

Air Quality and Dust Monitoring Monthly Report – **October** 2020

London Borough of Hillingdon



SKANSKA



Department for Transport

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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 CSJV and Align JV on behalf of HS2 Ltd.

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Monthly Summary

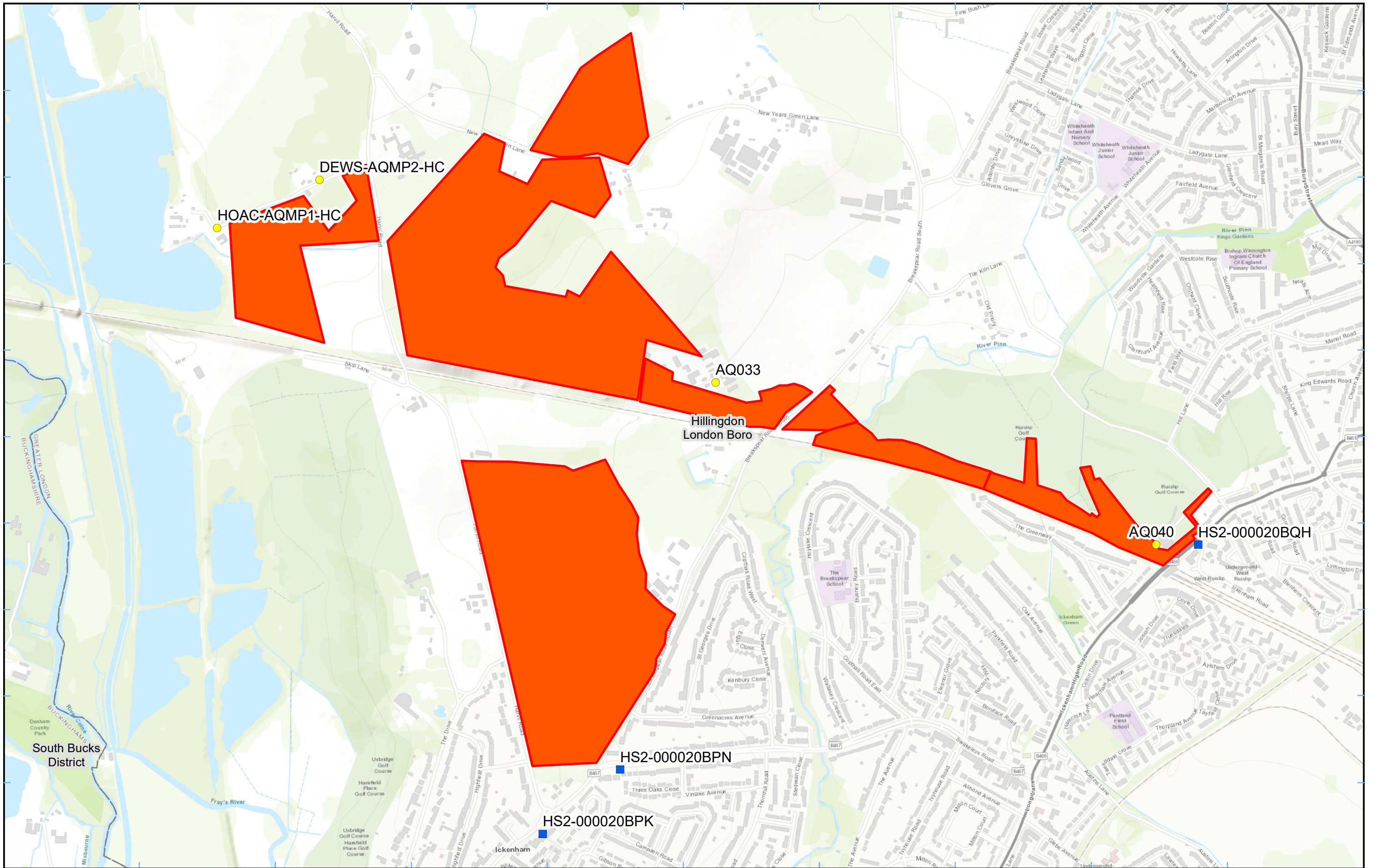
- 1.1.1 This Summary Report is published in fulfilment of commitments detailed in the High Speed Rail (London-West Midlands) Environmental Minimum Requirements, Annex 1: Code of Construction Practice, for the nominated undertaker to present the results of air quality and dust monitoring undertaken in the London Borough of Hillingdon (LBH) during September and October 2020 respectively.
- 1.1.2 Figure 1 to Figure 5 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 works, which commenced within the LBH in May 2018, are expected to be completed later in 2020. The next phase of construction works will commence in November 2019 and is expected to be completed by 2025. The current worksites, as presented in Appendix A, Figure 1 to Figure 5, include:
- Gatemead Embankment, Breakspear Road South and River Pinn Underbridge new site set up and haul road creation;
 - Utility diversions at Breakspear Road South now complete;
 - Utility diversions, haul road creation and groundworks at Copthall North and Copthall South;
 - West Ruislip Portal haul road creation and groundworks;
 - South Ruislip mobilisation, site set up and ground works;
 - Northern Sustainable Placement Area (NSPA) site mobilisation, set- up and archaeological dig; and
 - Southern Sustainable Placement Area (SSPA) site mobilisation, set- up and archaeological dig.
- 1.1.5 The Colne Valley Viaduct (CVV) Dews Lane and LTP2 worksites also fall within the administrative boundary of LBH. This phase of works commenced in July 2017 and was completed in October 2020 at the LTP2 worksite. The Dews Lane works are expected to be completed by the end of April 2021. The current phase of works at the CVV South Moorhall Road worksite commenced within LBH in September 2020 and is ongoing. Activities for each worksite within October 2020, as presented in Appendix A, Figure 1 to Figure 5, include:
- Dews Lane site:
- ground investigation and overwater ground investigation works.
- CVV South Moorhall Road worksite:

