

Air Quality and Dust Monitoring Monthly Report – May 2020

London Borough of Ealing



SKANSKA



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 Costain Skanska 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.

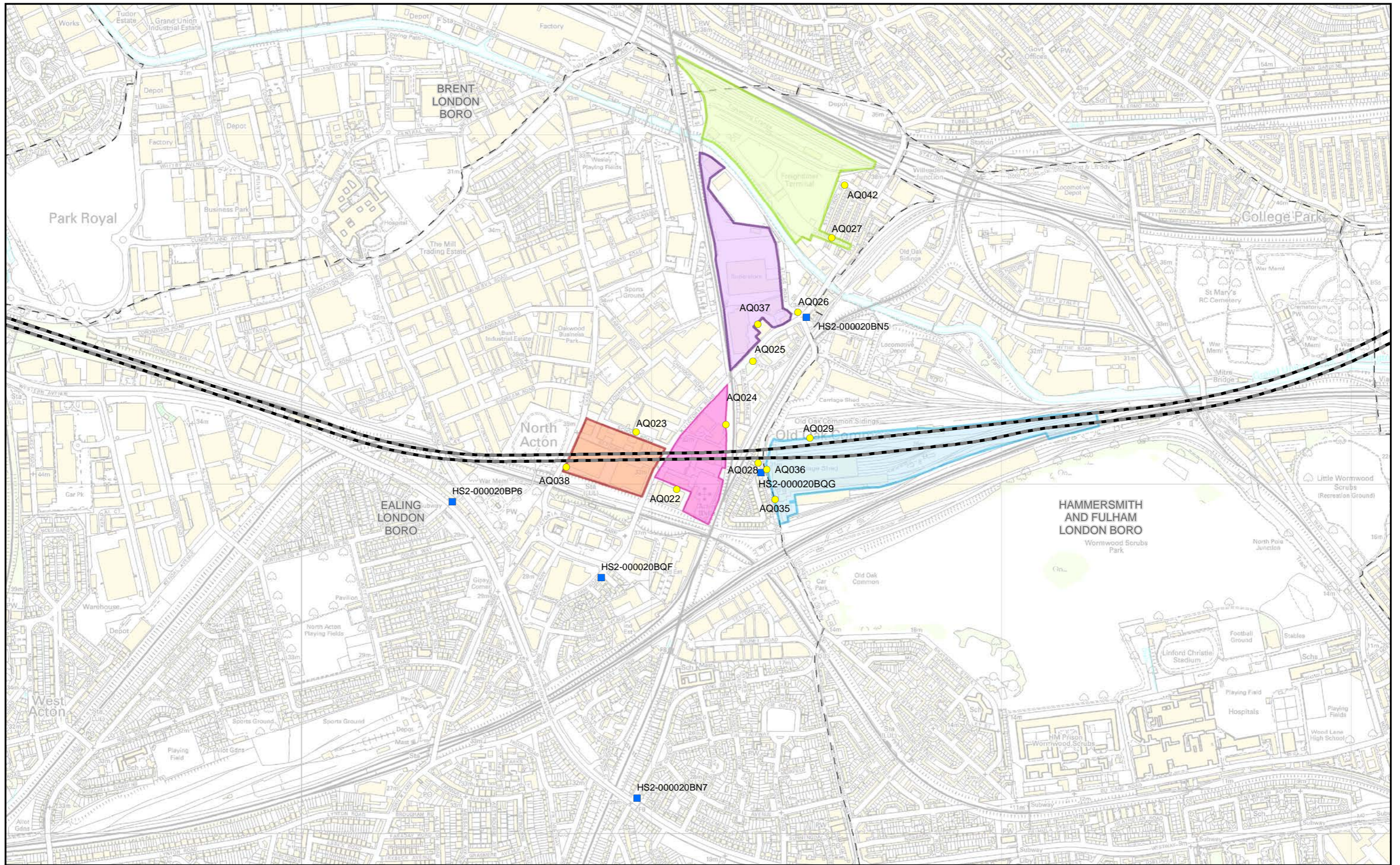
Monthly Summary

- 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 Ealing (LBE) during April and May 2020 respectively.
- 1.1.2 Figure 1 and Figure 2 in Appendix A indicate 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 October 2019 and is expected to be completed by 2025. The current worksites, as presented in Appendix A, Figure 1 and Figure 2, include:
- Demolition and groundworks at Old Oak Common Depot (located in the London Borough of Hammersmith and Fulham);
 - Victoria Road Crossover Box and Flat Iron Site mobilisation, site set up and groundworks;
 - Willesden Euro Terminal mobilisation and site set up;
 - Atlas Road mobilisation and site set up;
 - Green Park Way Vent Shaft – yet to be established; and
 - Mandeville Road Vent Shaft mobilisation and site set up.
- 1.1.5 Eleven (11) dust monitors were installed around worksites, where works are underway. These sites returned a medium or high dust risk rating.
- 1.1.6 Dust monitoring locations and results are presented in Appendix B, Table 1, together with line charts of monthly data from each dust monitor. 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 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 (May 2020). Exceedances are presented in Appendix B, Table 2. All other results were in line with expected ranges.

- 1.1.9 Data capture for AQ025 and AQ042 was below 90% for the month of May 2020. This was due to technical faults with the monitors. Due to the COVID-19 pandemic and government lockdown, it was not possible to conduct immediate maintenance and repair work on these monitors. Monitors have since been replaced, repaired or calibrated.
- 1.1.10 Diffusion tube monitoring of Nitrogen Dioxide (NO₂) is undertaken at six (6) locations around highways within the LBE as part of the management of air quality where significant effects may occur as a result of the scheme. Due to the COVID-19 pandemic and government lockdown it was not possible to conduct diffusion tube air quality monitoring in April 2020.
- 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.
- 1.1.12 NO₂ monitoring locations and results are presented in Appendix C, Table 2, together with the 2020 running mean.
- 1.1.13 There were no (0) complaints received related to dust or air quality, during this reporting period (June 2020).

Appendix A – Worksites and Monitoring Locations

Figure 1 and 2: Worksites and monitoring locations within the LBE



- Legend**
- Route in tunnel
 - Route on surface
 - Diffusion tube monitoring location
 - Dust monitoring location
 - Willesden Euro worksite
 - Victoria Road Crossover Box
 - Old Oak Common worksite
 - Atlas Road worksite
 - Flat Iron Compound

- Willesden Euro worksite
- Victoria Road Crossover Box
- Old Oak Common worksite
- Atlas Road worksite
- Flat Iron Compound

