

Air Quality and Dust Monitoring Monthly Report – June 2021

London Borough of Ealing



Department for Transport

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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 May and June 2021 respectively.
- 1.1.2 Figure 1 to Figure 3 in Appendix A present 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; temporary bridge installation across the Grand Union Canal;
 - Atlas Road– welfare cabin installation, fit and piling operations and groundworks;
 - Green Park Way Vent Shaft –site set up and groundworks;
 - Mandeville Road Vent Shaft – site set up and groundworks; and
 - Westgate Vent Shaft – site set up and groundworks.
- 1.1.5 Fourteen (14) 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 2, 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 (June 2021). Triggers are presented in Appendix B, Table 3. All other results were in line with expected ranges.
- 1.1.9 Data capture for monitor AQ038 was below 90% for the month of June 2021 due to a fault with the monitor over the course of the month). Data capture for AQ037, AQ039 and AQ046 was below 90% due to a loss of power.
- 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 4, together with the 2021 running mean.
- 1.1.13 Table 1 provides a summary of the complaint information related to dust or air quality received during this reporting period, together with the findings of any related investigations.

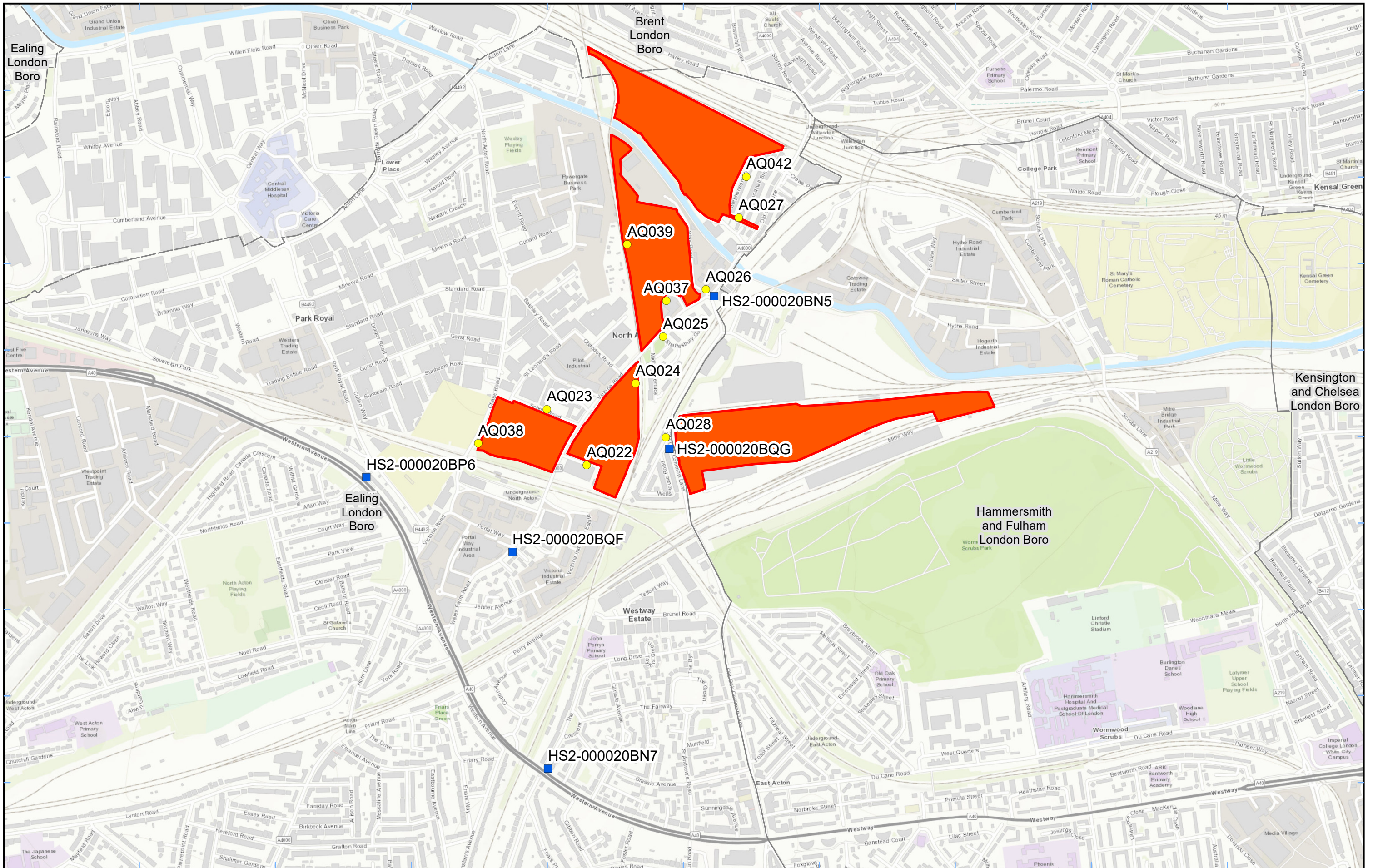
Table 1: Summary of complaints received during June 2021

