

## Air Quality and Dust Monitoring Monthly Report – May 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

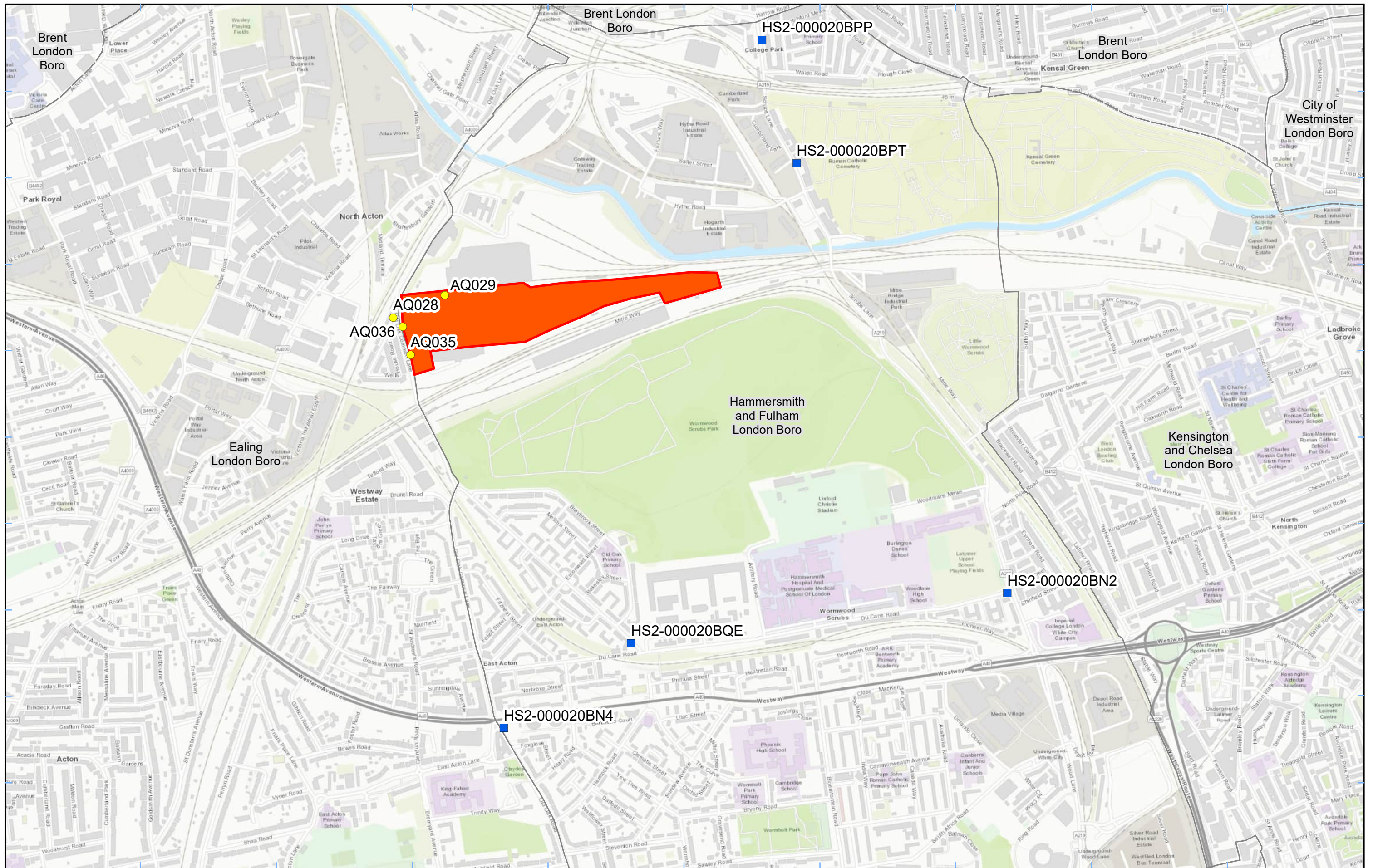
- 1.1.1 This Summary Report is published in fulfilment of commitments detailed in the High Speed Rail (London-West Midlands) Environmental Minimum Requirements, Annex 1: Code of Construction Practice, for the nominated undertaker to present the results of air quality and dust monitoring undertaken in the London Borough of Hammersmith and Fulham (LBHF) during April and May 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](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 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, 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.
  - Conveyor Commissioning
  - Manhole Construction / Site setup / Segment Installation – Wormwood Scrubs.
- 1.1.5 Four (4) dust monitors are installed around the worksite, where works 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, **Error! Reference source not found.**, 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 were recorded during the monitoring period (May 2022) and are reported in Appendix B, Table 2.
- 1.1.9 Data capture was below 90% for monitor AQ035 in May 2022 due to a monitor malfunction that has since been resolved.
- 1.1.10 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 may occur as a result of the scheme.
- 1.1.11 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.
- 1.1.12 NO<sub>2</sub> monitoring locations and results are presented in Appendix C, 3, together with the 2022 running mean.
- 1.1.13 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

