

Air Quality and Dust Monitoring Monthly Report – August 2018

London Borough of Ealing



SKANSKA



Department for Transport

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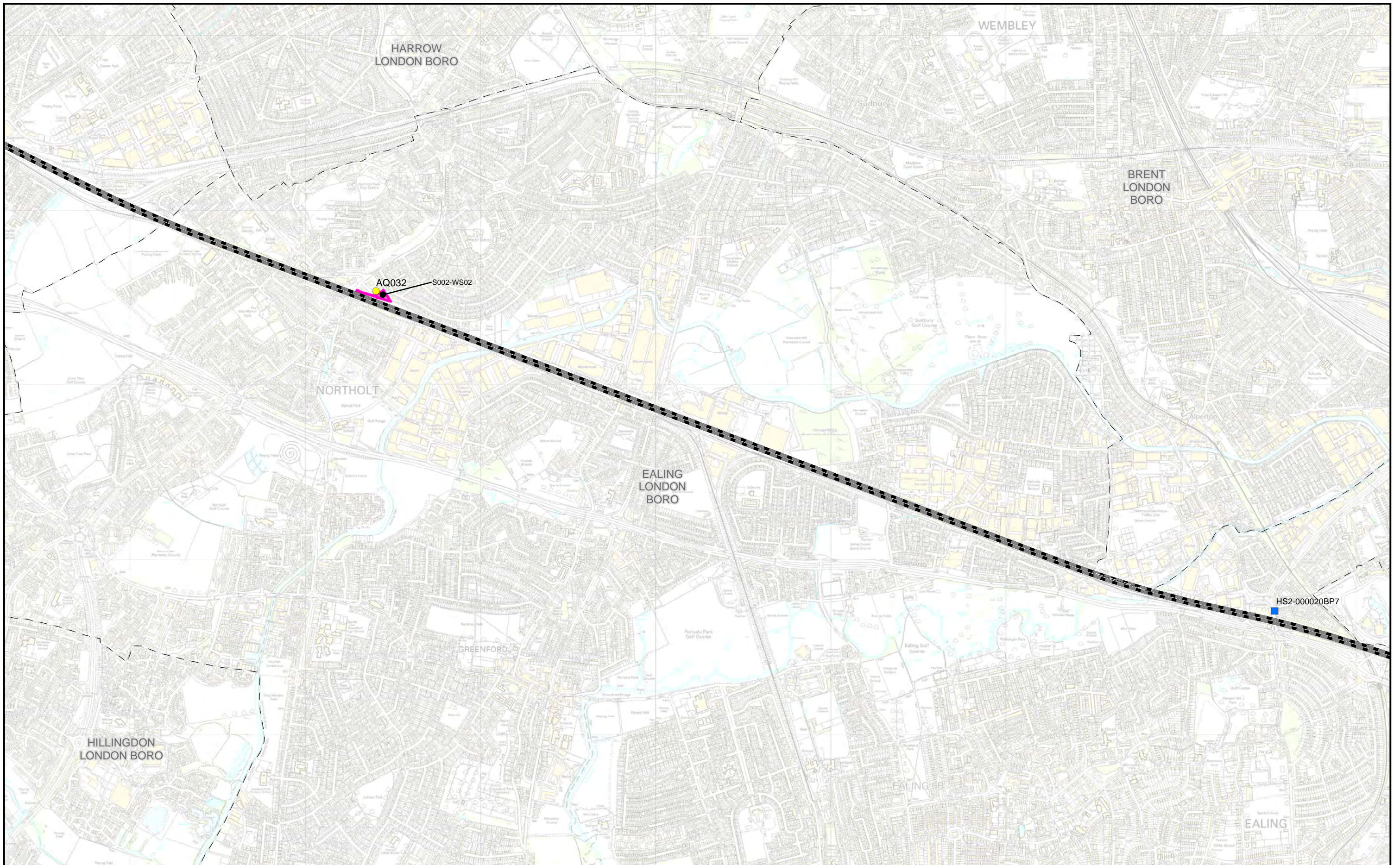
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Monthly Summary