- ground investigation works; and
- overwater ground investigation works.

- 1.1.6 Five (5) dust monitors are installed around worksites, where demolition, earthworks, construction and trackout activities are underway. The sites returned a medium dust risk rating.
- 1.1.7 Dust monitoring locations and results are presented in Appendix B, Table 1, together with line charts of monthly data from each dust monitor in Figure 6. 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.
- 1.1.8 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.
- 1.1.9 There were three (3) dust trigger alerts recorded during the monitoring period (October 2020). However, following investigations it was noted that these exceedances were not related to HS2 site activities. Exceedances are presented in Appendix B, Table 2. All other results were in line with expected ranges.
- 1.1.10 Data capture for monitors AQ033, DEWS-AQMP2-HC and CVV-AQMP1-HC were below 90% for the month of October 2020, due to intermittent power loss to the monitors. Particularly low data capture at CVV-AQMP1-HC was due to the loss of solar and leisure battery power, caused by a lack of sunlight. An alternative power source is being explored to resolve the intermittent solar power issue at this monitor.
- 1.1.11 Diffusion tube monitoring of Nitrogen Dioxide (NO₂) is undertaken at eleven (11) locations around highways within the LBH as part of the management of air quality where significant effects may occur as a result of the scheme.
- 1.1.12 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.
- 1.1.13 NO₂ monitoring locations and results are presented in Appendix C, Table 3, together with the 2020 running mean.
- 1.1.14 There were no (0) complaints received, relating to air quality, during this reporting period (October 2020).

Appendix A – Worksites and Monitoring Locations

Figure 1 to Figure 5: Current monitoring locations within the LBH



Legend

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

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Map Number
 Map Name
**Worksite and Monitoring Locations
 In LBH (Sheet 1)**
 London Borough of Hillingdon