**hs2**

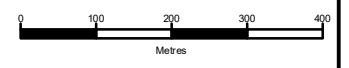
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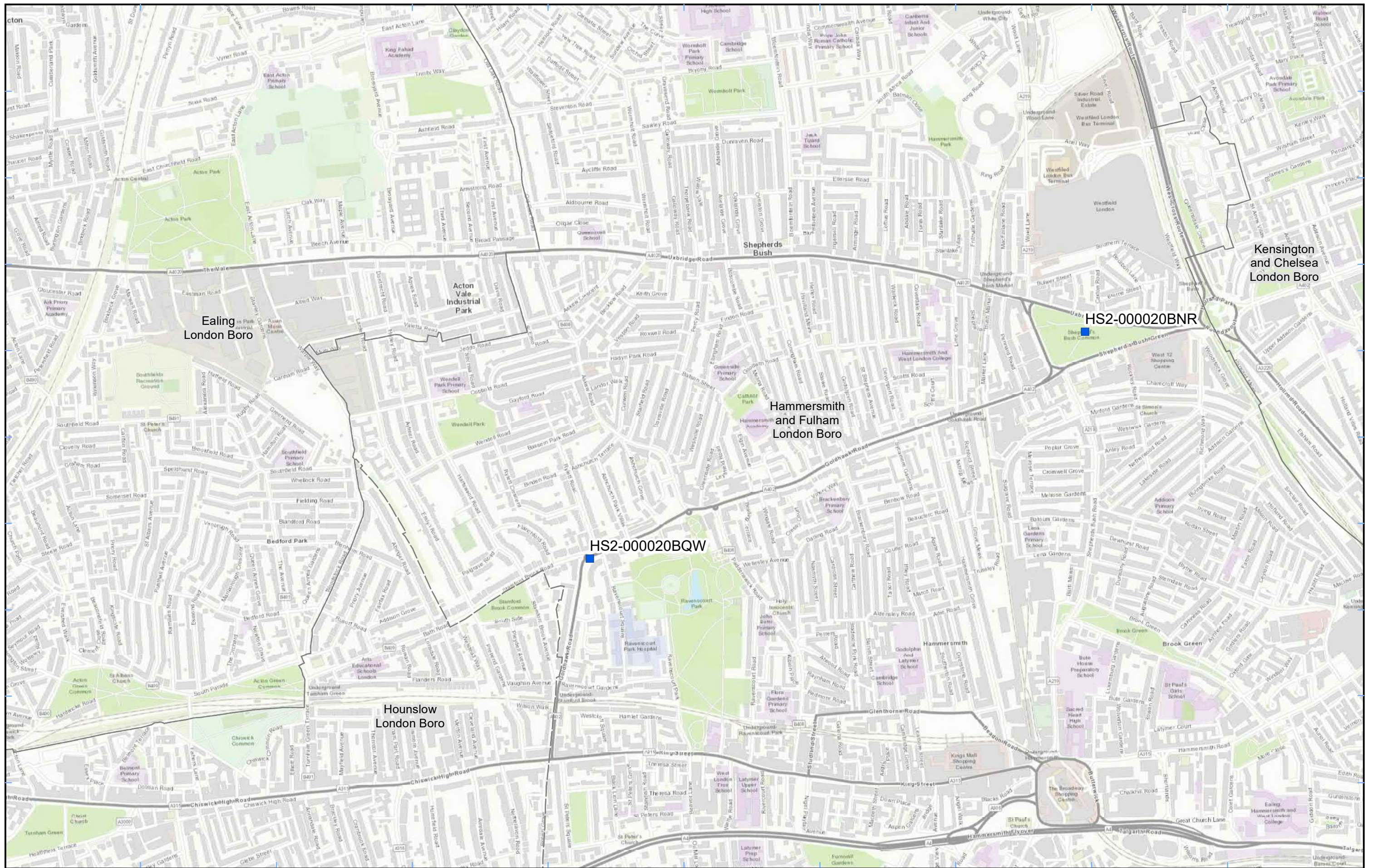
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**Legend**  
■ Diffusion Tube  
 District Borough Unitary Boundaries

