

Air Quality and Dust Monitoring Monthly Report – **August** 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 July and August 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:
- Mobilisation and handover to the Station works contractors at Old Oak Common Depot (located in the London Borough of Hammersmith and Fulham);
 - Victoria Road Crossover Box and Flat Iron Site – groundworks;
 - Willesden Euro Terminal – site set up and groundworks;
 - Atlas Road – 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 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 3. 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.

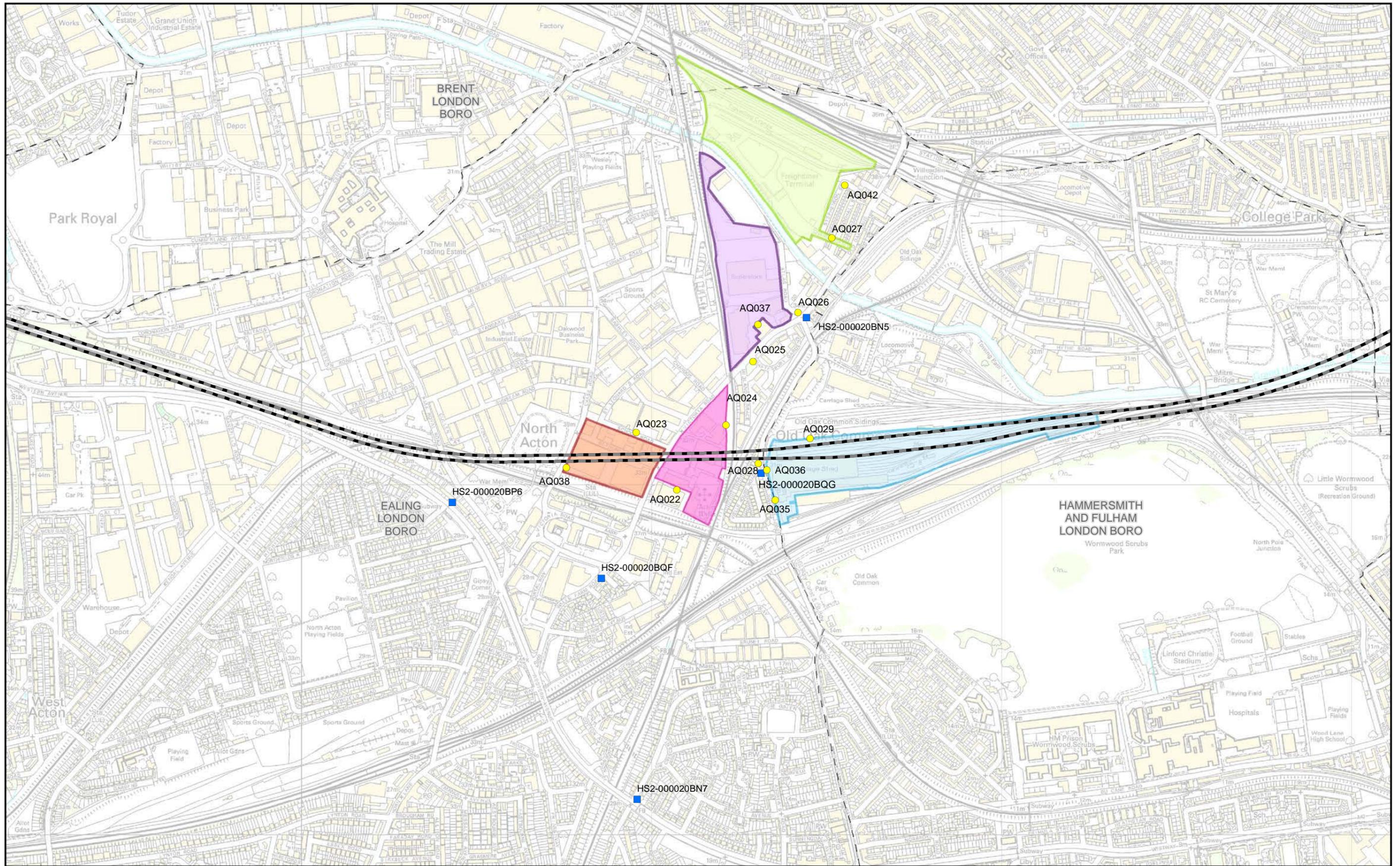
- 1.1.8 There were no (0) dust trigger alerts recorded during the monitoring period (August 2020). All results were in line with expected ranges.
- 1.1.9 Diffusion tube monitoring of Nitrogen Dioxide (NO₂) is undertaken at six (6) locations around highways within the LBE as part of the management of 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 Table 1 provides a summary of the complaint information related to dust or air quality received during the reporting period (August 2020), together with the findings of any related investigations.

