

## Air Quality and Dust Monitoring Monthly Report – June 2022

London Borough of Hammersmith and  
Fulham



## Department for Transport

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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 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](https://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 and Figure 2, include:
- Old Oak Common Depot and mobilisation and new site set up for the station works;
  - Material movements - GWML;
  - Construction of temporary haul roads;
  - Drainage / utility installation;
  - Piling and D-Wall activities – East / Central Box;
  - Site Entrance Works;
  - D-wall breakdown - East / West;
  - Capping beam construction – East Box;
  - Capping beam construction / fixing rebar for propping beam and slabs – West Box;
  - Breaking down of D-wall / excavation in - West box;
  - Conveyor Commissioning; and
  - Manhole Construction / Pipe jacking / Tunnelling / shutter striking – Wormwood Scrubs.
- 1.1.5 Four (4) dust monitors are installed around the worksites, 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 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 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 Dust trigger alerts recorded during the monitoring period (June 2022) and are reported in Appendix B, Table 3.
- 1.1.9 Diffusion tube monitoring of Nitrogen Dioxide (NO<sub>2</sub>) is undertaken at seven (7) locations around highways within the LBHF as part of the management of air quality where significant effects June occur as a result of the scheme.
- 1.1.10 Diffusion tube monitoring results are as 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 NO<sub>2</sub> monitoring locations and results are presented in Appendix C, Table 4, together with the 2022 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.

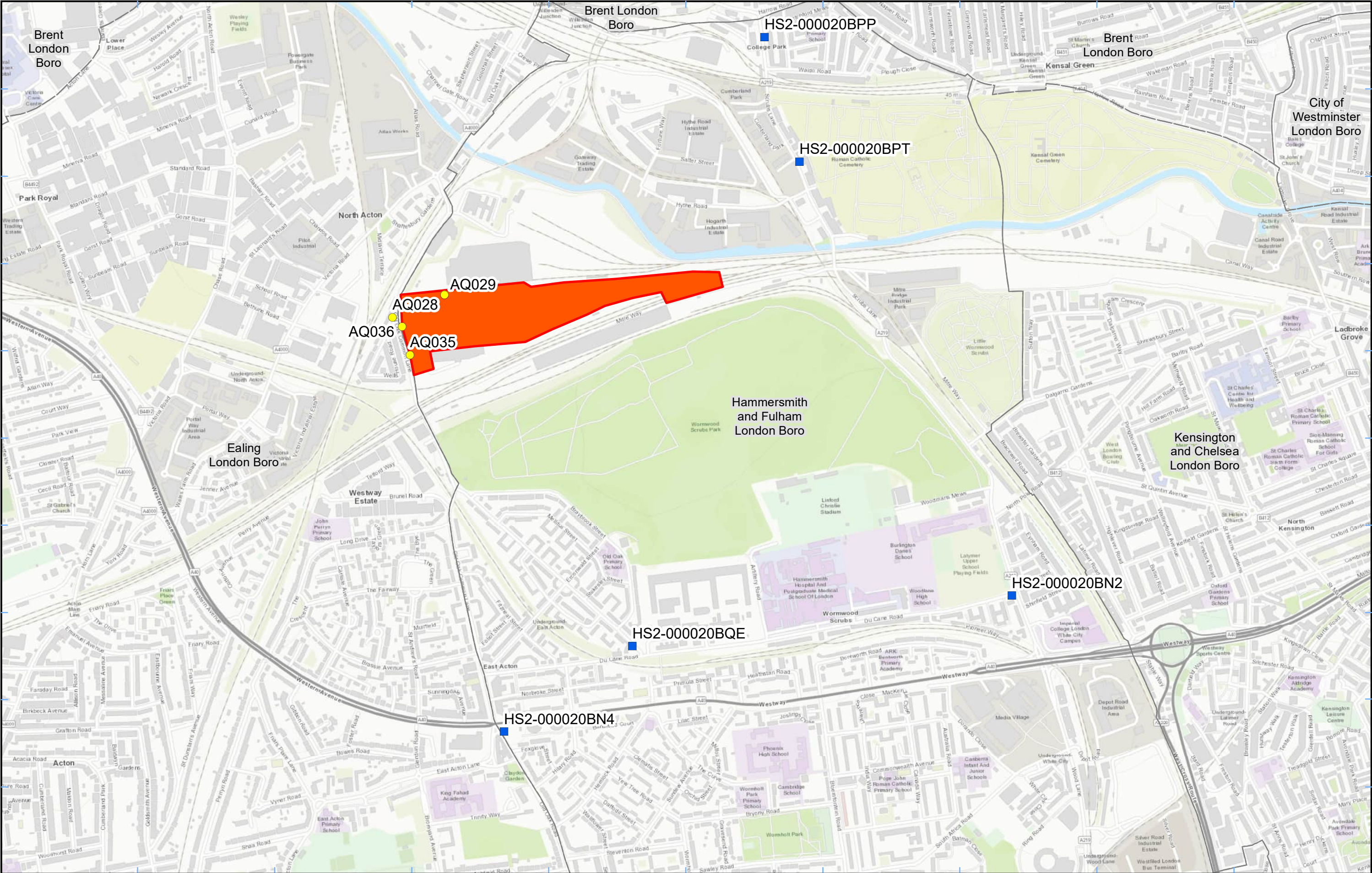
Table 1: Summary of complaints received during June 2022 in LBHF

