

Air Quality and Dust Monitoring Monthly Report – June 2021

London Borough of Hammersmith and
Fulham



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 Hammersmith and Fulham (LBHF) during May and June 2021 respectively.
- 1.1.2 Figure 1 and Figure 2 in Appendix A present the current worksite 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 Construction works commenced in August 2020 and is expected to be completed by 2025. The current worksite, as presented in Appendix A, Figure 1, includes:
- Old Oak Common Depot and mobilisation and new site set up for the station works;
 - Ground reduction works;
 - Sheet Pile Installation;
 - Flat Iron Demolition;
 - Permanent Accommodation Building construction;
 - Maintaining vegetation clearance on Wormwood Scrubs;
 - Heathrow Express railway sidings demolition;
 - Construction of temporary haul roads;
 - Drainage installation;
 - Concrete Batching and Polymer plant set up; and
 - Piling and excavation activities.
- 1.1.5 Four (4) dust monitors are installed around the worksite, where earthworks, construction and trackout activities are underway. This site returned a medium to high 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.

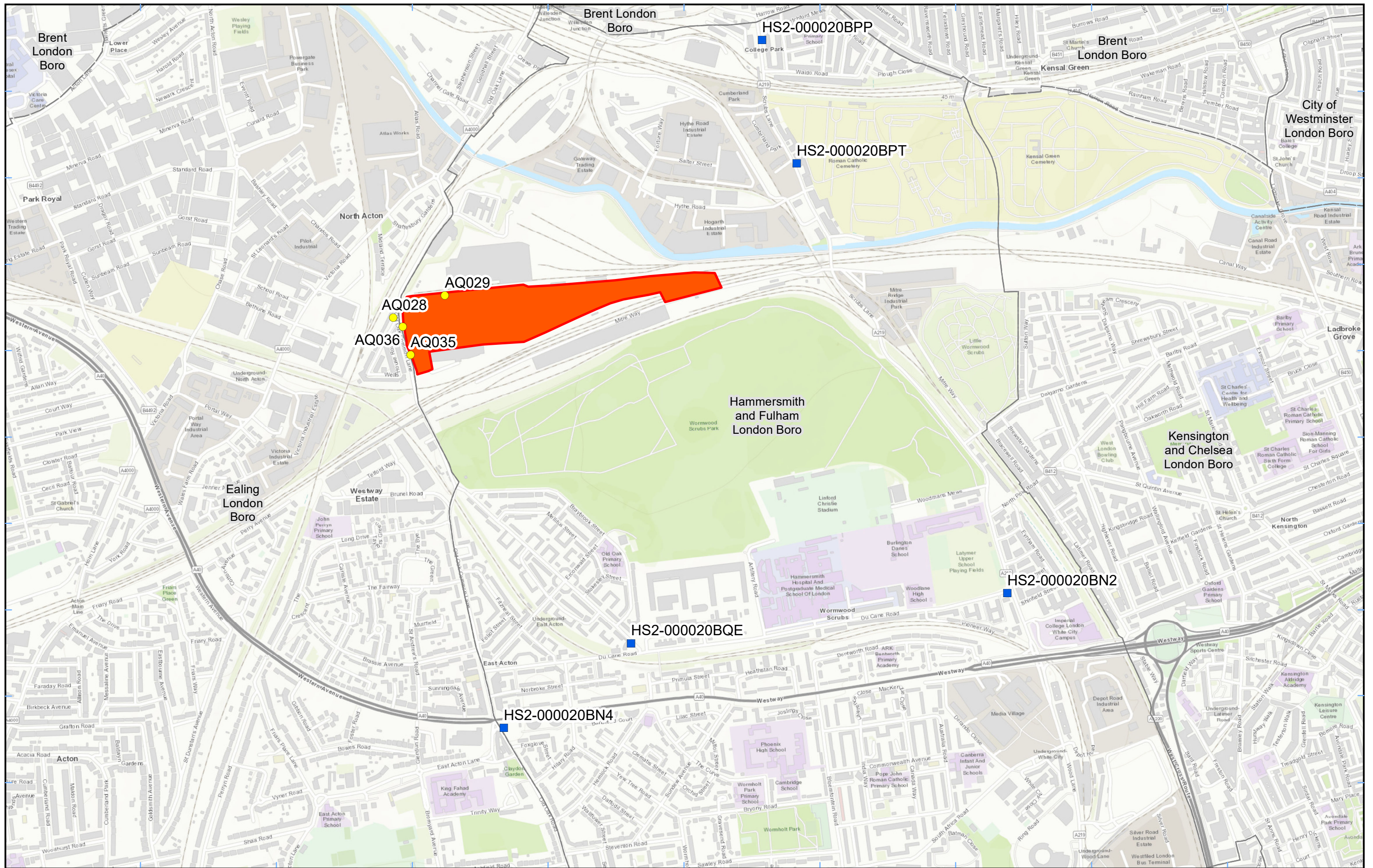
- 1.1.8 There was one (1) dust trigger alert recorded during this monitoring period (June 2021). Triggers are presented in Appendix B, Table 3. All other results in line with the expected ranges.
- 1.1.9 Data capture for monitors AQ029 and AQ036 was below 90% for the month of June 2021 due to a power supply issue causing data loss. The monitors will be switched from a generator to mains power which will resolve the issue. Dust monitor at AQ035 was also replaced during June 2021. Diffusion tube monitoring of Nitrogen Dioxide (NO₂) is undertaken at seven (7) locations around highways within the LBHF 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 4, together with the 2021 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, together with the findings of any related investigations.