- 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 2018 respectively.
- 1.1.2 Figure 1 and Figure 2 in Appendix A indicate the current work sites 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 works commenced within the LBE during April 2018, and are expected to be completed by July 2019. The current worksites, as presented in Appendix A, Figure 1 and Figure 2, include:
- Securing of and pre-demolition surveys of site on Victoria Road, worksite ref. S002-WS01.
 - Securing of and pre-demolition surveys of site on Atlas Road, worksite ref. S001-WS02.
 - Securing of and pre-demolition surveys of site at Willesden Euro Terminal, worksite ref. S001-WS03.
 - Track and gantry removal works, demolition of the short stabling shed and wheel lathe shed at Old Oak Common Depot (located in the London Borough of Hammersmith and Fulham), worksite ref. S004-WS01.
 - Future works site at Mandeville Road Pumping Station, worksite ref. S002-WS02.
- 1.1.5 Seven (7) dust monitors were installed around worksites, where pre-demolition works are underway. These sites returned a medium or high dust risk rating, in accordance with the methodology described in the Overview Monitoring Report, available from www.gov.uk/government/collections/monitoring-the-environmental-effects-of-hs2, in line with the IAQM Guidance (2014) on the assessment of dust from demolition and construction activities.
- 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.
- 1.1.7 There were twelve (12) exceedances of the dust trigger level recorded during the month of August 2018. However, following investigations it was considered that none of these exceedances were directly related to HS2 site activities. Exceedances are presented in Appendix B, Table 2. All other results were in line with the expected ranges.

- 1.1.8 Diffusion tube monitoring of Nitrogen Dioxide (NO₂) was undertaken at six (6) locations in July 2018, around highways within the LBE as part of the management of air quality where significant effects may occur as a result the scheme.
- 1.1.9 Diffusion tube monitoring results were 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.
- 1.1.10 NO₂ monitoring locations and results are presented in Appendix C, Table 3, together with the 2018 running mean.
- 1.1.11 There were no complaints received, relating to dust or air quality, during this monitoring period.

