

Air Quality and Dust Monitoring Monthly Report - December 2020

London Borough of Brent



Department for Transport

High Speed Two (HS2) Limited has been tasked by the Department for Transport (DfT) with managing the delivery of a new national high speed rail network. It is a non-departmental public body wholly owned by the DfT.

High Speed Two (HS2) Limited,
Two Snowhill
Snow Hill Queensway
Birmingham B4 6GA

Telephone: 08081 434 434

General email enquiries: HS2enquiries@hs2.org.uk

Website: www.gov.uk/hs2

A report prepared by EWCs and MWCCs on behalf of HS2 Ltd.

High Speed Two (HS2) Limited has actively considered the needs of blind and partially sighted people in accessing this document. The text will be made available in full on the HS2 website. The text may be freely downloaded and translated by individuals or organisations for conversion into other accessible formats. If you have other needs in this regard please contact High Speed Two (HS2) Limited.

© High Speed Two (HS2) Limited, 2020, except where otherwise stated.

Copyright in the typographical arrangement rests with High Speed Two (HS2) Limited.

This information is licensed under the Open Government Licence v2.0. To view this licence, visit www.nationalarchives.gov.uk/doc/open-government-licence/version/2 **OGI** or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or e-mail: psi@nationalarchives.gsi.gov.uk. Where we have identified any third-party copyright information you will need to obtain permission from the copyright holders concerned.



Printed in Great Britain on paper containing at least 75% recycled fibre.

Monthly Summary

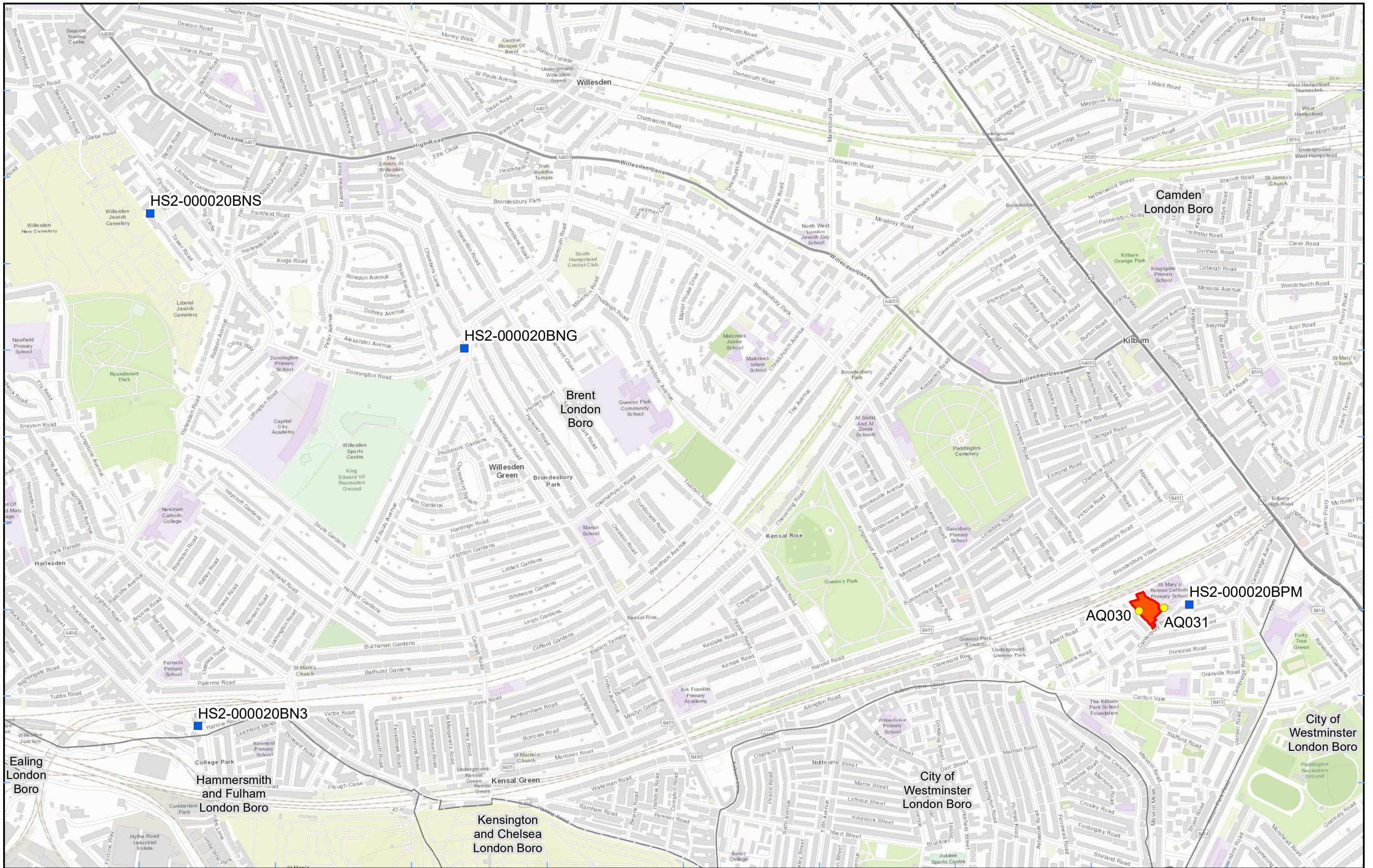
- 1.1.1 This Summary Report is published in fulfilment of commitments detailed in the High Speed Rail (London-West Midlands) Environmental Minimum Requirements, Annex 1: Code of Construction Practice, for the nominated undertaker to present the results of air quality and dust monitoring undertaken in the London Borough of Brent (LBB) during November and December 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 locations 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 four (4) dust trigger alerts recorded during the monitoring period (December 2020). Exceedances 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 , together with the 2020 running mean.
- 1.1.12 There were no (0) complaints received, relating to air quality, during this reporting period (December 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

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Map Number

Map Name

**Worksite and Monitoring Locations
In LBB**

London Borough of Brent

hs2

HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.

Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway,
Birmingham B4 6GA.

© Crown copyright and database rights 2020.
Ordnance Survey Licence Number 100049190.

Scale at A3: 1:10,000

0 100 200 300 400 Metres

Doc Number:

Date: 08/12/20

Appendix B – Dust Monitoring Results

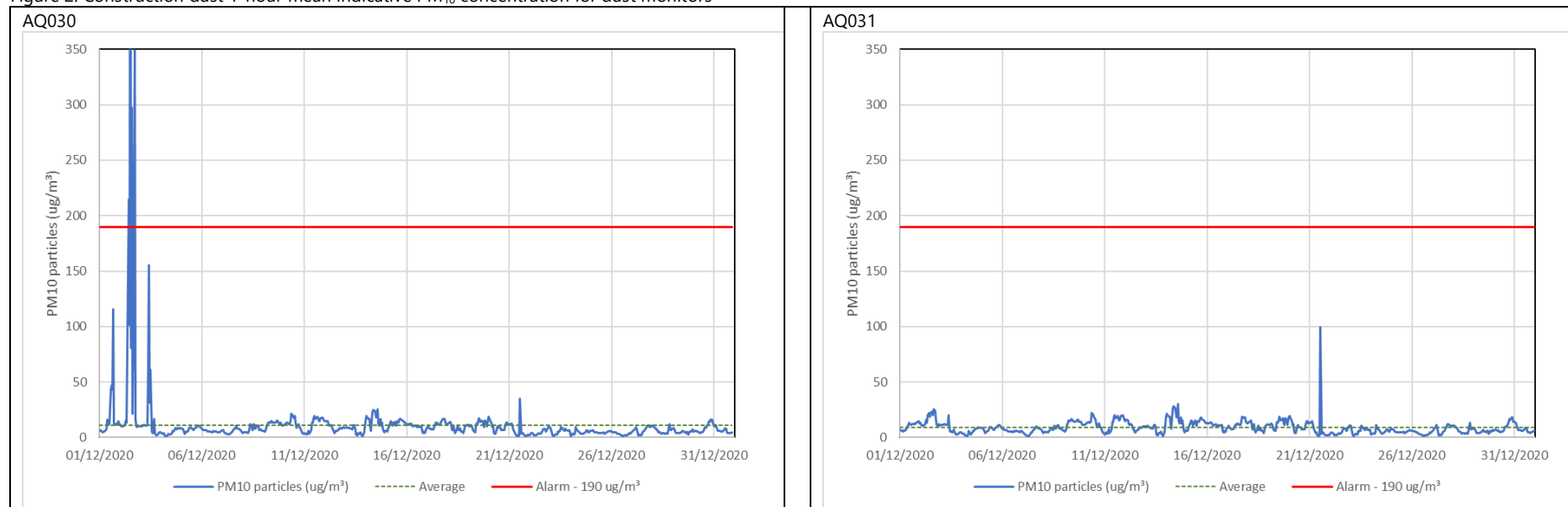
Table 1: Dust monitoring locations and November 2020 Results

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	11.2	1.1	632.5	4	100.0
AQ031	525148, 183299	Eastern Hoarding of Canterbury Road works site	M	Yes	N	9.1	1.2	99.4	0	100.0

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

Monitoring Site ID	Period of trigger alert & concentration recorded	Investigation	Outcomes / Resolution / Remedial measures implemented
AQ030	02/12/2020 09:00 - 10:00: 214.6 µg/m ³ , 02/12/2020 11:00 - 12:00: 632.5 µg/m ³ 02/12/2020 13:00 - 14:00: 297.7 µg/m ³ 02/12/2020 16:00 - 17:00: 348.9 µg/m ³	<p>At the time of the triggers the concrete slab by the western hoarding, directly beneath the monitor, was being broken-out.</p> <p>Dust suppression by the use of a hose and jet wash was being used to suppress dust for the duration of the works.</p> <p>It was considered that the extremely close proximity of the works and dust, albeit limited, was the cause of the trigger.</p> <p>Unfortunately, no trigger alerts were received during the works and the opportunity to investigate the first trigger at the time and avoid subsequent ones by alternative methods of work was missed. This was possibly due to issues with the mobile phone network or with the monitor's webserver, which has been investigated.</p>	<p>Both monitors were due their quarterly service and maintenance in December, which has now been completed</p> <p>The site team will continue to remain vigilant and ensure dust suppression is sufficient during dust generating site activities.</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 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	Sign post on High Street Harlesden	522335, 182955	62	48	No data			42	28	44	50	51	68		49
HS2-000020BNG	Lamp post on Donnington Road	523110, 184055	50	40	No data			29	25	29	33	35	53		37
HS2-000020BNS	Lamp post on Tower Road by Willesden Jewish Cemetery	522196, 184448	34	No data	No data			20	15	20	24	25	42		26
HS2-000020BPM	Lamp post along Gorefield Place near block of flats	525222, 183309	39	32	No data			21	Tube missing	21	25	28	42		30

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.