Complaint Reference No.	Worksite Reference	Description of complaint	Results of investigation
HS2-21-42176-C	Old Oak Common Station Site	Resident complained about noise and dust in the area and that more noise insulation is required.	Investigation is being undertaken and a response being prepared.

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

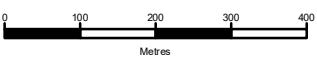


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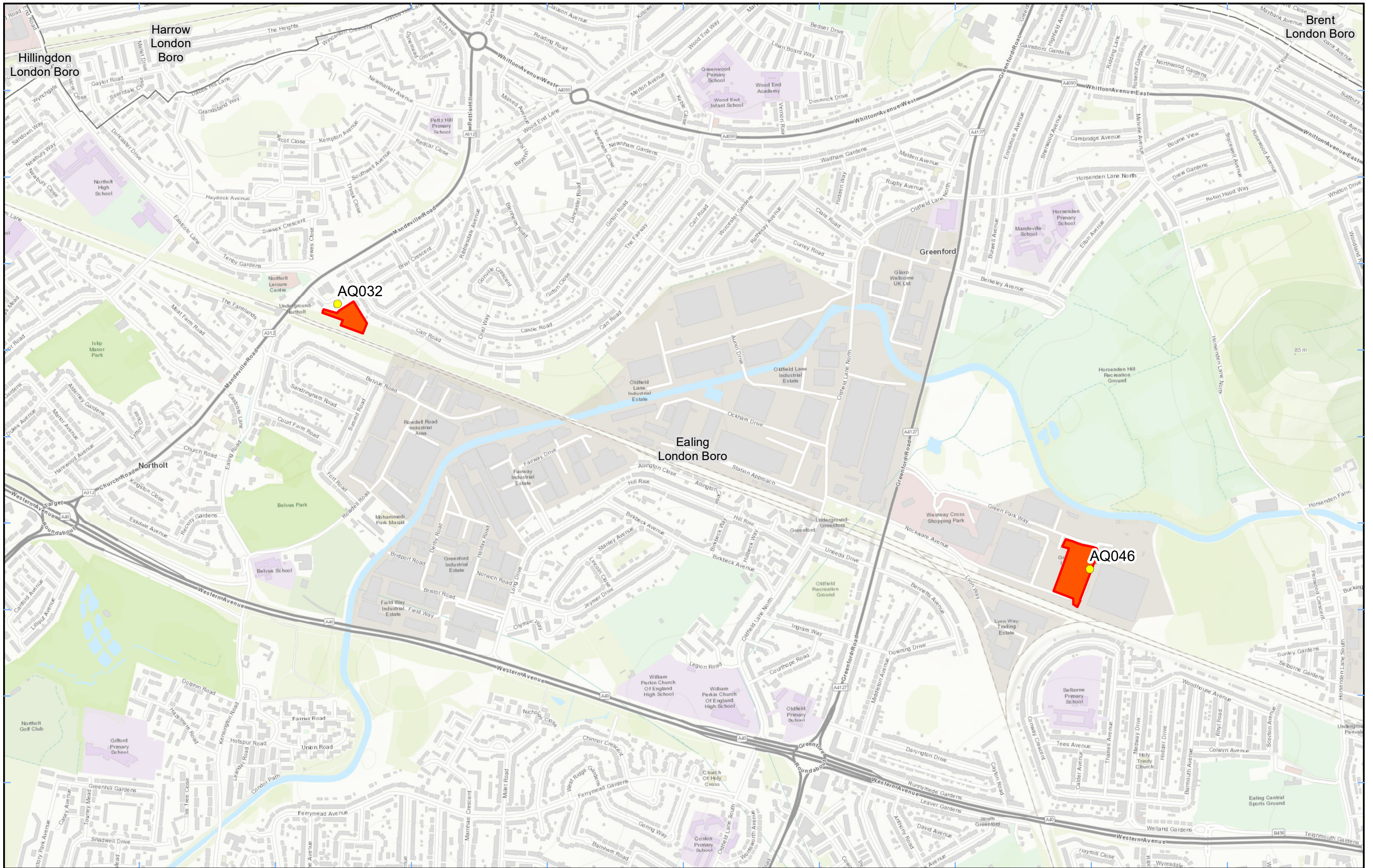


