

Air Quality and Dust Monitoring Monthly Report – **July** 2020

London Borough of Ealing



SKANSKA



Department for Transport

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Monthly Summary

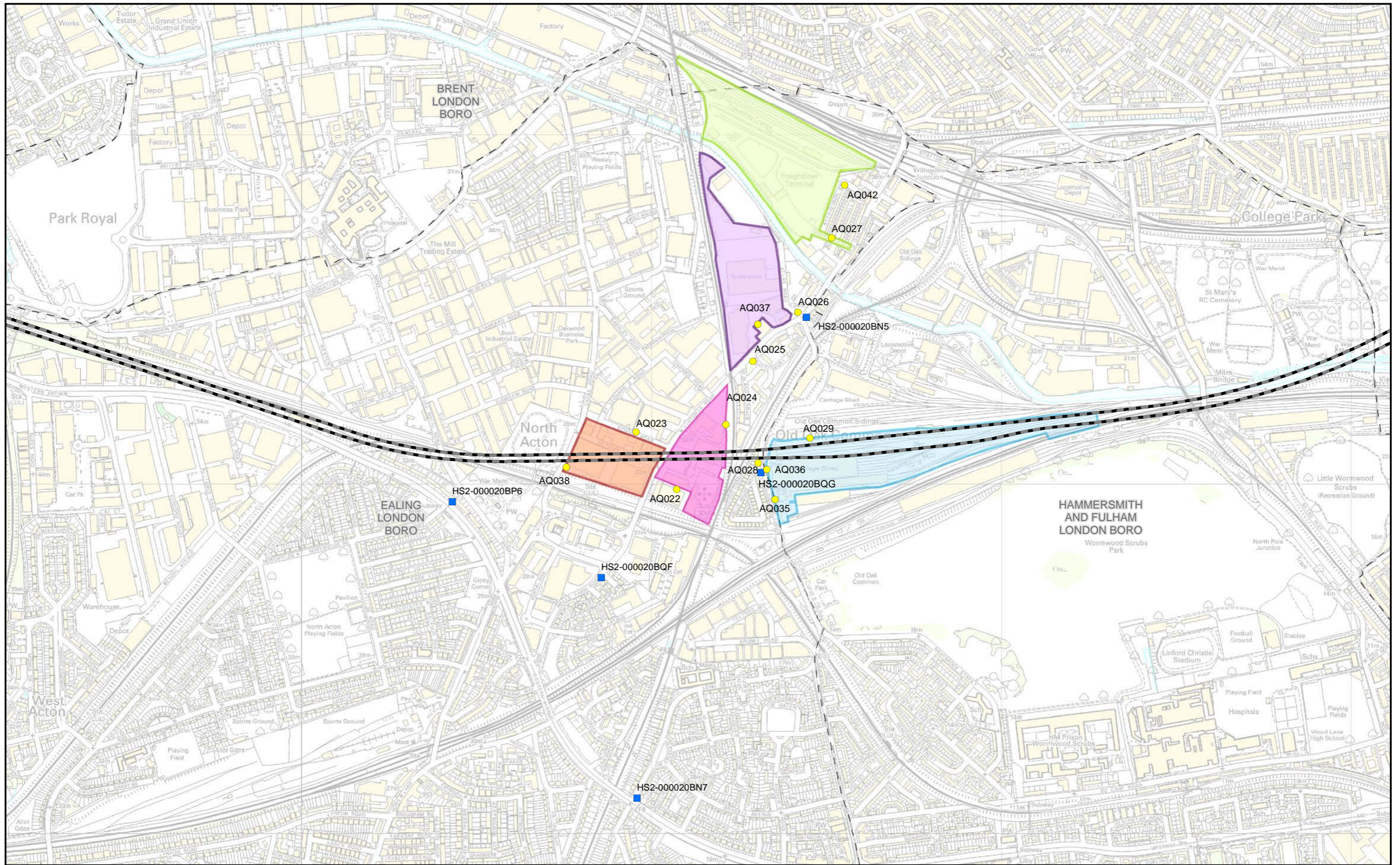
- 1.1.1 This Summary Report is published in fulfilment of commitments detailed in the High Speed Rail (London-West Midlands) Environmental Minimum Requirements, Annex 1: Code of Construction Practice, for the nominated undertaker to present the results of air quality and dust monitoring undertaken in the London Borough of Ealing (LBE) during June and July 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 worksites, as presented in Appendix A, Figure 1 and Figure 2, include:
- Groundworks at Old Oak Common Depot (located in the London Borough of Hammersmith and Fulham);
 - Victoria Road Crossover Box and Flat Iron Site – site set up and groundworks;
 - Willesden Euro Terminal – site set up and groundworks;
 - Atlas Road mobilisation – 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 Eleven (11) dust monitors were 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 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 eight (8) dust trigger alerts recorded during the monitoring period (July 2020). Exceedances are presented in Appendix B, Table 2. 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 2, together with the 2020 running mean.
- 1.1.12 There were no (0) complaints received, relating to dust or air quality, during this reporting period (July 2020).

