

## **Air Quality and Dust Monitoring Monthly Report – February 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 January and February 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](http://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 and completed worksites, as presented in Appendix A, Figure 1 and Figure 2, include:
- Current -
- Demolition and groundworks at Old Oak Common Depot (located in the London Borough of Hammersmith and Fulham), worksite ref. S004-WS01;
  - Victoria Road Crossover Box and Flat Iron Site mobilisation, site set up and groundworks, works site ref. S002-WS01;
  - Willesden Euro Terminal mobilisation and site set up, works site ref. S001-WS03; and
  - Atlas Road mobilisation and site set up, worksite ref. S001-WS05.
- Completed -
- Demolition of buildings on Atlas Road, worksite ref. S001-WS05;
  - Demolition of buildings on Victoria Road, worksite ref. S002-WS01;
  - Demolition works at Willesden Euro Terminal, worksite ref. S001-WS03; and
  - Demolition of buildings at Mandeville Road Pumping Station, worksite ref. S002-WS02.
- 1.1.5 Eleven (11) dust monitors are 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

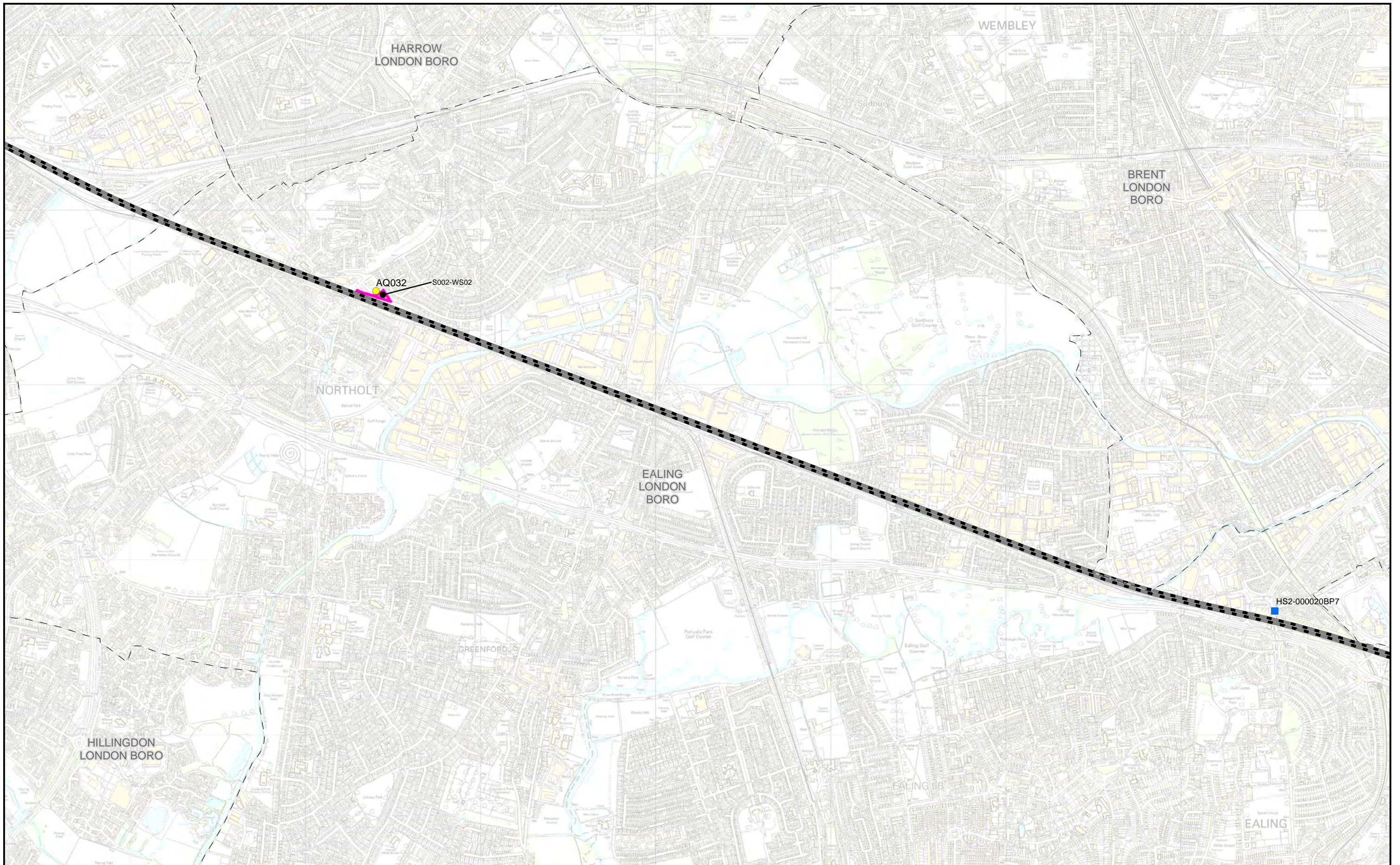
strictly compared with Air Quality Standards for human health and the environment. The purpose of the monitoring undertaken is to ensure the effectiveness of the on-site mitigation.

