HS2

June 2020

Air Quality and Dust Monitoring Monthly Report – June 2020

London Borough of Ealing

COSTAIN SKANSKA

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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 May and June 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:

- Demolition and groundworks at Old Oak Common Depot (located in the London Borough of Hammersmith and Fulham);
- Victoria Road Crossover Box and Flat Iron Site mobilisation, site set up and groundworks;
- Willesden Euro Terminal mobilisation and site set up;
- Atlas Road mobilisation, site set up and groundworks;
- Green Park Way Vent Shaft – yet to be established; 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 PM_{10} concentrations of 190 µg/m^3, 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 2020). Exceedances are presented in Appendix B, Table 2. All other results were in line with expected ranges.

1.1.9 Data capture for AQ022, AQ025, AQ027, AQ037 and AQ042 was below 90% for the month of June 2020. For monitors AQ025, AQ037 and AQ042 this was due to technical faults with the monitors. For monitors AQ022 and AQ027 this was due to these monitors being removed on the 26th June for annual calibration. Faulty monitors have been repaired and reinstalled.

1.1.10 Diffusion tube monitoring of Nitrogen Dioxide (NO_2) 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. Due to the COVID-19 pandemic and government lockdown it was not possible to conduct diffusion tube air quality monitoring in May 2020.

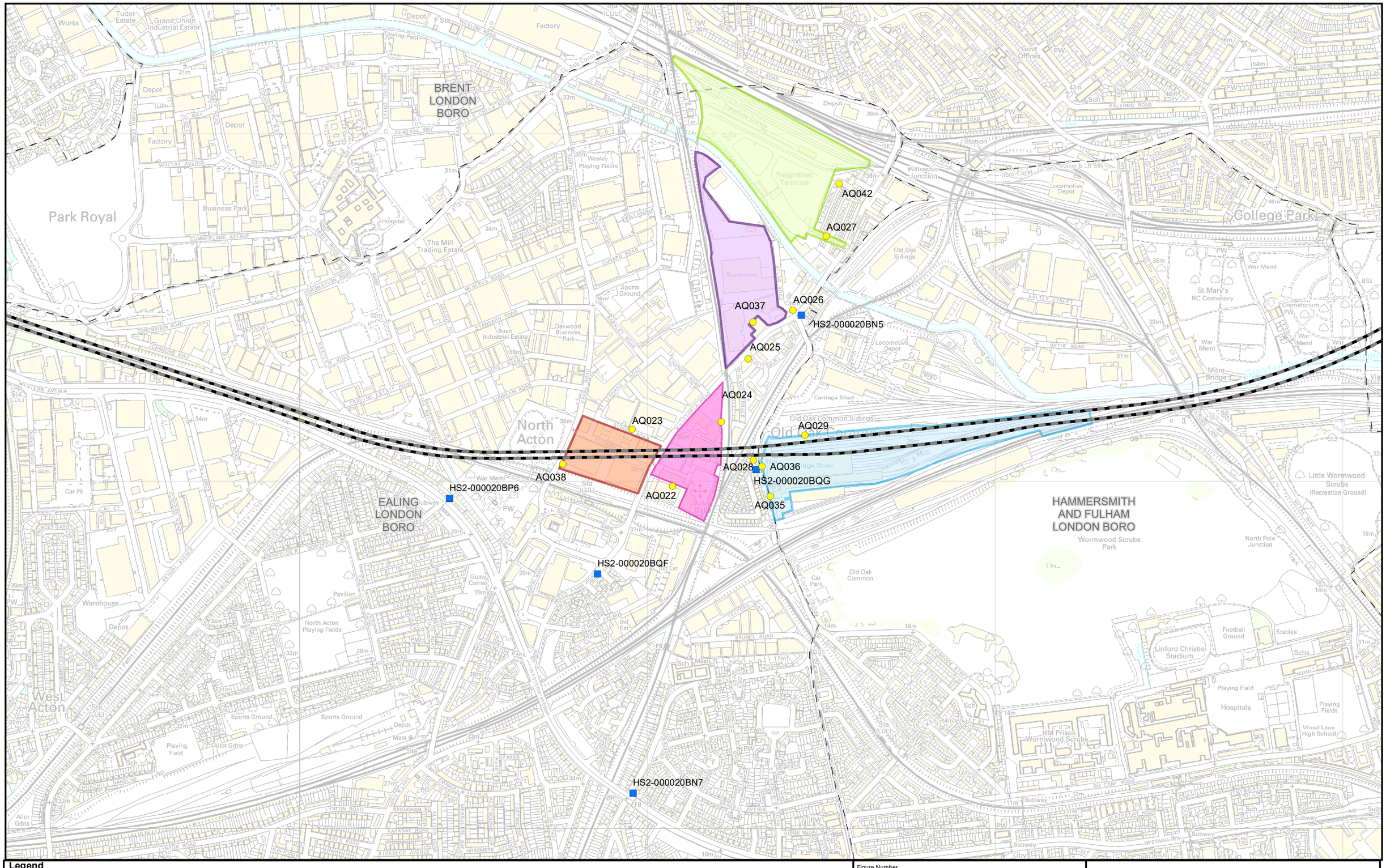
1.1.11 Diffusion tube monitoring results are provided from the laboratory analysis, and therefore still require various analysis and adjustments to be undertaken. Final corrected results will be presented and described in the annual report.