Table 1: Summary of complaints received during February 2021 in LBHF

Complaint Reference No.	Worksite Reference	Description of complaint	Results of investigation
HS2-21-42176-C	Old Oak Common Station Site	Resident complained about noise and dust in the area and that more noise insulation is required.	Investigation is being undertaken on noise insulation.
HS2-21-42179-C	Old Oak Common Lane	Resident complained about the amount of dust and debris that has accumulated on Old Oak Common Lane.	A response was provided to the resident outlining the dust control measures being implemented on site as well as the ongoing monitoring undertaken to minimise any disruption caused to residents as a result of the ongoing works.

Appendix A – Worksites and Monitoring Locations

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



Legend

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

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Map Number

Map Name

**Worksite and Monitoring Locations
In LBHF (Sheet 1)**

**London Borough of Hammersmith
and Fulham**

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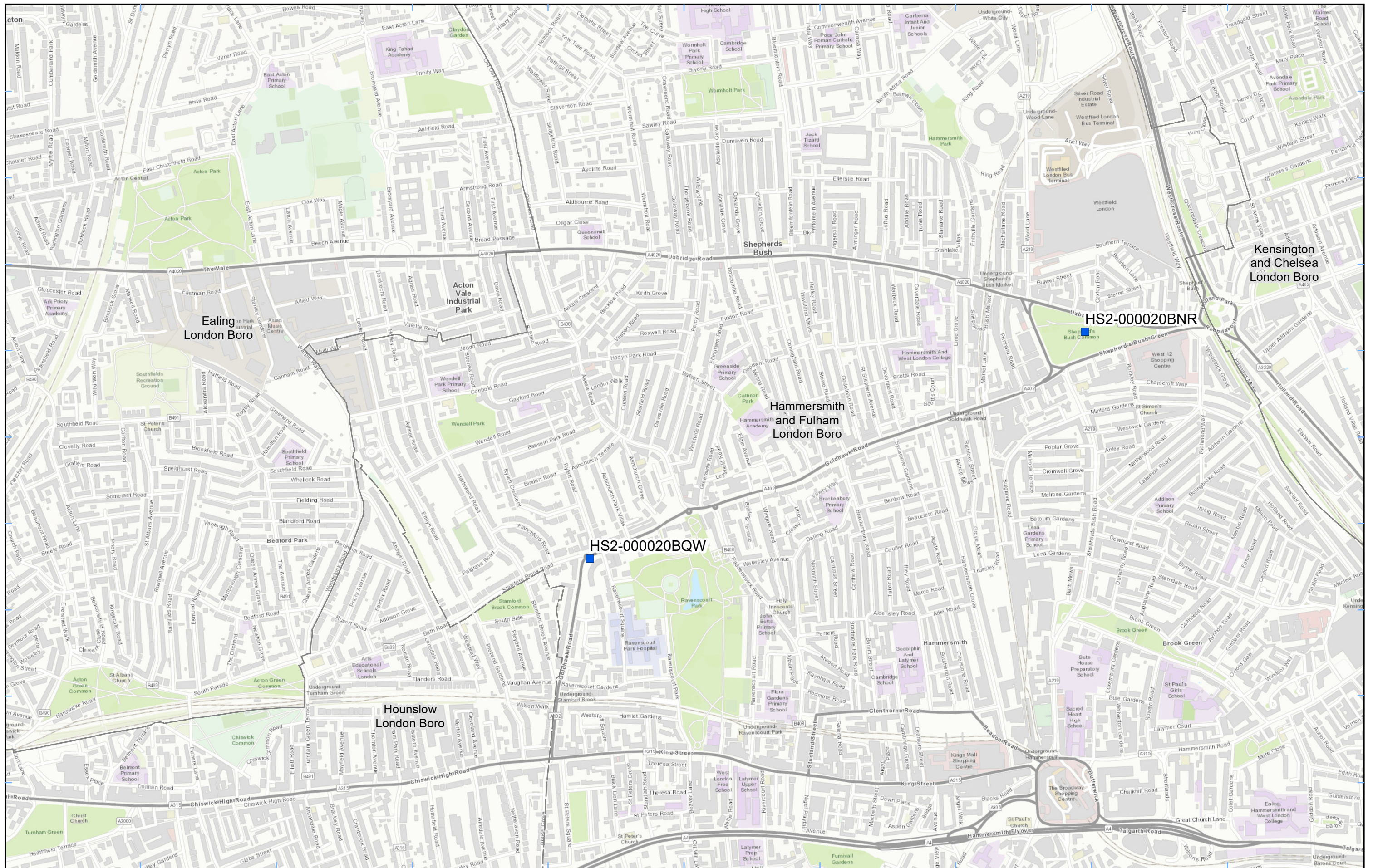
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Legend
 Diffusion Tube
 District Borough Unitary Boundaries

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Map Number
 Map Name
**Monitoring Locations In LBHF
 (Sheet 2)**
**London Borough of Hammersmith
 and Fulham**

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Appendix B – Dust Monitoring Results