Complaint Reference No.	Worksite Reference	Description of complaint	Results of investigation
HS2-22-43727-C	Unknown	Resident complaining about the dust on Old Oak Common Lane and Old Oak Lane. Resident feels that there is no dust suppression being used.	BBVS monitor the conditions along Old Oak Common Lane and when necessary, have a road sweeper to clean the road and we regularly clean the pavements around our site boundary. I have attached a few photos to show the standard level of cleaning we maintain.  In terms of dust suppression on site, we have wheel wash facilities, bowsters on site, dust suppression sprays and hose down the site entrance / exit as necessary. Please see some more images attached from last week as examples.

# Appendix A – Worksites and Monitoring Locations

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





Legend

Diffusion Tube

Dust Monitor

Worksite

District Borough Unitary Boundaries

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Map Number

Map Name

Worksite and Monitoring Locations  
In LBHF (Sheet 1)

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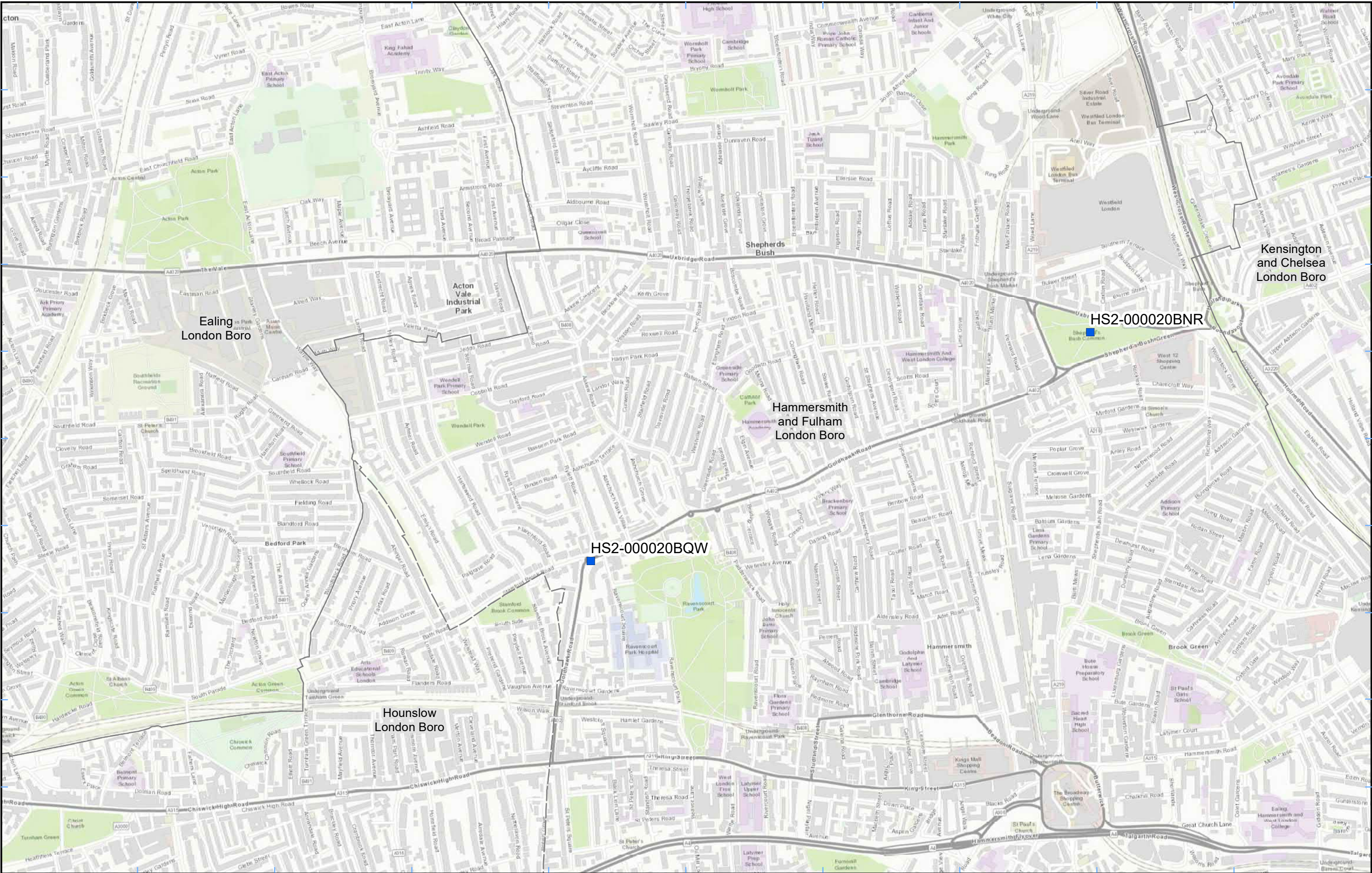
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**Legend**

