

Air Quality and Dust Monitoring Monthly Report – August 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 July and August 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 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;
 - 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 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 2, together with line charts of monthly data from each dust monitor, 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 were three (3) trigger alerts recorded during the monitoring period (August 2021). Triggers are presented in Appendix B, Table 3. All other results were in line with expected ranges.
- 1.1.9 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.
- 1.1.10 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 4, together with the 2021 running
- 1.1.12 Table 1 provides a summary of the complaint information related to dust or air quality received during the reporting period, together with the findings of any related investigations.

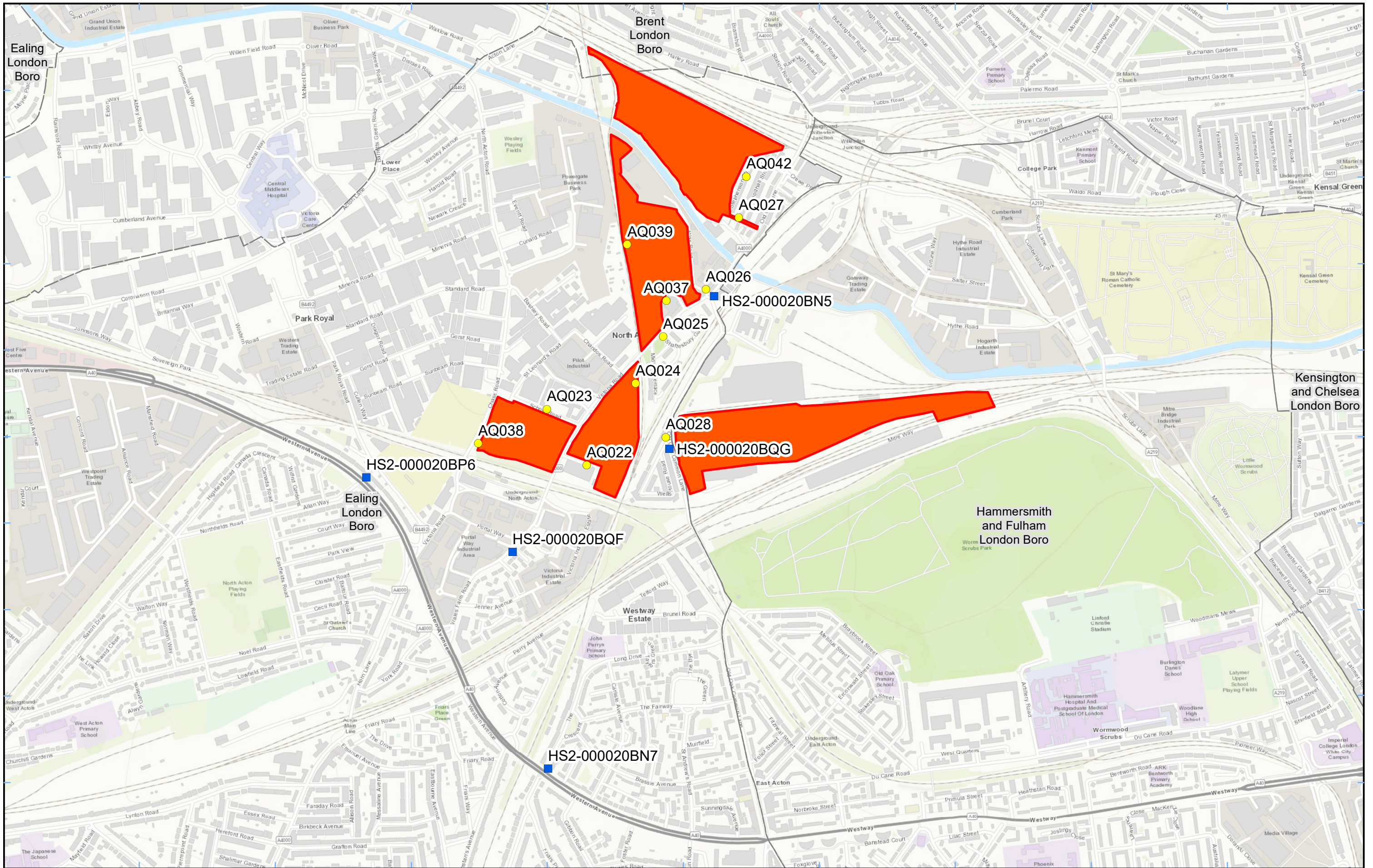
Table 1: Summary of complaints received during August 2021

Complaint Reference No.	Worksite Reference	Description of complaint	Results of investigation
HS2-21-42381-C	N/A	Ongoing smell of sewage.	The complainant was responded to highlighting that the nearest septic tank changed 3 times a week. Odour reducing methods are continuing to be sought.