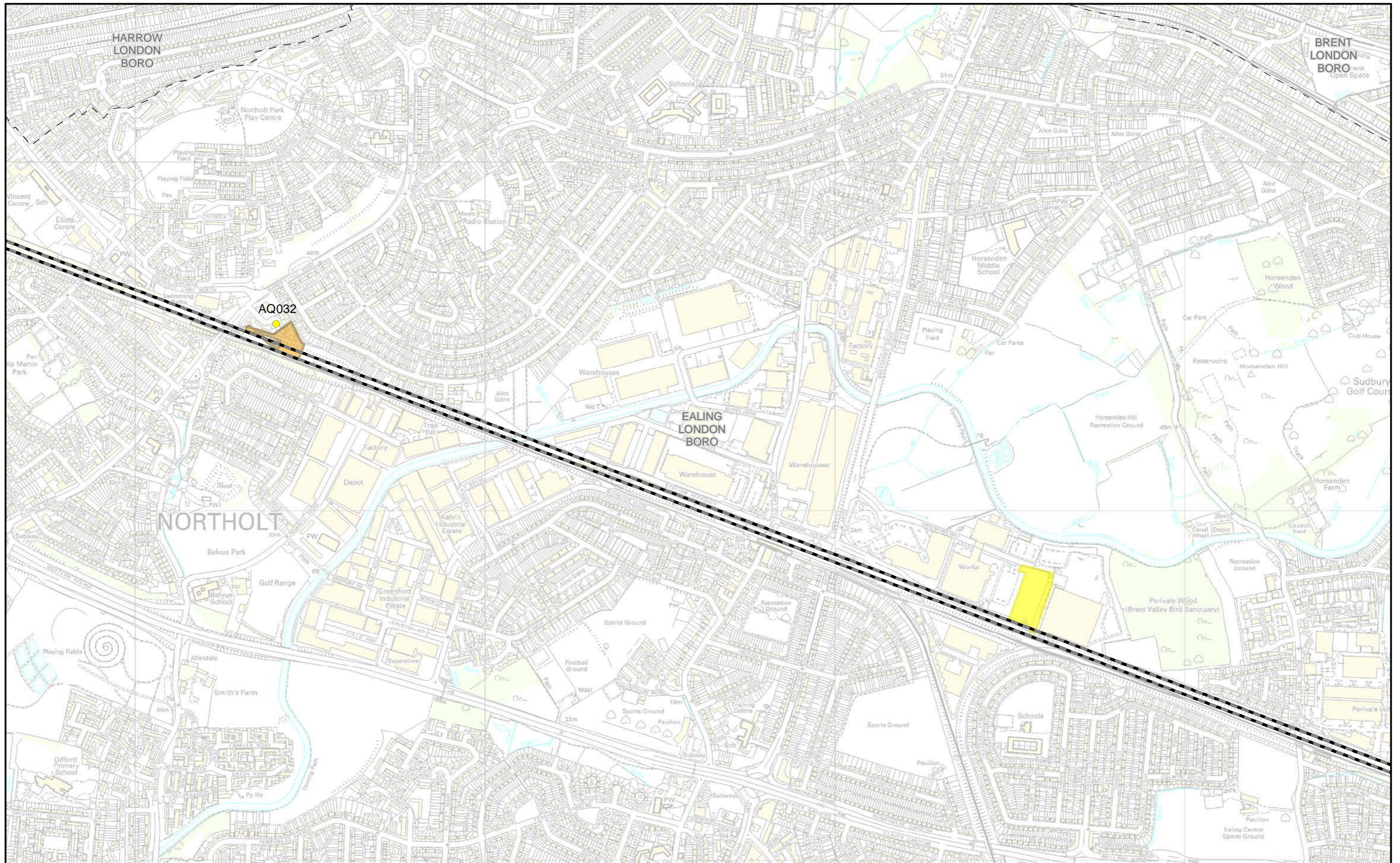
Figure Number

Figure Name
Worksites and Monitoring locations in LBE
 (sheet 1)

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.

Scale at A3: 10,000

London Borough of Ealing



- Legend**
- Route in tunnel
 - Route on surface
 - Diffusion tube monitoring location
 - Greenway Park Vent Shaft
 - Mandeville Road Vent Shaft
 - Dust monitoring location

Figure Number

Figure Name
Worksites and Monitoring locations in LBE
 (sheet 2)

London Borough of Ealing

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.