- 1.1.7 The trigger level of  $190 \mu\text{g}/\text{m}^3$ , 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 were three (3) dust trigger alerts recorded during this monitoring period (February 2020). Exceedances are presented in Appendix B, Table 2. All other results, apart from the newly installed monitor AQ042 which appears to be faulty, were in line with expected ranges.
- 1.1.9 Data capture for AQ038 and AQ042 was below 90% for the month of February 2020. This was due to AQ038 and AQ042 being newly installed (17/02/20 and 04/02/20 respectively) and powered-up during the month.
- 1.1.10 Diffusion tube monitoring of Nitrogen Dioxide ( $\text{NO}_2$ ) was undertaken at six (6) locations in January 2020, around highways within the LBE as part of the management of air quality where significant effects may occur as a result of the scheme.
- 1.1.11 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. However, based on the results to date, no unexpected values were recorded during the monitoring period.
- 1.1.12  $\text{NO}_2$  monitoring locations and results are presented in Appendix C, Table 3, together with the 2020 running mean.
- 1.1.13 There were no complaints received, relating to air quality, during this monitoring period (February 2020).

# Appendix A – Worksites and Monitoring Locations

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





**Legend**

- District/Borough boundary
- Route in tunnel
- Route on surface
- HS2 Chainage Markers

- Diffusion tube monitoring location
- Mandeville Road Pumping Station
- Dust monitoring location