1.1.12 NO_2 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 (June 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

Figure Number

Figure Name

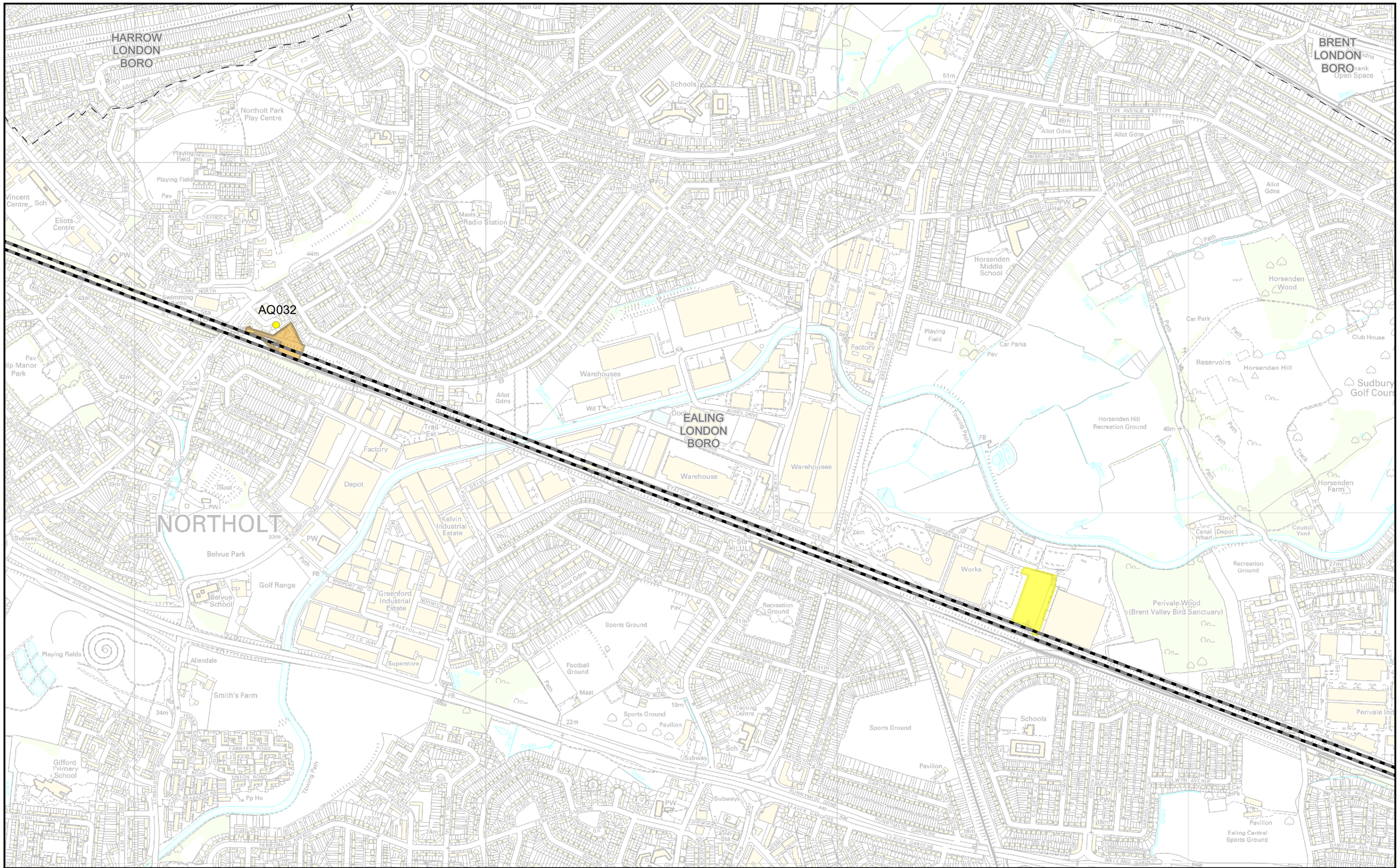
Worksites and Monitoring locations in LBE (sheet 1)