Appendix A – Worksites and Monitoring Locations

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





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

- Willesden Euro worksite
- Victoria Road Crossover Box
- Old Oak Common worksite
- Atlas Road worksite
- Flat Iron Compound

Figure Number

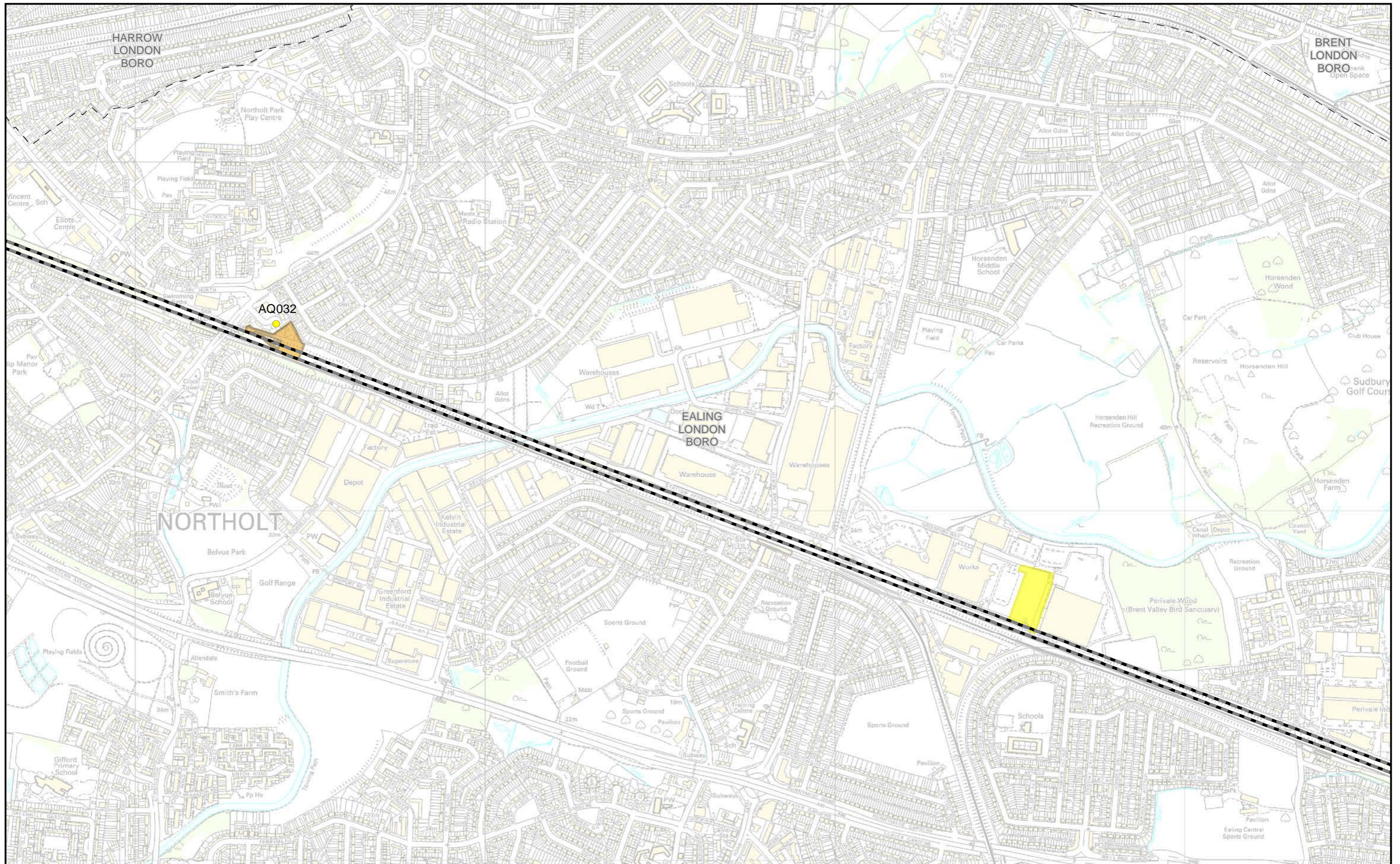
Figure Name
Worksites and Monitoring locations in LBE
 (sheet 1)