Appendix A – Worksites and Monitoring Locations

Figure 1-3: 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

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



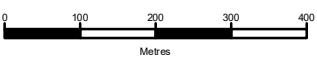
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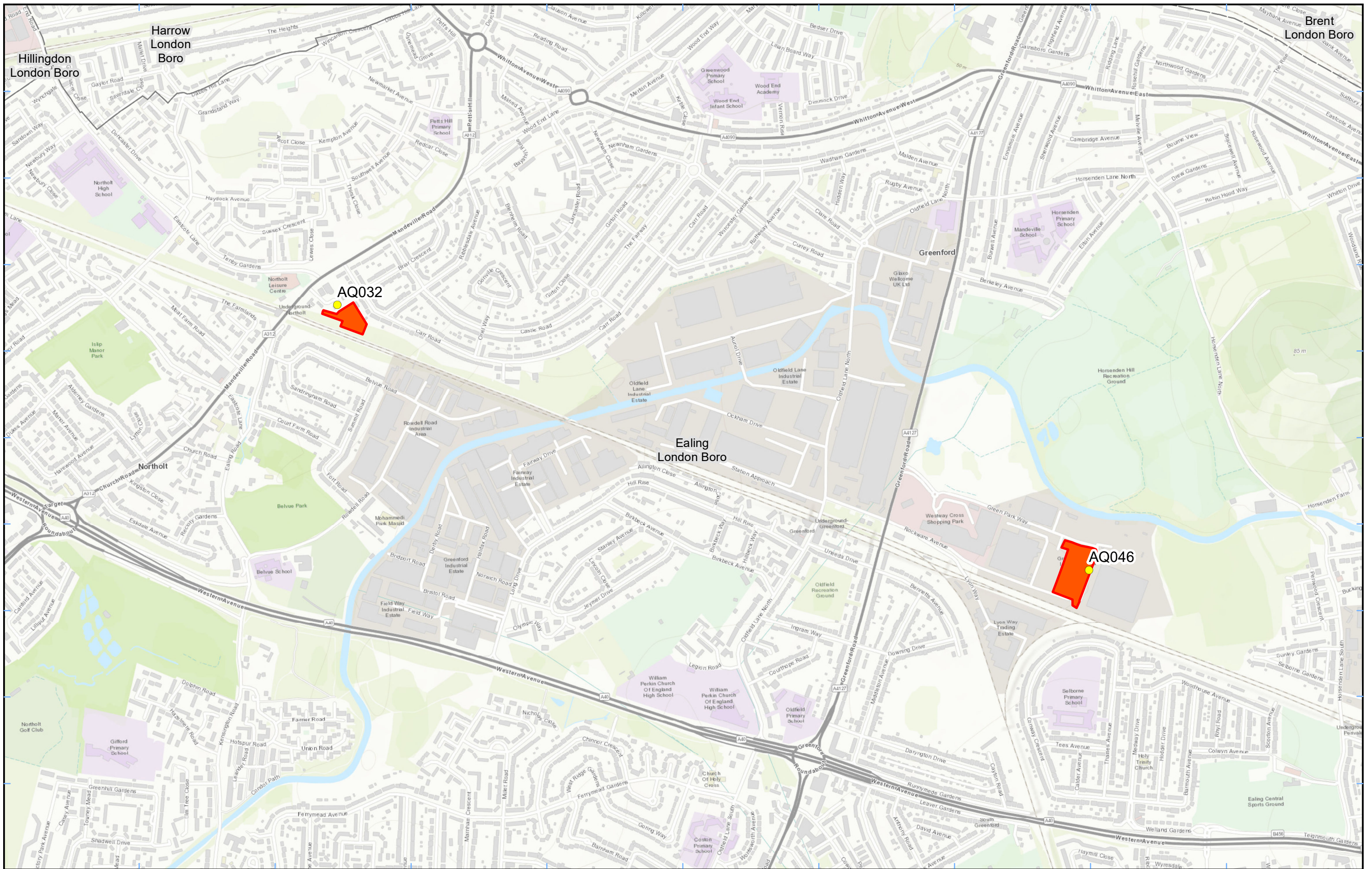