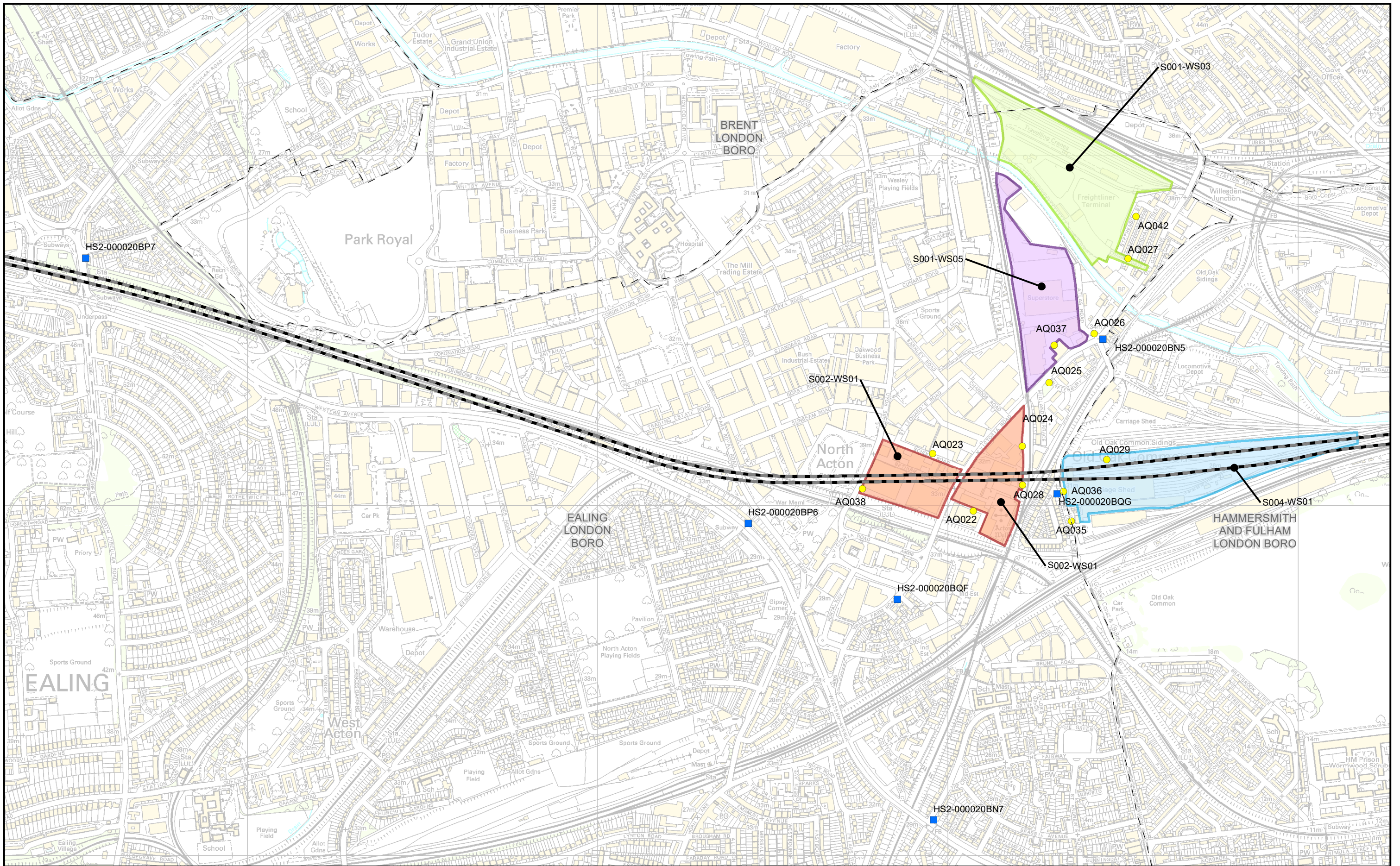
Figure Number
Figure Name Worksites and Monitoring locations in LBE (sheet 1)
London Borough of Ealing

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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