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London Borough of Ealing

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- Legend**
- Route in tunnel
 - Route on surface
 - Diffusion tube monitoring location
 - Dust monitoring location
 - Greenway Park Vent Shaft
 - Mandeville Road Vent Shaft

Figure Number

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

London Borough of Ealing

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Appendix B – Dust Monitoring Results

Table 1: Dust monitoring locations and July 2020 results

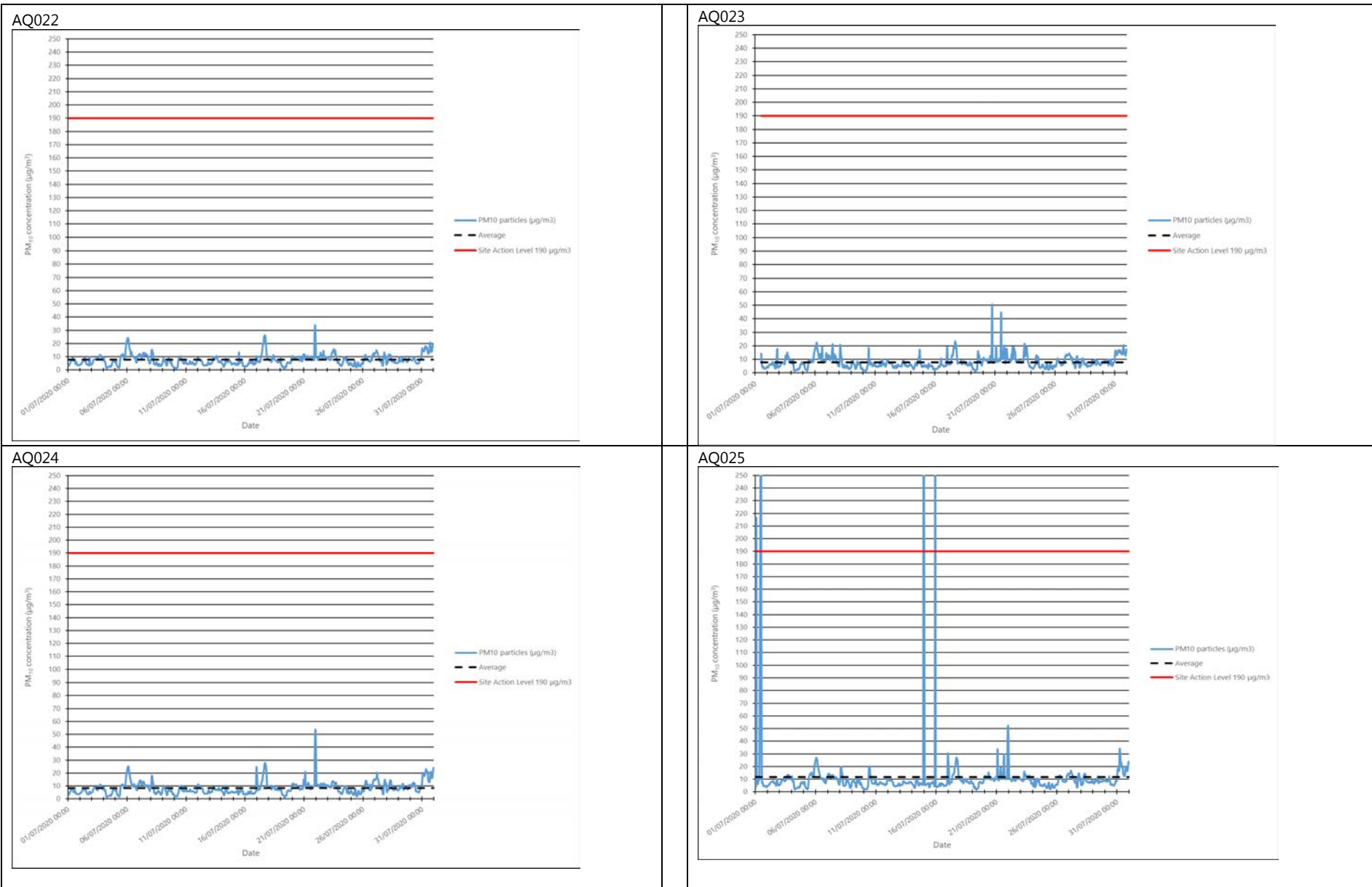
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM ₁₀ concentration (µg/m ³)	Minimum 1-hour PM ₁₀ concentration (µg/m ³)	Maximum 1-hour PM ₁₀ concentration (µg/m ³)	Number of 1-hour periods exceeding trigger level of 190 µg/m ³	Data capture (%)
AQ022	521072, 181985	Boden House	H	Yes	N	7.7	1.0	33.9	0	100.0
AQ023	520956, 182149	School Road	H	Yes	N	7.9	0.9	50.6	0	98.5
AQ024	521214, 182223	Braitrim House	H	Yes	N	8.4	1.2	53.5	0	100.0
AQ025	521295, 182360	Victoria Road	H	Yes	N	11.6	1.4	410.1	6	100.0
AQ026	521419, 182497	Old Oak Lane	H	Yes	N	9.4	1.5	86.5	0	98.5
AQ027	521515, 182706	Channel Gate Road	H	Yes	N	7.1	0.2	94.7	0	98.7
AQ028	521302, 182067	Wells House Road	H	Yes	N	10.7	1.5	57.6	0	100.0
AQ032	513402, 184536	Badminton Close	M	Yes	N	5.2	0.5	16.3	0	93.7
AQ037	521304, 182464	Atlas Road	M	No	N	6.8	1.1	58.1	0	100.0
AQ038	520756, 182049	Chase Road	H	Yes	N	9.0	0.9	257.8	1	99.3
AQ042	521537, 182826	Stephenson Road	H	Yes	N	13.4	1.8	693.8	1	92.5