Scale at A3: 10,000

Appendix B – Dust Monitoring Results

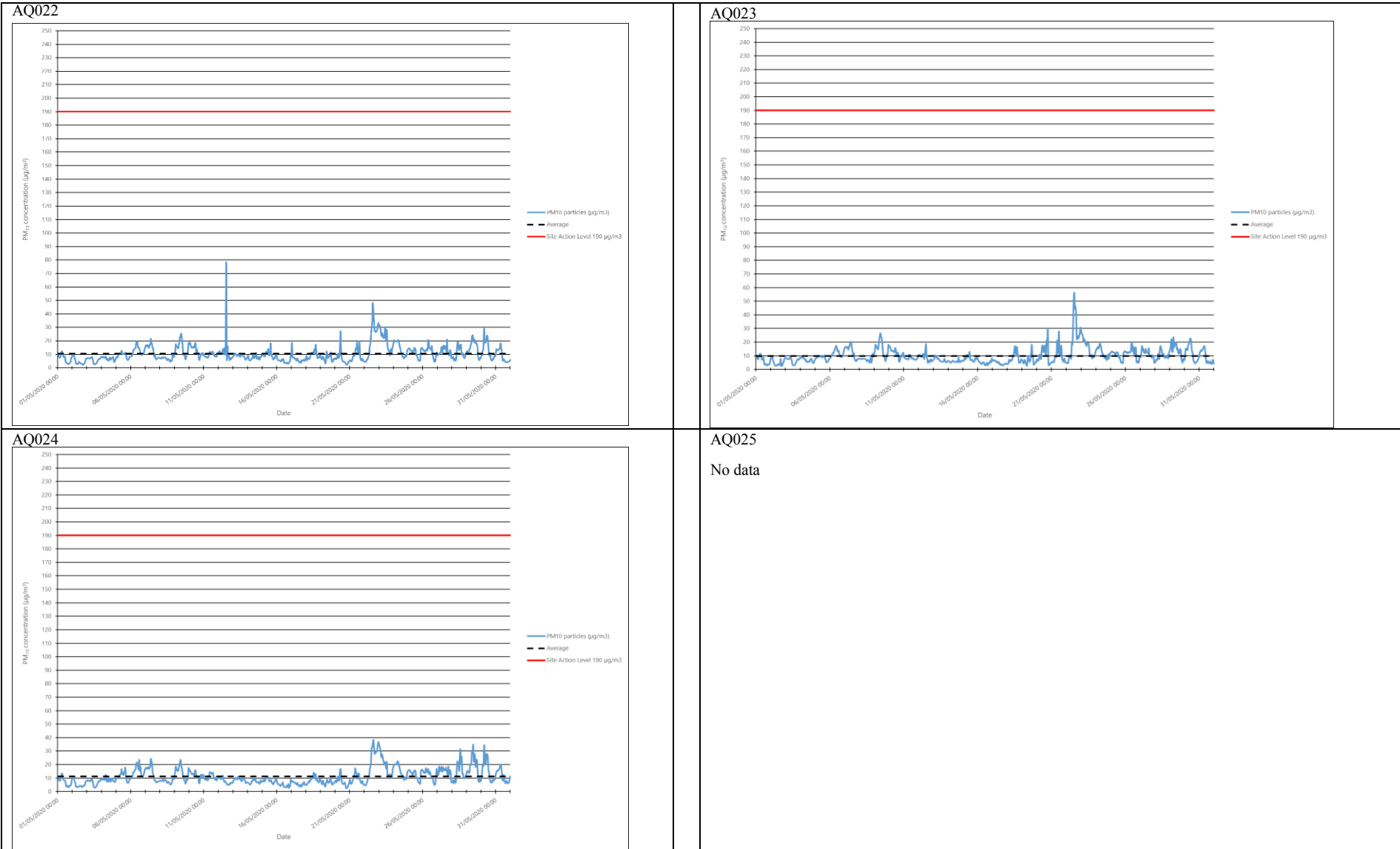
Table 1: Dust monitoring locations and May 2020 results

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 (%)
AQ022	521072, 181985	Boden House	H	Yes	N	10.5	2.3	78.4	0	100.0
AQ023	520956, 182149	School Road	H	Yes	N	9.9	2.4	56.1	0	100.0
AQ024	521214, 182223	Braitrim House	H	Yes	N	11.2	2.6	38.3	0	100.0
AQ025	521295, 182360	Victoria Road	H	Yes	N	No data	No data	No data	No data	0
AQ026	521419, 182497	Old Oak Lane	H	Yes	N	12.7	2.3	55.2	0	100.0
AQ027	521515, 182706	Channel Gate Road	H	Yes	N	8.6	1.7	93.5	0	100.0
AQ028	521302, 182067	Wells House Road	H	Yes	N	19.9	3.5	121.7	0	99.9
AQ032	513402, 184536	Badminton Close	M	Yes	N	7.6	2.1	25.5	0	100.0
AQ037	521304, 182464	Atlas Road	M	No	N	12.6	2.0	194.5	1	99.6
AQ038	520756, 182049	Chase Road	H	Yes	N	15.7	2.9	204.5	1	99.9
AQ042	521537, 182826	Stephenson Road	H	Yes	N	No data	No data	No data	No data	0