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 February 2020 Results

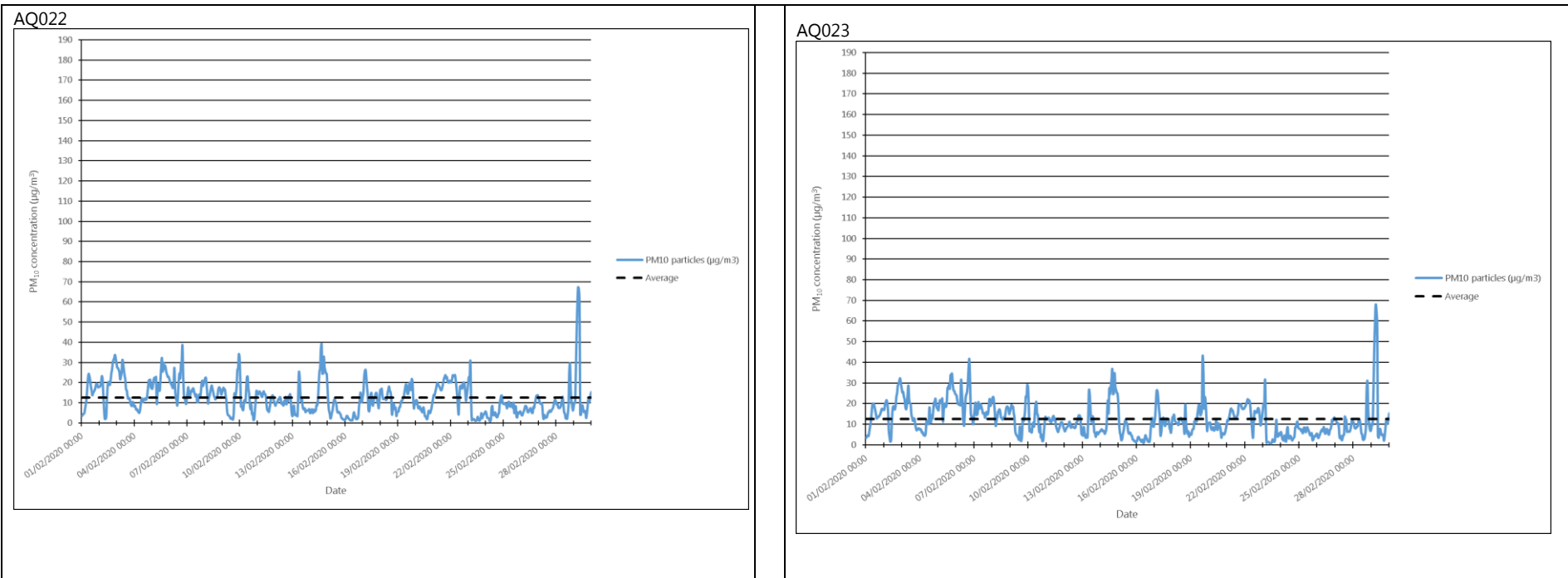
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM <sub>10</sub> concentration (µg/m <sup>3</sup> )	Minimum 1-hour PM <sub>10</sub> concentration (µg/m <sup>3</sup> )	Maximum 1-hour PM <sub>10</sub> concentration (µg/m <sup>3</sup> )	Number of 1-hour periods exceeding trigger level of 190 µg/m <sup>3</sup>	Data capture (%)
AQ022	521072, 181985	Boden House	H	Yes	N	12.5	0.8	67.2	0	100
AQ023	520956, 182149	School Road	H	Yes	N	12.5	0.7	67.9	0	100
AQ024	521214, 182223	Braitrim House	H	Yes	N	13.3	0.8	69.1	0	100
AQ025	521295, 182360	Victoria Road	H	Yes	N	14.7	1.0	71.6	0	99.9
AQ026	521419, 182497	Old Oak Lane	H	Yes	N	13.4	0.7	68.6	0	100
AQ027	521515, 182706	Channel Gate Road	H	Yes	N	15.3	0.7	411.8	1	100
AQ028	521302, 182067	Wells House Road	H	Yes	N	13.7	0.8	62.8	0	100
AQ032	513402, 184536	Badminton Close	M	Yes	N	10.8	0.6	61.3	0	100
AQ037	521304, 182464	Atlas Road	M	No	Y	10.9	0.6	57.1	0	100
AQ038	520756, 182049	Chase Road	H	Yes	Y	11.7	0.7	70.2	0	43.4
AQ042	521537, 182826	Stephenson Street	H	Yes	Y	53.5	3.0	229.2	2	83.3