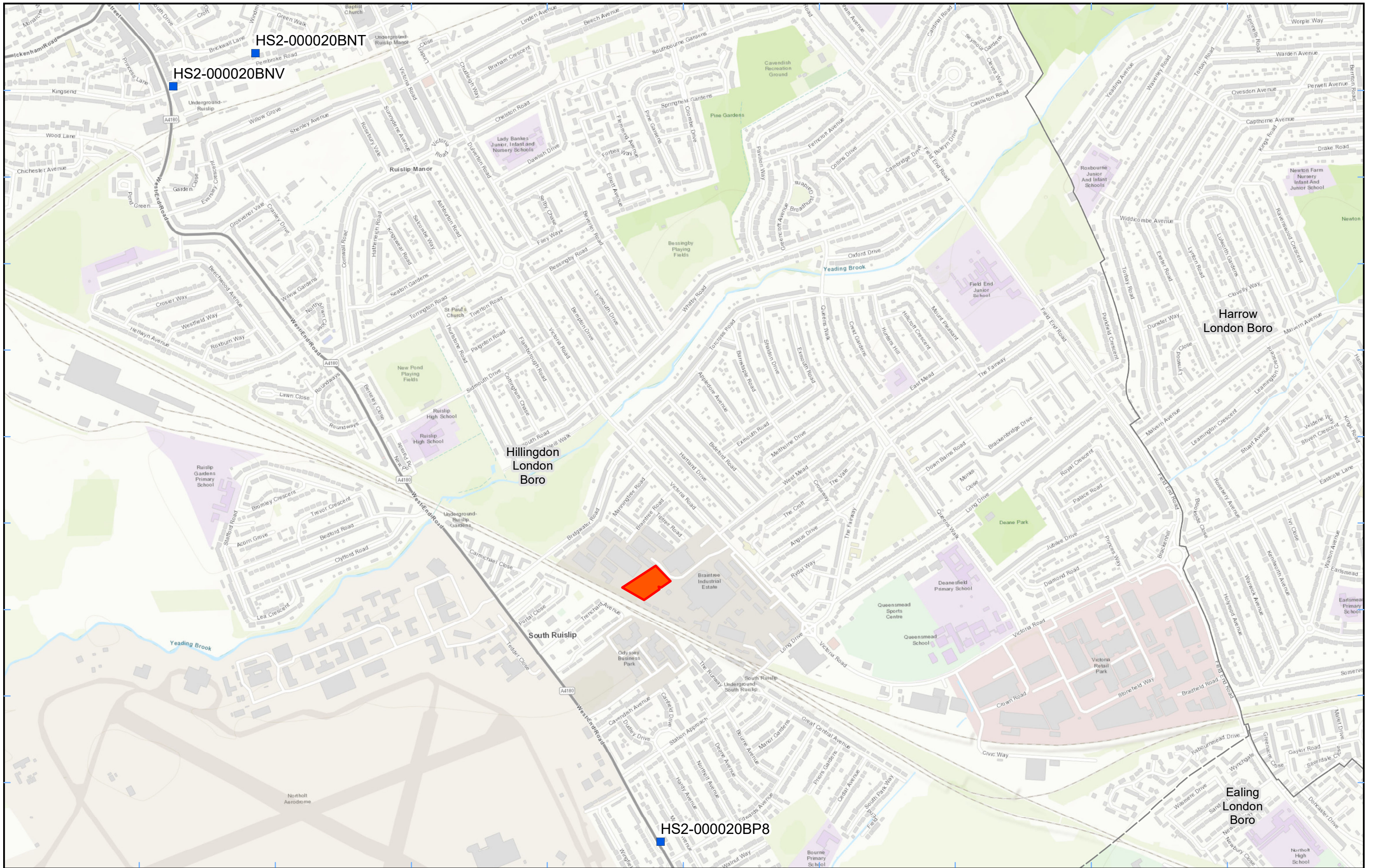
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Legend
■ Diffusion Tube District Borough Unitary Boundaries
 Worksite