London Borough of Ealing

Scale at A3: 10,000

0 100 200 300 400 Metres

Map Number: 1EW02-CSJ-EV-REP-S000-000017_appAFig1.pdf **Date:** 25/06/20



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

Scale at A3: 10,000

0 100 200 300 400 Metres

Map Number: 1EW02-CSJ-EV-REP-S000-000017_appAFig1.pdf **Date:** 15/04/20

Appendix B – Dust Monitoring Results

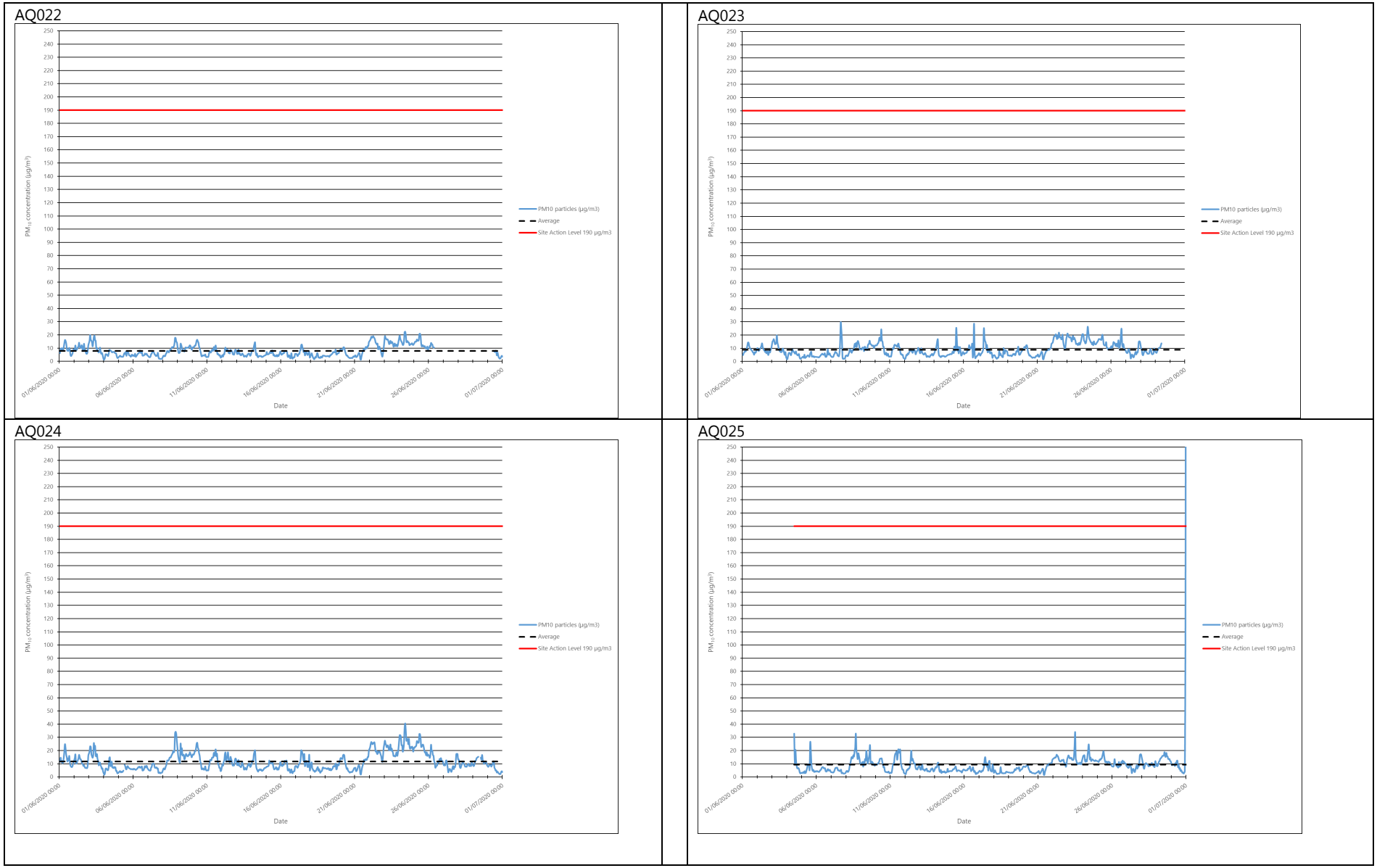
Table 1: Dust monitoring locations and June 2020 results