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Metres

Date: 26/07/21



- 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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Appendix B – Dust Monitoring Results

Table 2: Dust monitoring locations and August 2021 results

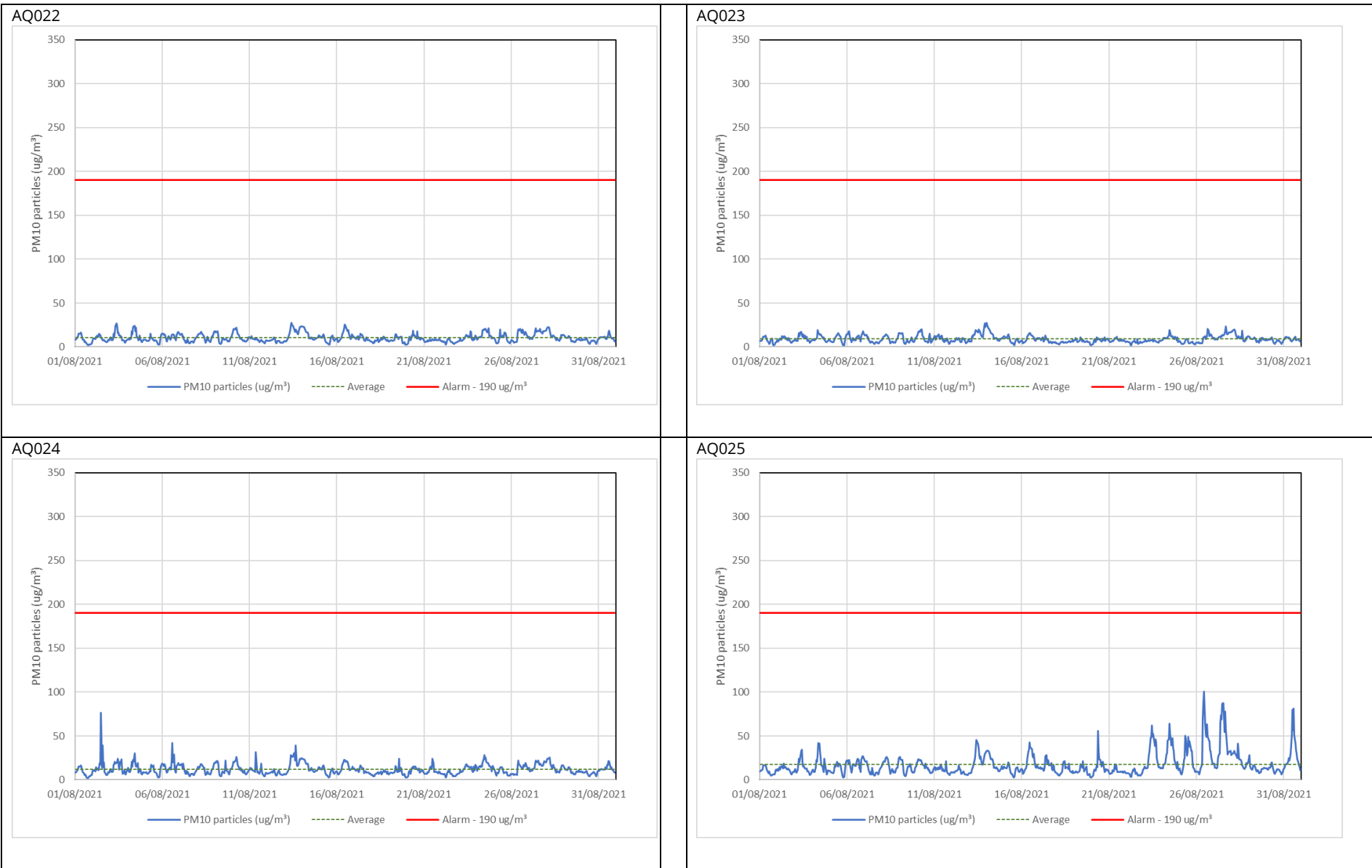
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM ₁₀ concentration (µg/m ³)	Minimum 1-hour PM ₁₀ concentration (µg/m ³)	Maximum 1-hour PM ₁₀ concentration (µg/m ³)	Number of 1-hour periods exceeding trigger level of 190 µg/m ³	Data capture
AQ022	521072, 181985	Boden House	M	Yes	N	10.5	2.0	27.4	0	100.0
AQ023	520956, 182149	School Road	M	Yes	N	9.0	1.8	27.8	0	100.0
AQ024	521214, 182223	Braitrim House	M	Yes	N	11.9	2.0	76.2	0	100.0
AQ025	521295, 182360	Victoria Road	M	Yes	N	17.7	2.6	100.6	0	100.0
AQ026	521419, 182497	Old Oak Lane	M	Yes	N	14.9	1.8	88.3	0	100.0
AQ027	521515, 182706	Channel Gate Road	M	Yes	N	13.6	1.7	146.7	0	100.0
AQ028	521302, 182067	Wells House Road	M	Yes	N	25.2	2.0	205.2	1	100.0
AQ032	513402, 184536	Badminton Close	M	Yes	N	7.6	1.5	25.8	0	100.0
AQ037	521304, 182464	Atlas Road	M	No	N	9.6	1.1	65.7	0	100.0
AQ038	520756, 182049	Chase Road	M	Yes	N	13.2	1.8	255.1	2	100.0
AQ039	532417, 181198	Atlas Road 2	M	Yes	N	10.8	1.2	110.0	0	100.0
AQ042	521537, 182826	Stephenson Road	M	Yes	N	10.2	1.5	85.8	0	100.0

