

## Air Quality and Dust Monitoring Monthly Report – March 2021

London Borough of Ealing



## Department for Transport

High Speed Two (HS2) Limited has been tasked by the Department for Transport (DfT) with managing the delivery of a new national high speed rail network. It is a non-departmental public body wholly owned by the DfT.

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A report prepared by EWCs and MWCCs on behalf of HS2 Ltd.

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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 February and March 2021 respectively.
- 1.1.2 Figure 1 to Figure 3 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 worksites, as presented in Appendix A, Figure 1 to Figure 3, include:
- Old Oak Common Depot (located in the London Borough of Hammersmith and Fulham) mobilisation and new site set up for the station works contractors;
  - Victoria Road Crossover Box and Flat Iron Site – groundworks, piling and utilities works;
  - Willesden Euro Terminal – groundworks; temporary bridge installation across the Grand Union Canal;
  - Atlas Road – site set up, welfare cabin installation and groundworks;
  - Green Park Way Vent Shaft – site set up and groundworks;
  - Mandeville Road Vent Shaft – site set up and groundworks; and
  - Westgate Vent Shaft – site set up and groundworks.
- 1.1.5 Twelve (12) 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 4. 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<sub>10</sub> concentrations of 190 µg/m<sup>3</sup>, 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 alerts recorded during the monitoring period (March 2021). Triggers are presented in Appendix B, Table 3. All other results were in line with expected ranges.
- 1.1.9 Data capture for monitors AQ022 was below 90% for the month of February 2021 due to a fault in the monitor. The monitor was replaced during the month.
- 1.1.10 Diffusion tube monitoring of Nitrogen Dioxide (NO<sub>2</sub>) 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.
- 1.1.11 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 NO<sub>2</sub> monitoring locations and results are presented in Appendix C, Table 4, together with the 2021 running mean.
- 1.1.13 Table 1 provides a summary of the complaint information related to dust or air quality received during this reporting period (March 2021), together with the findings of any related investigations.

Table 1: Summary of complaints received during March 2021

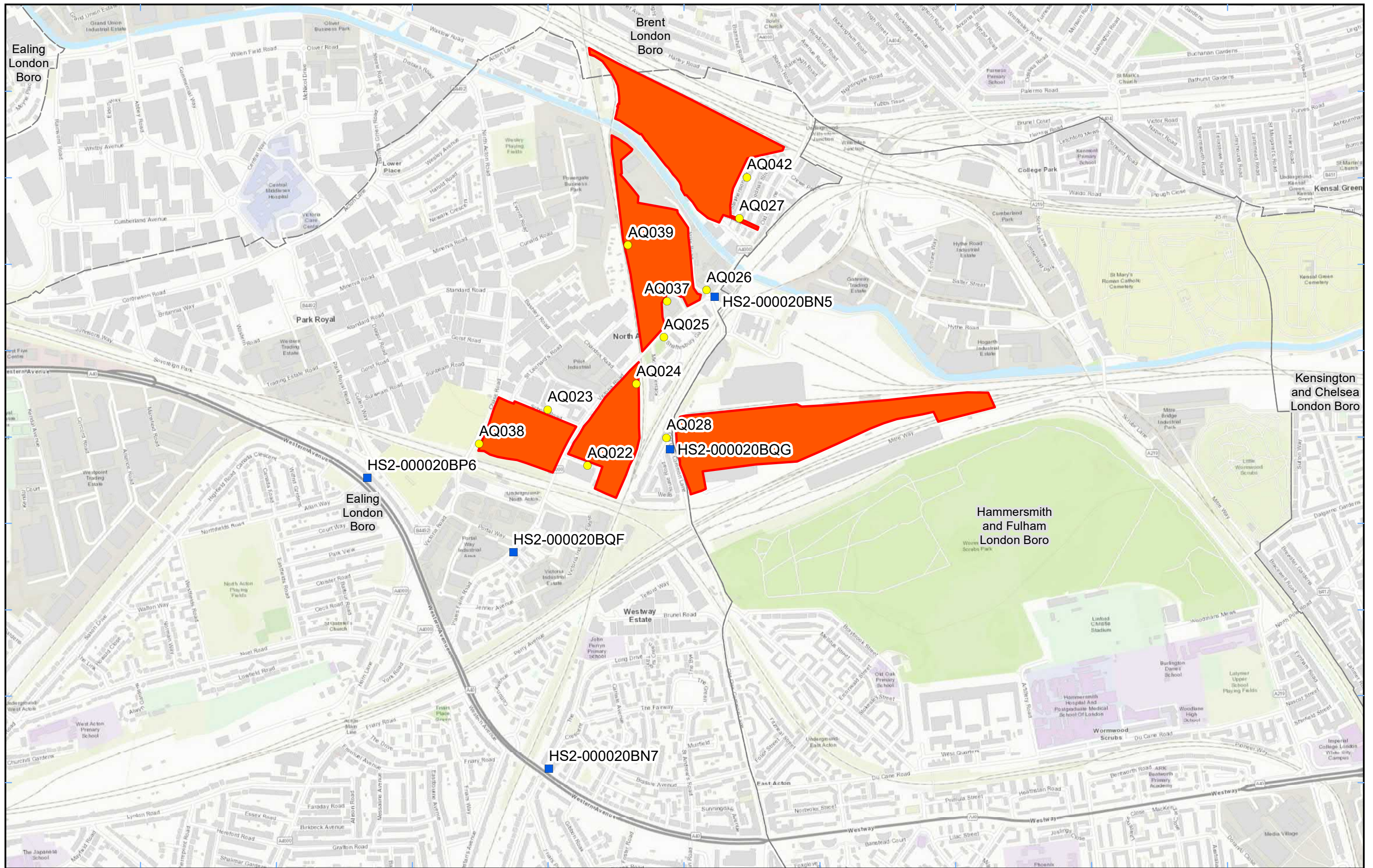
Complaint Reference No.	Worksite Reference	Description of complaint	Results of investigation
HS2-21-41666-C	N/A	Dust levels on site on 29/03/21. No water to suppress dust can be seen.	Response was provided from the contractor that monitoring concentrations were checked and there were no elevated recordings on the date in question. Contractor also confirmed the measures they employ on site to manage dust in line with HS2's Code of Construction Practice, and will continue to be implemented.