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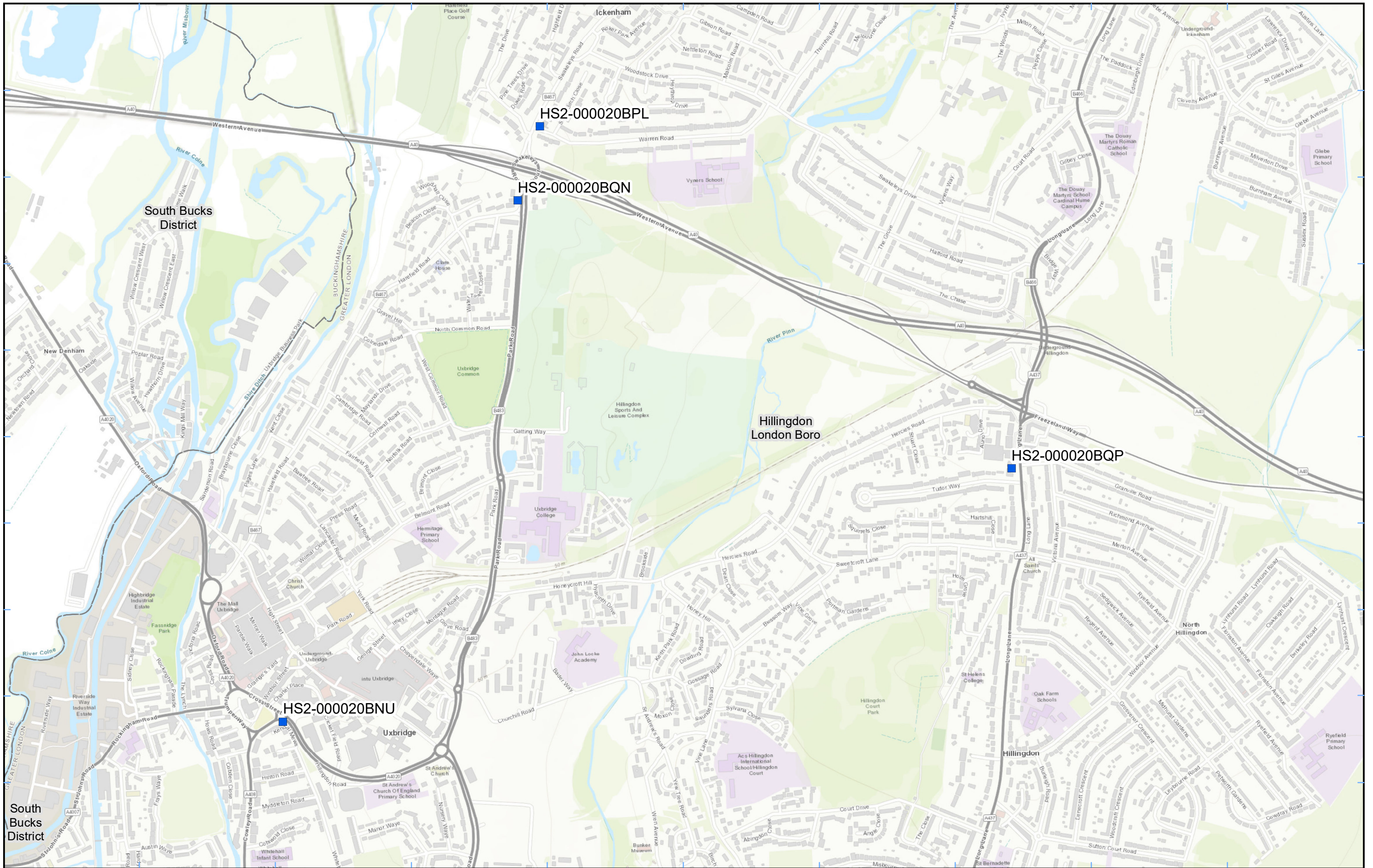
Map Number
 Map Name
**Worksite and Monitoring Locations
 In LBH (Sheet 2)**
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Legend
 ■ Diffusion Tube
 □ District Borough Unitary Boundaries

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Map Number
 Map Name
Monitoring Locations In LBH (Sheet 3)
 London Borough of Hillingdon