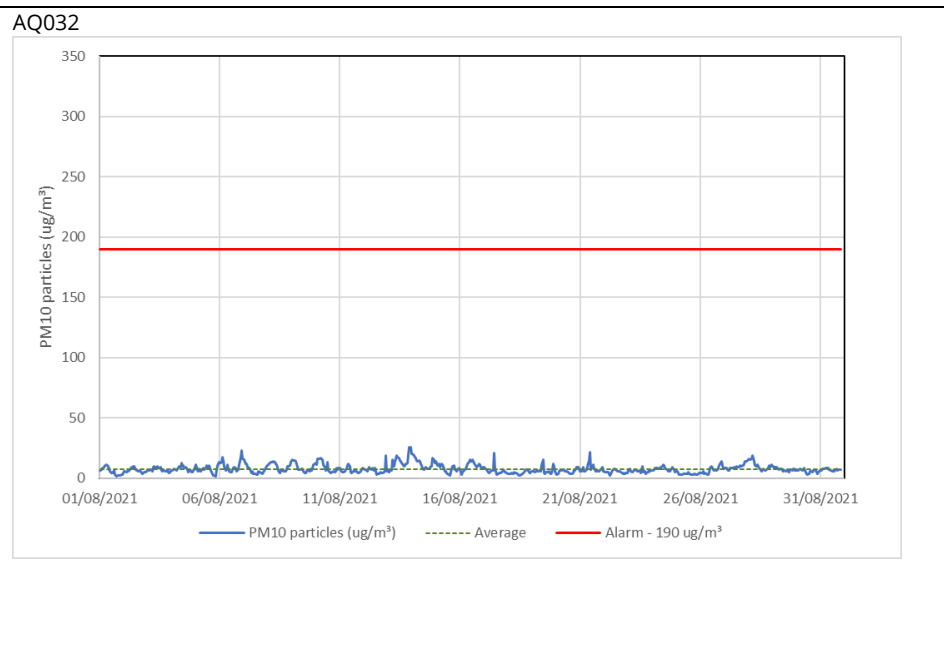
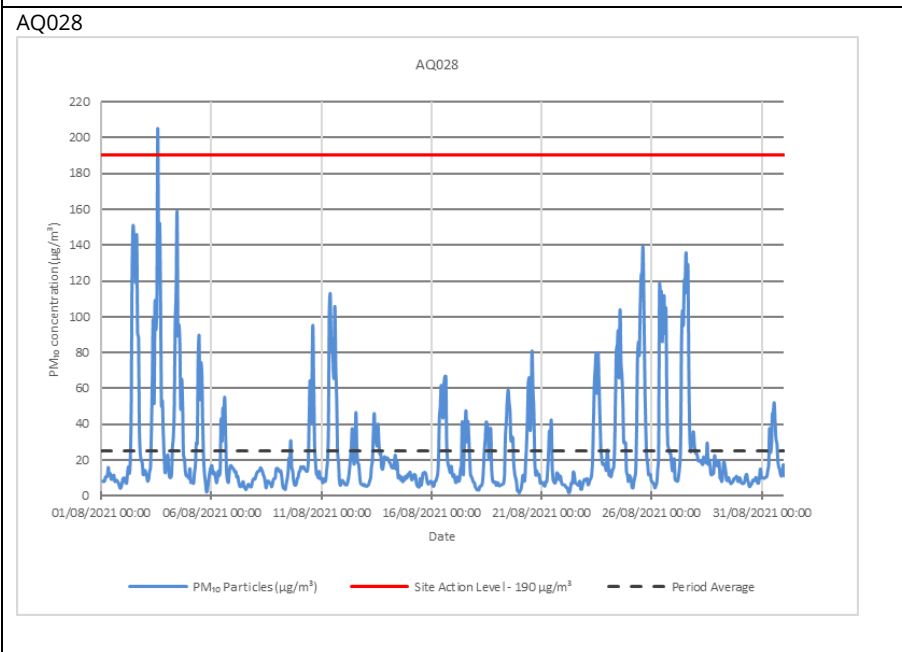
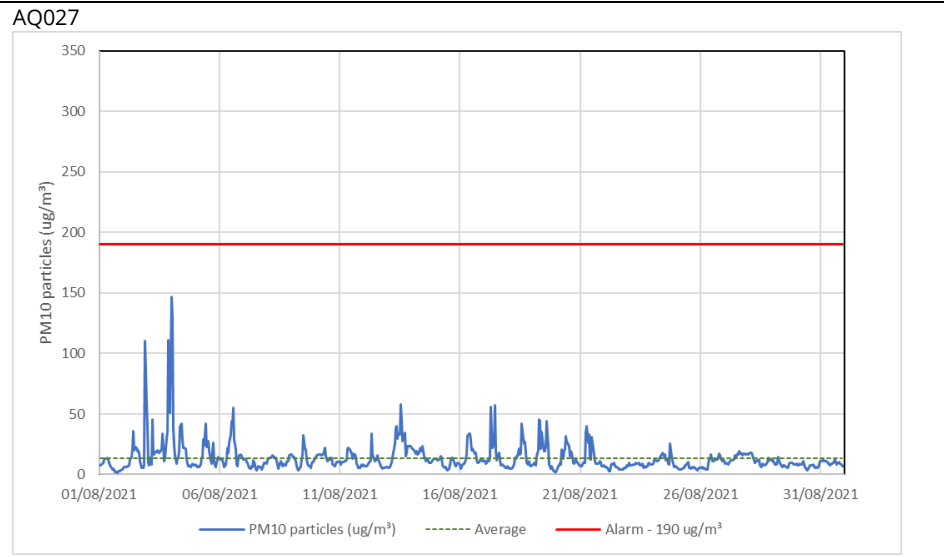
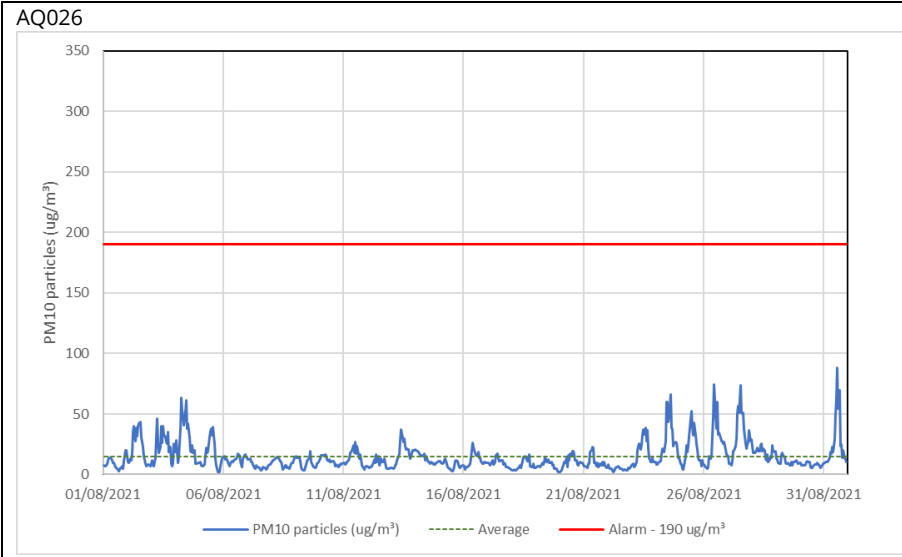
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM ₁₀ concentration (µg/m ³)	Minimum 1-hour PM ₁₀ concentration (µg/m ³)	Maximum 1-hour PM ₁₀ concentration (µg/m ³)	Number of 1-hour periods exceeding trigger level of 190 µg/m ³	Data capture
AQ046	515593 , 183764	Green Park Way	M	Yes	N	9.1	1.3	49.8	0	99.5
AQ051	51.531688, -0.300934	Westgate	M	Yes	N	11.0	2.3	416.6	1	100.0