Appendix A – Worksites and Monitoring Locations



Legend

--- District/Borough boundary

--- Route in tunnel

--- Route on surface

--- HS2 Chainage Markers

■ Diffusion tube monitoring location

■ Mandeville Road Pumping Station

● Dust monitoring location

Figure Number

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

London Borough of Ealing

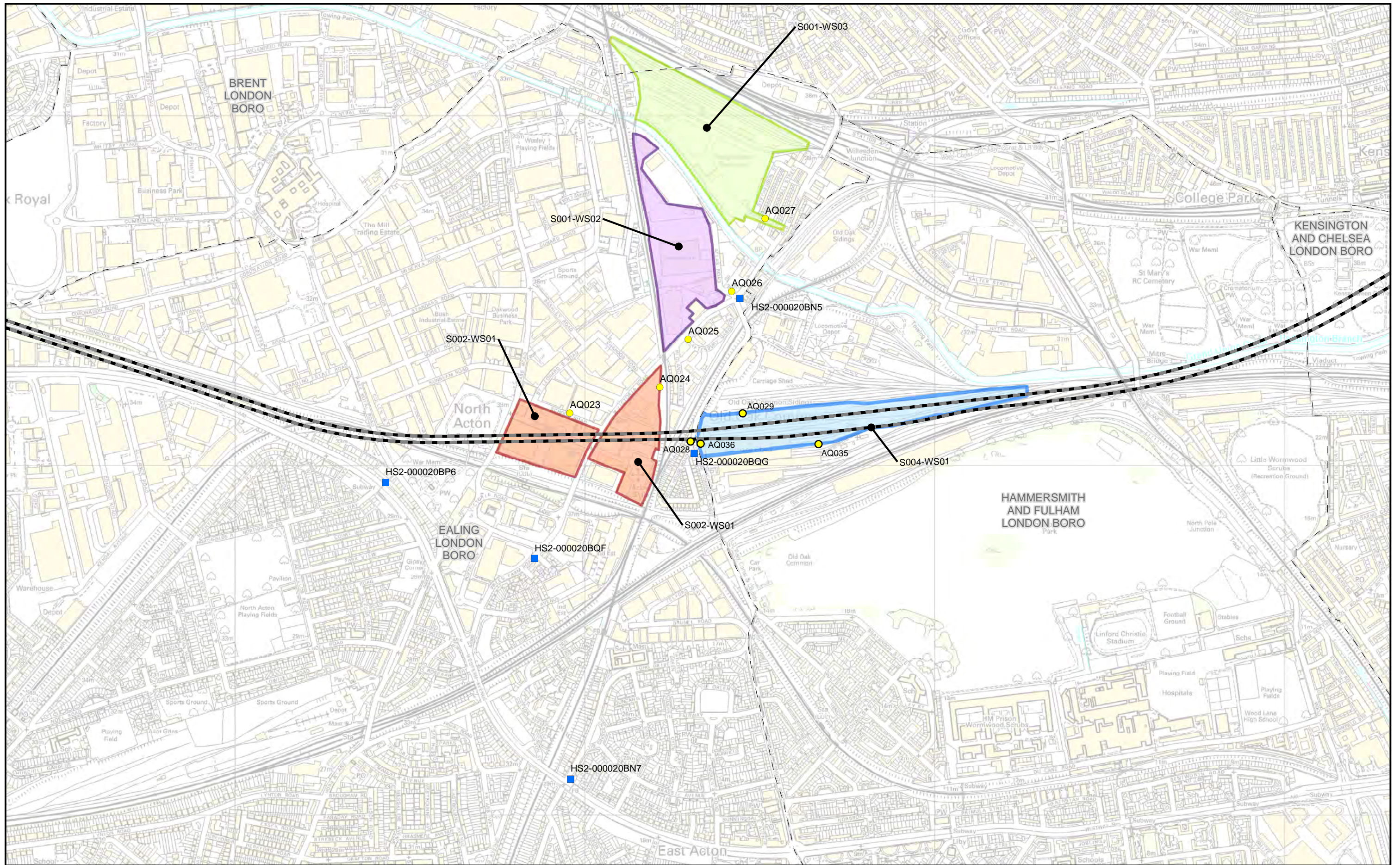
hs2

Scale at A3: 20,000

0 200 400 600 800
 Metres

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

- Willesden Euro worksite
- Victoria Road worksite
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- Atlas Road worksite

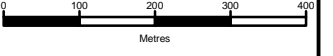
Figure Number
 Figure Name
Worksites and Monitoring locations in LBE
 (sheet 2)

London Borough of Ealing



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Appendix B – Dust Monitoring Results