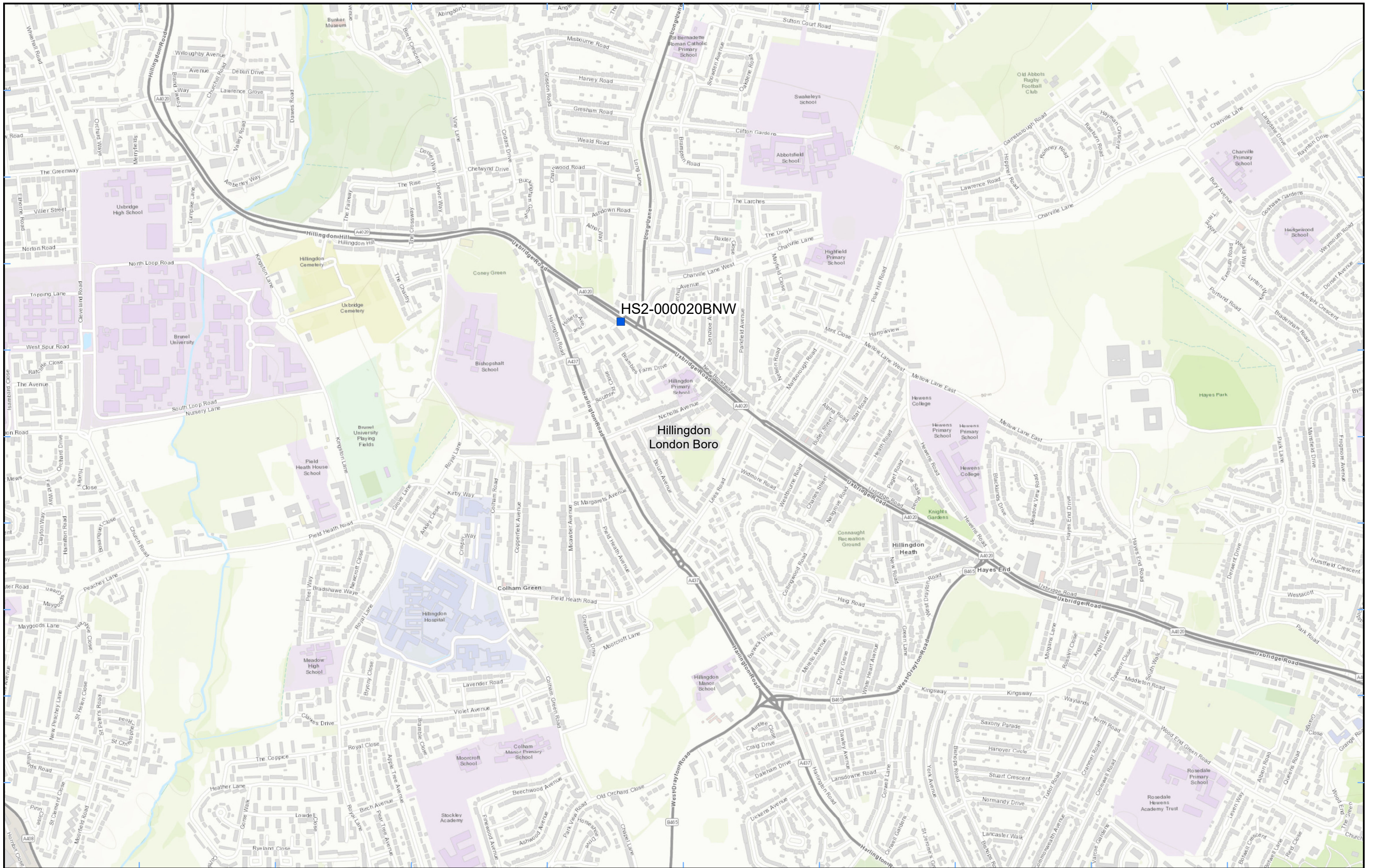
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Legend
■ Diffusion Tube
 District Borough Unitary Boundaries

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Map Number
 Map Name
Monitoring Locations In LBH (Sheet 4)
 London Borough of Hillingdon

