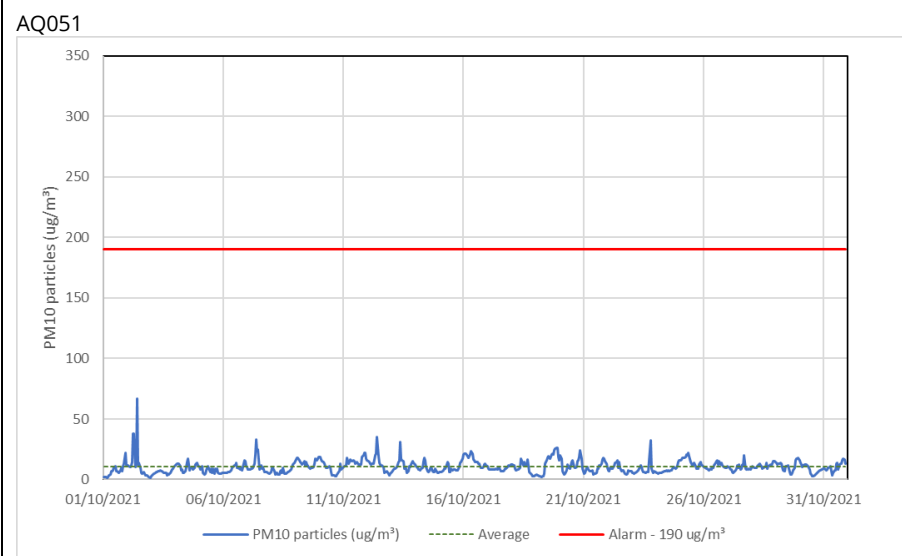
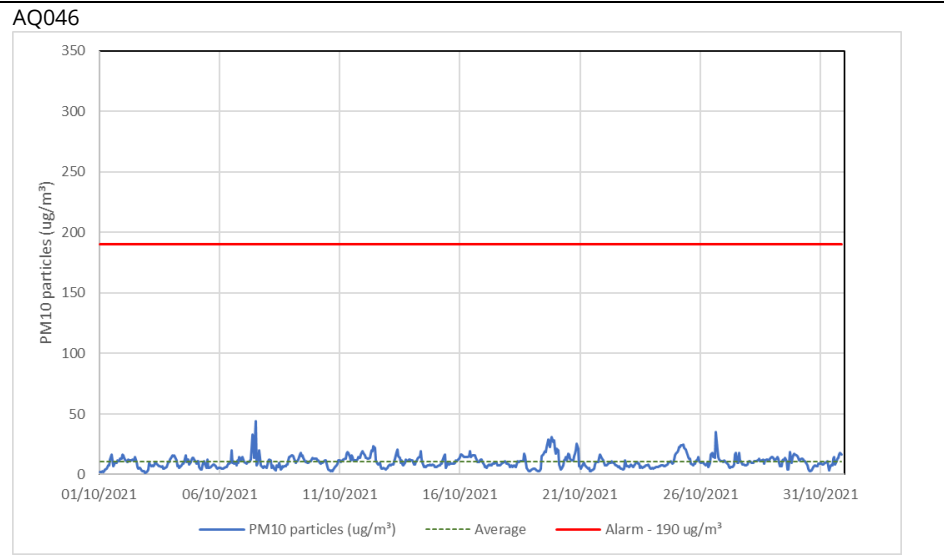
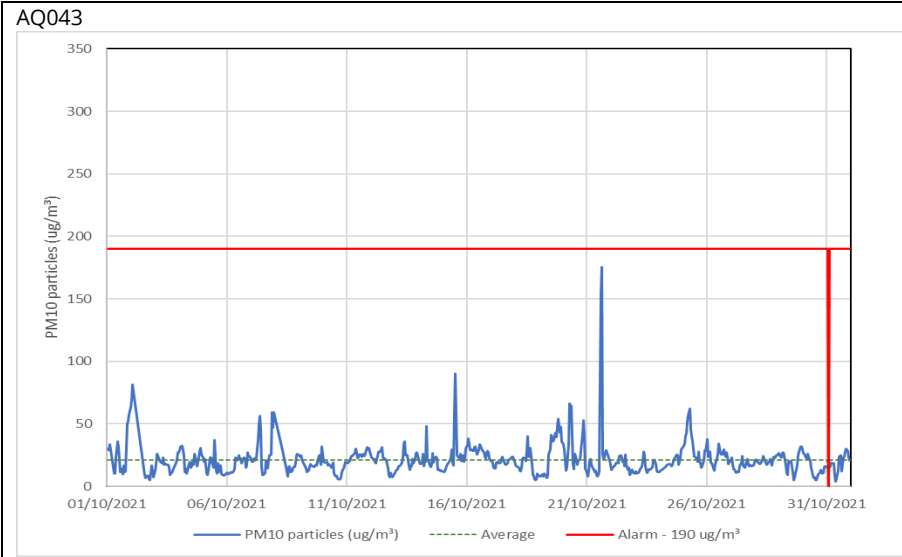
Monitoring site ID	Period exceeding trigger level	Investigation	Outcomes/ Resolution/ Remedial measures implemented
AQ028	13/10/2021 at 14:00 BST (13:00 GMT) – 194.9 µg/m ³	On investigation, it was deemed that the most likely activity to have caused the alert was the operation of the road sweeper along Old Oak Common Road.	<p>New road sweeper driver today was reminded again not to sweep next to monitors.</p> <p>Continually using road sweep on site haul roads, all site vehicles go through site wheel wash when leaving site.</p> <p>The road works along Old Oak Common lane have recently moved along with the position of the traffic lights so build-up of traffic along this road is not unusual directly in front of the monitor.</p> <p>Further investigations beyond the site boundaries were undertaken. It was noted that the roads were clean with continuously sweeping on-going. As a result, it is unclear as to what caused the alert.</p>

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 2021 (µg/m³)

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean ¹
HS2-000020BN5	Sign post on Victoria Road	521443, 182477	57	47	Tube Missing	45	48	35	51	42	60				48
HS2-000020BN7	The Approach street sign	520959, 181102	56	47	45	41	49	38	29	38	55				44
HS2-000020BQF	Conway Drive sign post	520856, 181733	58	53	49	53	51	46	42	40	63				51
HS2-000020BQG	Lamp post outside No 1. Wells House Road on Old Oak Common Lane	521312, 182033	39	44	38	36	38	15	32	40	57				38
HS2-000020BQZ	Lamp post on Victoria Road opposite Tudor House	521354, 182425									66				66
HS2-000020BR0	Sign post on Shaftesbury Gardens	521295, 182354									38				38
HS2-000020BR1	Lamp post on Midland Terrace	521263, 182298									37				37
HS2-000020BR2	Lamp post on Victoria Road outside Papa John's	520702, 181844									57				57

¹ 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.

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean ₁
HS2-000020BP6	Triplicate site next to the Ealing, Western Avenue Acton roadside automatic monitoring station	520430, 181950	51	51	46	41	48	37	41	32	54				45
HS2-000020BP7	Triplicate site next to the Ealing, Hangar Lane Gyrotory roadside automatic monitoring station	518537, 182708	63	69	68	54	72	57	55	48	52				60