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- Legend**
- Dust Monitor
 - District Borough Unitary Boundaries
 - Worksite

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

London Borough of Ealing

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Appendix B – Dust Monitoring Results

Table 2: Dust monitoring locations and June 2021 results

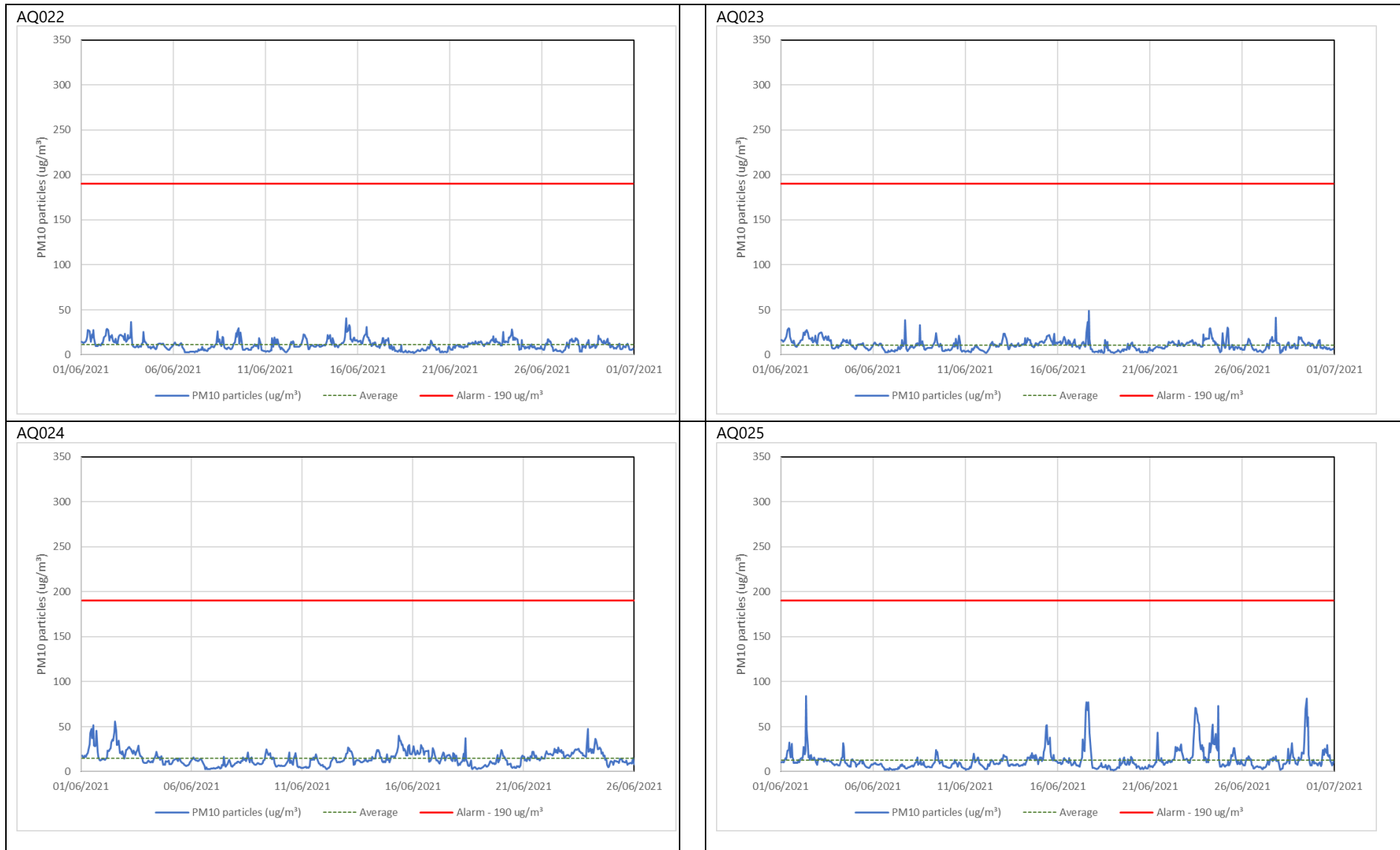
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM ₁₀ concentration (µg/m ³)	Minimum 1-hour PM ₁₀ concentration (µg/m ³)	Maximum 1-hour PM ₁₀ concentration (µg/m ³)	Number of 1-hour periods exceeding trigger level of 190 µg/m ³	Data capture (%)
AQ022	521072, 181985	Boden House	M	Yes	N	11.1	2.2	40.8	0	99.9
AQ023	520956, 182149	School Road	M	Yes	N	10.8	1.9	49.2	0	99.9
AQ024	521214, 182223	Braitrim House	M	Yes	N	14.7	2.5	55.7	0	99.9
AQ025	521295, 182360	Victoria Road	M	Yes	N	12.8	1.7	83.8	0	99.9
AQ026	521419, 182497	Old Oak Lane	M	Yes	N	22.9	2.1	169.9	0	99.9
AQ027	521515, 182706	Channel Gate Road	M	Yes	N	14.6	2.1	203.4	1	99.9
AQ028	521309, 182085	Wells House Road	M	Yes	N	19.7	2.2	166.0	0	100.0
AQ032	513402, 184536	Badminton Close	M	Yes	N	6.5	1.5	26.9	0	99.9
AQ037	521304, 182464	Atlas Road	M	No	N	12.0	2.3	113.0	0	77.4
AQ038	520756, 182049	Chase Road	M	Yes	N	13.8	1.8	140.8	0	49.0
AQ039	532417, 181198	Atlas Road 2	M	Yes	N	13.1	2.2	61.6	0	26.4
AQ042	521537, 182826	Stephenson Road	M	Yes	N	8.5	1.6	64.4	0	99.9
AQ046	515593, 183764	Green Park Way	M	Yes	N	8.9	1.9	32.5	0	60.7