# Appendix A – Worksites and Monitoring Locations

Figure 1 to 3: Worksites and monitoring locations within the LBE







- Legend**
- Diffusion Tube
  - Worksite
  - Dust Monitor
  - District Borough Unitary Boundaries

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Map Number  
 Map Name  
**Worksite and Monitoring Locations  
 In LBE (Sheet 1)**  
 London Borough of Ealing

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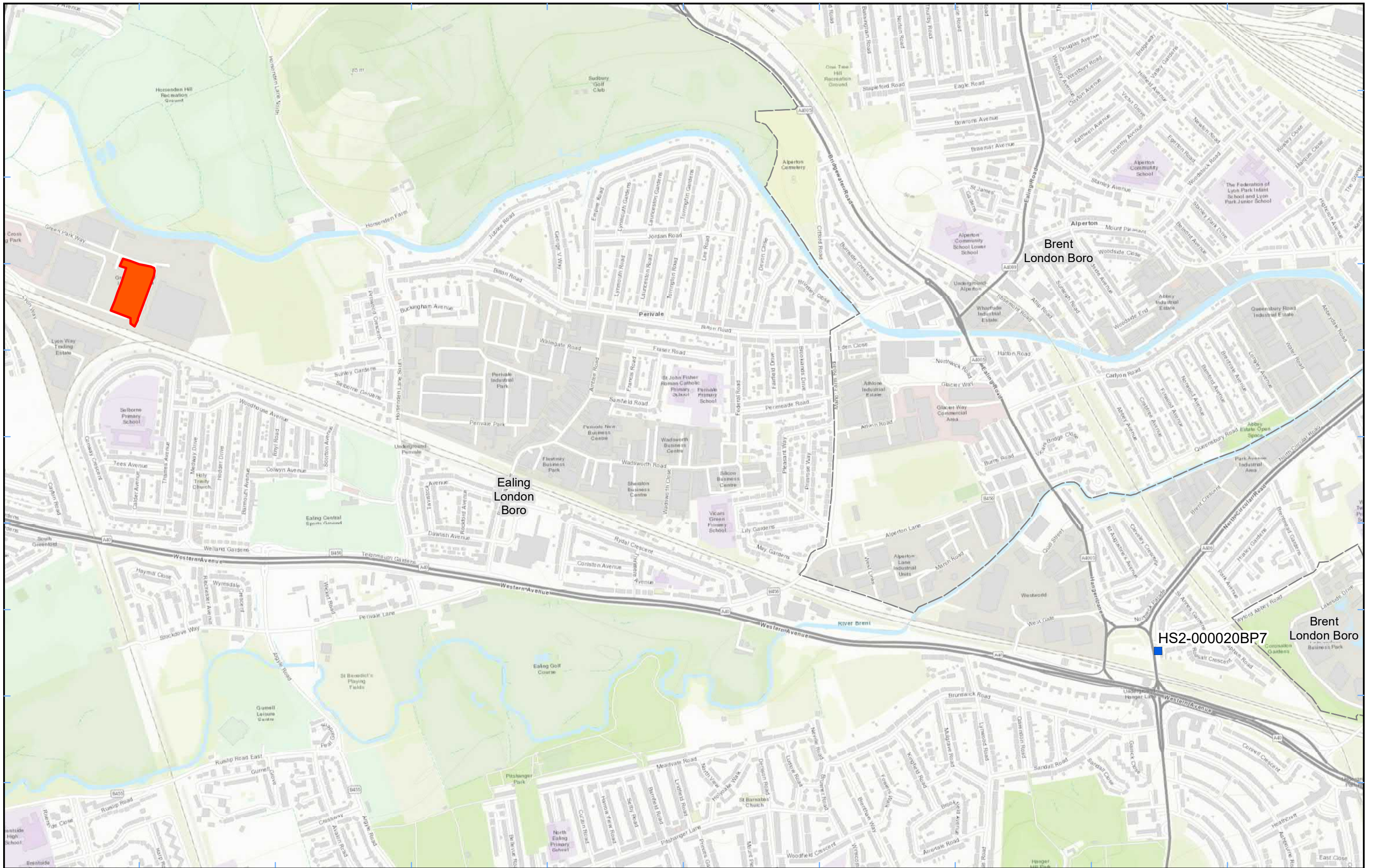
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0 100 200 300 400  
 Metres