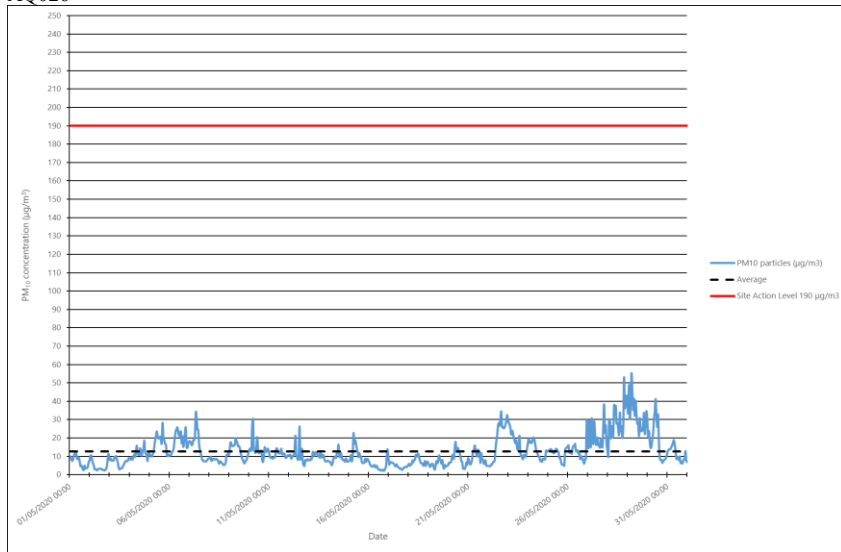
Table 2: Summary of exceedances of trigger level in May 2020

Period exceeding trigger level	Worksite	Monitoring site ID	Complaint reference number (if applicable)	Reason	Resolution
27/05/2020 12:01 – 13:00	Atlas Road	AQ037	n/a	<p>On the southern end of the HS2 SCS site at Atlas Road, as part of the slab removal works, loading of break out material onto the dumpers was underway to move them to the former MAKRO slab area where the material is due to be crushed.</p> <p>This work coincided with significant increases in the wind in the area which resulted in dust being blow across the site.</p> <p>There were two (2) water cannons in place to keep dust levels low, one for directed at the breaking out area and one to damp-down the broken-out material for loading onto dumpers.</p> <p>On receipt of the trigger alert, works immediately stopped to identify what changes may have occurred resulting in the increased dust levels during the hour. With the trigger coinciding with the start of the loading of the dumpers it was considered this activity was the reason for the trigger along with the sudden increase in winds sweeping across the site.</p>	<p>An additional dust cannon was deployed for the loading works and going forward the dumper loading work will be slowed down until the broken-out material has been sufficiently damped through rather than just damped on the surface.</p> <p>The loading of the material has also been moved further away from the site boundary.</p> <p>An additional 2000l highway water bowser has also been ordered to ensure that damping down is sufficient along haul routes.</p>
29/05/2020 15:01 – 16:00	Victoria Road Crossover Box	AQ038	n/a	<p>A fault with the air quality monitoring software meant that this trigger was not received at the time and therefore not investigated to determine the cause of trigger</p> <p>Concrete break out and excavation works had been underway at the time of the trigger. Dust suppression was deployed including dust cannon, a sweeper on the roads and a tractor and bowser trailer to try and dampen down areas of the site which are away from Bethune Road.</p>	<p>Dust suppression was maintained across all site activities.</p>