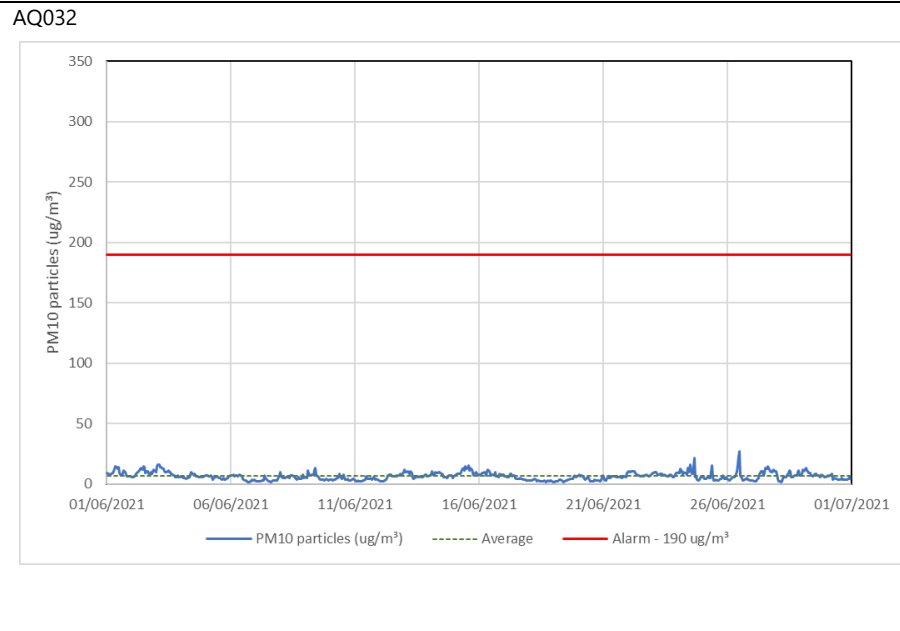
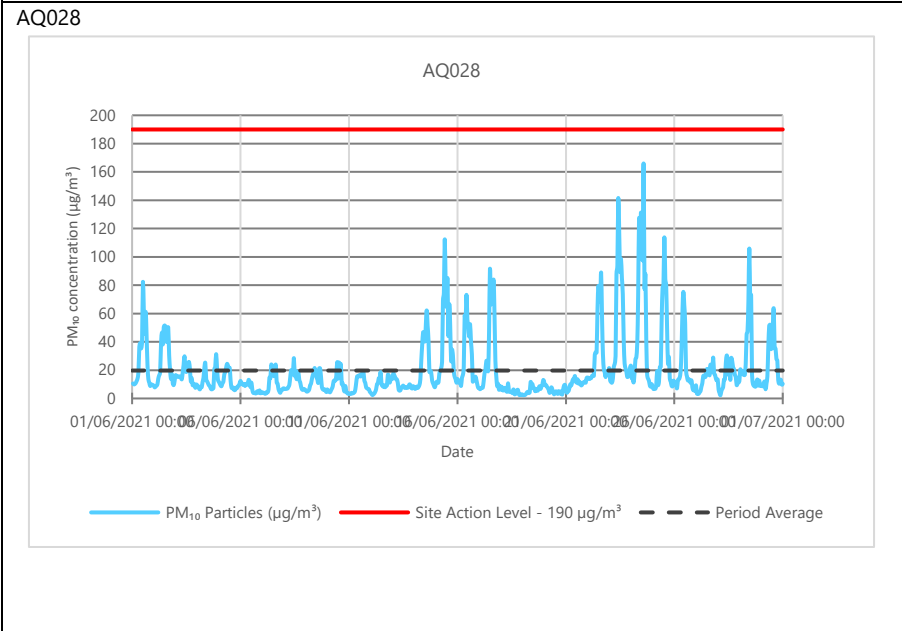
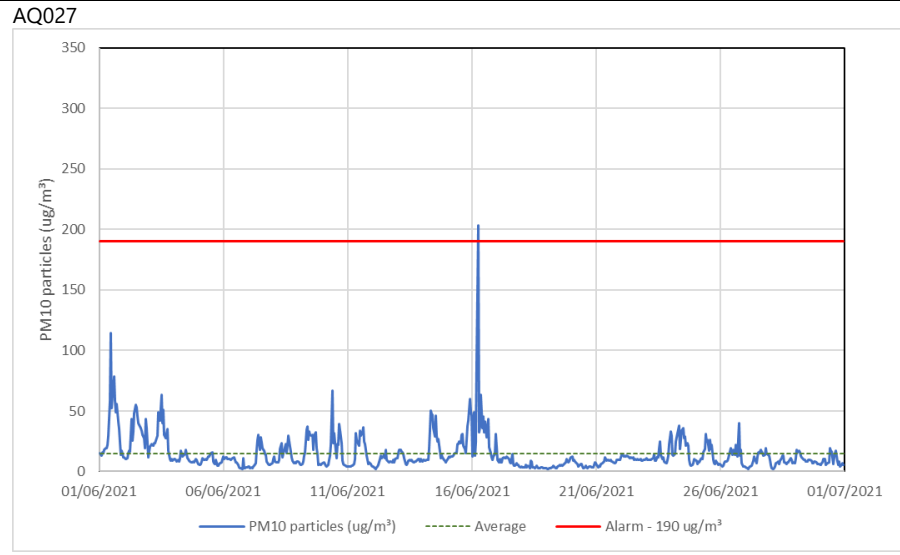
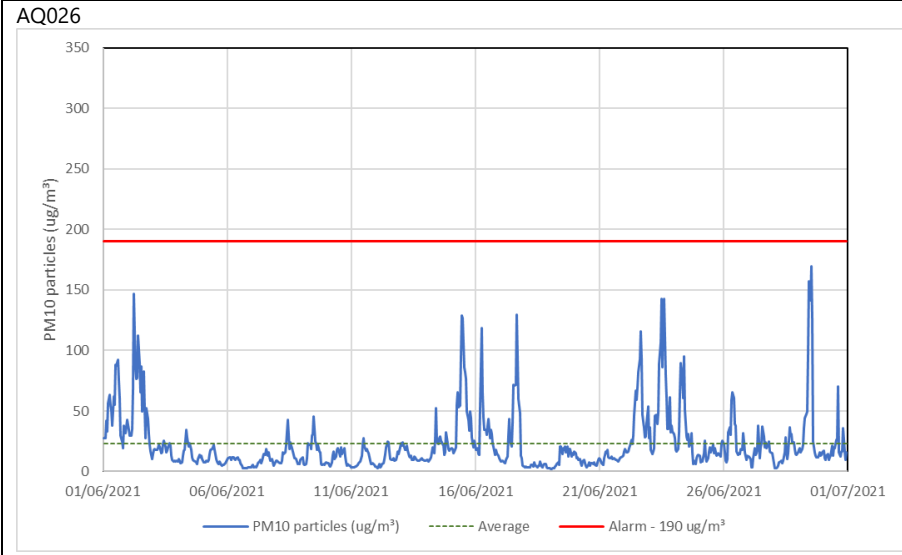
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM ₁₀ concentration (µg/m ³)	Minimum 1-hour PM ₁₀ concentration (µg/m ³)	Maximum 1-hour PM ₁₀ concentration (µg/m ³)	Number of 1-hour periods exceeding trigger level of 190 µg/m ³	Data capture (%)
AQ051	517976, 182823	Westgate	M	Yes	N	11.1	2.3	74.7	0	99.9

