

Air Quality and Dust Monitoring Monthly Report – September 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

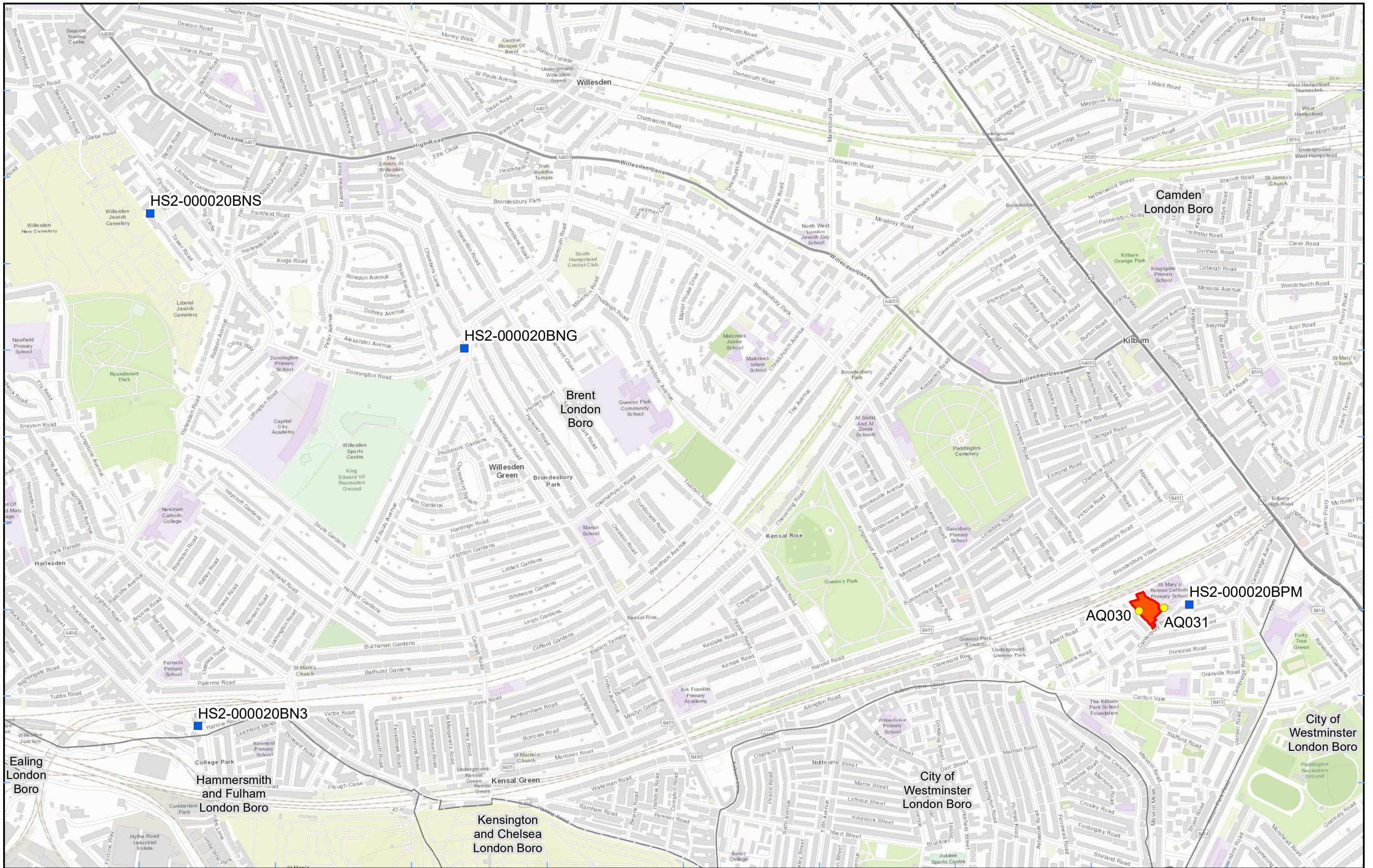
- 1.1.1 This Summary Report is published in fulfilment of commitments detailed in the High Speed Rail (London-West Midlands) Environmental Minimum Requirements, Annex 1: Code of Construction Practice, for the nominated undertaker to present the results of air quality and dust monitoring undertaken in the London Borough of Brent (LBB) during August and July 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 construction works commenced 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 piling operations 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 There were three (3) dust trigger alerts recorded during the monitoring period (September 2021). Triggers are presented in Appendix B, Table 2. All other results were in line with expected ranges.

- 1.1.9 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.
- 1.1.10 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 2021 running mean.
- 1.1.12 There were no (0) complaints received during this reporting period (September 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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Appendix B – Dust Monitoring Results