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**Legend**  
■ Diffusion Tube  District Borough Unitary Boundaries  
 Worksite

Map Number  
 Map Name  
**Worksite and Monitoring Locations  
 In LBE (Sheet 2)**  
**London Borough of Ealing**

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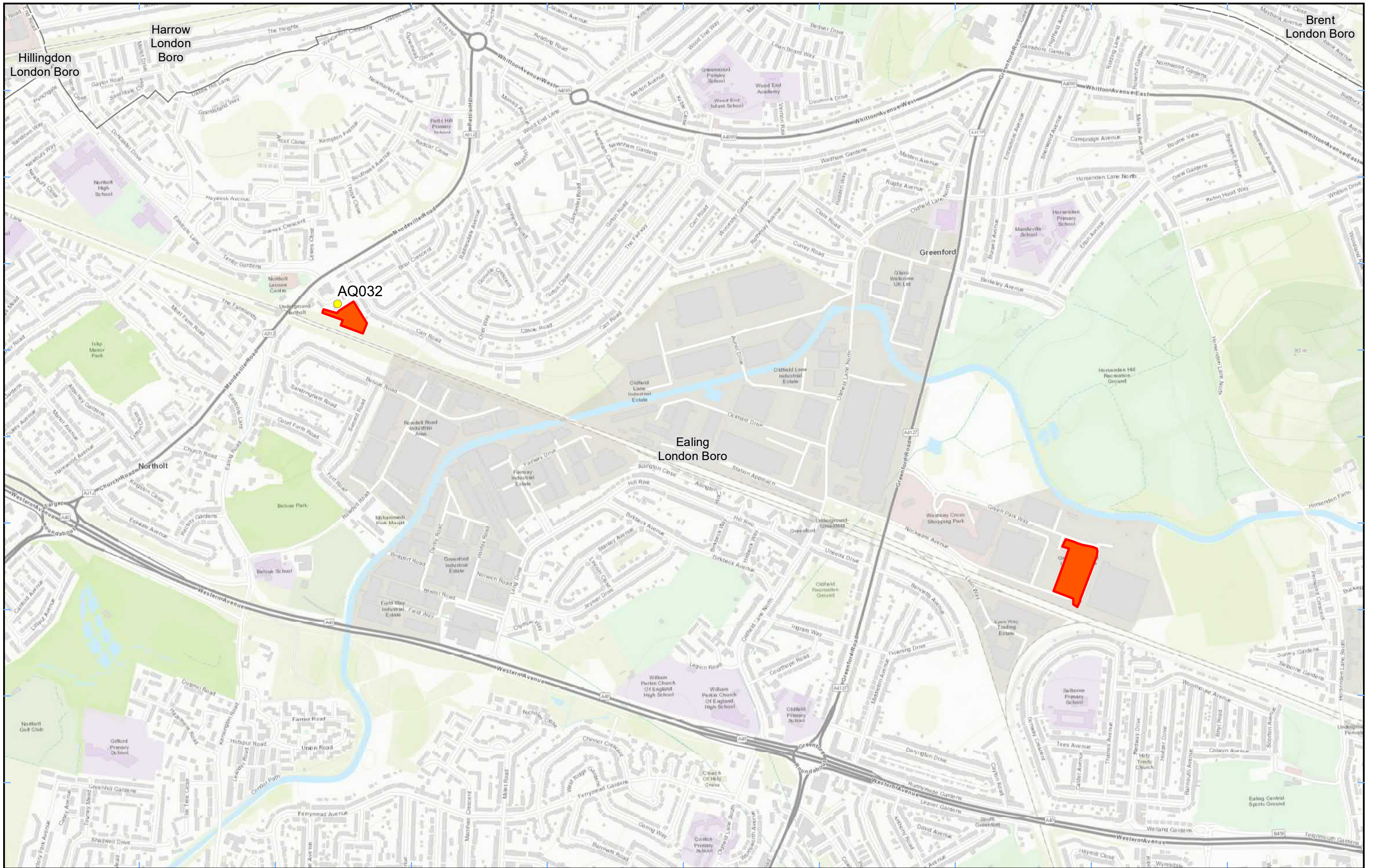
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- Legend**
- Dust Monitor
  - District Borough Unitary Boundaries
  - Worksite