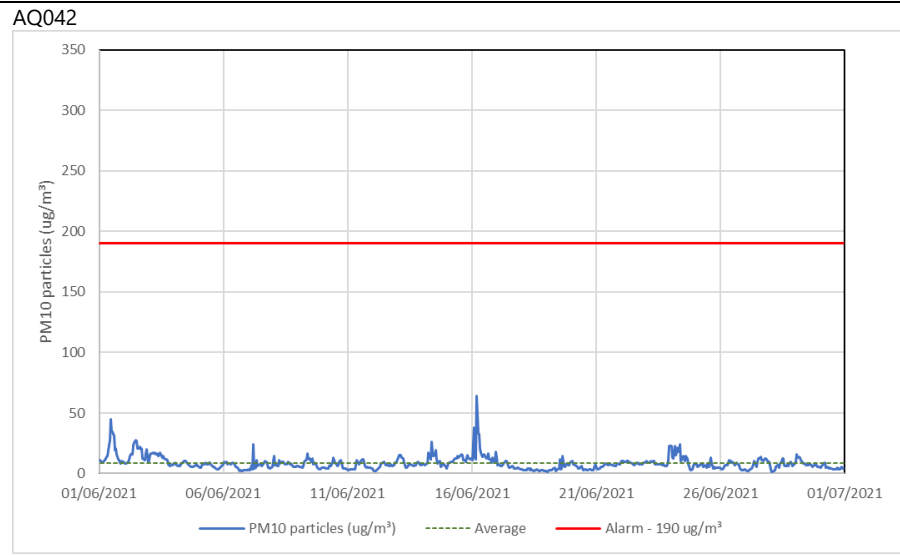
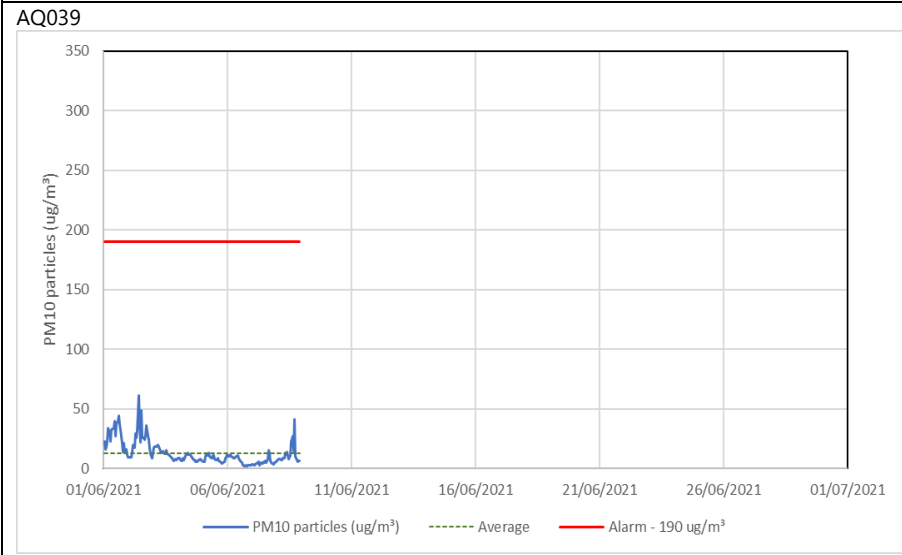
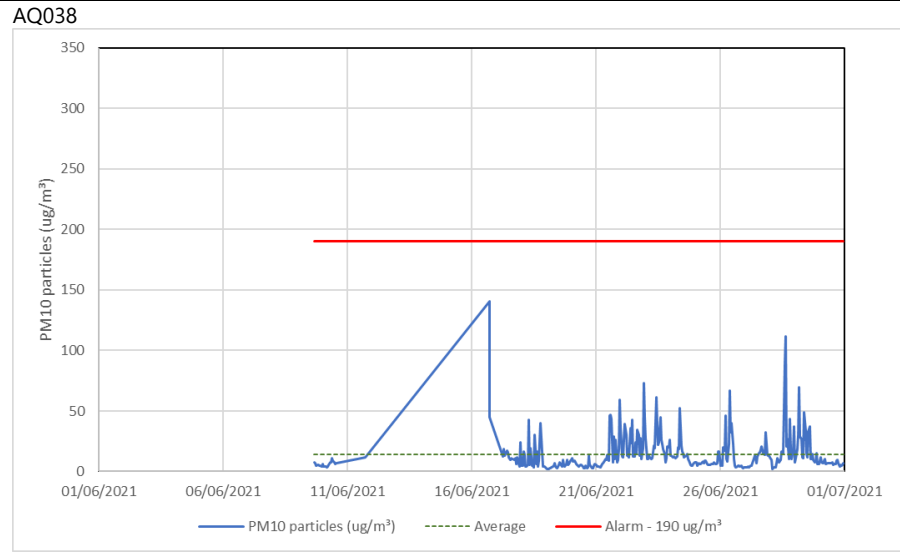