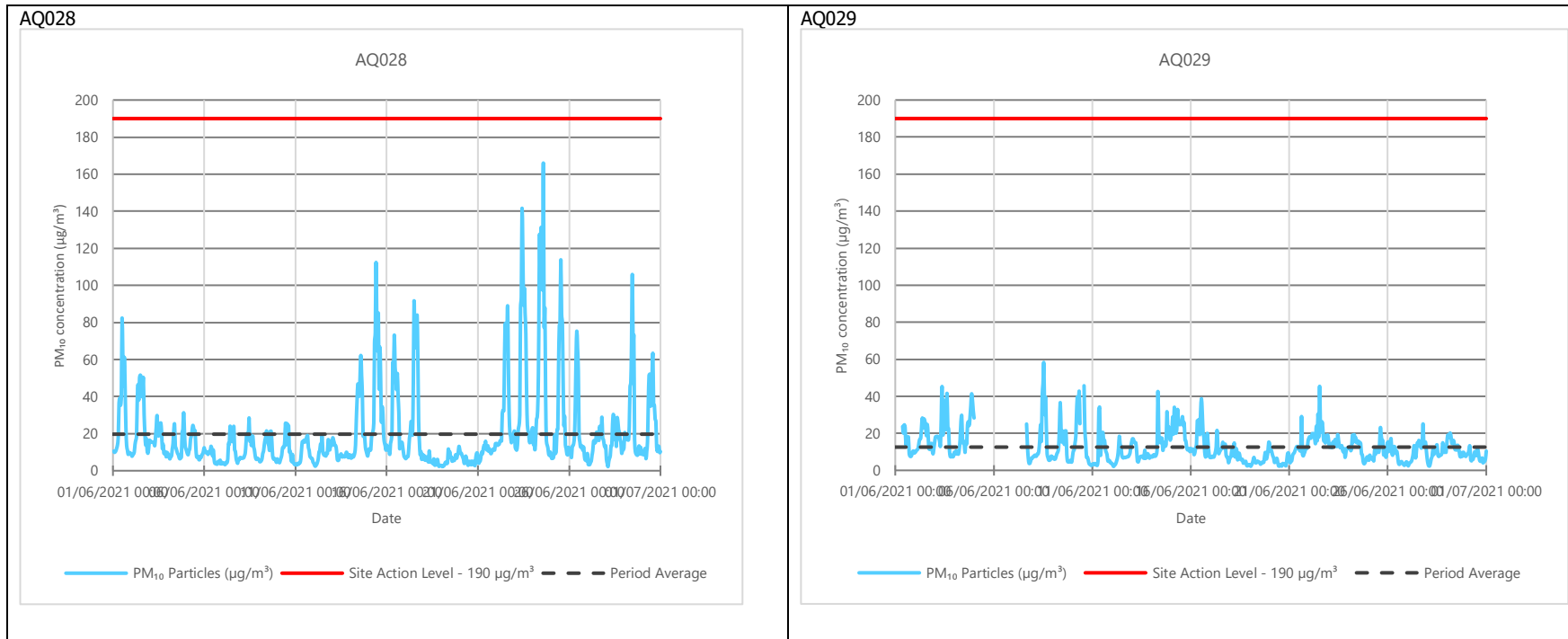
Table 2: Dust Monitoring locations and June 2021 results

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 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 (%)
AQ028	521302, 182067	Wells House Road	M	Yes	N	19.7	2.2	166.0	0	100.0
AQ029	521453, 182132	Old Oak Common	H	Yes	N	12.6	2.1	57.9	0	89.4
AQ035	521353, 181959	Old Oak Common	H	Yes	N	14.5	2.2	232.1	1	100.0
AQ036	521330, 182041	Old Oak Common	H	Yes	N	12.3	2.1	91.5	0	87.2

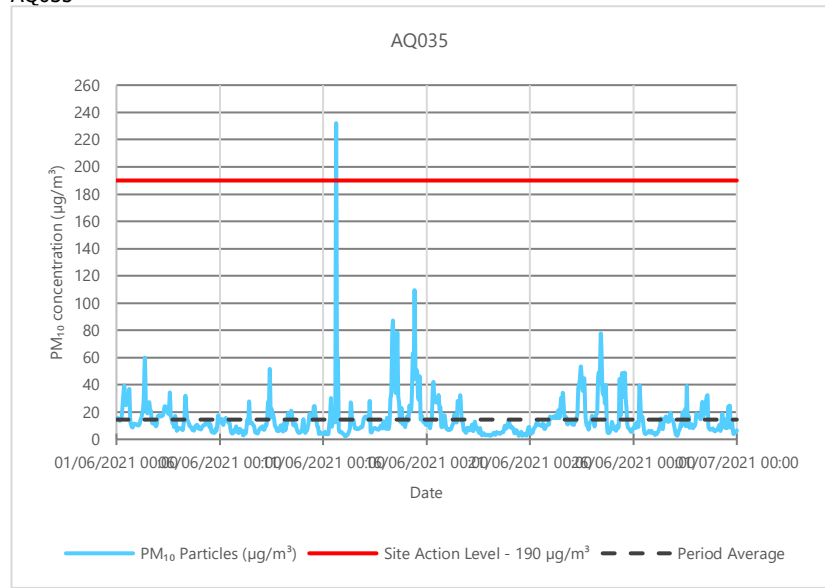
Table 3: Summary of exceedances of trigger level in June 2021