Map Number  
 Map Name  
**Worksite and Monitoring Locations  
 In LBE (Sheet 3)**  
**London Borough of Ealing**

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## Appendix B – Dust Monitoring Results

Table 2: Dust monitoring locations and March 2021 results

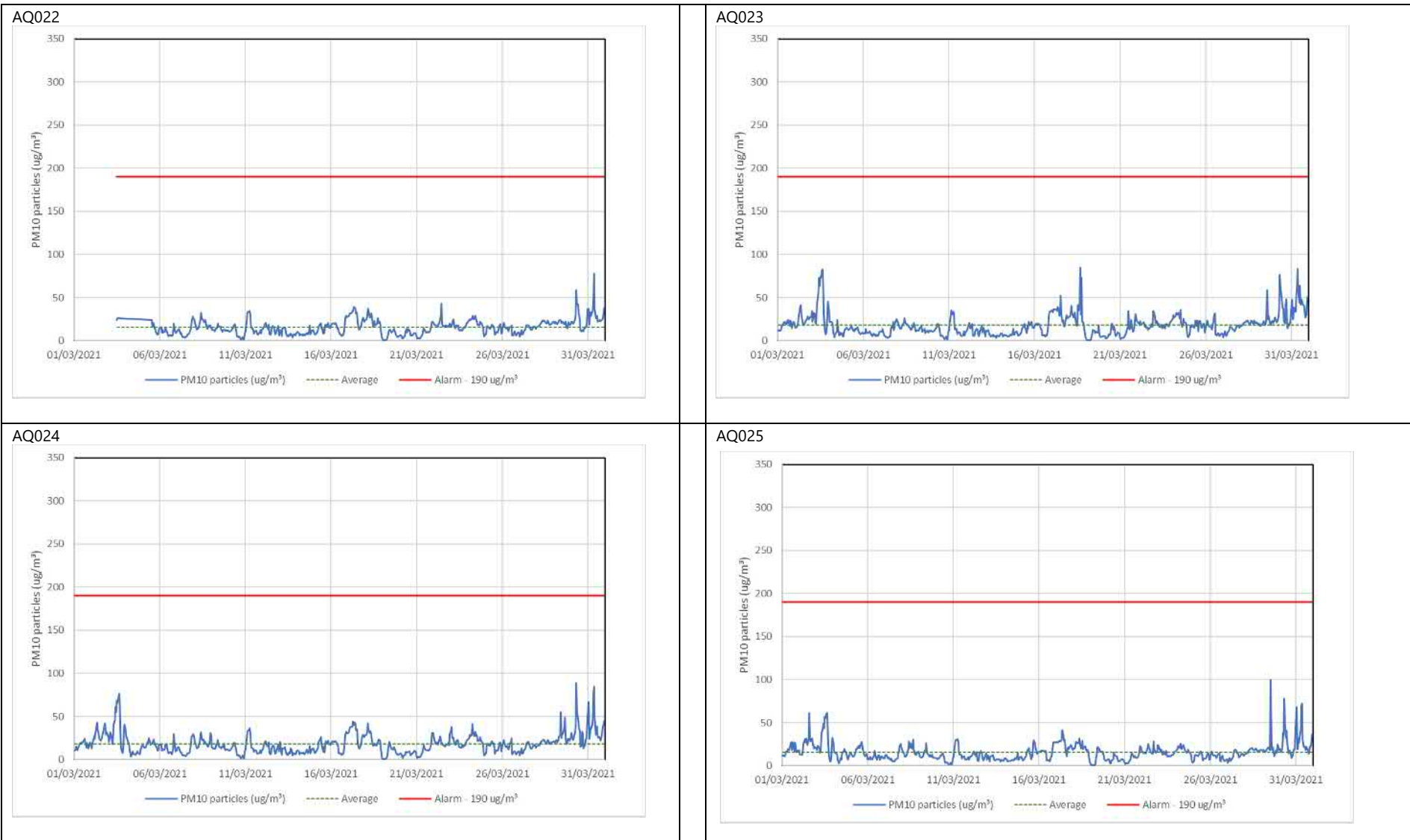
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM <sub>10</sub> concentration (µg/m <sup>3</sup> )	Minimum 1-hour PM <sub>10</sub> concentration (µg/m <sup>3</sup> )	Maximum 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	M	Yes	N	15.7	0.4	78.0	0	85.8
AQ023	520956, 182149	School Road	M	Yes	N	17.9	0.5	84.8	0	100.0
AQ024	521214, 182223	Braitrim House	M	Yes	N	18.3	0.4	89.2	0	100.0
AQ025	521295, 182360	Victoria Road	M	Yes	N	15.6	0.4	100.2	0	100.0
AQ026	521419, 182497	Old Oak Lane	M	Yes	N	19.3	0.5	115.2	0	100.0
AQ027	521515, 182706	Channel Gate Road	M	Yes	N	21.5	0.4	125.5	0	100.0
AQ032	513402, 184536	Badminton Close	M	Yes	N	12.0	0.4	67.1	0	100.0
AQ037	521304, 182464	Atlas Road	M	No	N	15.0	0.4	88.1	0	100.0
AQ038	520756, 182049	Chase Road	M	Yes	N	16.9	0.5	106.6	0	100.0
AQ039	532417, 181198	Atlas Road 2	M	Yes	N	21.2	0.5	259.6	1	99.9
AQ041	507942, 187028	West Ruislip Portal	M	Yes	N	13.3	0.5	76.7	0	99.7
AQ042	521537, 182826	Stephenson Road	M	Yes	N	16.0	0.4	106.4	0	100.0
AQ046	515593, 183764	Green Park Way	M	Yes	N	14.4	0.5	125.6	0	93.9