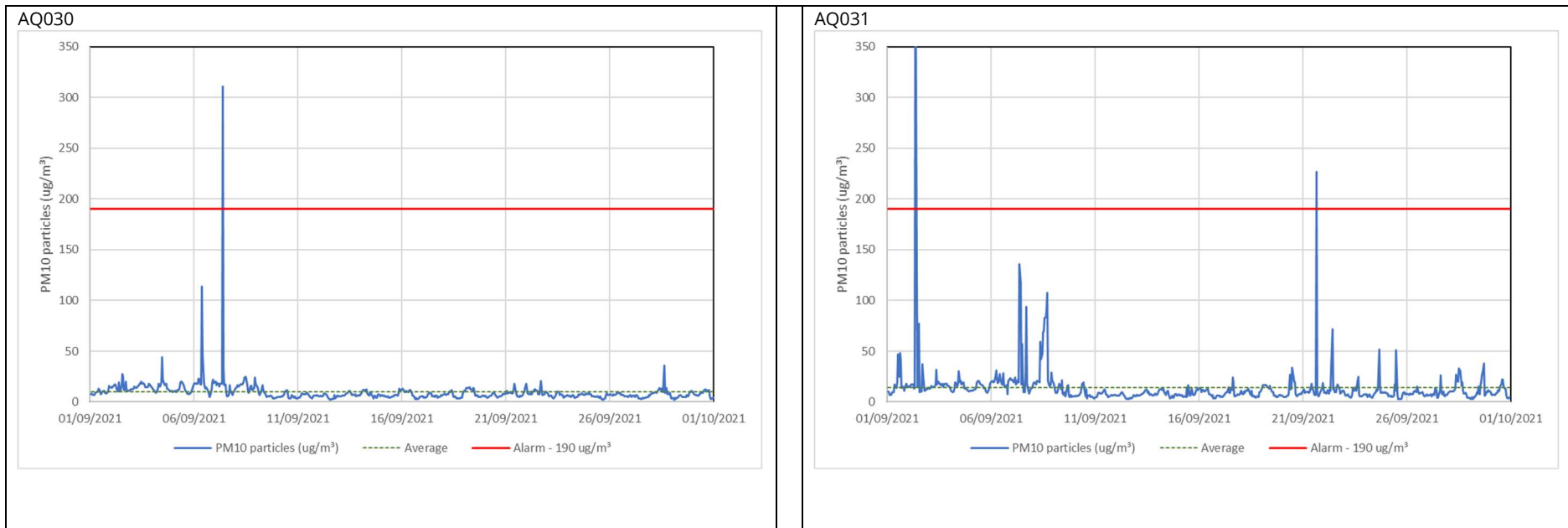
Table 1: Dust monitoring location and September 2021 Results

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	9.6	2.2	310.9	1	99.9
AQ031	525148, 183299	Eastern Hoarding of Canterbury Road works site	M	Yes	N	13.8	2.4	464.4	2	100.0

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

Monitoring site ID	Period exceeding trigger level	Investigation	Outcomes / Resolution / Remedial measures implemented
AQ031	02/09/2021 08:01 – 09:00; 464.4 µg/m ³	<p>At the time of the trigger alert from the dust monitor (AQ031) which is on the eastern boundary of the Canterbury Road Vent Shaft site, adjacent to the St Mary's School, sheet piling operations were underway towards the north west corner of the site through the day.</p> <p>These works were not considered to be the cause of the trigger given their distance to the monitor and the type of operation (not dusty) which continued throughout the day without giving rise to any similar elevated levels.</p> <p>All other readings were significantly lower and it is considered the isolated trigger was due to loose debris within the monitor's inlet.</p>	<p>Dust suppression will continue to be deployed across the site as required and the monitor is due its quarterly service and maintenance in the coming weeks.</p> <p>The dust monitor remains temporarily on a quad stand until hoarding works are complete in the near future, after which it will be placed on the hoarding line.</p>
AQ030	07/09/2021 08:01-09:00; 310.9 µg/m ³	<p>At the time of the trigger alert from the dust monitor (AQ030) which is on the western boundary of the Canterbury Road Vent Shaft site, adjacent to Carlton House, there were no dusty activities were occurring on site. Sheet piling operations were not being undertaken at that time.</p> <p>Similar to the previous week, all other readings were significantly lower and it is considered the isolated trigger was due to loose debris within the monitor's inlet.</p>	<p>Dust suppression will continue to be deployed across the site as required and the monitor is due its quarterly service and maintenance in the coming weeks.</p>
AQ031	21/09/2021 15:01-16:00; 226.8 µg/m ³	<p>At the time of the trigger alert from the dust monitor (AQ031) which is on the eastern boundary of the Canterbury Road Vent Shaft site, adjacent to the St Mary's School, sheet piling operations were continuing towards the north west corner of the site through the days, see photo 1.</p> <p>Similar to the previous triggers earlier in the month, these works were not considered to be the cause of the trigger given their distance to the monitor and the type of operation (not dusty) which continued throughout the day without giving rise to any similar elevated levels. No other dusty operations were being undertaken in the vicinity of the monitor, see photo 2</p> <p>All other readings were significantly lower and it is considered the isolated trigger was due to loose debris within the monitor's inlet..</p>	<p>Dust suppression will continue to be deployed across the site as required and the monitor is due its quarterly service and maintenance in the week commencing 27th September.</p> <p>The dust monitor remains temporarily on a quad stand until hoarding works are complete in the near future, after which it will be placed on the hoarding line.</p>

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	54	50	56	40	49	41					51
HS2-000020BNG	Lamp post on Donnington Road	523110, 184055	47	43	41	34	Tube Missing	27	28	25					35
HS2-000020BNS	Lamp post on Tower Road by Willesden Jewish Cemetery	522196, 184448	35	34	28	27	19	17	Tube Missing	17					25
HS2-000020BPM	Lamp post along Gorefield Place near block of flats	525222, 183309	Tube Missing	33	29	27	24	18	21	20					24

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.