

Air Quality and Dust Monitoring Monthly Report - March 2021

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

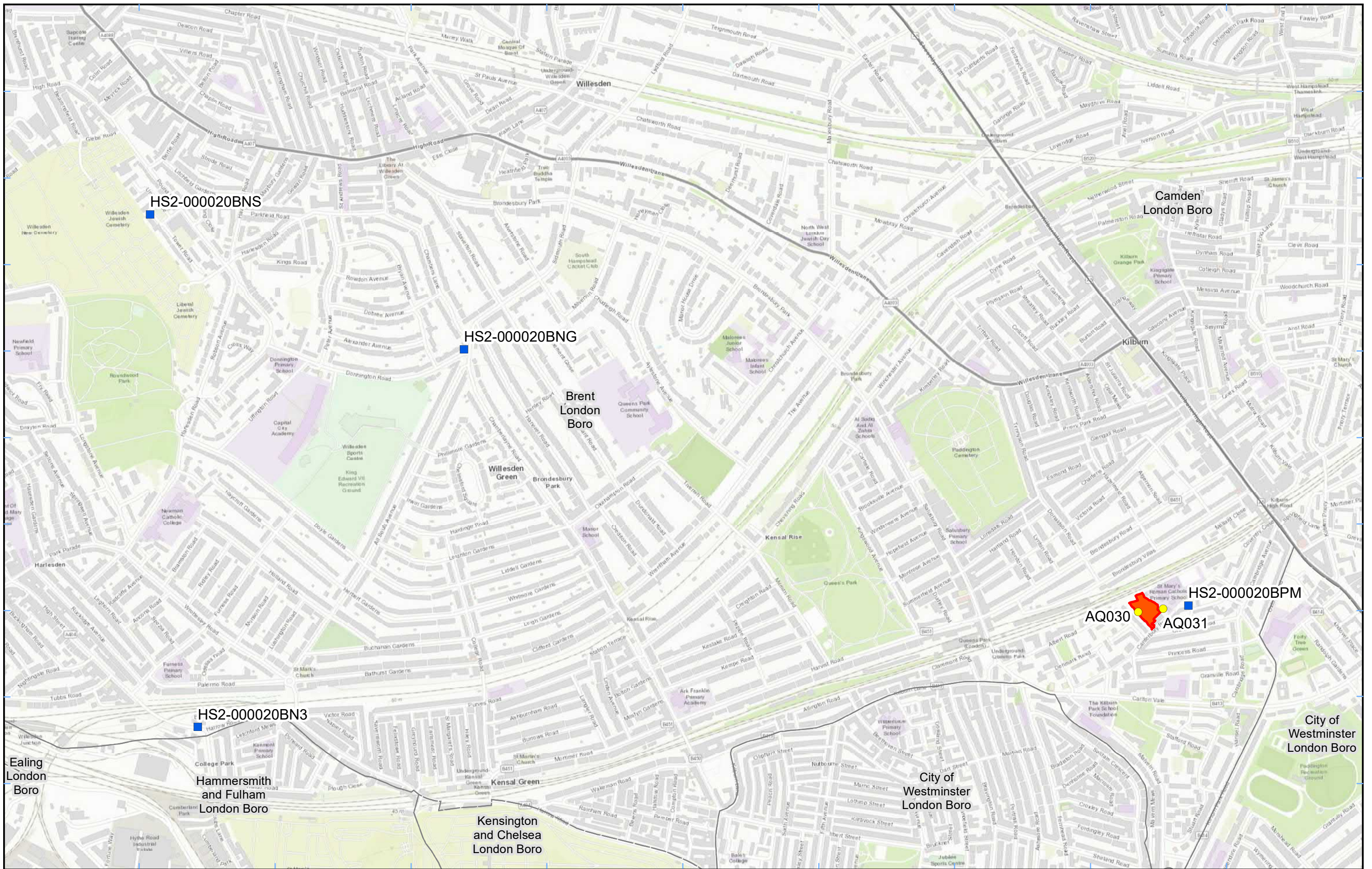
- 1.1.1 This Summary Report is published in fulfilment of commitments detailed in the High Speed Rail (London-West Midlands) Environmental Minimum Requirements, Annex 1: Code of Construction Practice, for the nominated undertaker to present the results of air quality and dust monitoring undertaken in the London Borough of Brent (LBB) during February and March 2021 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, concreting and materials management.
- 1.1.5 Two (2) dust monitors are currently installed on the boundary of the Canterbury Road Vent Shaft worksite. These sites 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 Two (2) exceedances of the dust trigger level were recorded during the monitoring period (March 2021). Triggers are presented in Appendix B, Table 2. All other results were in line with the expected ranges.

- 1.1.9 Data capture for monitor AQ030 was below 90% for the month of March 2021 due to a power loss to the monitor over the course of the month.
- 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 2021 running mean.
- 1.1.13 There were no (0) complaints received, relating to air quality, during this reporting period (March 2021).