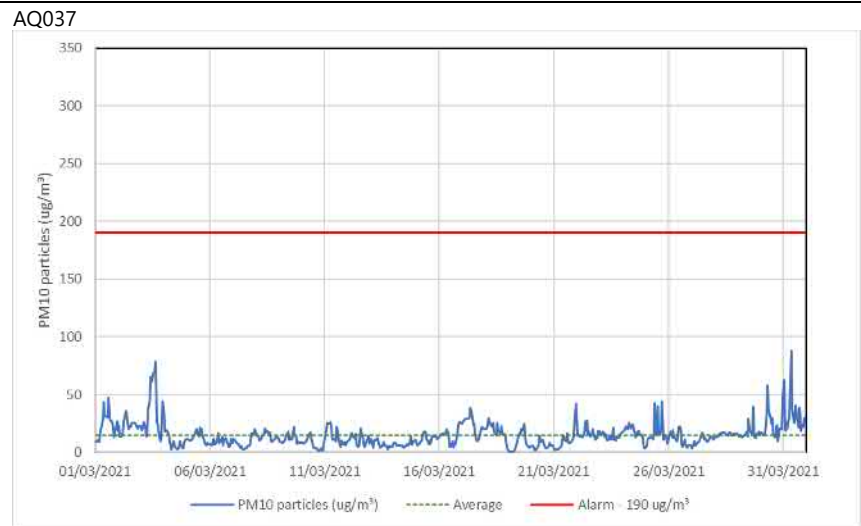
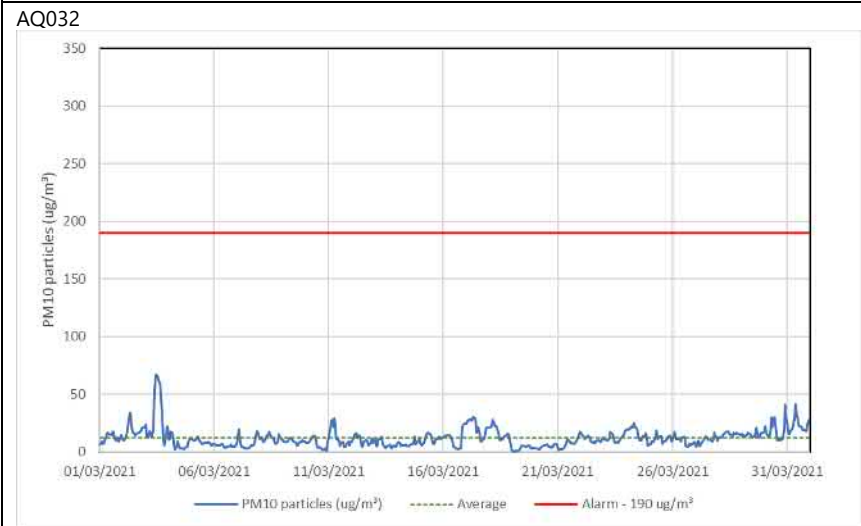
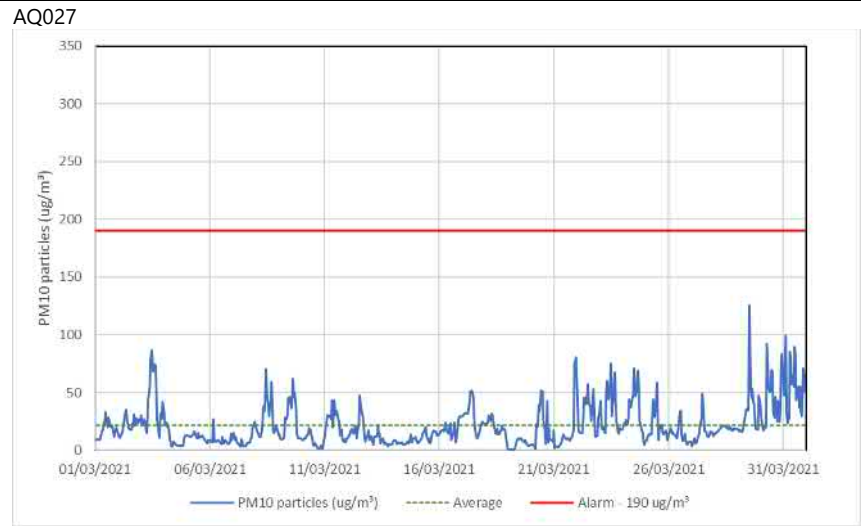
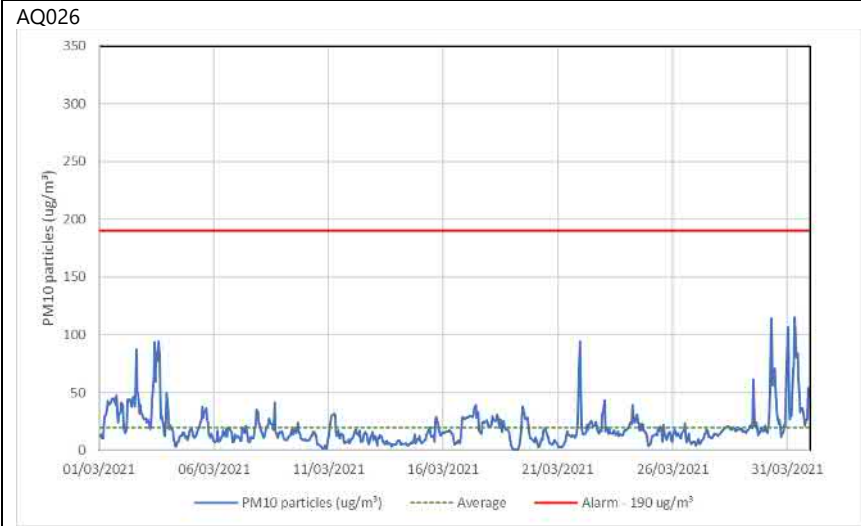
Table 3: Summary of exceedances of trigger level in March 2021