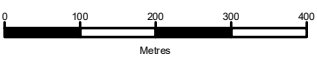


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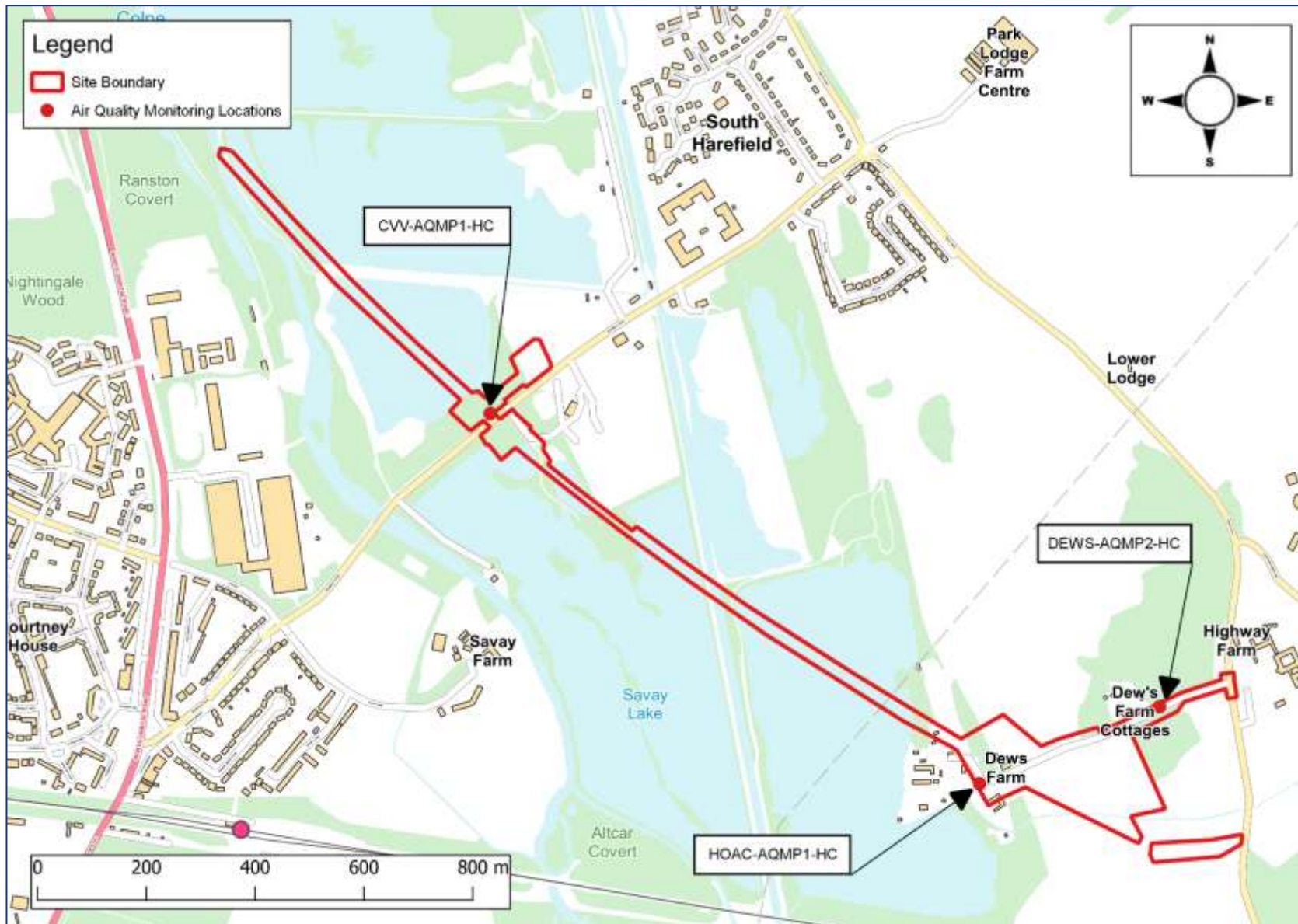
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Appendix B – Dust Monitoring Results