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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0 100 200 300 400 Metres

Doc Number: Date: 08/12/20

Appendix B – Dust Monitoring Results

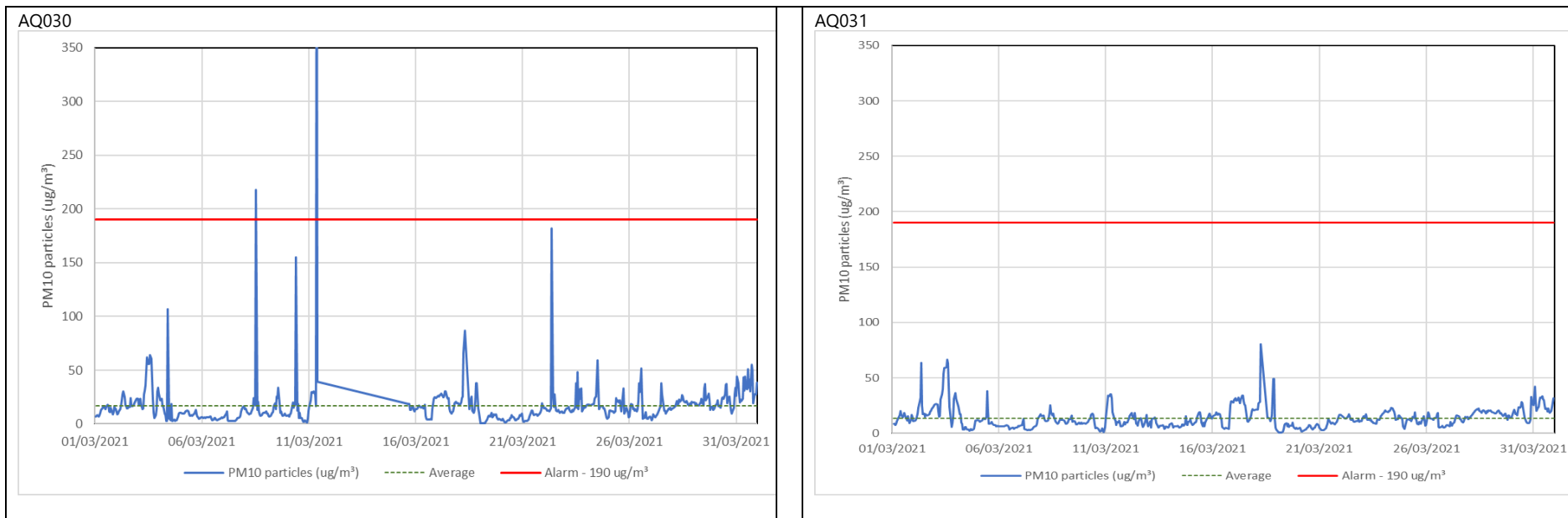
Table 1: Dust monitoring location and March 2021 results

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 (%)
AQ030	525075, 183290	Western Hoarding of Canterbury Road works site	M	Yes	N	17.1	0.4	543.8	2	85.8
AQ031	525148, 183299	Eastern Hoarding of Canterbury Road works site	M	Yes	N	13.7	0.4	80.3	0	94.6

Table 2: Summary of exceedances of trigger level in March 2021

Monitoring site ID	Period exceeding trigger alert and concentration recorded	Investigation	Outcomes / Resolution / Remedial measures implemented
AQ030	08/03/2021 12:00 – 13:00: 217.5 µg/m ³	At the time of the trigger alert from dust monitor (AQ030), which is located on the western boundary of the Canterbury Road Vent Shaft site, drainage excavation works in preparation for the welfare cabins was being undertaken. Ground conditions were damp and not dusty but the works at the time were directly beneath the monitor which is mounted on the hoarding above.	On receipt of the trigger, works were stopped, a bowser was immediately deployed, and the area damped down before groundwork recommenced. Subsequent monitored readings dropped to expected levels once again. The site team will take a more precautionary approach in future and ensure dust suppression is available and deployed where required on site.
AQ030	11/03/2021 08:00 – 09:00: 543.8 µg/m ³	No trigger notification was received at the time as the monitor was subsequently found to be offline due to power loss to the monitor for the subsequent 4 days. It is considered the trigger was not associated with works activities but reduced operation of the monitor's pump resulting in a 'false' trigger prior to stopping operation.	Power loss, and online status of the monitor has been resolved and will continue to be monitored.

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 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
HS2-000020BN3	Sign-post on High Street Harlesden	522335, 182955	56	59											57
HS2-000020BNG	Lamp post on Donnington Road	523110, 184055	47	43											45
HS2-000020BNS	Lamp post on Tower Road by Willesden Jewish Cemetery	522196, 184448	35	34											34
HS2-000020BPM	Lamp post along Gorefield Place near block of flats	525222, 183309	Tube Missing	33											33

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.