Table 1: Dust monitoring locations and August 2018 Results

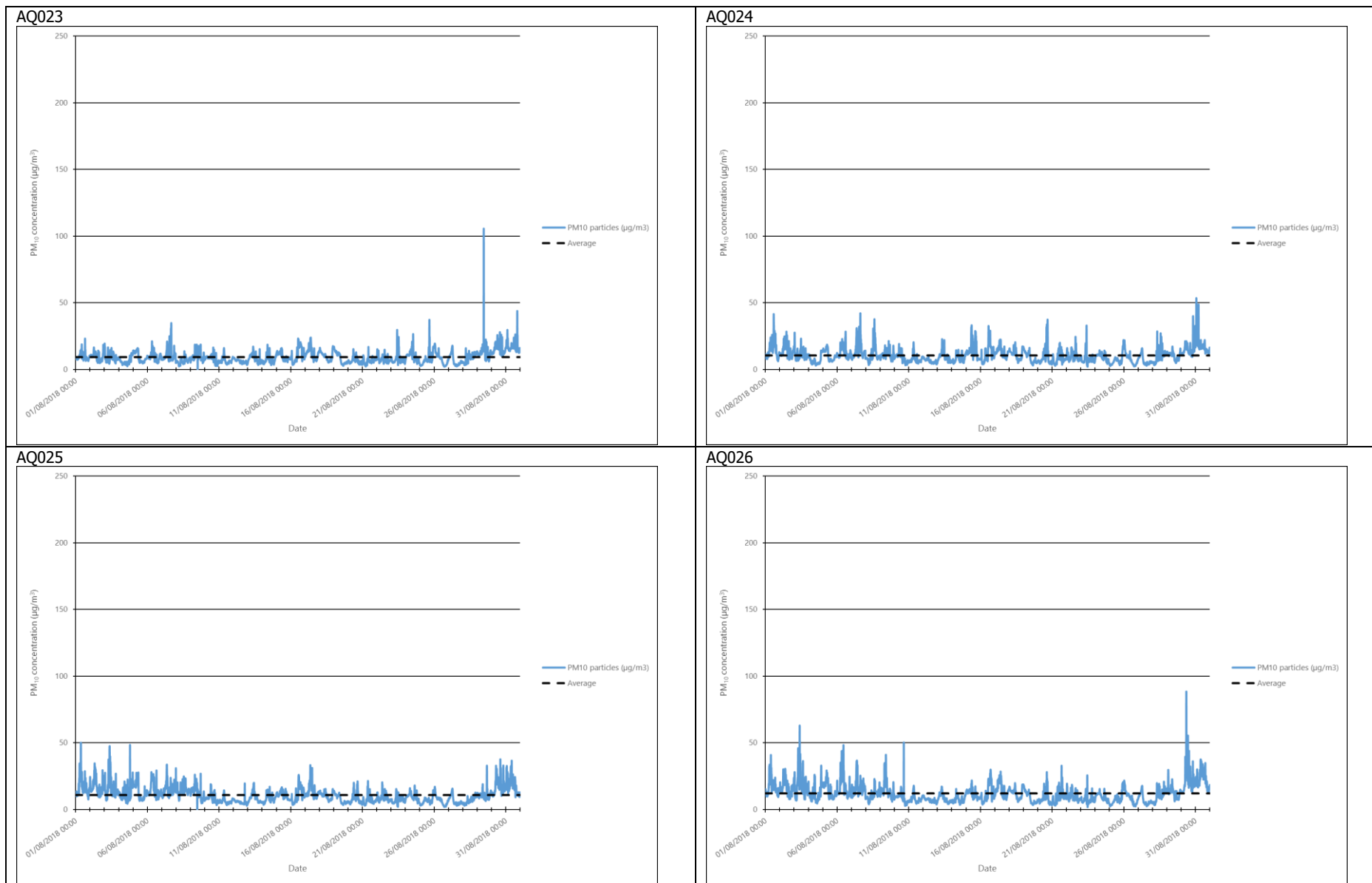
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site ¹	Monitoring site active during period	Change to site since previous period report	Mean 15-minute PM ₁₀ concentration (µg/m ³)	Minimum 15-minute PM ₁₀ concentration (µg/m ³)	Maximum 15-minute PM ₁₀ concentration (µg/m ³)	Number of 15-min periods exceeding trigger level of 250 µg/m ³	15-min data capture (%)
AQ023	520956, 182149	School Road	H	Yes	N	9.2	2.2	105.4	0	100.0
AQ024	521214, 182223	Braitrim House	H	Yes	N	10.4	2.0	52.8	0	100.0
AQ025	521295, 182360	Victoria Road	H	Yes	N	10.7	1.8	50.1	0	100.0
AQ026	521419, 182497	Old Oak Lane	H	Yes	N	12.0	1.9	88.3	0	100.0
AQ027	521515, 182706	Stephenson Street	H	Yes	N	11.0	1.3	94.8	0	100.0
AQ028	521302, 182067	Wells House Road	H	Yes	Y	14.5	2.2	315.5	1	100.0
AQ032	513402, 184536	Badminton Close	M	Yes	N	16.9	1.0	3,347.5	11	96.9

¹ The dust risk rating (H – High, M – Medium, L – Low) has been assigned in accordance with the methodology described in the Overview Monitoring Report, available from www.gov.uk/government/collections/monitoring-the-environmental-effects-of-hs2, in line with the IAQM Guidance (2014) on the assessment of dust from demolition and construction activities.