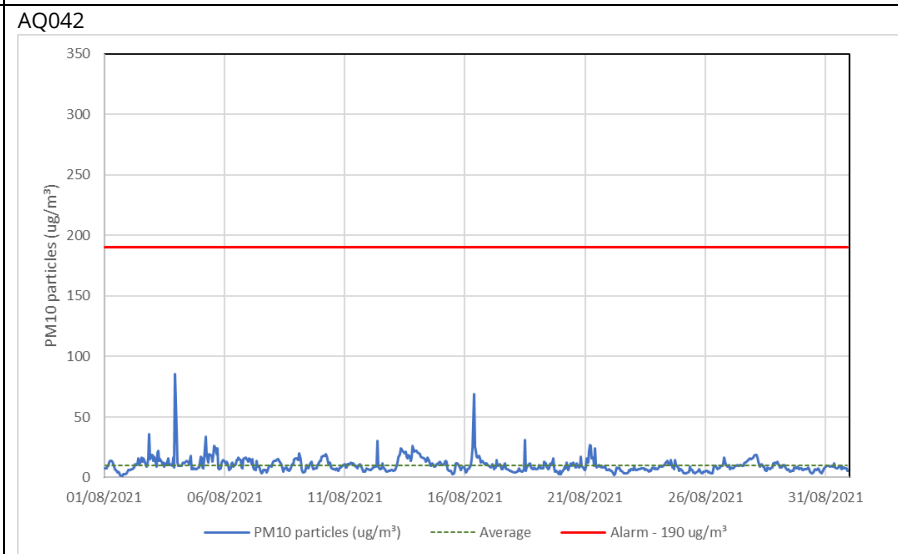
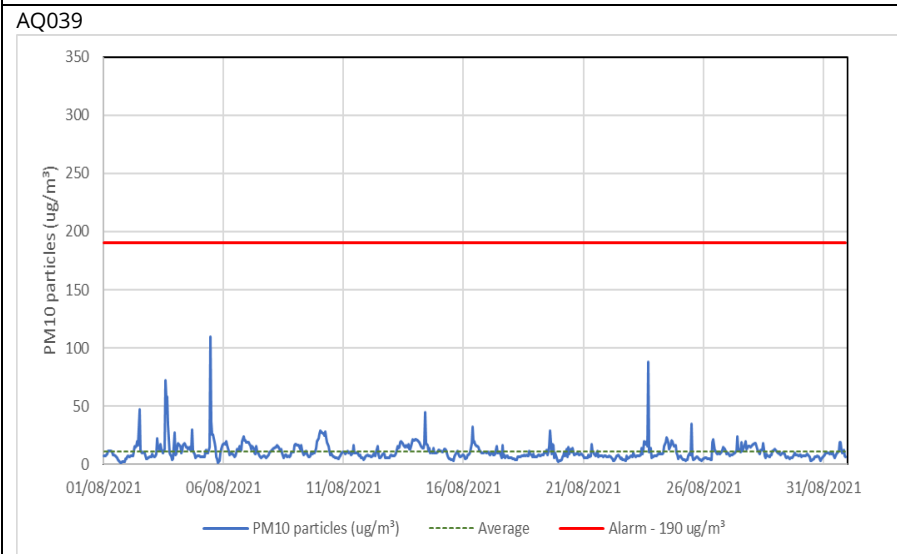
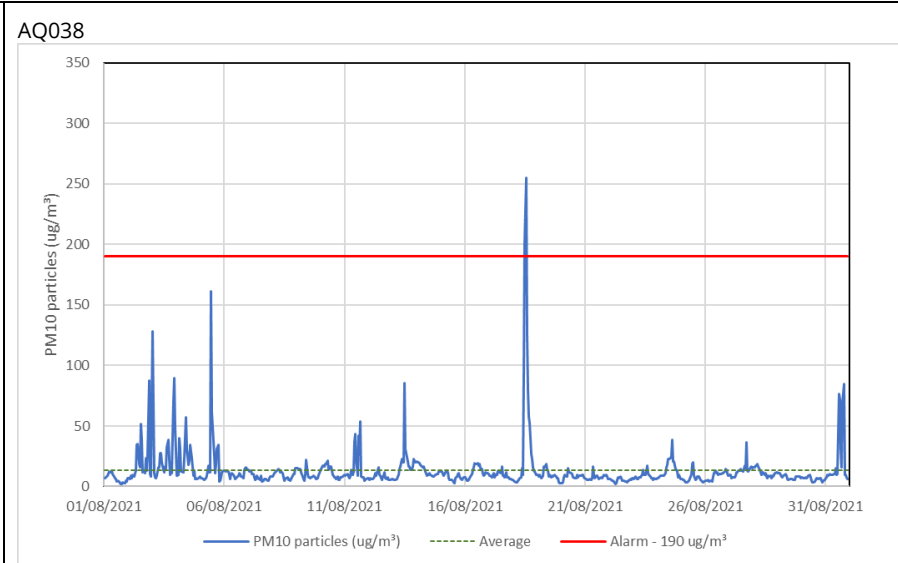