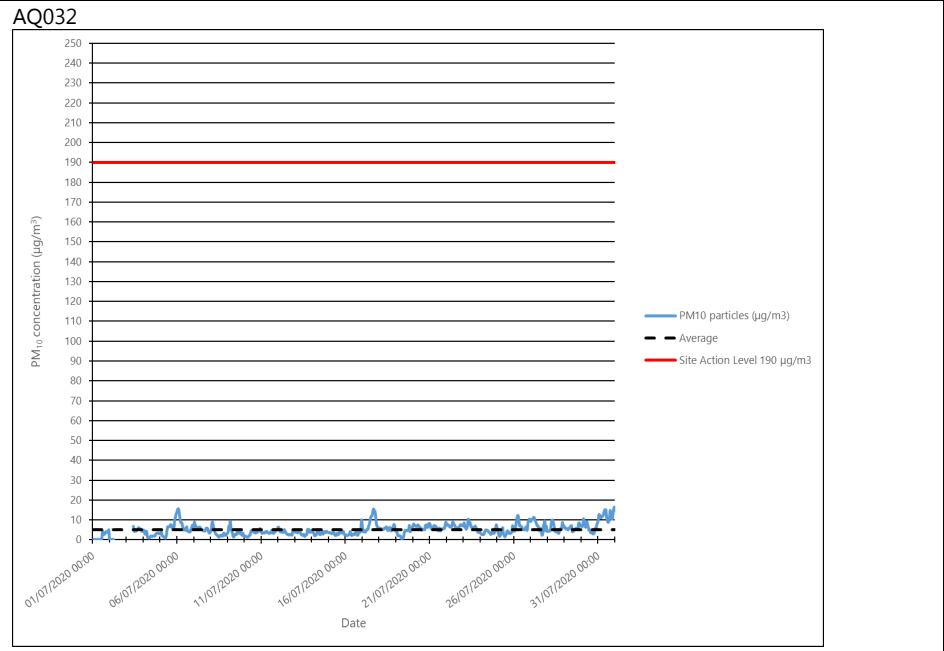
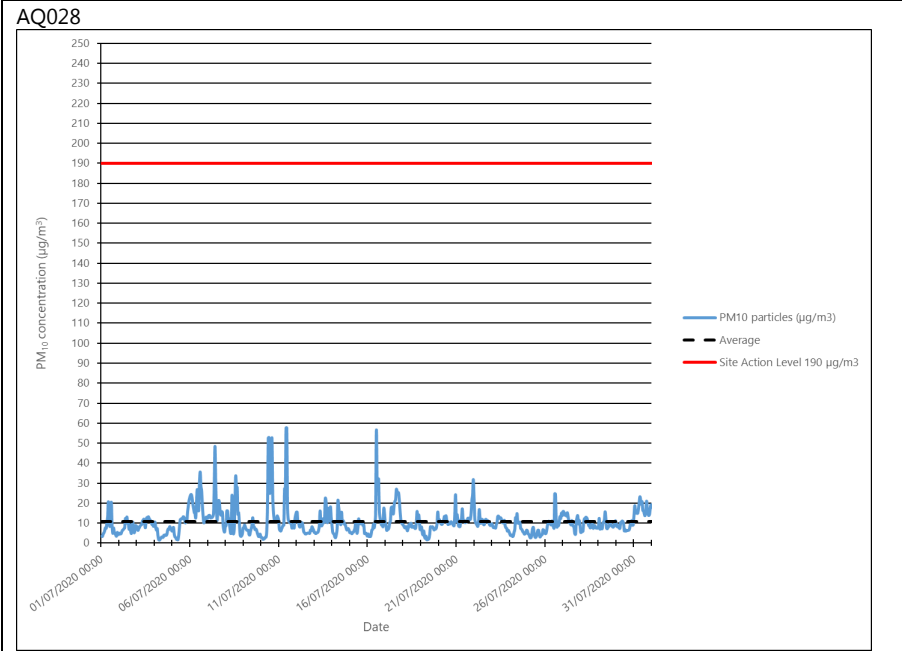
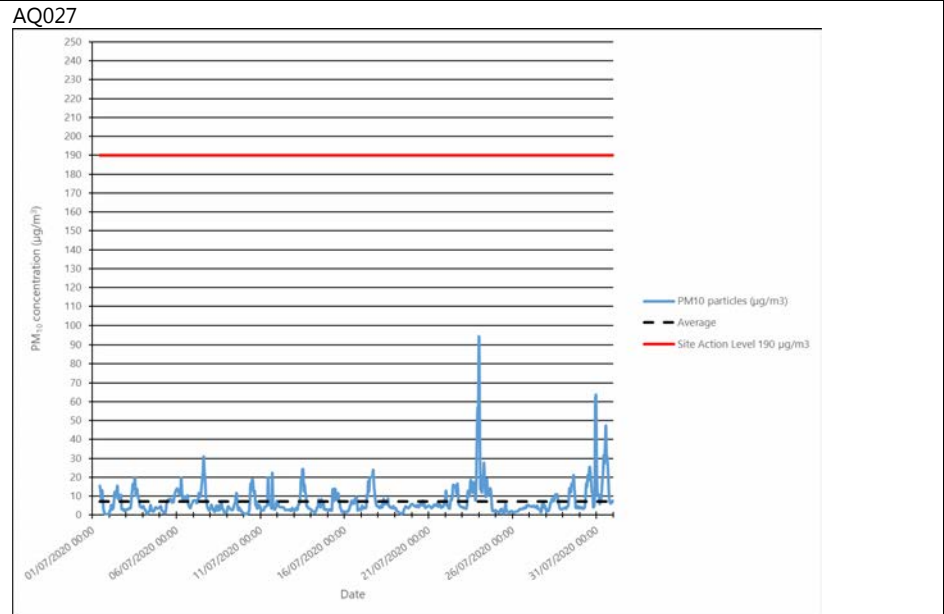