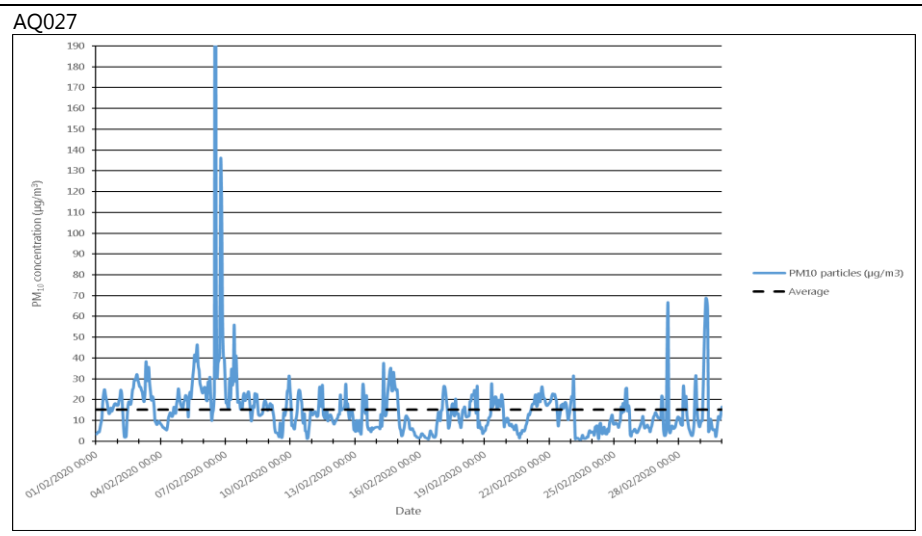
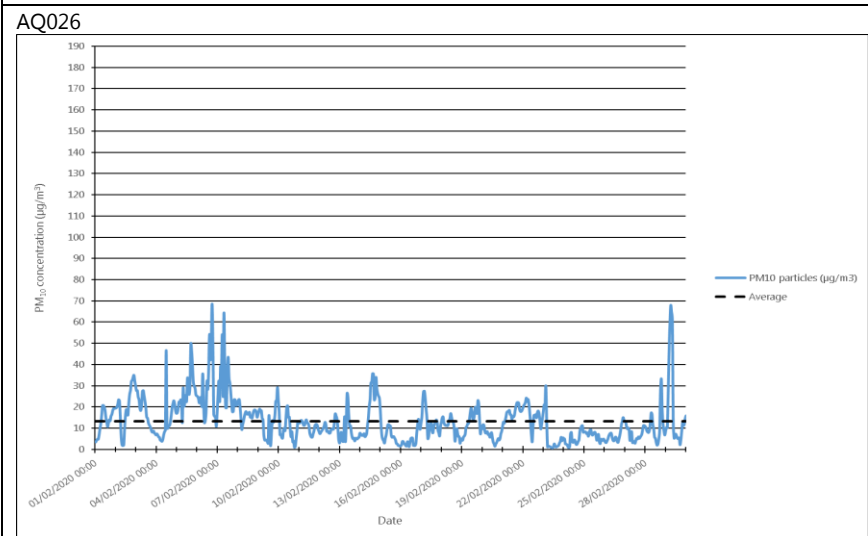
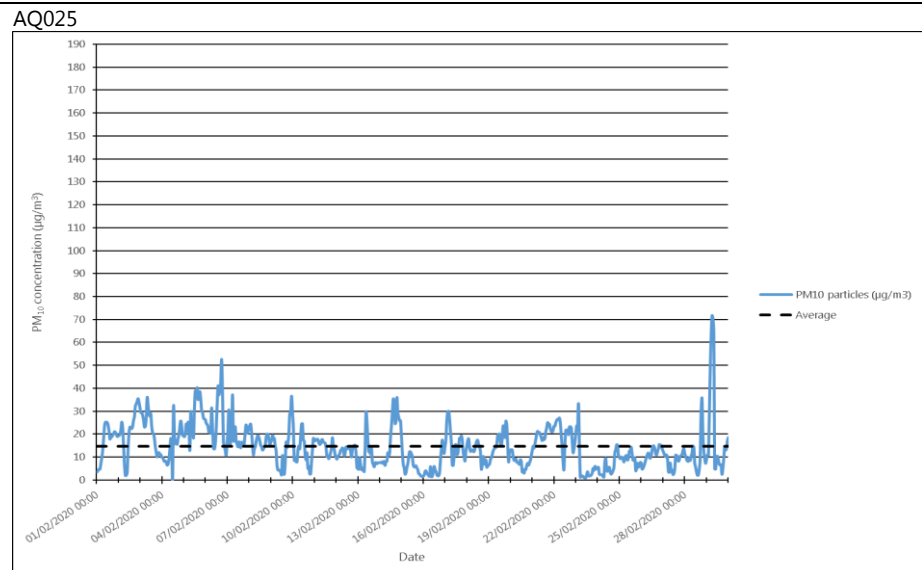
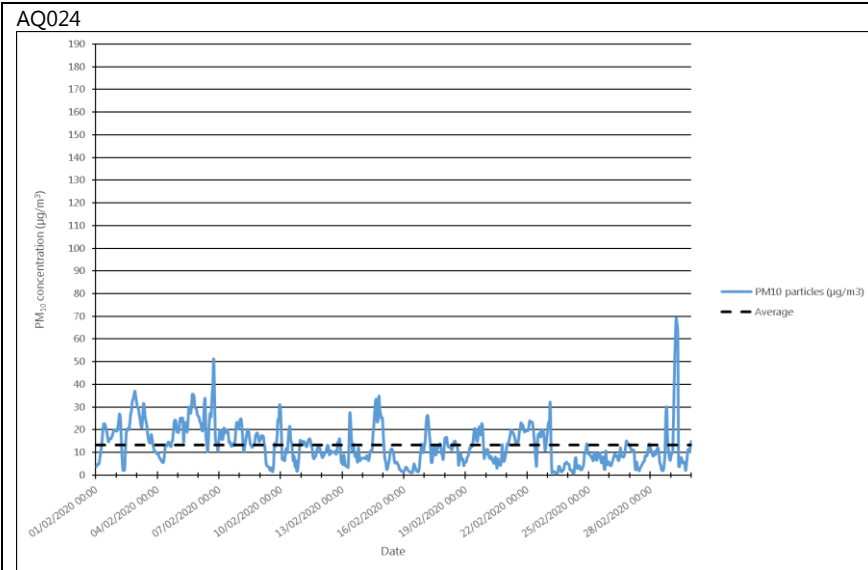
Table 2: Summary of exceedances of trigger level in February 2020