Table 1: Summary of complaints received during August 2020 in LBE

Complaint Reference No.	Worksite Reference	Description of complaint	Results of investigation
HS2-20-40460-C	Victoria Road Crossover Box	On 25 th August 2020, a complaint was raised about dust on windows and in guttering.	The early works contractor (CSJV) were contacted about this matter and have advised the resident on the measures used to manage dust onsite. This includes the use of a number of water suppression techniques, including Moto fogs, water cannons, and water sprays. The combined use of these, together with daily visual checks and the surrounding real time monitors provide assurance that dust levels are being managed and that mitigation is proving effective throughout the works, allowing us to halt works when we reach set levels and amend our mitigation as necessary.

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)

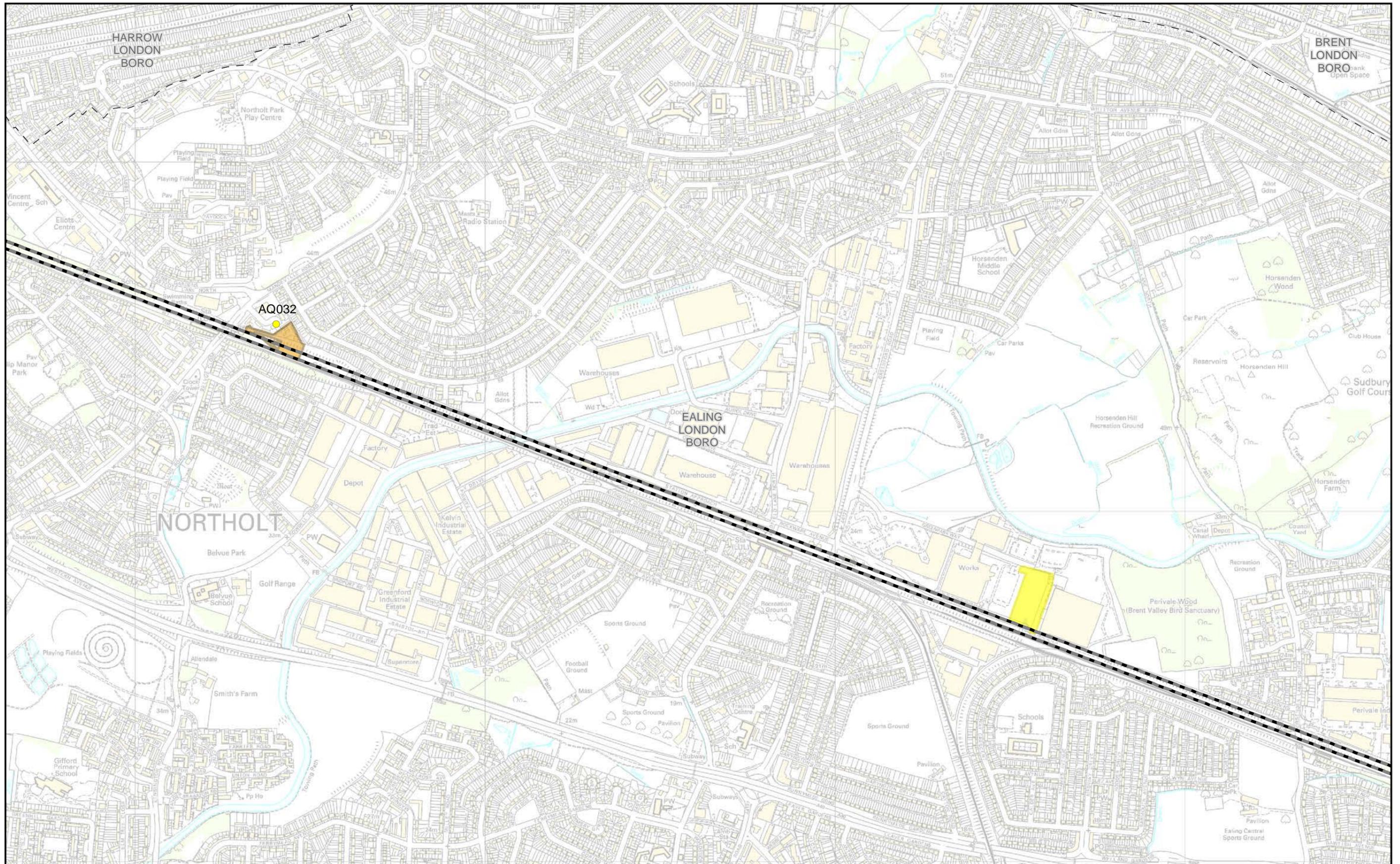
London Borough of Ealing

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

Figure Number

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

