

Air Quality and Dust Monitoring Monthly Report – April 2022

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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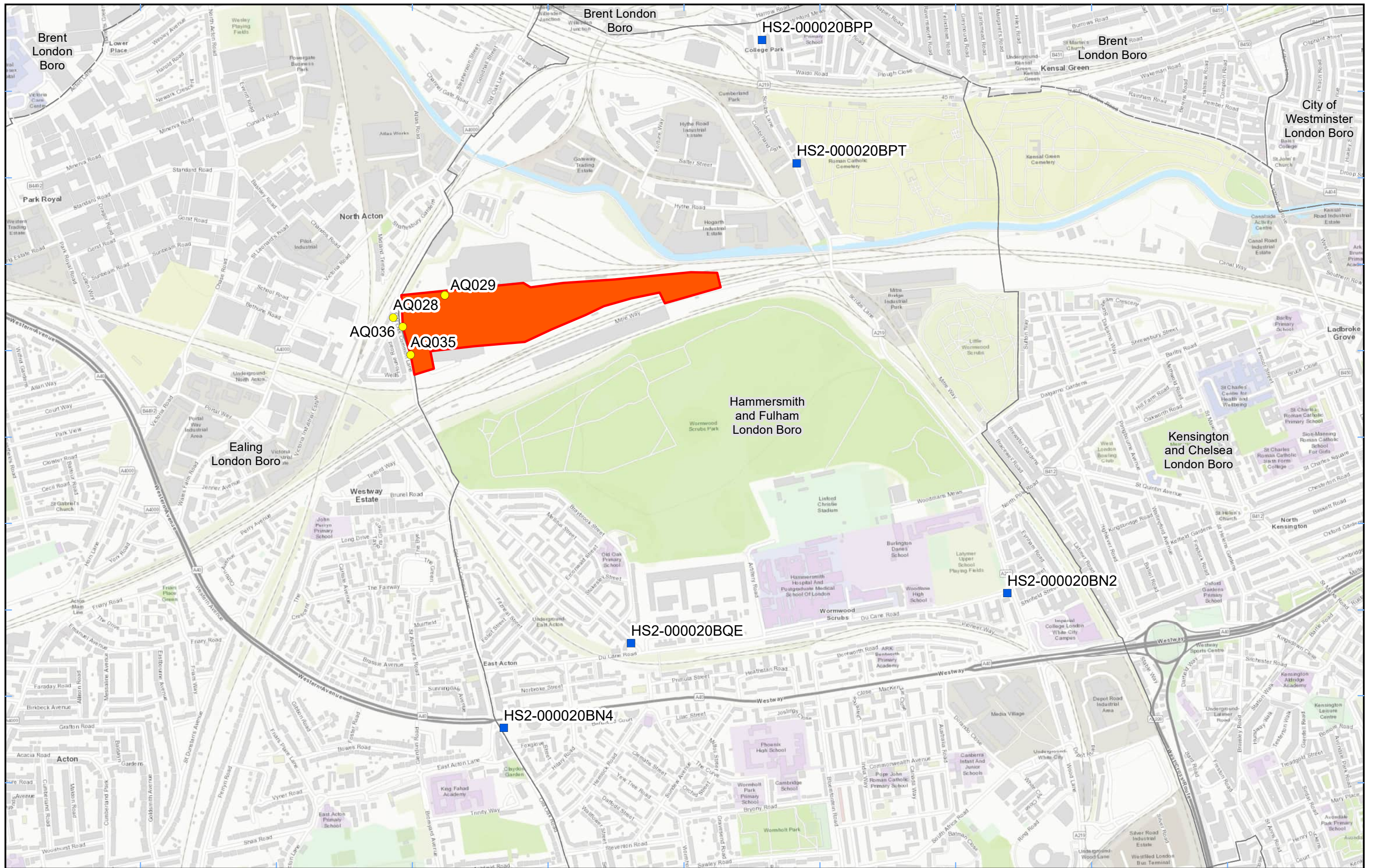
Monthly Summary

- 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 March and April 2022 respectively.
- 1.1.2 Figure 1 and Figure 2 in Appendix A indicate 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 to Figure 2, includes:
- Old Oak Common Depot and mobilisation and new site set up for the station works;
 - Box excavation, muck away, crushing and concrete processing – GWML;
 - Construction of temporary haul roads;
 - Drainage installation;
 - Piling and D-Wall activities – East / Central Box;
 - Capping beam construction / fixing rebar for propping beam and slabs – West Box;
 - Breaking down of D-wall / excavation in - West box;
 - Old Oak Common Lane boundary wall – paving slabs laying;
 - Conveyor steel erection; and
 - Concrete pours / pipe laying / Segment Installation – Wormwood Scrubs.
- 1.1.5 Four (4) dust monitors are installed around the worksite, where works are underway. These sites returned a medium to 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 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 One (1) dust trigger alert was recorded during the monitoring period (April 2022) and is reported in Appendix B, Table 2.
- 1.1.9 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 3, together with the 2022 running mean.
- 1.1.12 There were no (0) complaints received during this reporting period.