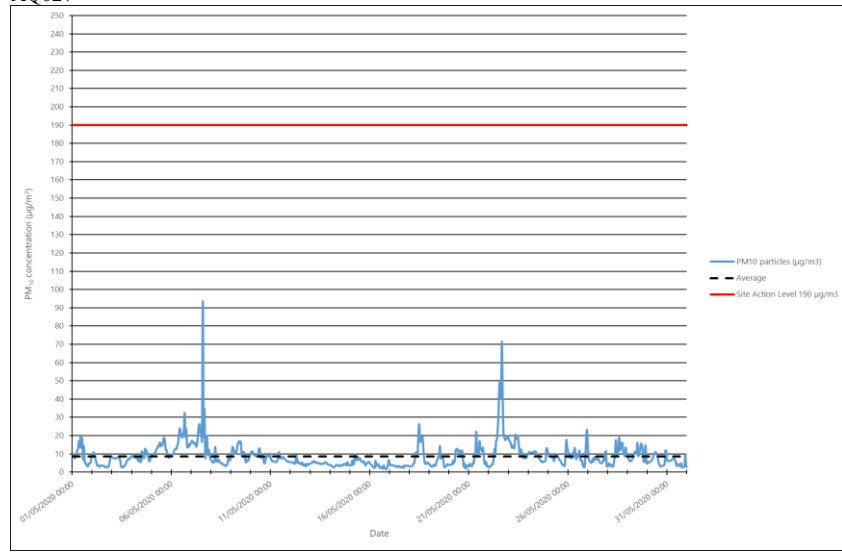
Figure 1: Construction dust 1-hour mean indicative PM₁₀ concentration for dust monitors