London Borough of Ealing

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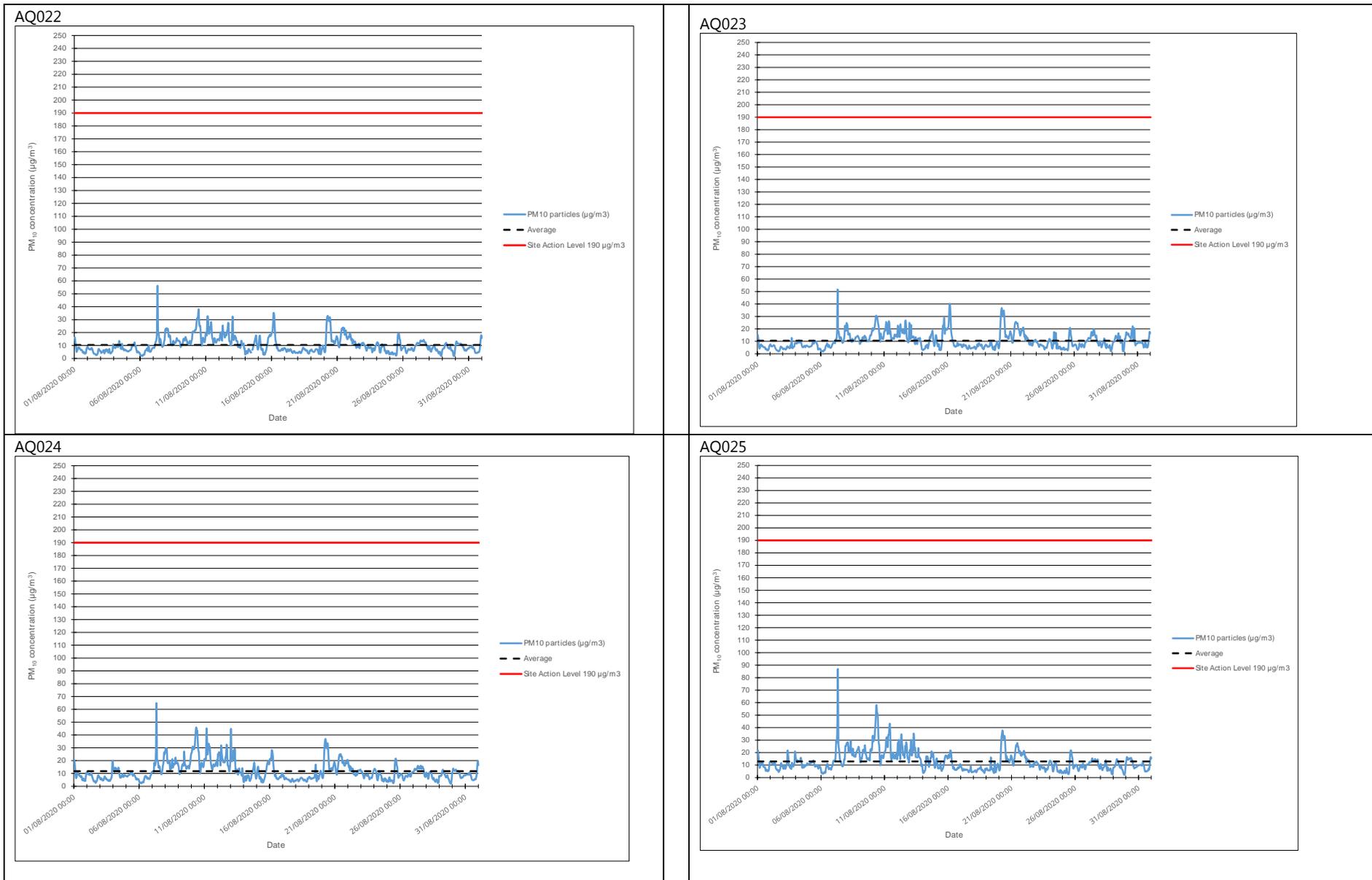
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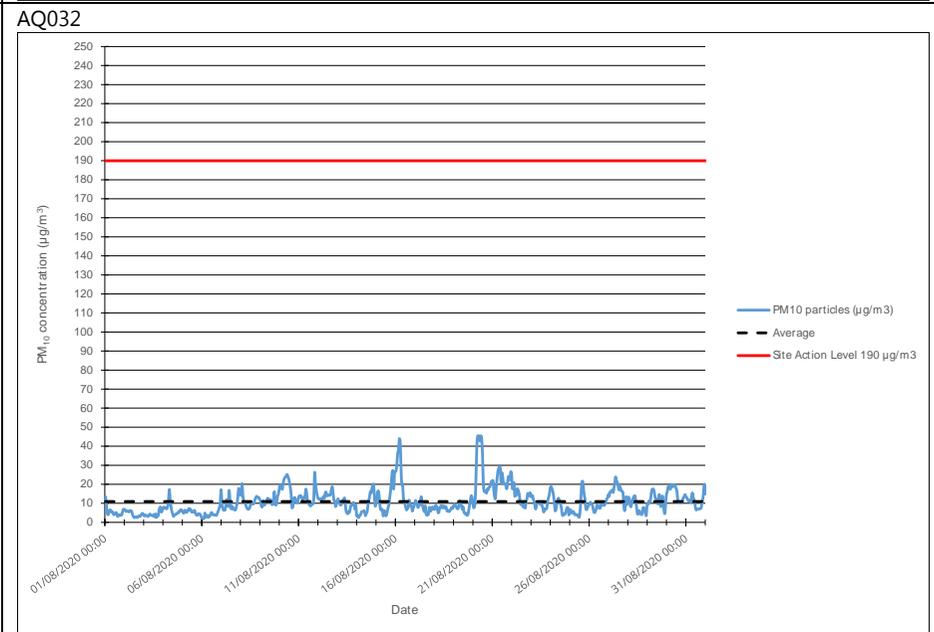
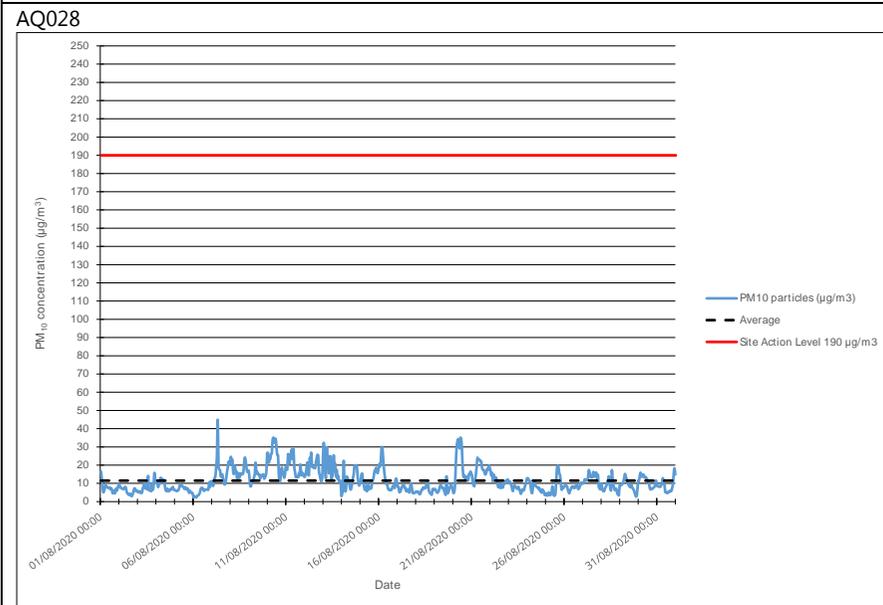
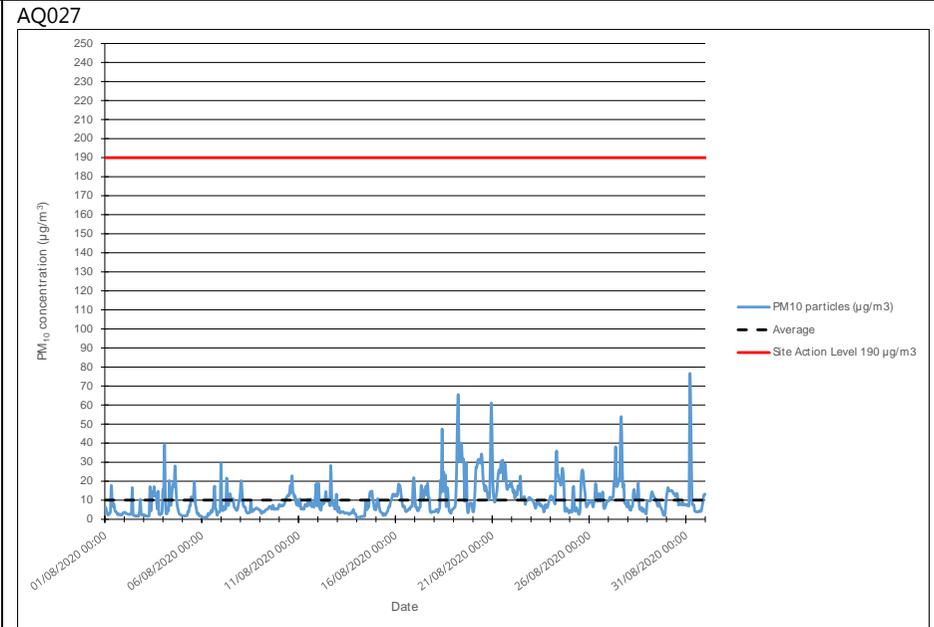
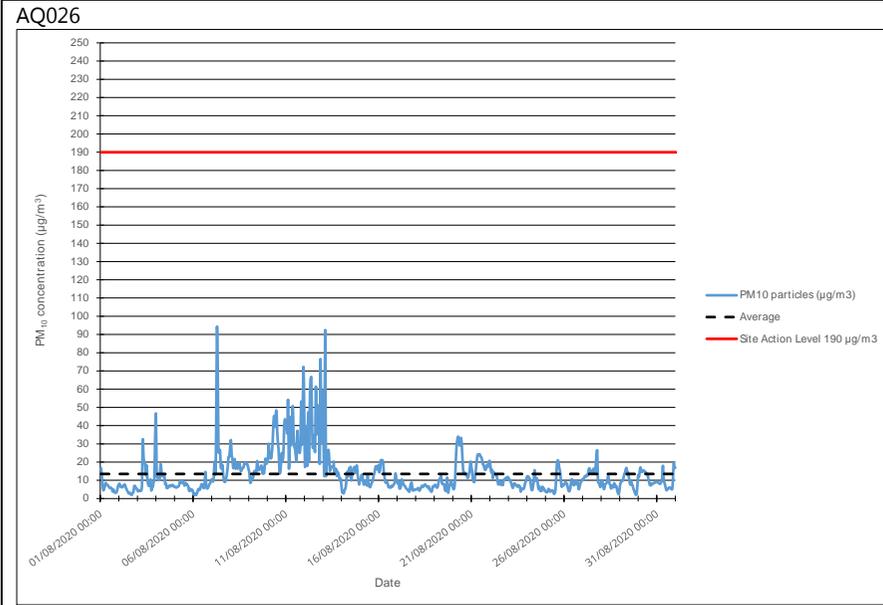
Appendix B – Dust Monitoring Results