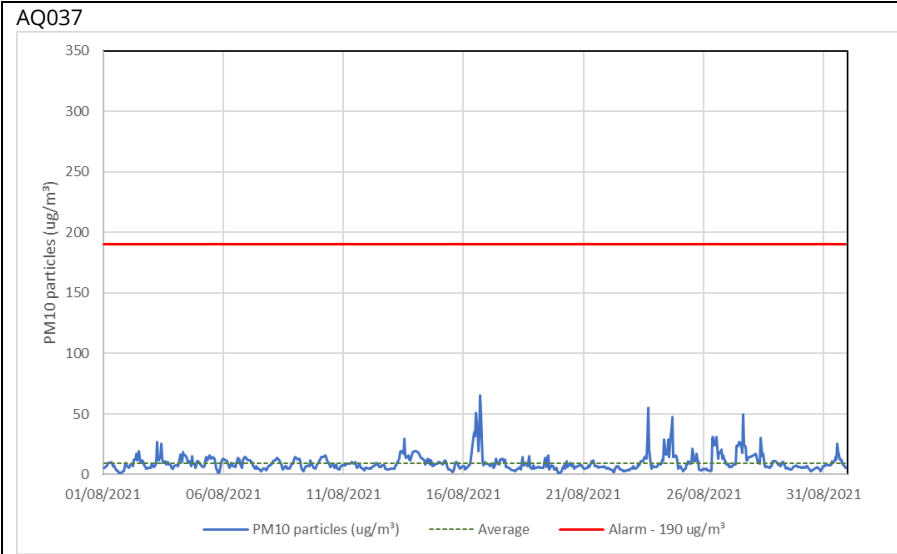
Table 3: Summary of exceedances of trigger level in August 2021