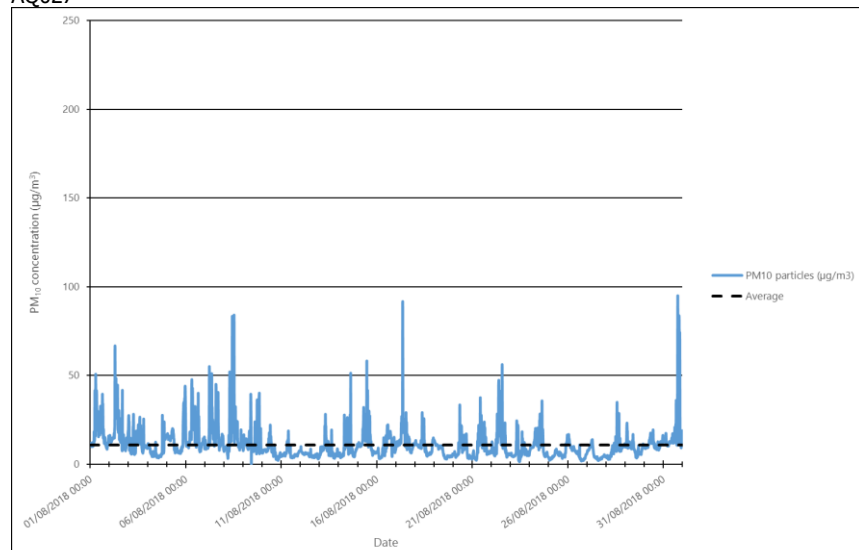
Table 2: Summary of exceedances of trigger level in August 2018

Period exceeding trigger level	Worksite reference	Monitoring site ID	Complaint reference number (if applicable)	Reason	Resolution
28/08/2018 11:46 – 28/08/2018 12:00	S004-WS01	AQ028	n/a	<p>Albeit works were being carried out on the depot site, a significant distance (150-200m) away from the Old Oak Common Lane / Wells House Road boundary.</p> <p>All dust suppression and bowsers were in operation for these works as standard.</p> <p>There were traffic management measures on Old Oak Common Lane and queuing traffic directly adjacent to the dust monitor.</p> <p>It is considered this is the more likely reason for the trigger and not dust from site operations. None of the 2 x other monitors which are in closer proximity to the works triggered</p>	n/a
15/08/2018 01:01 – 15/08/2018 01:15	S002-WS02	AQ032	n/a	<p>No HS2 works were being undertaken in the area at the time of the exceedances and no likely dust sources from nearby HS2 sites or other 3rd party sites were noted.</p> <p>The monitor underwent general maintenance and filter change on the 16/08/18 and again on the 22/08/2018. It is likely that the dislodging of small amounts of loose debris in the inlet pipe was responsible for the series of trigger alerts prior to and between the two visits exacerbated by the summer dry period and then subsequent period of wet weather.</p>	Maintenance and filter change.
16/08/2018 01:46 – 16/08/2018 02:00	S002-WS02	AQ032	n/a		
16/08/2018 04:31 – 16/08/2018 04:45	S002-WS02	AQ032	n/a		
16/08/2018 05:01 – 16/08/2018 05:15	S002-WS02	AQ032	n/a		
18/08/2018 09:01 – 18/08/2018 09:15	S002-WS02	AQ032	n/a		
20/08/2018 12:01 – 20/08/2018 12:15	S002-WS02	AQ032	n/a		
21/08/2018 01:16 – 21/08/2018 02:00	S002-WS02	AQ032	n/a		
21/08/2018 12:16 – 21/08/2018 12:30	S002-WS02	AQ032	n/a		
22/08/2018 13:01 – 22/08/2018 13:15	S002-WS02	AQ032	n/a		