-  Diffusion Tube
-  District Borough Unitary Boundaries


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Map Number


Map Name

**Monitoring Locations In LBHF  
(Sheet 2)**

**London Borough of Hammersmith  
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## Appendix B – Dust Monitoring Results

Table 2: Dust Monitoring locations and June 2022 results

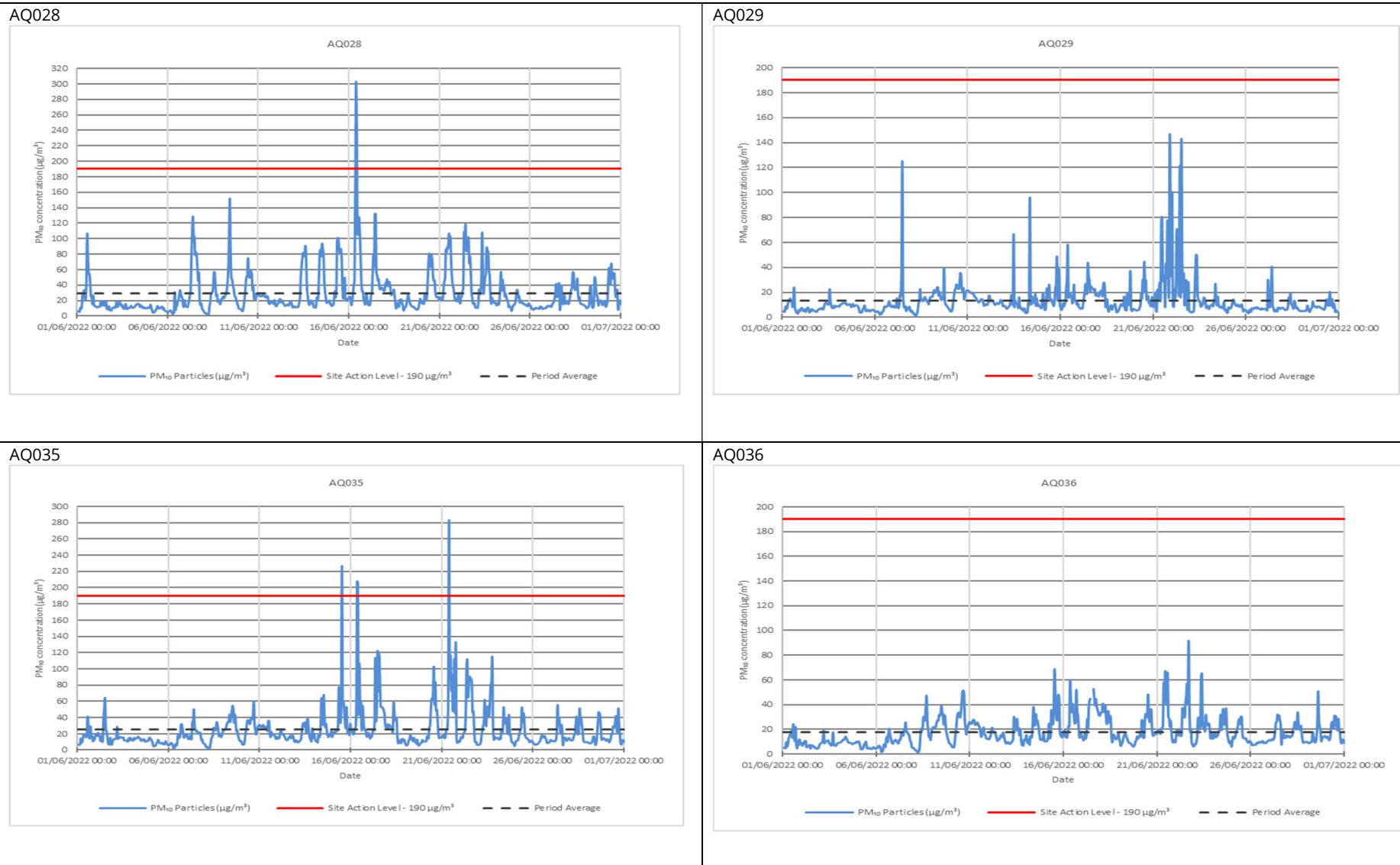
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM <sub>10</sub> concentration (µg/m <sup>3</sup> )	Minimum 1-hour PM <sub>10</sub> concentration (µg/m <sup>3</sup> )	Maximum 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 (%)
AQ028	521302, 182067	Wells House Road	M	Yes	N	28.8	1.5	300.0	2	100.0
AQ029	521453, 182132	Old Oak Common	H	Yes	N	13.5	1.3	146.0	0	100.0
AQ035	521353, 181959	Old Oak Common	H	Yes	N	25.0	2.3	283.1	4	100.0
AQ036	521330, 182041	Old Oak Common	H	Yes	N	17.5	1.5	91.4	0	99.6