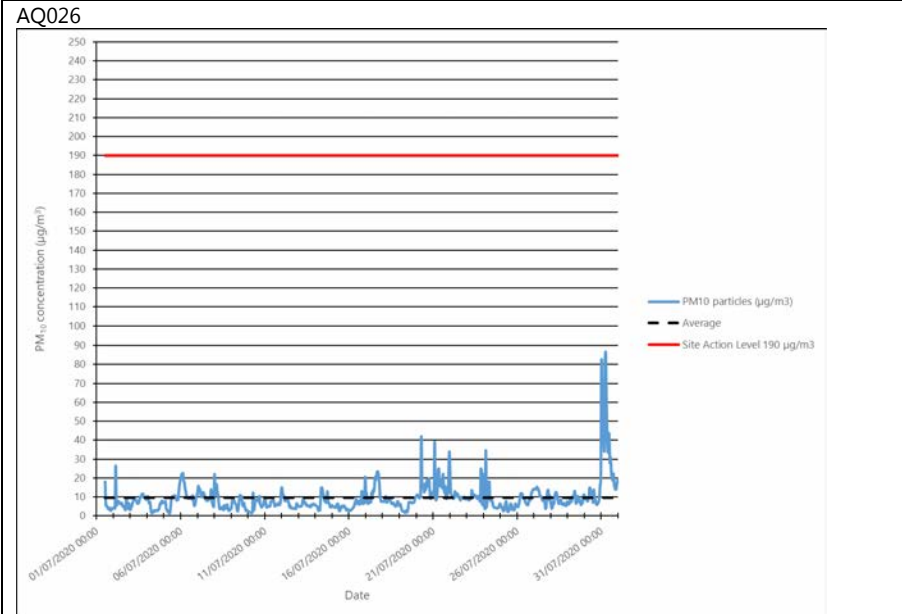
Table 2: Summary of exceedances of trigger level in July 2020