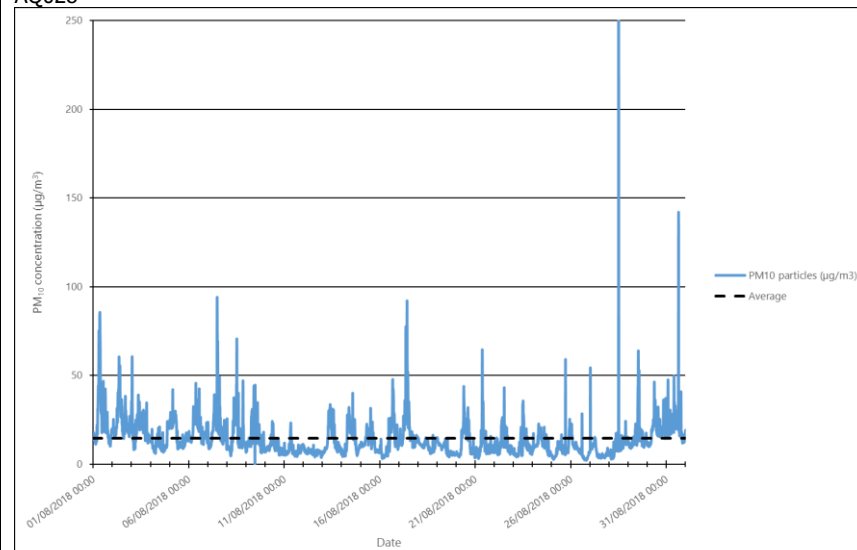
Figure 3: Construction dust 15-minute mean indicative PM₁₀ concentration for dust monitors



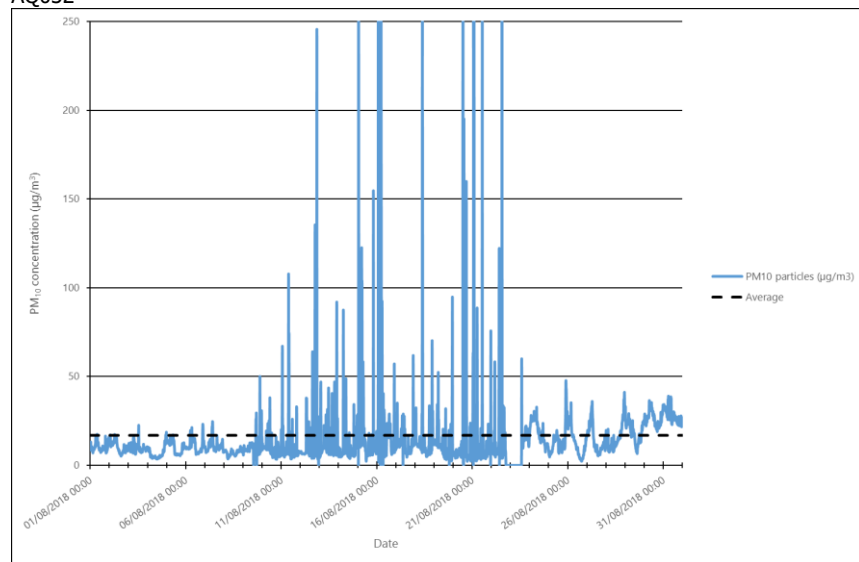
AQ027



AQ028



AQ032



Appendix C – Air Quality Monitoring Results

Table 3: NO₂ monitoring locations around highways, NO₂ concentrations and monthly monitoring results with running mean for 2018 (µg/m³)

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean ²
HS2-000020BN5	Sign post on Victoria Road	521443, 182477	57	54	67	51	55	50	58						56
HS2-000020BN7	The Approach street sign	520959, 181102	77	57	56	65	52	40	65						59
HS2-000020BQF	Conway Drive sign post	520856, 181733	71	63	70	63	60	60	67						65
HS2-000020BQG	Lamp post outside No 1. Wells House Road on Old Oak Common Lane	521312, 182033	75	76	57	70	58	48	64						64
HS2-000020BP6	Triplicate site next to the Ealing, Western Avenue Acton roadside automatic monitoring station	520430, 181950	58	58	52	54	62	51	76						59
HS2-000020BP7	Triplicate site next to the Ealing, Hangar Lane Gyrotory roadside automatic monitoring station	518537, 182708	76	68	63	72	75	58	99						73

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.