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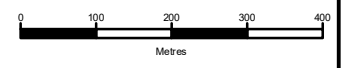
Map Number  
 Map Name  
**Monitoring Locations In LBHF  
 (Sheet 2)**  
 London Borough of Hammersmith  
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## Appendix B – Dust Monitoring Results

Table 1: Dust Monitoring locations and May 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	31.2	1.7	229.5	2	100.0
AQ029	521453, 182132	Old Oak Common	H	Yes	N	14.1	2.0	84.8	0	100.0
AQ035	521353, 181959	Old Oak Common	H	Yes	N	24.0	2.4	245.3	2	83.7
AQ036	521330, 182041	Old Oak Common	H	Yes	N	17.8	2.1	653.2	2	98.0



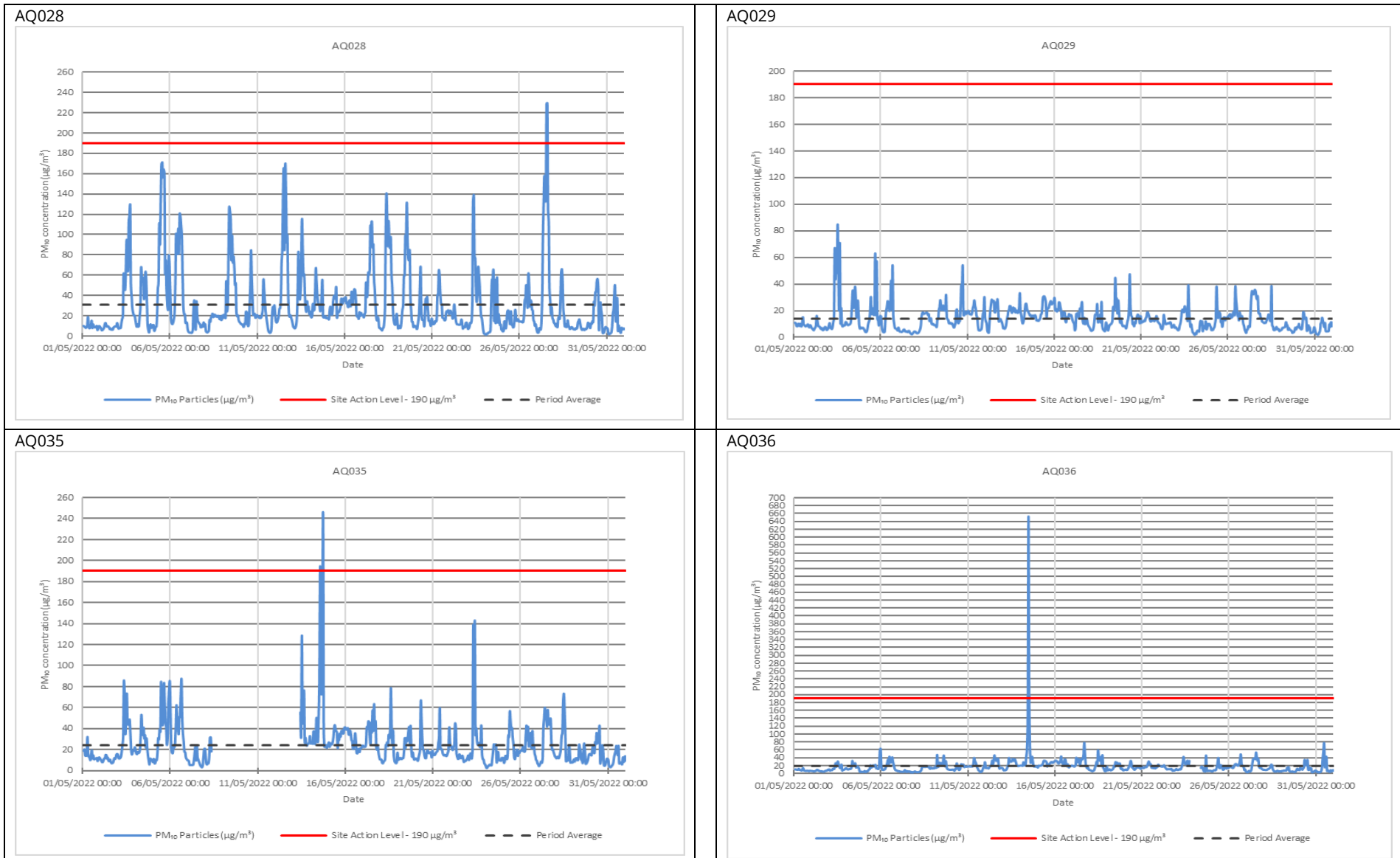
Table 2: Summary of exceedances of trigger level in May 2022