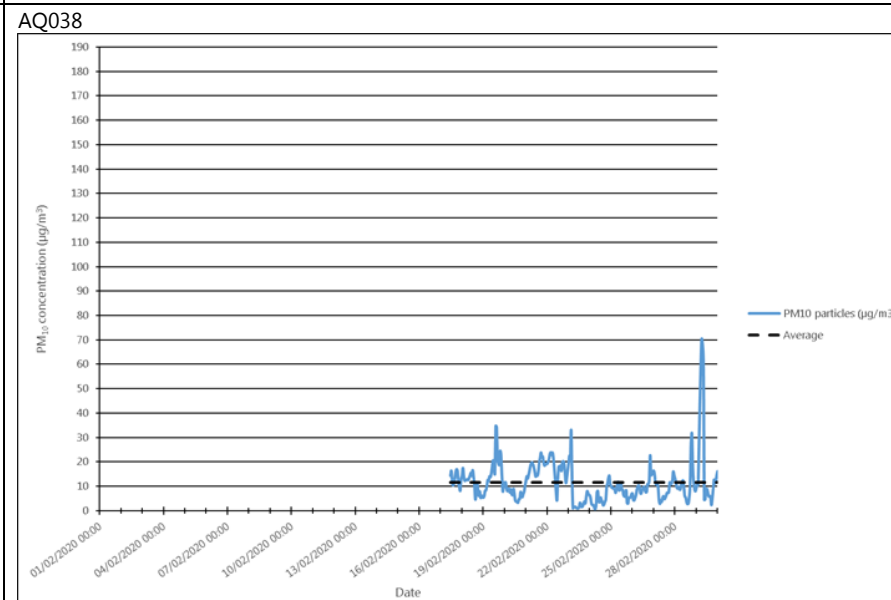
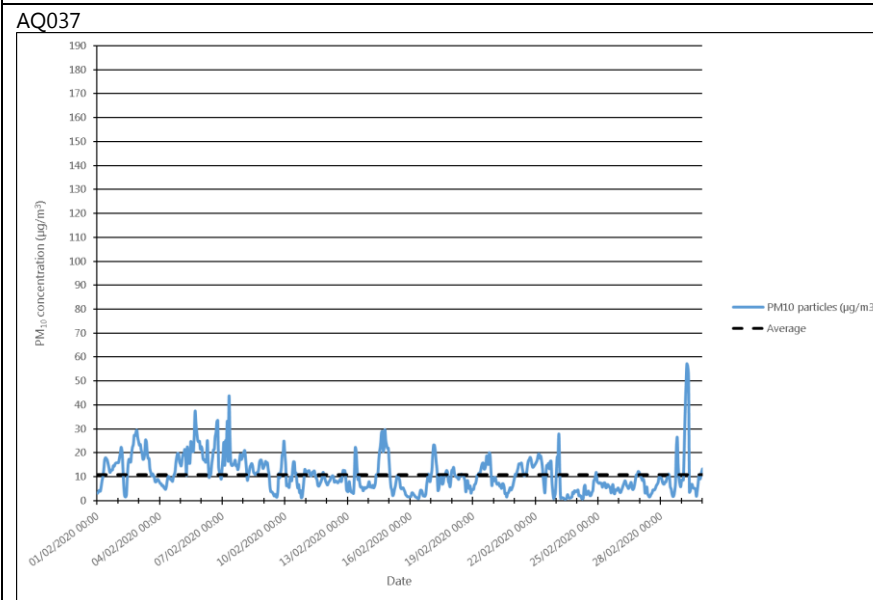
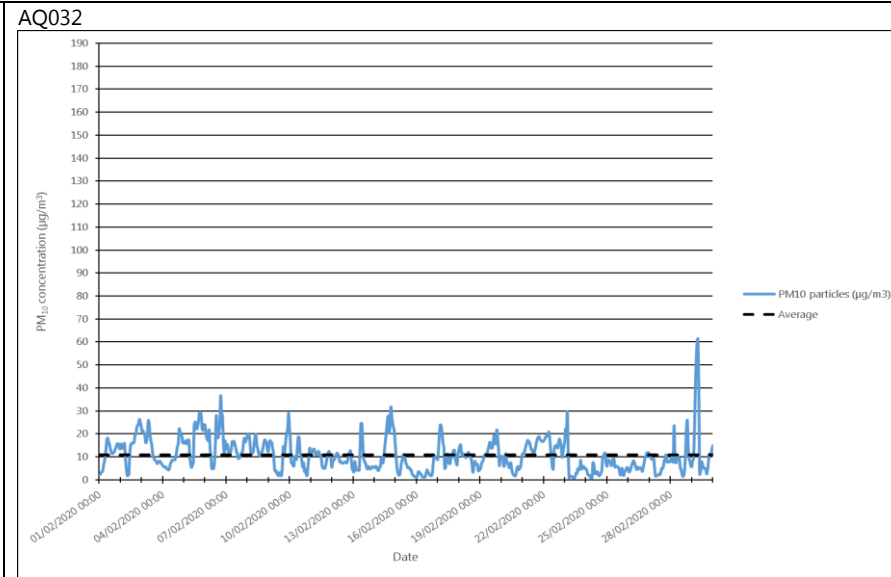
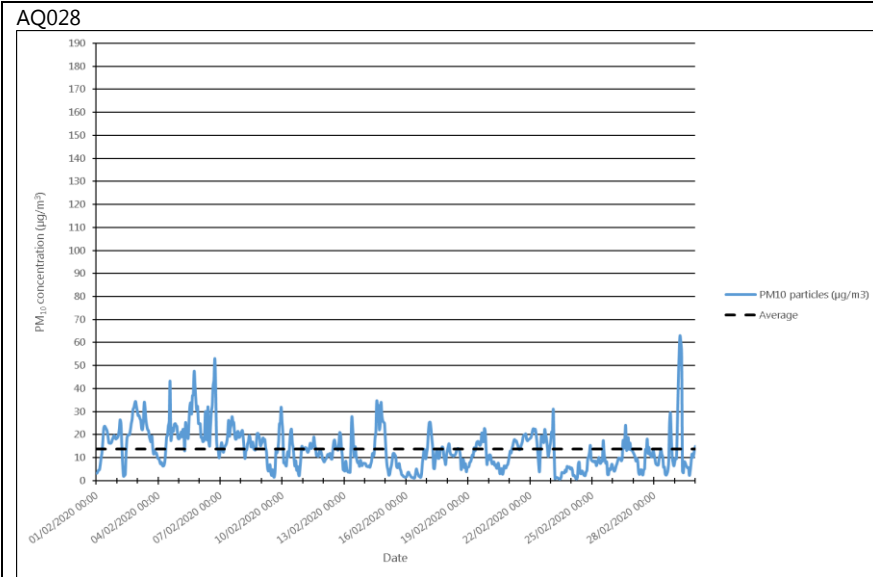
Period exceeding trigger level	Worksite reference	Monitoring site ID	Complaint reference number (if applicable)	Reason	Resolution
06/02/2020 12:01 – 13:00	S001-WS03	AQ027	n/a	No notable HS2 works underway at the Willesden Euro Terminal site or 3 <sup>rd</sup> party site during the month of February. Isolated trigger was associated with loose debris in the inlet tube following the service and maintenance of the monitor on 4 <sup>th</sup> February.	Continued maintenance programme to continue to avoid reoccurrence.
14/02/2020 18:01 – 19:00	S001-WS03	AQ042	n/a	No notable HS2 works underway at the Willesden Euro Terminal site or 3 <sup>rd</sup> party site during the month of February.	Monitor was repaired / replaced during March. Continued maintenance programme to continue to avoid reoccurrence.
23/02/2020 02:01 – 03:00	S001-WS03	AQ042	n/a	Erratic monitored levels throughout the month indicate that the monitor is currently faulty albeit just installed.	