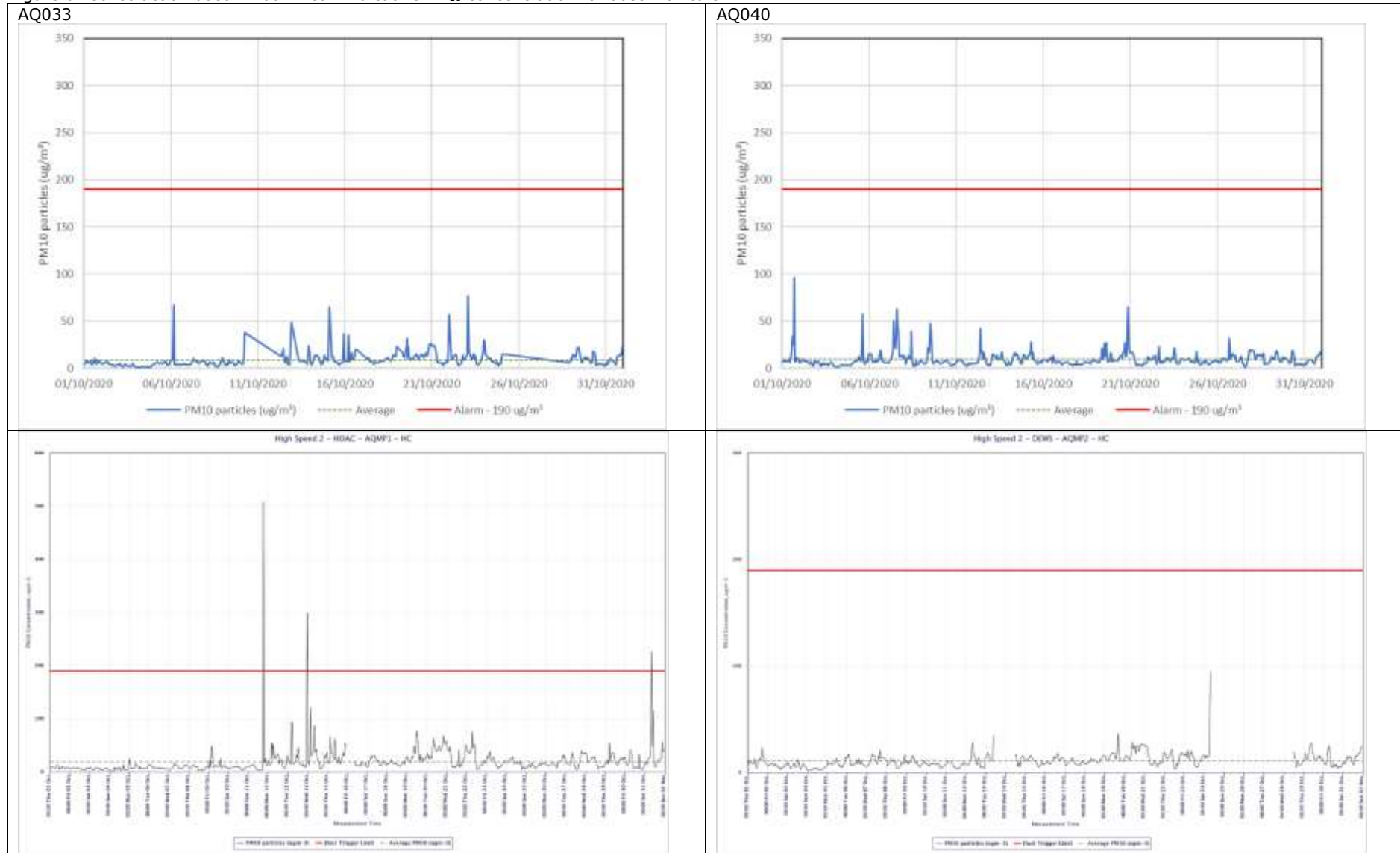
Table 1: Dust monitoring locations and October 2020 Results