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 ($\mu g/m^3$)	Minimum 1-hour PM_{10} concentration ($\mu g/m^3$)	Maximum 1-hour PM_{10} concentration ($\mu g/m^3$)	Number of 1-hour periods exceeding trigger level of 190 $\mu g/m^3$	Data capture (%)
AQ022	521072, 181985	Boden House	H	Yes	N	8.0	1.4	22.5	0	86.5
AQ023	520956, 182149	School Road	H	Yes	N	8.9	1.7	29.5	0	94.7
AQ024	521214, 182223	Braitrim House	H	Yes	N	11.7	1.7	40.5	0	99.4
AQ025	521295, 182360	Victoria Road	H	Yes	N	9.3	1.4	512.5	1	88.5
AQ026	521419, 182497	Old Oak Lane	H	Yes	N	12.5	1.6	84.8	0	94.6
AQ027	521515, 182706	Channel Gate Road	H	Yes	N	6.1	0.4	37.4	0	84.9
AQ028	521302, 182067	Wells House Road	H	Yes	N	17.7	2.1	99.1	0	100.0
AQ032	513402, 184536	Badminton Close	M	Yes	N	8.0	0.1	23.6	0	94.2
AQ037	521304, 182464	Atlas Road	M	No	N	9.7	1.4	67.6	0	80.1
AQ038	520756, 182049	Chase Road	H	Yes	N	11.3	1.8	153.4	0	98.1
AQ042	521537, 182826	Stephenson Street	H	Yes	N	17.9	6.7	46.0	0	13.2

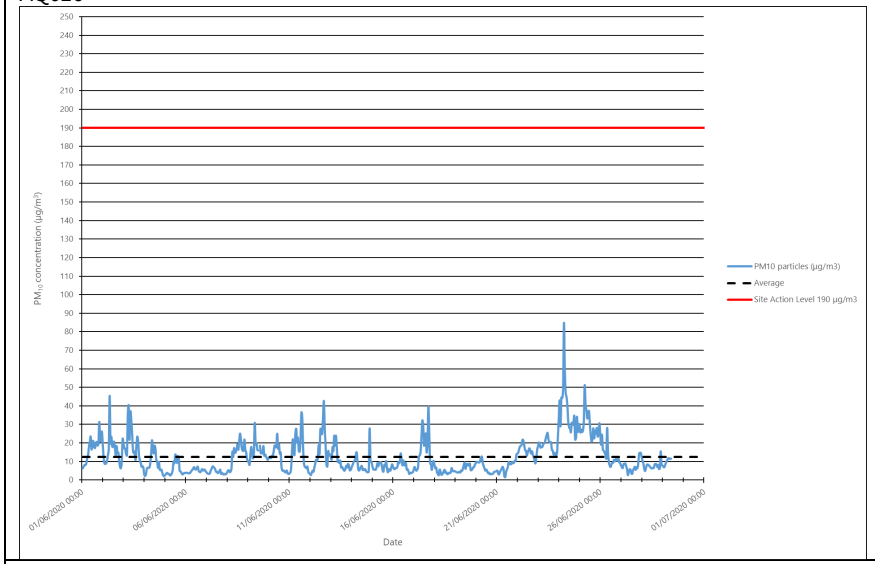
Table 2: Summary of exceedances of trigger level in June 2020

Period exceeding trigger level	Worksite	Monitoring site ID	Complaint reference number (if applicable)	Reason	Resolution
30/06/2020 23:01 – 01/07/2020 00:00 And then further triggers during the early and late hours of the morning of the 01/07/2020 01:00- 02:00 09:00- 10:00 10:00-11:00	Atlas Road	AQ025	n/a	The trigger was received late at night when the nearby HS2 Atlas Road site was shut. Third Party contractors were carrying out excavation works throughout the night with heavy plant, machinery and vehicles which 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 triggers were not associated with HS2 works.	n/a

