

Air Quality and Dust Monitoring Monthly Report - November 2020

London Borough of Brent



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

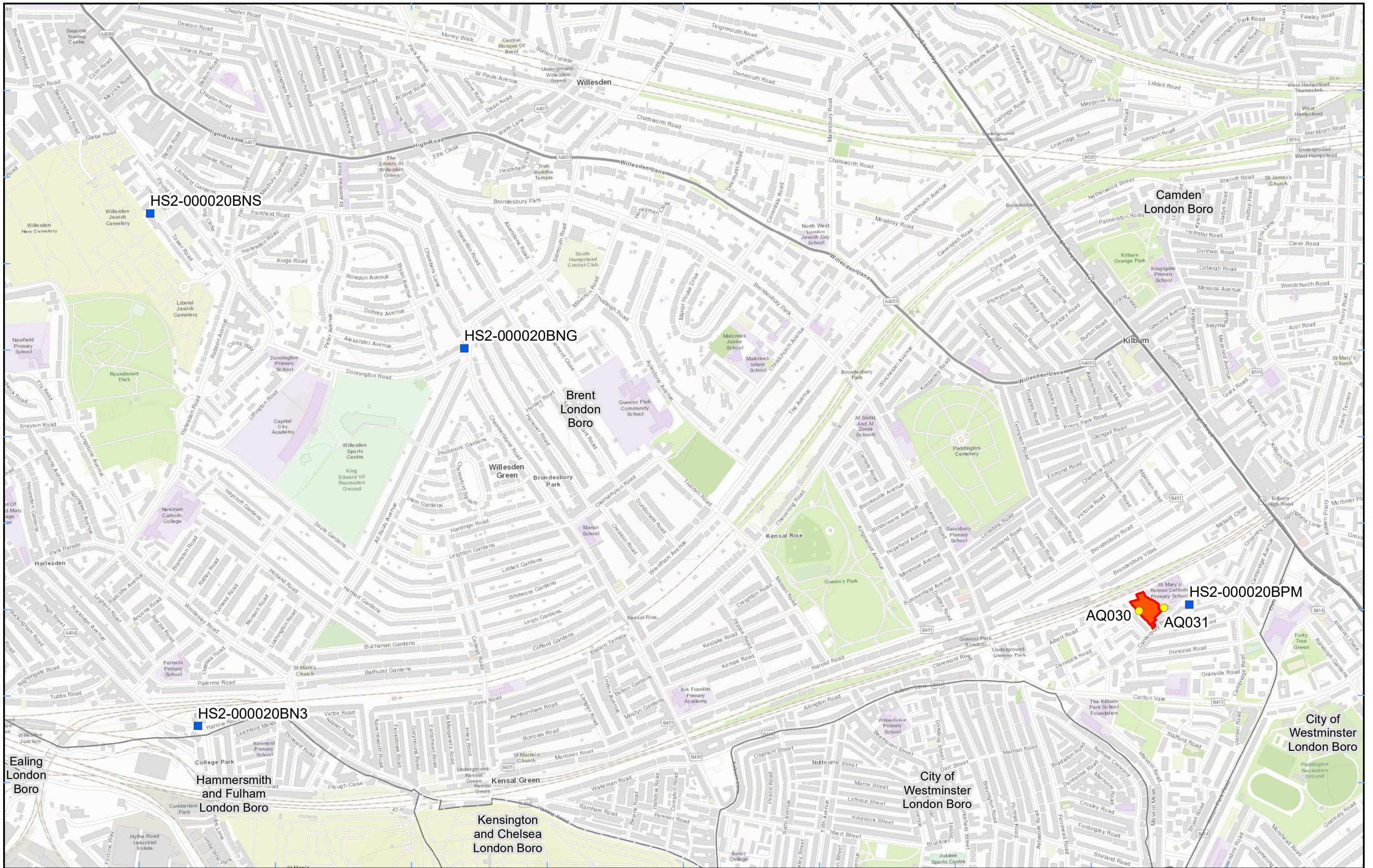
- 1.1.1 This Summary Report is published in fulfilment of commitments detailed in the High Speed Rail (London-West Midlands) Environmental Minimum Requirements, Annex 1: Code of Construction Practice, for the nominated undertaker to present the results of air quality and dust monitoring undertaken in the London Borough of Brent (LBB) during October and November 2020 respectively.
- 1.1.2 Figure 1 in Appendix A indicates 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, 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 works commenced within the LBB in August 2020 and is expected to be completed by the end of 2025. The current and planned worksites, include:
- Canterbury Road Vent Shaft site set up and groundworks.
- 1.1.5 Two (2) dust monitors are currently installed on the boundary of the Canterbury Road Vent Shaft worksite. This site returned a medium dust risk rating.
- 1.1.6 Dust monitoring location and results are presented in Appendix B, Table 1, together with line chart of monthly data from the dust monitor in Figure 2. The 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 were two (2) dust trigger alerts recorded during the monitoring period (November 2020). However, following investigations it was noted that these exceedances were not related to HS2 site activities, but rather the prevailing weather conditions (heavy fog experienced). Exceedances are presented in Appendix B, Table 2. All other results were in line with expected ranges.