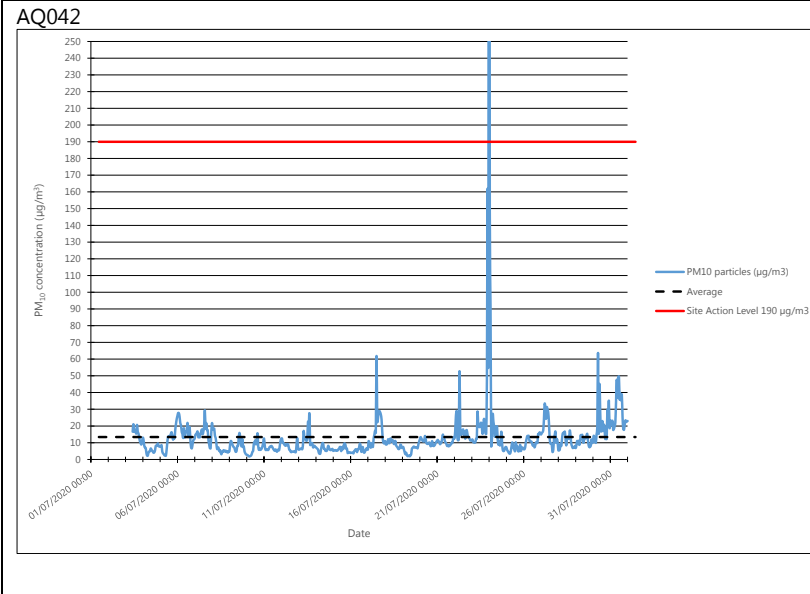
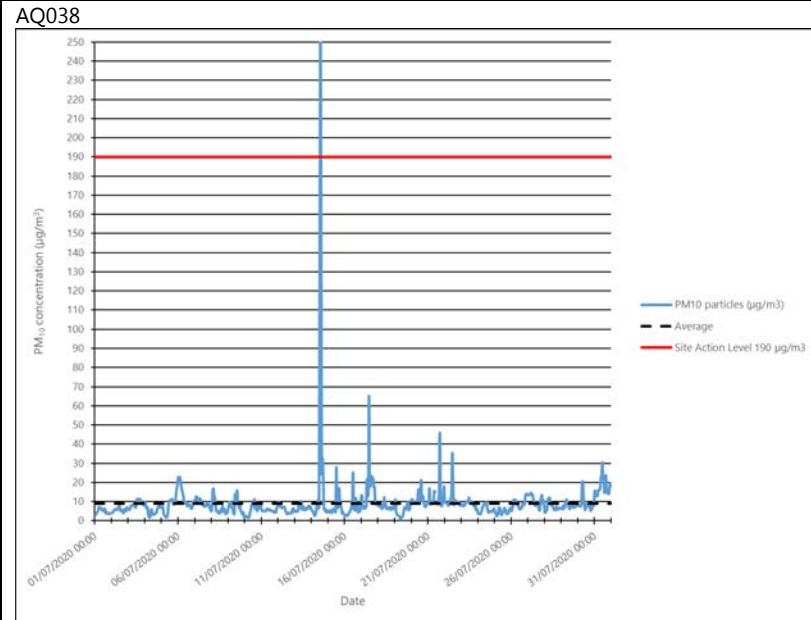
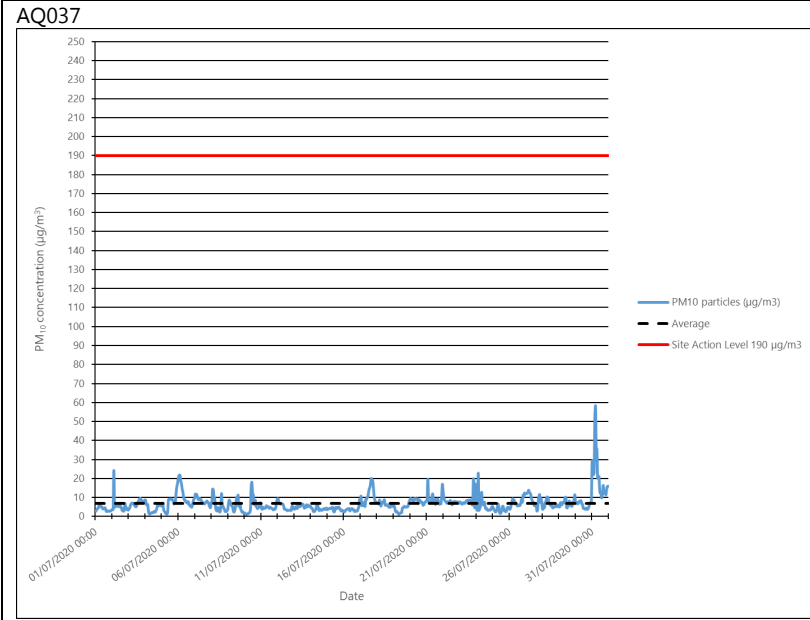
Period exceeding trigger level	Worksite	Monitoring site ID	Complaint reference number (if applicable)	Reason	Resolution
01/07/2020 00:01 – 02:00	Atlas Road	AQ025	n/a	The first two triggers were received during the early hours of the morning when the nearby HS2 Atlas Road site was shut. Two subsequent trigger alerts were also received this morning during normal working hours. Third Party contractors were carrying out excavation works throughout the night and continuing during the morning with heavy plant, machinery and vehicles were directly adjacent to / underneath the dust monitor. Works were finished by about 13:00 on the 01/07/2020 No dusty activities were being undertaken on the HS2 Atlas Road site and the nearby dust monitor (AQ037) located on the site boundary showed no elevated levels over the same period. It is considered that the four triggers were not associated with HS2 site works.	n/a
01/07/2020 09:01 – 11:00 (x2 triggers)	Atlas Road	AQ025	n/a		
14/07/2020 22:01 – 15/07/2020 00:00 (x2 triggers)	Atlas Road	AQ025	n/a		
15/07/2020 21:01 – 22:00	Atlas Road	AQ025	n/a	Received late night / middle of the night and closer and nearby monitors to the Atlas Road site, AQ037 and AQ026, showed no elevated levels at the time - not related to HS2 site works. It was not possible to verify if these triggers were due to third party works as experienced at the beginning of the month.	n/a
14/07/2020 12:01 – 13:00	Victoria Road Crossover Box	AQ038	n/a		