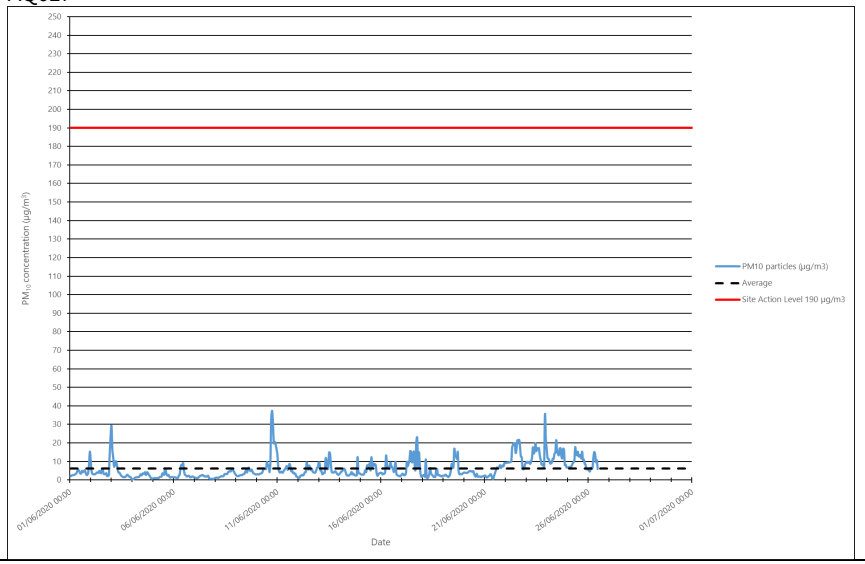
Figure 1: Construction dust 1-hour mean indicative PM_{10} concentration for dust monitors