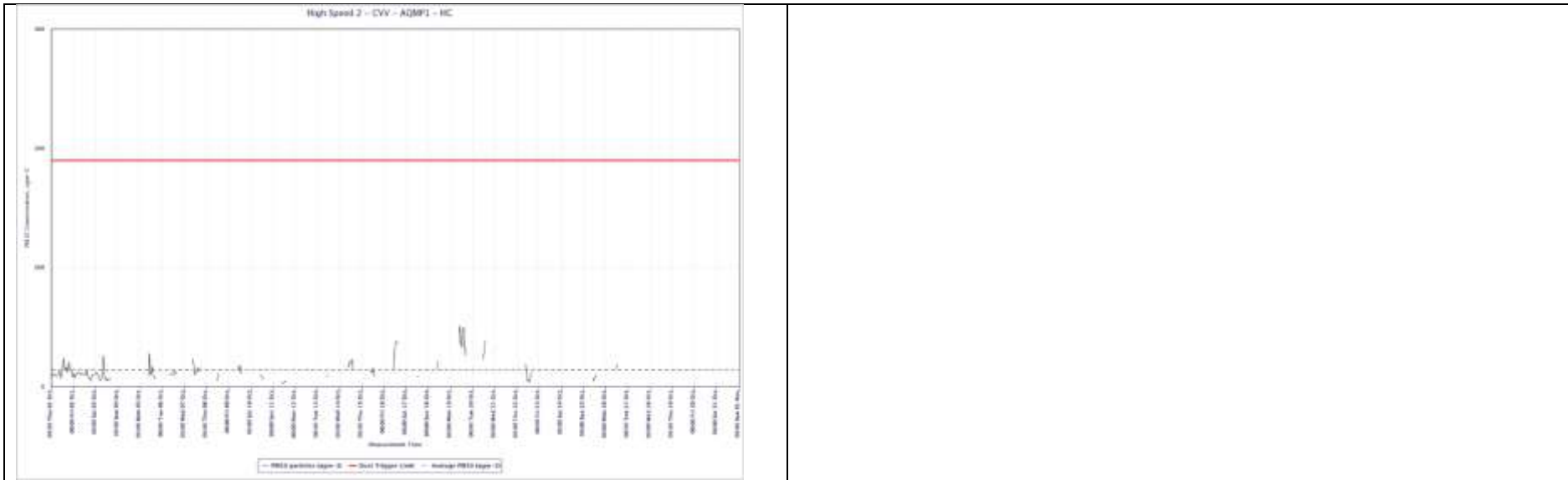
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM ₁₀ concentration (µg/m ³)	Minimum 1-hour PM ₁₀ concentration (µg/m ³)	Maximum 1-hour PM ₁₀ concentration (µg/m ³)	Number of 1-hour periods exceeding trigger level of 190 µg/m ³	Data capture (%)
AQ033	507045, 187352	Breakspear Road South	M	Yes	N	8.9	0.9	77.1	0	76.7
AQ040	508328, 186880	West Ruislip Golf Course	M	Yes	N	9.4	1.5	96.0	0	99.7
HOAC-AQMP ₁ -HC	505594, 187801	On the western boundary of HOAC at Dews Lane	M	Yes	Yes	18.7	1.5	508.4	3	98.8
DEWS-AQMP ₂ -HC	505892, 187942	Adjacent to Dew's Farm Cottages on Dews Lane.	M	Yes	Yes	11.1	1.9	94.8	0	83.6
CVV-AQMP ₁ -HC	504679, 188475	On the roadworks boundary along north side of Moorhall Road	M	Yes	Yes	14.0	2.8	50.5	0	22.0

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

Monitoring Site ID	Period of trigger alert & Concentration recorded	Investigation	Outcomes / Resolution / Remedial measures implemented
HOAC-AQMP1_HC	11/10/2020 18:00 – 508.4 ug/m ³ 14/10/2020 23:00 – 299.3 ug/m ³ 31/10/2020 08:00 – 226.7 ug/m ³	All triggers occurred outside of working hours, and no works were being undertaken near the monitor during working shifts. While investigations were undertaken, the cause of the triggers were unclear.	Align JV will continue to ensure that all activities being undertaken have appropriate mitigation measures applied (in line with the CoCP). Monitor maintenance regimes will continue to be implemented.

Figure 6: 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
HS2-000020BNT	Lamp post on Pembroke Road	509678, 187214	35	26	No data			19	14	18	22				22
HS2-000020BNU	Cowley Road sign post at junction with Hillingdon Road	505492, 183926	49	46	No data			33	31	33	37				38
HS2-000020BNV	High Street sign post at junction with Pembroke Road	509439, 187117	45	33	No data			32	26	30	32				33
HS2-000020BNW	Signpost on A4020 Uxbridge Road at junction with Long Lane	507365, 182687	43	32	No data			35	22	36	36				34
HS2-000020BPK	Lamp post in crescent off Swakeleys Road	506542, 186037	40	34	No data			27	28	29	35				32
HS2-000020BPL	Warren Road sign post on corner of Swakeleys Road and Warren Road	506240, 185660	51	40	No data			28	28	30	33				35

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

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
HS2-000020BPN	Lamp post on B467	506767, 186224	41	30	No data			24	21	Tube missing	30				29
HS2-000020BQH	Lamp post on High Road Ickenham	508451, 186879	44	37	No data			27	24	29	39				33
HS2-000020BQN	Lamp post on Park Road	506176, 185444	47	34	No data			34	26	35	39				36
HS2-000020BQP	Sign post on Long Lane	507614, 184663	45	33	No data			30	24	34	38				34
HS2-000020BP8	Triplicate site at South Ruislip roadside automatic monitoring station	510858, 184916	39	32	No data			29	22	28	31				30