Figure 1: Construction dust 1-hour mean indicative PM<sub>10</sub> concentration for dust monitors

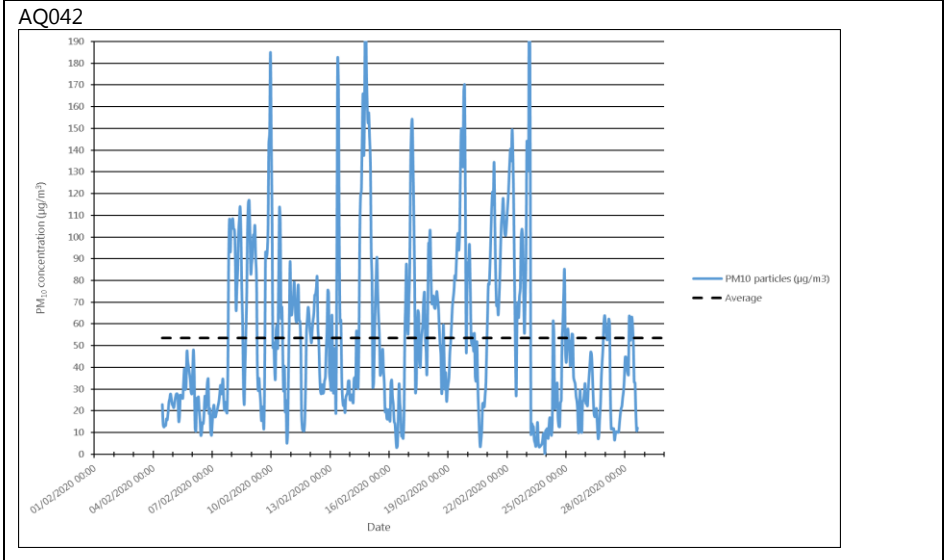












## Appendix C – Air Quality Monitoring Results

Table 3 NO<sub>2</sub> monitoring locations around highways, NO<sub>2</sub> concentrations and monthly monitoring results with running mean for 2020 (µg/m<sup>3</sup>)

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean <sup>1</sup>
HS2-000020BN5	Sign post on Victoria Road	521443, 182477	Tube missing												-
HS2-000020BN7	The Approach street sign	520959, 181102	64												64
HS2-000020BQF	Conway Drive sign post	520856, 181733	61												61
HS2-000020BQG	Lamp post outside No 1. Wells House Road on Old Oak Common Lane	521312, 182033	68												68
HS2-000020BP6	Triplicate site next to the Ealing, Western Avenue Acton roadside automatic monitoring station	520430, 181950	56												56
HS2-000020BP7	Triplicate site next to the Ealing, Hangar Lane Gyrotory roadside automatic monitoring station	518537, 182708	77												77

<sup>1</sup> 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.