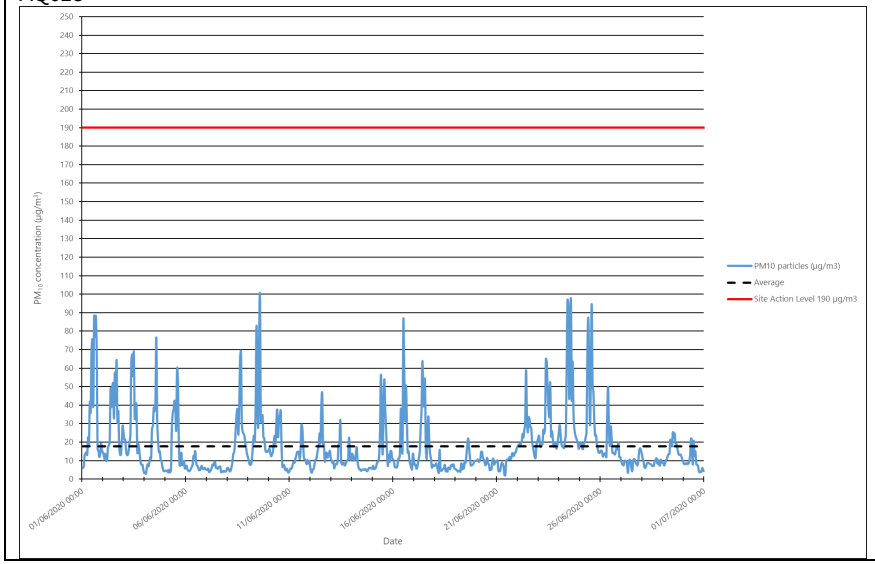
AQ026



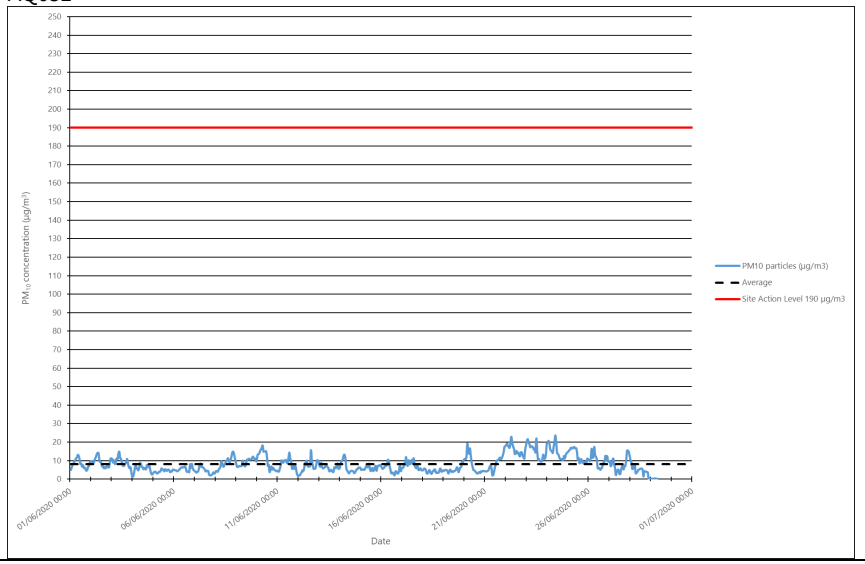
AQ027



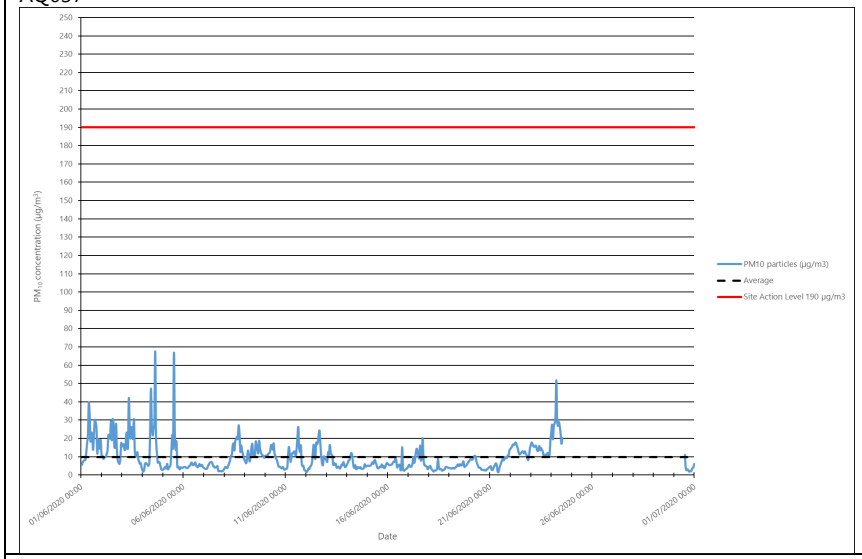
AQ028



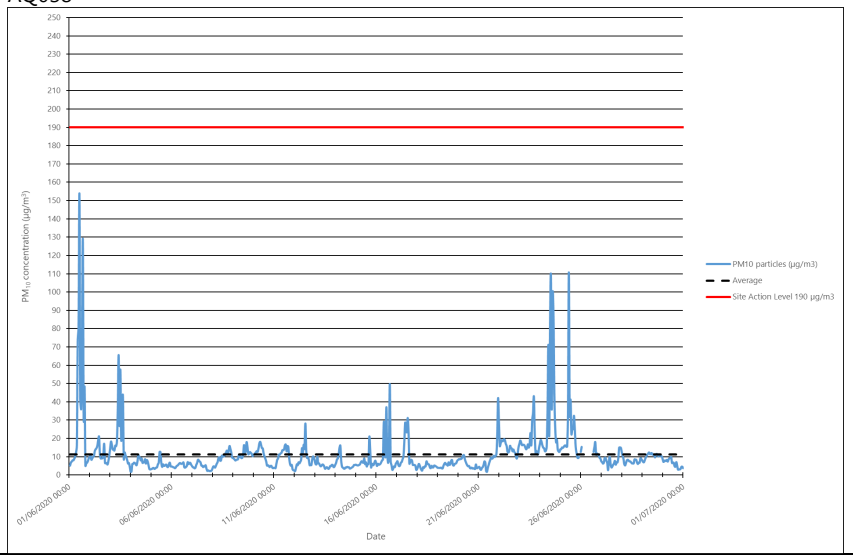
AQ032



AQ037



AQ038



AQ042

No data

Appendix C – Air Quality Monitoring Results

Table 3: NO_2 monitoring locations around highways, NO_2 concentrations and monthly monitoring results with running mean for 2020 (µg/m^3)

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										46
HS2-000020BN7	The Approach street sign	520959, 181102	64	55	No data										60
HS2-000020BQF	Conway Drive sign post	520856, 181733	61	51	No data										56
HS2-000020BQG	Lamp post outside No 1. Wells House Road on Old Oak Common Lane	521312, 182033	68	55	No data										61
HS2-000020BP6	Triplicate site next to the Ealing, Western Avenue Acton roadside automatic monitoring station	520430, 181950	56	46	No data										51
HS2-000020BP7	Triplicate site next to the Ealing, Hangar Lane Gyratory roadside automatic monitoring station	518537, 182708	77	61	No data										69

[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 May2020.*
[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.*