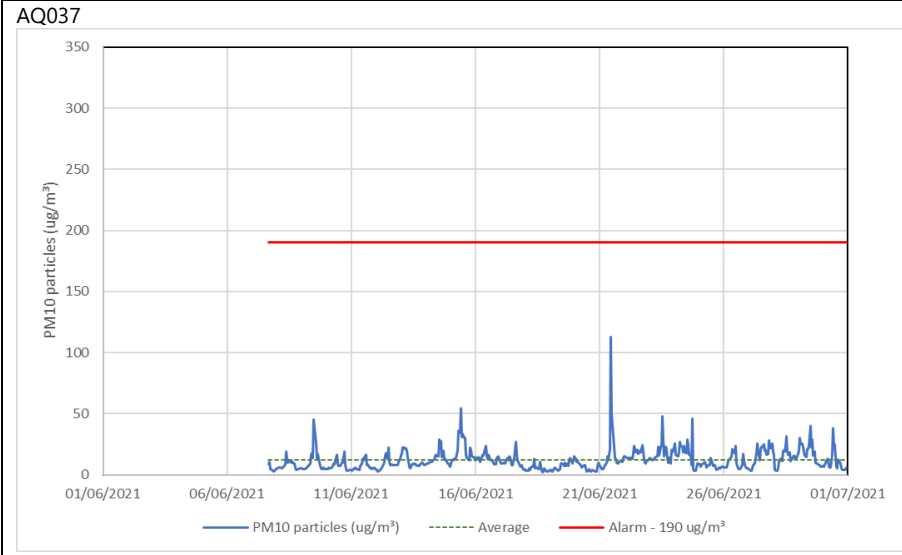
Table 3: Summary of exceedances of trigger level in June 2021