Monitoring site ID	Period exceeding trigger alert and concentration recorded	Investigation	Outcomes / Resolution / Remedial measures implemented
AQ039	01/03/2021 06:00 – 07:00: 259.6 µg/m <sup>3</sup>	<p>At the time of the trigger alert from the dust monitor (AQ039), which is located on the western boundary of the Atlas Road site with the railway, lorries were again (similar to the previous Friday – see February 2021 report) arriving onto site as part of the new subcontractor’s mobilisation, this time delivering welfare cabins.</p> <p>Given the weight, width and length of the lorries arriving, they were classed as abnormal loads and as such were delivered, but not off-loaded, prior to normal site operating hours.</p> <p>The continued warm, dry weather over the weekend meant the onsite haul road in that area was again, as before, very dry. The early delivery meant that the site team didn’t get the opportunity to damp-down the haul route prior to the lorries’ arrival.</p> <p>Neither of the other nearby dust monitors, AQ037, which is on the south eastern site boundary or AQ025, on the corner of Victoria Road and Shaftesbury Gardens, showed elevated levels.</p> <p>It is considered that the elevated dust levels were not experienced beyond the immediate area of the site or the monitor and for no longer than the lorries arrival.</p>	<p>A jet wash was dispatched across the haul route when the site opened to dampen the ground and the additional bowser ordered the previous Friday was being delivered later in the day.</p> <p>The site team ensured that prior to the arrival of any further abnormal loads the haul routes were suitably damped down.</p> <p>Thereafter, they will ensure dust suppression is available and deployed where required on site.</p>