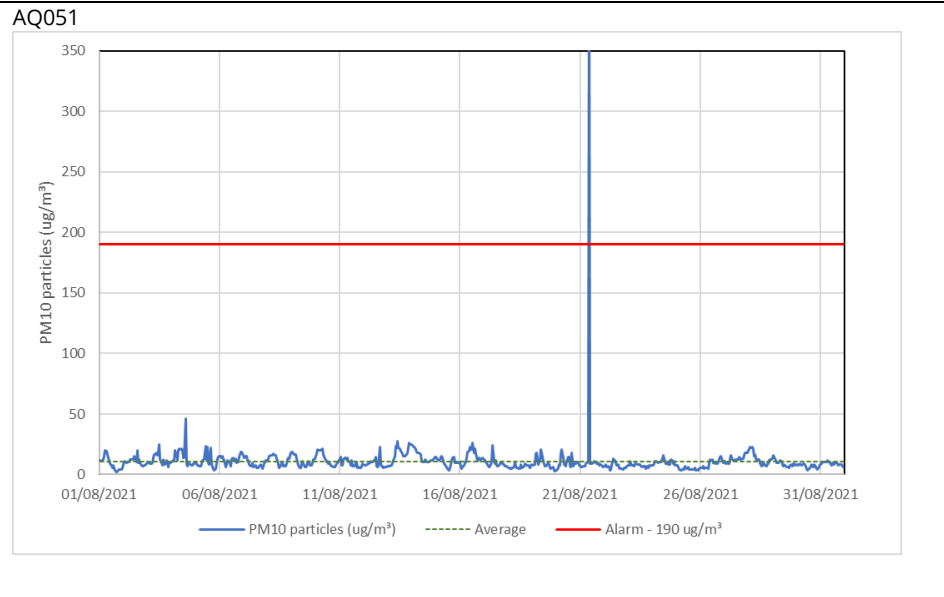
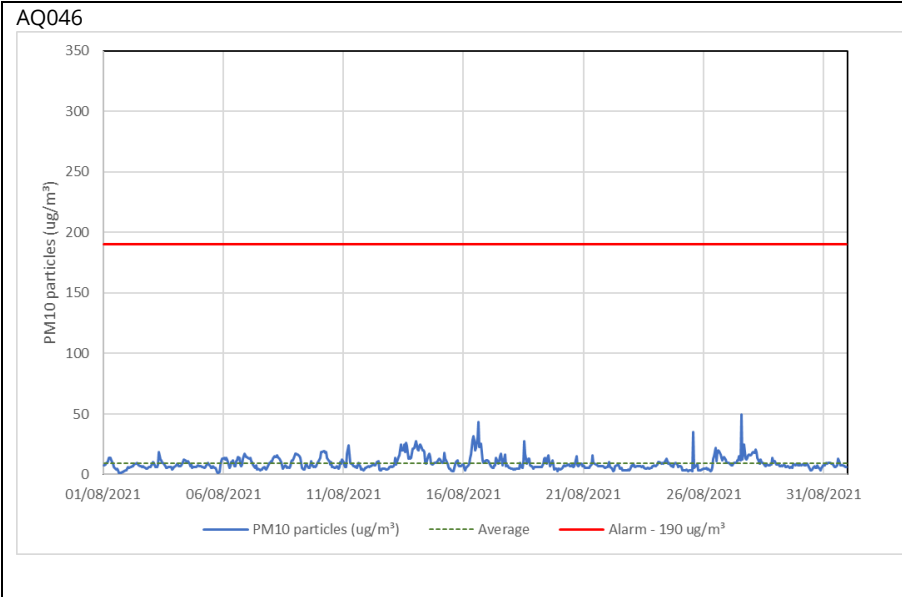
Monitoring site ID	Period exceeding trigger level	Investigation	Outcomes / Resolution / Remedial measures implemented
AQ038	18/08/2021; 11:01 – 12:00; 200.5 µg/m ³ 12:01 – 13:00; 255.1 µg/m ³	<p>At the time of the two trigger alerts from the dust monitor (AQ038) which is located on the western boundary of the Victoria Road Crossover Box site adjacent to Chase Road, there were no activities taking place in the area which could've given rise to the increased dust levels.</p> <p>The 1st trigger alert was investigated immediately by the site team and no obvious activities were found to be the cause, same for the 2nd trigger. The excavation work and spraying of the nearby shaft which has been ongoing for the past few months is now complete and decommissioning of plant and equipment is under way in the area.</p> <p>The locality and much of that area of the site is concrete hardstanding and damped down as part of daily circuits of the site by road sweepers, bowsers, dust canons, and jet sprays, so windblown dust from the wider site was not considered to be the source either.</p> <p>Utilities works on Chase Road were also considered but were ruled out given the nature (not dusty) and proximity of the work.</p>	<p>The site team will maintain good housekeeping standards across the site and continue to ensure dust suppression is available and deployed where required.</p>
AQ051	21/08/2021; 08:01 - 09:00; 416.6 µg/m ³	<p>At the time of the trigger alert from the dust monitor (AQ051), which is located on the north-eastern boundary of the Westgate Vent Shaft site, the tarmac directly beneath the monitor was being cut and removed. The works were related to the mains water supply connection to the site.</p> <p>Dust suppression was in use during the operation and the isolated elevated level was not considered to be experienced beyond the immediate vicinity of the works/monitor and not representative of wider site levels. Monitored levels immediately before and after the operation were significantly lower and within expected ranges.</p>	<p>Concreting activities were to be undertaken on the Tuesday 24th without incident and the site team will continue to employ necessary dust suppression to the works. .</p>

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	35	51						47
HS2-000020BN7	The Approach street sign	520959, 181102	56	47	45	41	49	38	29						43
HS2-000020BQF	Conway Drive sign post	520856, 181733	58	53	49	53	51	46	42						50
HS2-000020BQG	Lamp post outside No 1. Wells House Road on Old Oak Common Lane	521312, 182033	39	44	38	36	38	15	32						35
HS2-000020BP6	Triplicate site next to the Ealing, Western Avenue Acton roadside automatic monitoring station	520430, 181950	51	51	46	41	48	37	41						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						63

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.