Monitoring site ID	Period exceeding trigger level	Investigation	Outcomes / Resolution / Remedial measures implemented
AQ028	27/05/2022 12:01 – 13:00; 228.6 µg/m <sup>3</sup> 13:01 – 14:00; 229.5 µg/m <sup>3</sup>	<p>At the time of the trigger alerts the following activities were taking place:</p> <ul style="list-style-type: none"> <li>• Breaking concrete slab close to site entrance/ turnstiles;</li> <li>• Deliveries and traffic accessing and egressing site;</li> <li>• Rebar fixing in West Box for propping beam and slabs and use of crane to lift rebar; and</li> <li>• D-wall breakdown in East and West. Capping beam construction in East. Rebar fixing in SBS.</li> </ul>	<p>The following measures were implemented:</p> <ul style="list-style-type: none"> <li>• Continuous use of hose from water bowser to dampen down directly at source;</li> <li>• Use of water bowser to dampen down site haul roads;</li> <li>• Road sweepers employed in and around site;</li> <li>• All vehicles use site wheel wash before leaving site;</li> <li>• Dust suppression bowsers for tracking behind plant in East;</li> <li>• Use of Hose in West Box to dampen down entry ramp and area of plant activities; and</li> <li>• Acoustic blankets have also been erected around works area close to site entrance and adjacent to OOC Lane as noise mitigation measure, which helps to limit dust dispersion.</li> </ul>
AQ035	14/05/2022 12:01 – 13:00; 194.4 µg/m <sup>3</sup> 16:01 – 17:00; 245.3 µg/m <sup>3</sup>	<p>The resurfacing of Old Oak Common Lane included the use of tipper lorries to remove arisings.</p>	<p>The following measures were implemented:</p> <ul style="list-style-type: none"> <li>• Road sweeper was used during resurfacing works to minimise dust releases; and</li> <li>• All vehicles on site left by 12.00pm.</li> </ul> <p>It should be noted that the resurfacing works may have contributed to the alerts due to the close proximity of the monitors to plant used for the activity. However, BPM measure were deployed at all times during the works.</p>
AQ036	14/05/2022 10:01 – 11:00; 653.2 µg/m <sup>3</sup> 11:01 – 12:00; 213.1 µg/m <sup>3</sup>	<p>During time of the alerts, 6 scheduled deliveries took place to site.</p> <p>The resurfacing of Old Oak Common Lane included the use of tipper lorries to remove arisings, and road formation works through use of dumpers and excavators.</p> <p>Digging out of piling platform and clay from Grid Line 6 for propping beam. Digging down to blinding level for the TC01 tower crane base. Fixing of reinforcement of Slab, Grid Line</p>	<p>The following measures were implemented:</p> <ul style="list-style-type: none"> <li>• Damping down of haul routes were implemented at Bellmouth entrance and mobile water bowser used to dampen down (see images 4-6) during drier and hotter conditions.</li> <li>• Road sweeper was used during resurfacing works to minimise dust releases.</li> <li>• Use of hose on West Box entry ramp, water bowser towed and</li> </ul>

Monitoring site ID	Period exceeding trigger level	Investigation	Outcomes / Resolution / Remedial measures implemented
		4 and Grid Line 6. Striking of Grid line 5 Propping Beam. Breaking of d-wall in East Box.	<p>jet wash bowser dampening down any concrete breaking.</p> <ul style="list-style-type: none"> <li>6 jetter bowsers were employed on site.</li> </ul> <p>On investigation it was noted that no other sources were in close enough proximity to have influenced the alerts.</p> <p>It should be noted that the resurfacing works may have contributed to the alerts due to the close proximity of the monitors to plant used for the activity. However, BPM measure were deployed at all times during the works.</p> <p>Further to this, for any complaints received at the time of the alerts which are being investigated by BBVS community team, a response will be issued to the complainant in due course.</p>



Figure 3: 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 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									50
HS2-000020BN4	End of cycle lane sign on Old Oak Road	521625, 180871	55	34	50	42									45
HS2-000020BNR	Lamp posts in Shepherd's Bush Common	523481, 179871	48	No Data	Tube Missing	Tube Missing									48
HS2-000020BPP	Sign post on A219 Scrubs Lane, South of Harrow Road	522378, 182877	63	44	48	39									48
HS2-000020BPT	Controlled Zone/Zone Ends road sign on A219 Scrubs Lane, north of Hythe Road	522478, 182517	61	42	49	38									47
HS2-000020BQE	Lamp post next to No 11 Wulfstan Street	521996, 181118	44	30	38	26									34
HS2-000020BQW	Lamp post on A402 Goldhawk Road	522037, 179209	59	36	Tube Missing	34									43

<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.