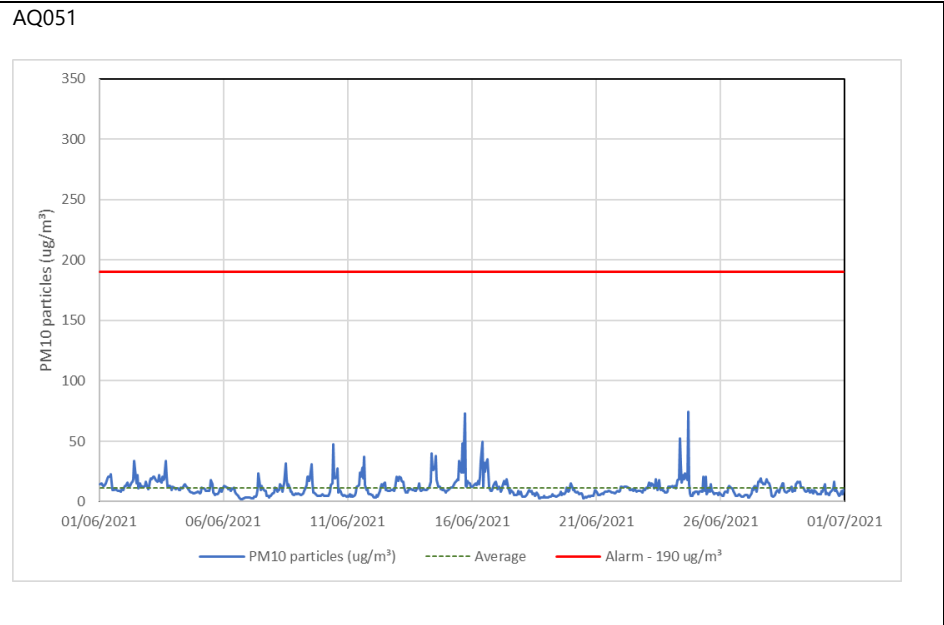
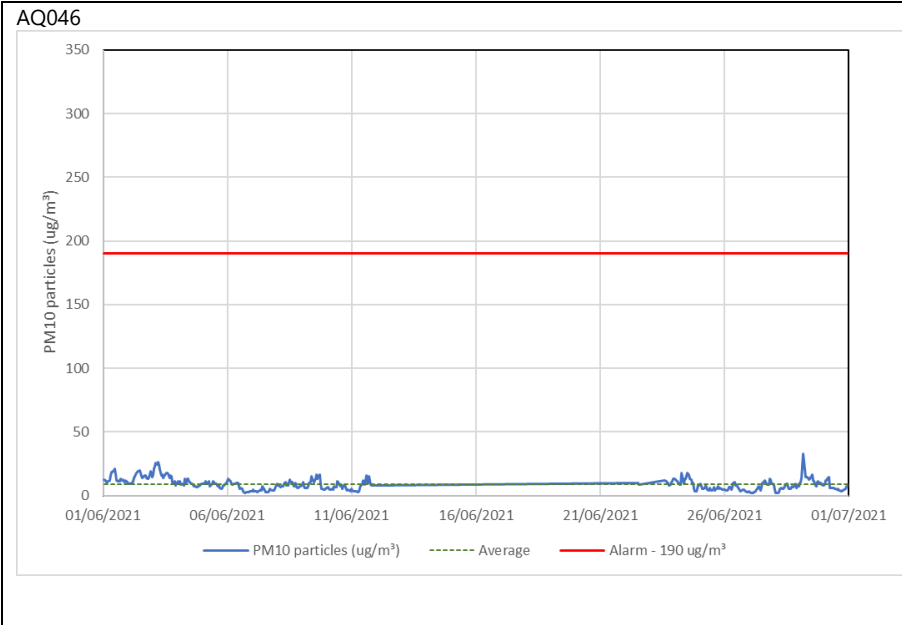
Monitoring site ID	Period exceeding trigger level	Investigation	Outcomes / Resolution / Remedial measures implemented
AQ027	16/06/2021 05:00 - 06:00; 203.4 µg/m ³	At the time of the trigger there were no works or vehicle movements associated with the HS2 site as the site was shut. Channel Gate Road is cleaned swept regularly and clear of any dust or debris. It is considered the trigger was due to moisture in the inlet during the early hours of the morning giving a false reading.	No action required

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









Appendix C – Air Quality Monitoring Results

Table 4: 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								49
HS2-000020BN7	The Approach street sign	520959, 181102	56	47	45	41	49								48
HS2-000020BQF	Conway Drive sign post	520856, 181733	58	53	49	53	51								53
HS2-000020BQG	Lamp post outside No 1. Wells House Road on Old Oak Common Lane	521312, 182033	39	44	38	36	38								39
HS2-000020BP6	Triplicate site next to the Ealing, Western Avenue Acton roadside automatic monitoring station	520430, 181950	51	51	46	41	48								47
HS2-000020BP7	Triplicate site next to the Ealing, Hangar Lane Gyrotory roadside automatic monitoring station	518537, 182708	63	69	68	54	72								65

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.