23/07/2020 23:01 - 24/07/2020 00:00:00	Willesden Euro Terminal	AQ042	n/a	At the time of the trigger alert from monitor AQ038, located in the south west corner of the HS2 Victoria Road Crossover Box site, limited concrete breakout using a hand-held breaker was in operation just near to the hoarding line (within a few metres of the dust monitor). Periodic dust suppression was being employed during the operation. However, on receipt of the trigger, works were stopped.	Prior to recommencement of the works, the area was suitably damped down and the bowser / jet wash used more consistently for the remaining duration of the works.

					Monitored levels subsequently returned to the lower expected values.
				The isolated trigger was received in the middle of the night and indicative of a fault with the monitor due to high humidity levels – faulty heater. The nearby monitor outside WET (AQ027) showed no similar elevated level at the time. Not related to HS2 site works.	The monitor was subsequently serviced and repaired on the 31/07/20.

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







Appendix C – Air Quality Monitoring Results

Table 2: 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							43
HS2-000020BN7	The Approach street sign	520959, 181102	64	55	No data			37							52
HS2-000020BQF	Conway Drive sign post	520856, 181733	61	51	No data			42							51
HS2-000020BQG	Lamp post outside No 1. Wells House Road on Old Oak Common Lane	521312, 182033	68	55	No data			38							54
HS2-000020BP6	Triplicate site next to the Ealing, Western Avenue Acton roadside automatic monitoring station	520430, 181950	56	46	No data			40							48
HS2-000020BP7	Triplicate site next to the Ealing, Hangar Lane Gyratory roadside automatic monitoring station	518537, 182708	77	61	No data			56							65

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.