- 1.1.9 Data capture for monitor AQ030 and AQ031 was below 90% for the month of November 2020 due to prolonged period of power loss to the monitors, which has been restored.
- 1.1.10 Diffusion tube monitoring of Nitrogen Dioxide (NO₂) is undertaken at four (4) locations around highways within the LBB 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 NO₂ monitoring locations and results are presented in Appendix C, Table 3, together with the 2020 running mean.
- 1.1.13 There were no (0) complaints received, relating to air quality, during this reporting period (November 2020).

Appendix A – Worksites and Monitoring Locations

Figure 1: Worksites and monitoring locations within the LBB





Legend

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

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Map Number

Map Name

**Worksite and Monitoring Locations
In LBB**

London Borough of Brent

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Appendix B – Dust Monitoring Results

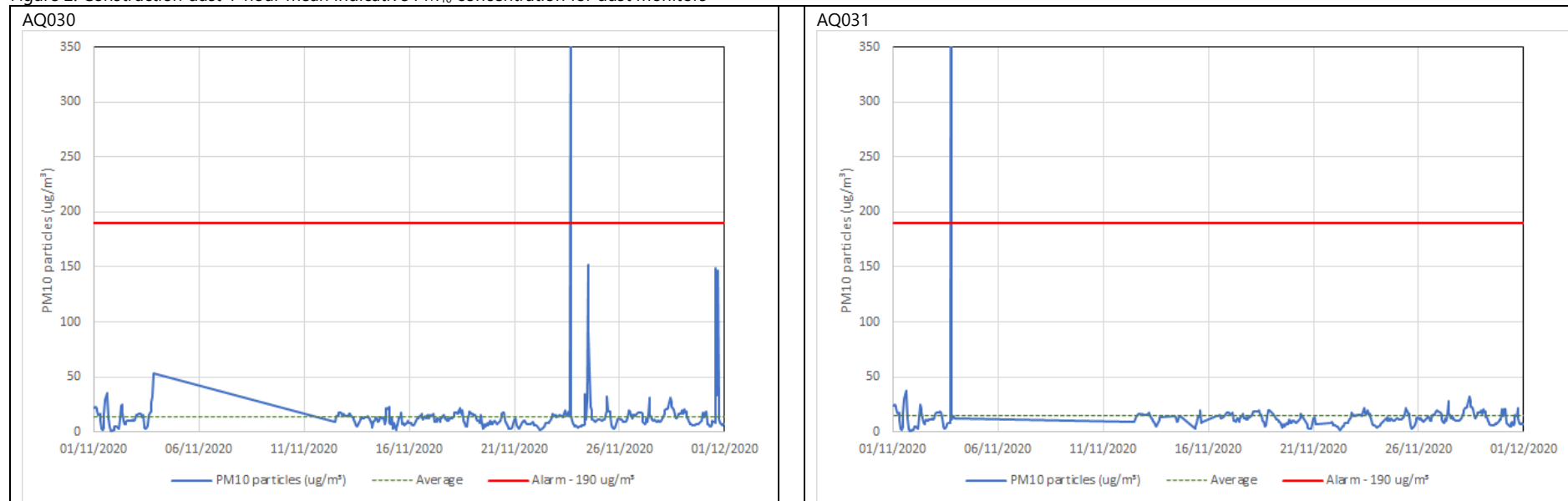
Table 1: Dust monitoring location and November 2020 Results

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 (%)
AQ030	525075, 183290	Western Hoarding of Canterbury Road works site	M	Yes	N	14.0	1.1	482.7	1	67.5
AQ031	525148, 183299	Eastern Hoarding of Canterbury Road works site	M	Yes	N	14.6	1.1	1037.0	1	56.6

Table 2: Summary of exceedances of trigger level in November 2020

Monitoring Site ID	Period of trigger alert & Concentration recorded	Investigation	Outcomes / Resolution / Remedial measures implemented
AQ030	23/11/2020 15:00 - 16:00: 482.7 µg/m ³	<p>Given the limited or lack of works being undertaken near AQ30 on the 23/11/20 and AQ31 on the 03/11/20 when the site was shut and the fact that both readings were uncharacteristically very high, it is considered that both triggers were associated with the persistent wet weather conditions throughout November and the prolonged loss of power to both monitors rather than dust generated by site activities.</p> <p>The combination of moisture and debris build-up and subsequent loosening within the monitor inlets is considered to be the most likely cause for both triggers and has been evident in other monitors during the month.</p>	<p>Both monitors are due their quarterly service and maintenance.</p>
AQ031	03/11/2020 18:00-19:00: 1037.0 µg/m ³		

Figure 2: 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 2020 (µg/m³)

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar ¹	Apr ¹	May ¹	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean ²
HS2-000020BN3	Signpost on High Street Harlesden	522335, 182955	62	48	No data			42	28	44	50	51			46
HS2-000020BNG	Lamp post on Donnington Road	523110, 184055	50	40	No data			29	25	29	33	35			34
HS2-000020BNS	Lamp post on Tower Road by Willesden Jewish Cemetery	522196, 184448	34	No data	No data			20	15	20	24	25			23
HS2-000020BPM	Lamp post along Gorefield Place near block of flats	525222, 183309	39	32	No data			21	Tube missing	21	25	28			28

¹ Note: Due to the Covid-19 pandemic and government lockdown it was not possible to conduct diffusion tube air quality monitoring during March, April and May 2020.

² 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.