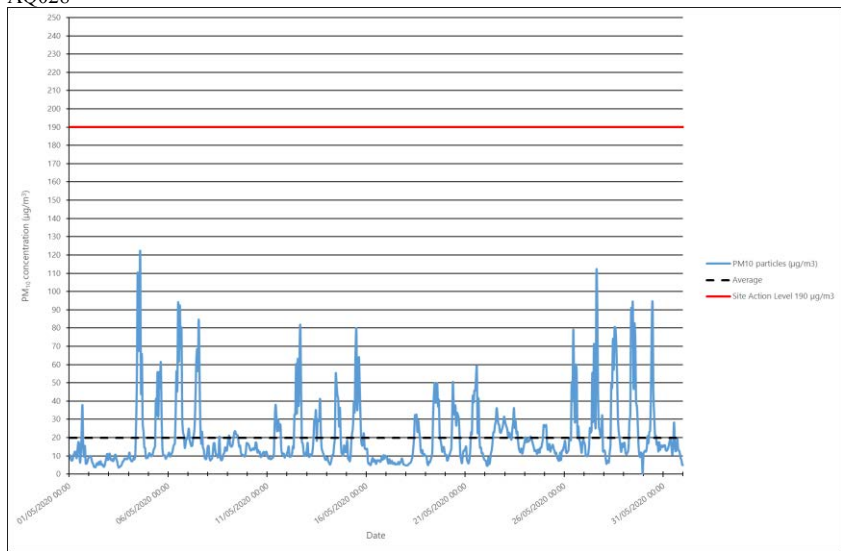
AQ026



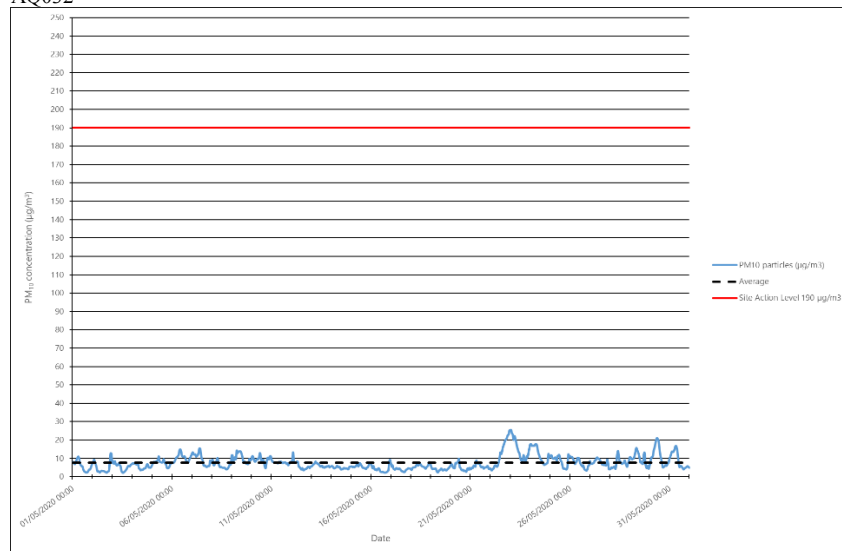
AQ027



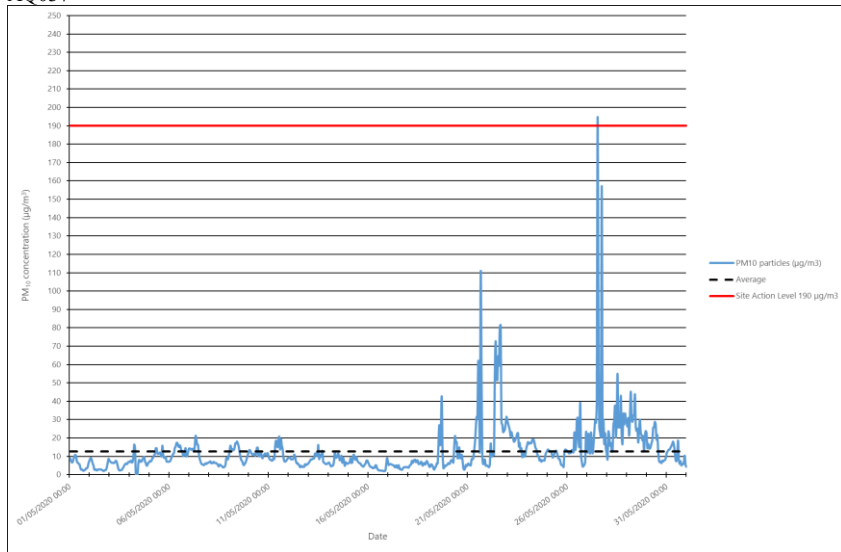
AQ028



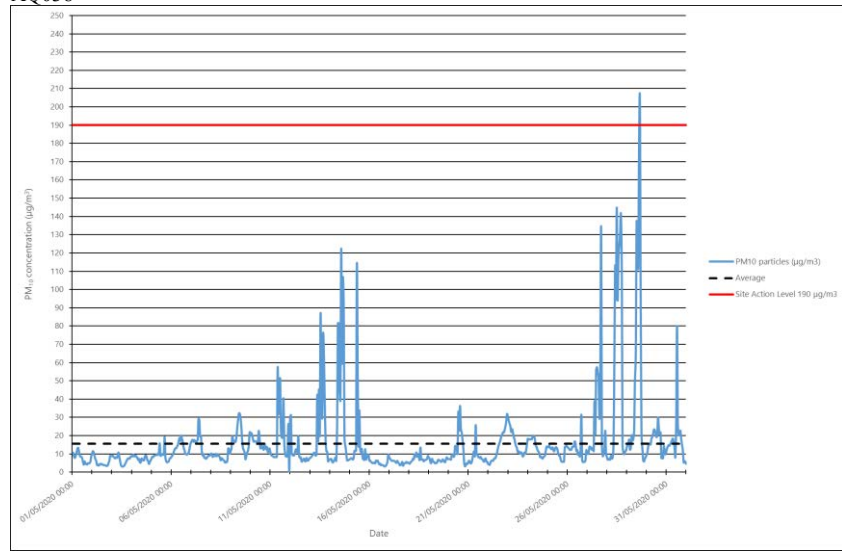
AQ032



AQ037



AQ038



AQ042
No Data

Appendix C – Air Quality Monitoring Results

Table 2: 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	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean ²
HS2-000020BN5	Sign post on Victoria Road	521443, 182477	Tube missing	46	No data										46
HS2-000020BN7	The Approach street sign	520959, 181102	64	55	No data										60
HS2-000020BQF	Conway Drive sign post	520856, 181733	61	51	No data										56
HS2-000020BQG	Lamp post outside No 1. Wells House Road on Old Oak Common Lane	521312, 182033	68	55	No data										61
HS2-000020BP6	Triplicate site next to the Ealing, Western Avenue Acton roadside automatic monitoring station	520430, 181950	56	46	No data										51
HS2-000020BP7	Triplicate site next to the Ealing, Hangar Lane Gyratory roadside automatic monitoring station	518537, 182708	77	61	No data										69

¹ Note: Due to the COVID-19 pandemic and government lockdown it was not possible to conduct diffusion tube air quality monitoring in March or April 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.