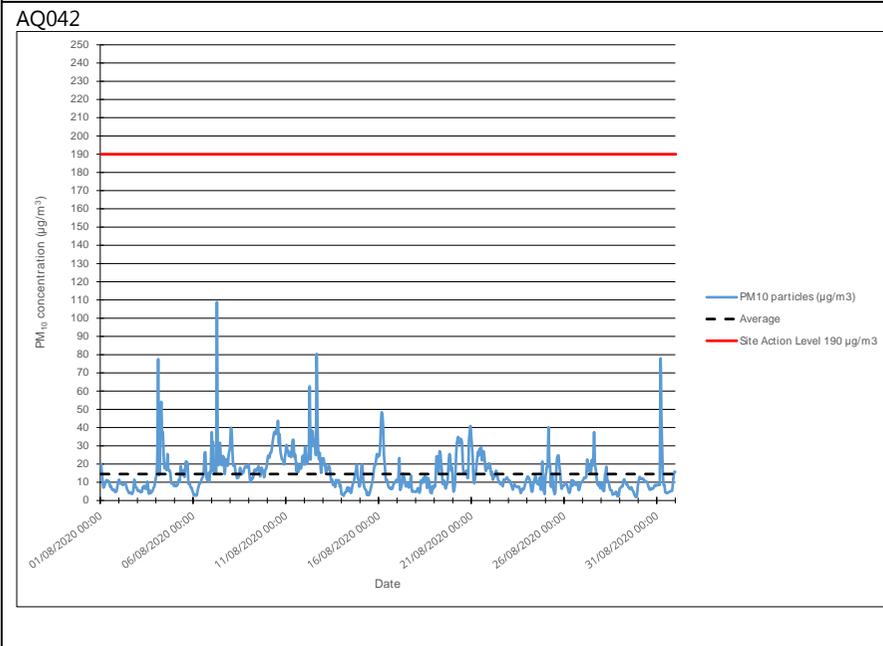
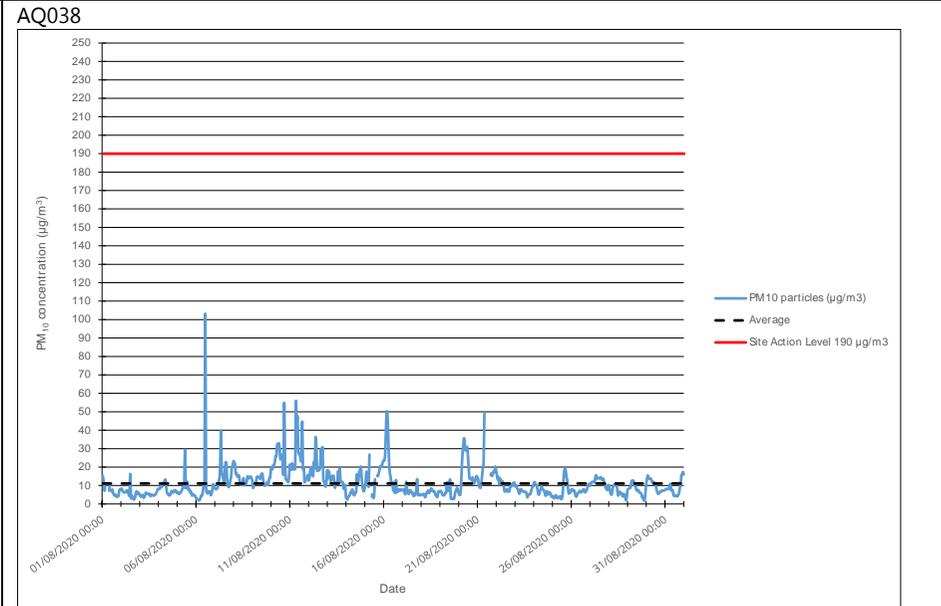
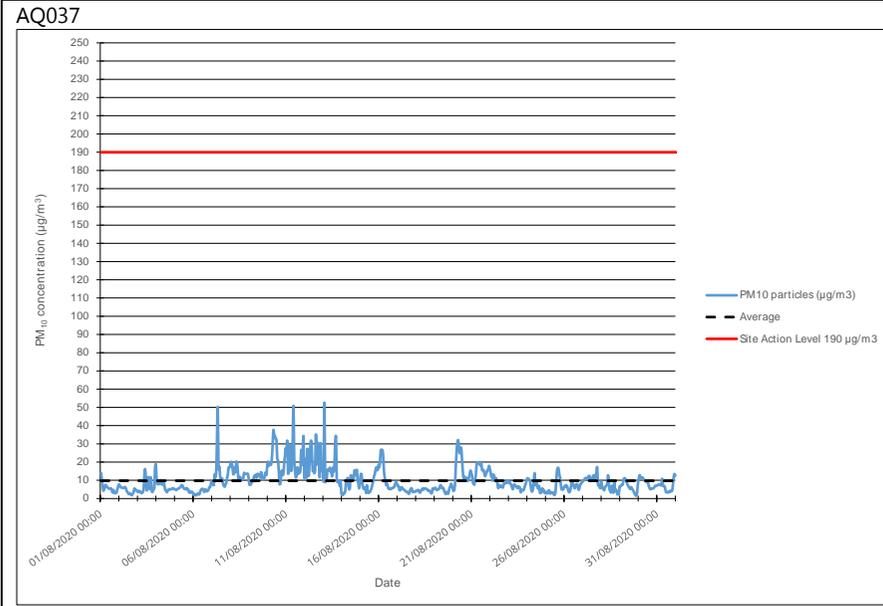
Table 2: Dust monitoring locations and August 2020 results