Table 3: Summary of exceedances of trigger level in June 2022

Monitoring site ID	Period exceeding trigger level	Investigation	Outcomes / Resolution / Remedial measures implemented
AQ035	15/06/2022 11:00 – 12:00; 226.7 µg/m <sup>3</sup>	Delivery vehicles are entering and leaving site during the time of alert. No activities being undertaken in vicinity of monitor were noted to generate high dust levels that would have contributed to the alerts. Works taking place included, rolling and compaction works, installation of a sheet pile, and steel fixing walls and beams. Nearby monitors (AQ028 AQ036) showed elevated PM <sub>10</sub> concentrations at the time of the alert. Hot, dry conditions at the time of the alert are likely to have increased particulate matter (PM <sub>10</sub> and PM <sub>2.5</sub> ). Works in the local area were investigated and none were found to be close enough to contribute to the exceedance alerts.	Road sweeper was on duty Use of a hose to dampen down Continued dampening down carried out through various methods including jet wash across works areas and water bowser being used for internal roads. Vehicle wheels were washed down before leaving site.
AQ035	16/06/2022 07:00 – 08:00; 207.7 µg/m <sup>3</sup> 08:01 – 09:00; 206.5 µg/m <sup>3</sup>	Delivery vehicles are entering and leaving site during the time of alert alongside crane loading wagon. Works in the local area were investigated and none were found to be close to contribute to the exceedance alerts	Road sweeper and use of hose at entrances to dampen down haul routes were on-going during time of alerts.
AQ028	16/06/2022 08:01 – 09:00; 300.0 µg/m <sup>3</sup> 09:01 – 10:00; 248.0 µg/m <sup>3</sup>	Nearby monitors (AQ028, AQ035 & AQ036) showed elevated PM <sub>10</sub> concentrations at the time of the alert. Hot, dry conditions at the time of the alert are likely to have increased particulate matter (PM <sub>10</sub> and PM <sub>2.5</sub> ).	
AQ035	21/06/2022 08:00 – 09:00; 283.1 µg/m <sup>3</sup>	Compaction of 6F5 (crushed material) was occurring in a small work area located approximately 20m away from the monitor. This was identified as the main contributor to the AQ alert. Installation of one sheet pile using a Giken Silent Piler between 08.00 and 09.00 BST.  Dampening down of the small work area containing the compaction of 6F5 was not sufficiently carried out during time of alert.  Works in the local area were investigated and none were found to be close to contribute to the exceedance alerts.	Works were stopped and the issue raised with the subcontractor's supervisor. Immediate action followed and damping down measures deployed to cover area while works are being carried out. Dampening down has been scheduled to occur more frequently. During a site inspection (21/06/22), BBVS Environment and Logistics Manager observed dust arisings emanating from the area due to lack of damping down. All site operatives were reminded on the importance of ensuring work areas are dampened down, especially during drier conditions.

Figure 3: Construction dust 1-hour mean indicative PM<sub>10</sub> concentration for all 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 2022 (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>
HS2-000020BN2	Lamp post on Du Cane Road	523092, 181264	55	Tube Missing	54	42	35								46
HS2-000020BN4	End of cycle lane sign on Old Oak Road	521625, 180871	55	34	50	42	Tube Missing								45
HS2-000020BNR	Lamp posts in Shepherd's Bush Common	523481, 179871	48	No Data	Tube Missing	Tube Missing	Tube Missing								48
HS2-000020BPP	Sign post on A219 Scrubs Lane, South of Harrow Road	522378, 182877	63	44	48	39	36								46
HS2-000020BPT	Controlled Zone/Zone Ends road sign on A219 Scrubs Lane, north of Hythe Road	522478, 182517	61	42	49	38	36								45
HS2-000020BQE	Lamp post next to No 11 Wulfstan Street	521996, 181118	44	30	38	26	21								32
HS2-000020BQW	Lamp post on A402 Goldhawk Road	522037, 179209	59	36	Tube Missing	34	26								39

<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.