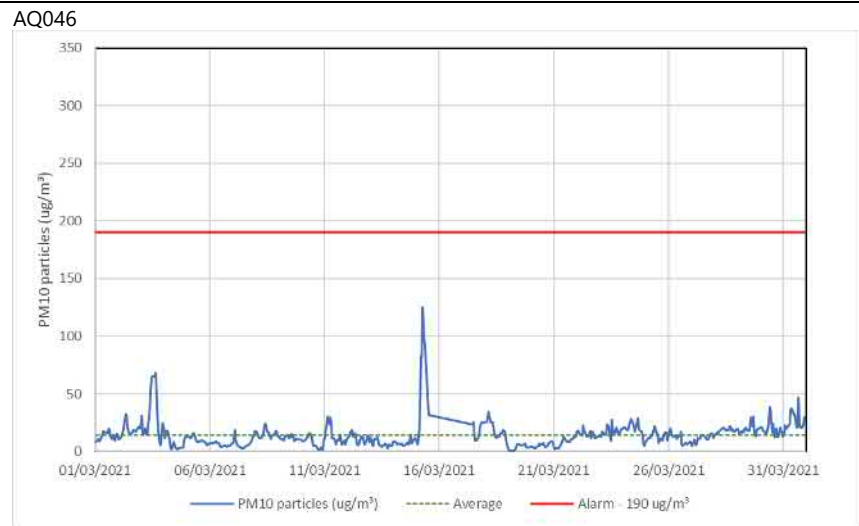
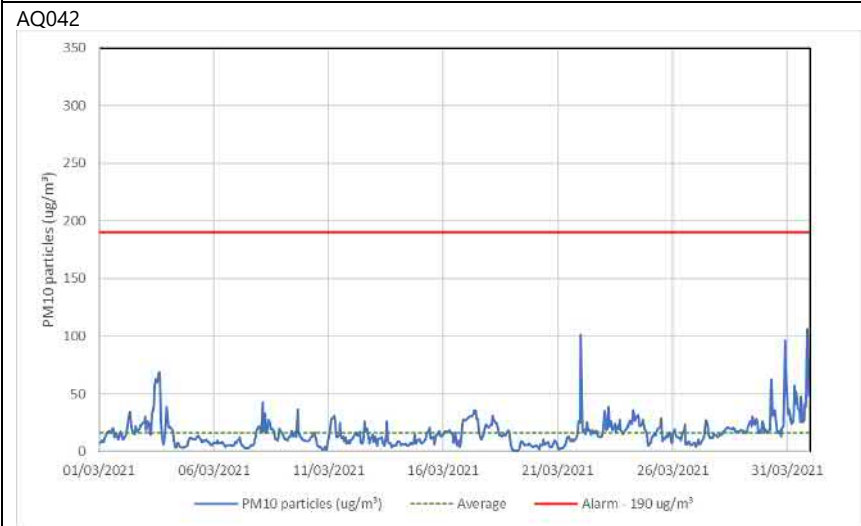
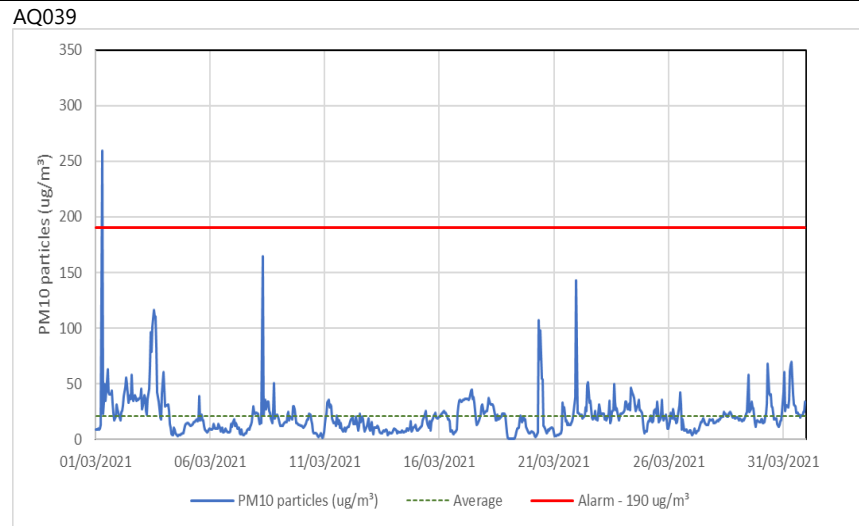
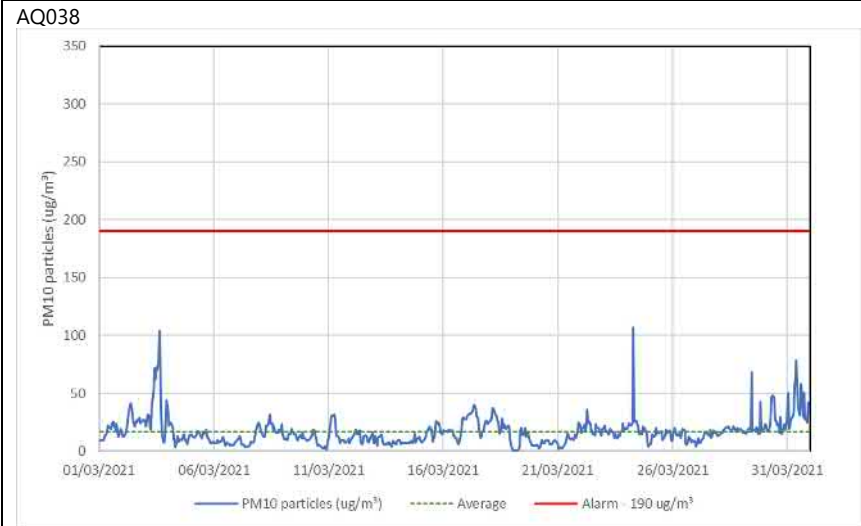


Figure 3: Construction dust 1-hour mean indicative PM<sub>10</sub> concentration for dust monitors









## Appendix C – Air Quality Monitoring Results

Table 4: NO<sub>2</sub> monitoring locations around highways, NO<sub>2</sub> concentrations and monthly monitoring results with running mean for 2021 (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	57	47											52
HS2-000020BN7	The Approach street sign	520959, 181102	56	47											51
HS2-000020BQF	Conway Drive sign-post	520856, 181733	58	52											55
HS2-000020BQG	Lamp post outside No 1. Wells House Road on Old Oak Common Lane	521312, 182033	39	44											41
HS2-000020BP6	Triplicate site next to the Ealing, Western Avenue Acton roadside automatic monitoring station	520430, 181950	51	51											51
HS2-000020BP7	Triplicate site next to the Ealing, Hangar Lane Gyrotory roadside automatic monitoring station	518537, 182708	63	69											66

<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.