Monitoring site ID	Period exceeding trigger level	Investigation	Outcomes / Resolution / Remedial measures implemented
AQ035 Old Oak Common	11/06/2021 15:01 – 16:00: 232.1 µg/m ³	<p>The works being undertaken across the site at the time of the activation would not generate excessive dust.</p> <p>We reviewed the Vehicle Management System MS and note that a low volume of booked vehicles left the site in the hour preceding the activation (7no).</p> <p>Given that the wind was blowing in a southerly direction at the time of the activation, the monitor may have been activated by dust created outside of the perimeter of the site.</p> <p>Photo provided below of site during works.</p>	<p>Works briefly stopped while an investigation of the alert undertaken by all work packages.</p> <p>The frequency that the road sweeper patrols external roads was increased.</p> <p>Continuous damping down across the site by subcontractors using water bowsers.</p> <p>All work areas had been damped down throughout the day as witnessed and recorded on the daily visual dust inspection log.</p> <p>Toolbox Talks (training) will be redone regarding damping down and a time rota will be produced to record the start and finish of the bowser route.</p> <p>Site supervisors will brief all operatives and continue to monitor site conditions should we require additional dampening down in specific areas.</p>

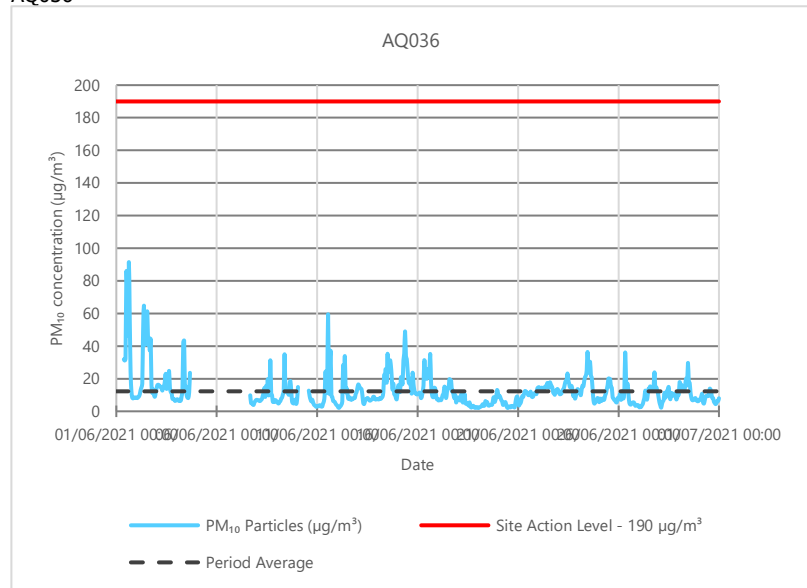
Figure 3: Construction dust 1-hour mean indicative PM₁₀ concentration for dust monitors



AQ035



AQ036



Appendix C – Air Quality Monitoring Results

Table 3: NO₂ monitoring locations around highways NO₂ concentrations and monthly monitoring results with running mean for 2021 (µg/m³)

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean ¹
HS2-000020BN2	Lamp post on Du Cane Road	523092, 181264	52	49	46	42	45								47
HS2-000020BN4	End of cycle lane sign on Old Oak Road	521625, 180871	55	49	47	54	48								51
HS2-000020BNR	Lamp posts in Shepherd's Bush Common	523481, 179871	42	39	34	33	34								36
HS2-000020BPP	Sign post on A219 Scrubs Lane, South of Harrow Road	522378, 182877	48	52	40	40	39								44
HS2-000020BPT	Controlled Zone/Zone Ends road sign on A219 Scrubs Lane, north of Hythe Road	522478, 182517	52	52	44	45	42								47
HS2-000020BQE	Lamp post next to No 11 Wulfstan Street	521996, 181118	38	33	33	29	27								32
HS2-000020BQW	Lamp post on A402 Goldhawk Road	522037, 179209	44	44	39	36	35								40

¹ 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.