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

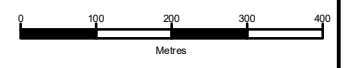
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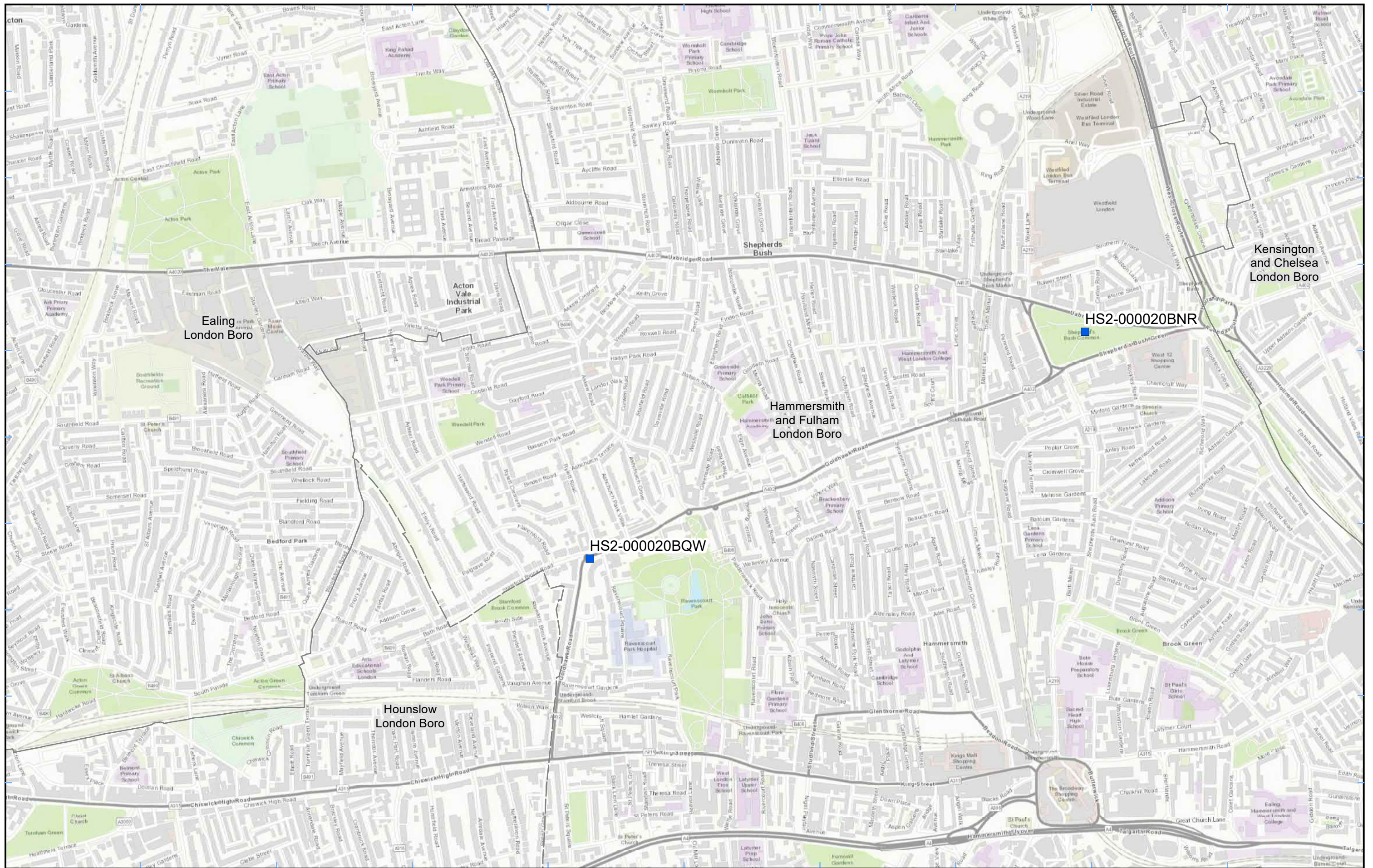
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Legend
■ Diffusion Tube
 District Borough Unitary Boundaries

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 1: Dust Monitoring locations and April 2022 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	26.9	1.4	169.7	0	100.0
AQ029	521453, 182132	Old Oak Common	H	Yes	N	16.8	1.7	186.8	0	91.0
AQ035	521353, 181959	Old Oak Common	H	Yes	N	22.7	1.4	234.2	1	100.0
AQ036	521330, 182041	Old Oak Common	H	Yes	N	14.5	1.2	105.5	0	96.8

Table 2: Summary of exceedances of trigger level in April 2022

Monitoring site ID	Period exceeding trigger level	Investigation	Outcomes / Resolution / Remedial measures implemented
AQ035	20/04/2022 14:00 – 15:00; 234.2 µg/m ³	At the time of the trigger a range of works were being carried out including: <ul style="list-style-type: none"> • Digging and concreting works; • Excavation of clay; • Breaking down of d-wall; • Fixing of rebar works; and • Processing and crushing concrete and excavating reduced levels. 	Dust control including wetting down was undertaken at the time of activities, but an additional large browser has been ordered to aid dust suppression.

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 2022 (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	55	Tube Missing	54										54
HS2-000020BN4	End of cycle lane sign on Old Oak Road	521625, 180871	55	34	50										46
HS2-000020BNR	Lamp posts in Shepherd's Bush Common	523481, 179871	48	No Data	Tube Missing										48
HS2-000020BPP	Sign post on A219 Scrubs Lane, South of Harrow Road	522378, 182877	63	44	48										52
HS2-000020BPT	Controlled Zone/Zone Ends road sign on A219 Scrubs Lane, north of Hythe Road	522478, 182517	61	42	49										50
HS2-000020BQE	Lamp post next to No 11 Wulfstan Street	521996, 181118	44	30	38										37
HS2-000020BQW	Lamp post on A402 Goldhawk Road	522037, 179209	59	36	Tube Missing										47

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.