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	M	Yes	N	10.4	1.8	56.3	0	99.9
AQ023	520956, 182149	School Road	M	Yes	N	10.5	1.8	51.7	0	100.0
AQ024	521214, 182223	Braitrim House	M	Yes	N	11.7	2.0	64.8	0	100.0
AQ025	521295, 182360	Victoria Road	M	Yes	N	12.9	2.1	87.0	0	99.7
AQ026	521419, 182497	Old Oak Lane	M	Yes	N	13.4	2.0	93.3	0	99.9
AQ027	521515, 182706	Channel Gate Road	M	Yes	N	10.1	0.8	74.5	0	100.0
AQ028	521302, 182067	Wells House Road	M	Yes	N	11.5	2.3	44.9	0	100.0
AQ032	513402, 184536	Badminton Close	M	Yes	N	10.9	1.8	45.5	0	99.9
AQ037	521304, 182464	Atlas Road	M	No	N	9.8	1.6	52.6	0	100.0
AQ038	520756, 182049	Chase Road	M	Yes	N	11.1	2.0	103.2	0	97.8
AQ042	521537, 182826	Stephenson Road	M	Yes	N	14.5	2.0	108.8	0	99.9

Figure 3: 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 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	25						37
HS2-000020BN7	The Approach street sign	520959, 181102	64	55	No data			37	29						46
HS2-000020BQF	Conway Drive sign post	520856, 181733	61	51	No data			42	28						45
HS2-000020BQG	Lamp post outside No 1. Wells House Road on Old Oak Common Lane	521312, 182033	68	55	No data			38	27						47
HS2-000020BP6	Triplicate site next to the Ealing, Western Avenue Acton roadside automatic monitoring station	520430, 181950	56	46	No data			40	35						45
HS2-000020BP7	Triplicate site next to the Ealing, Hangar Lane Gyratory roadside automatic monitoring station	518537, 182708	77	61	No data			56	50						61

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.