

## Air Quality and Dust Monitoring Monthly Report – April 2021 London Borough of Hillingdon



## 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.

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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 Hillingdon (LBH) during January and February 2021 respectively.
- 1.1.2 Figure 1 to Figure 5 in Appendix A present the current worksites, together with air quality and dust monitoring locations for April 2021.
- 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](http://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 LBH 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 groundworks and materials management;
  - Groundworks, piling and materials management at Copthall North and South;
  - West Ruislip Portal piling and groundworks and materials management;
  - South Ruislip ground works, piling operations and materials management;
  - Northern Sustainable Placement Area (NSPA) site mobilisation, set- up and groundworks; and
  - Southern Sustainable Placement Area (SSPA) site mobilisation and set- up.
- 1.1.5 The Colne Valley Viaduct (CVV), Dews Lane and LTP2 worksites fall within the administrative boundary of the LBH. The Dews Lane phase of works commenced in July 2017 and is expected to be completed by the end of April 2021. The current phase of works at the CVV Moorhall Road worksites commenced within LBH in September 2020 and is currently ongoing. Activities for each worksite within March 2021, as presented in Appendix A, Figure 1 to Figure 5, include:

*Dews Lane site:*

- Utilities: Section H2;
- HOAC Compound: compound operation and de-sanding compound;
- INNS-GUC to Harvil Road: removal works;
- Dews Lane Compound: compound operation, stockpile management and drainage works;
- Ground investigation works: GI works and overwater GI works;
- Cofferdam Sheet Piling: piling plant and support plant;

- Permanent main piling works: boring pile, de-sanding pile bore at pile position, installing reinforcement cage and concreting pile, bored pile break-down to prepare the pile surface, grout curtain around viaduct pile groups maintenance plant; and
- Haul Route: earthworks and drainage.

*CVV South Moorhall Road worksite:*

- Utilities: Sections H6, H7, H8, H9 and H11;
- North and South Moorhall Road Compounds: road and hardstanding and stockpile management;
- South Moorhall road compound: de-sanding compound;
- North Moorhall road compound: compound operation;
- INNS- River Colne to GUC: removal works;
- Haul Route: earthworks and drainage;
- Moorhall Road Junction crossing Tarmac;
- Ground investigation works: GI works and overwater GI works;
- Causeway Piling: sheet pile installation and support plant;
- Cofferdam Sheet Piling: piling plant and support plant; and
- Permanent main piling works: boring pile, desanding pile bore at pile position, installing reinforcement cage and concreting pile, bored pile break-down to prepare the pile surface, grout curtain around viaduct pile groups maintenance plant.

- 1.1.6 Eight (8) dust monitors are installed around worksites, where demolition, earthworks, construction and trackout activities are underway. The sites returned a low to medium dust risk rating.
- 1.1.7 Dust monitoring locations and results are presented in Appendix B, Table 2, 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 PM<sub>10</sub> concentrations of 190 µg/m<sup>3</sup>, 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 no (0) dust trigger alerts recorded during the monitoring period (April 2021).
- 1.1.10 Data capture for various monitors was below 90% for the month of April 2021, due to intermittent monitor connection issues with the supplier's remote software. This issue is in the process of been resolved. Data capture was interrupted at CVV-AQMP5 due to a power connectivity. A new, alternative power source has been provided. All concerned issues have been or are in the process of being resolved.

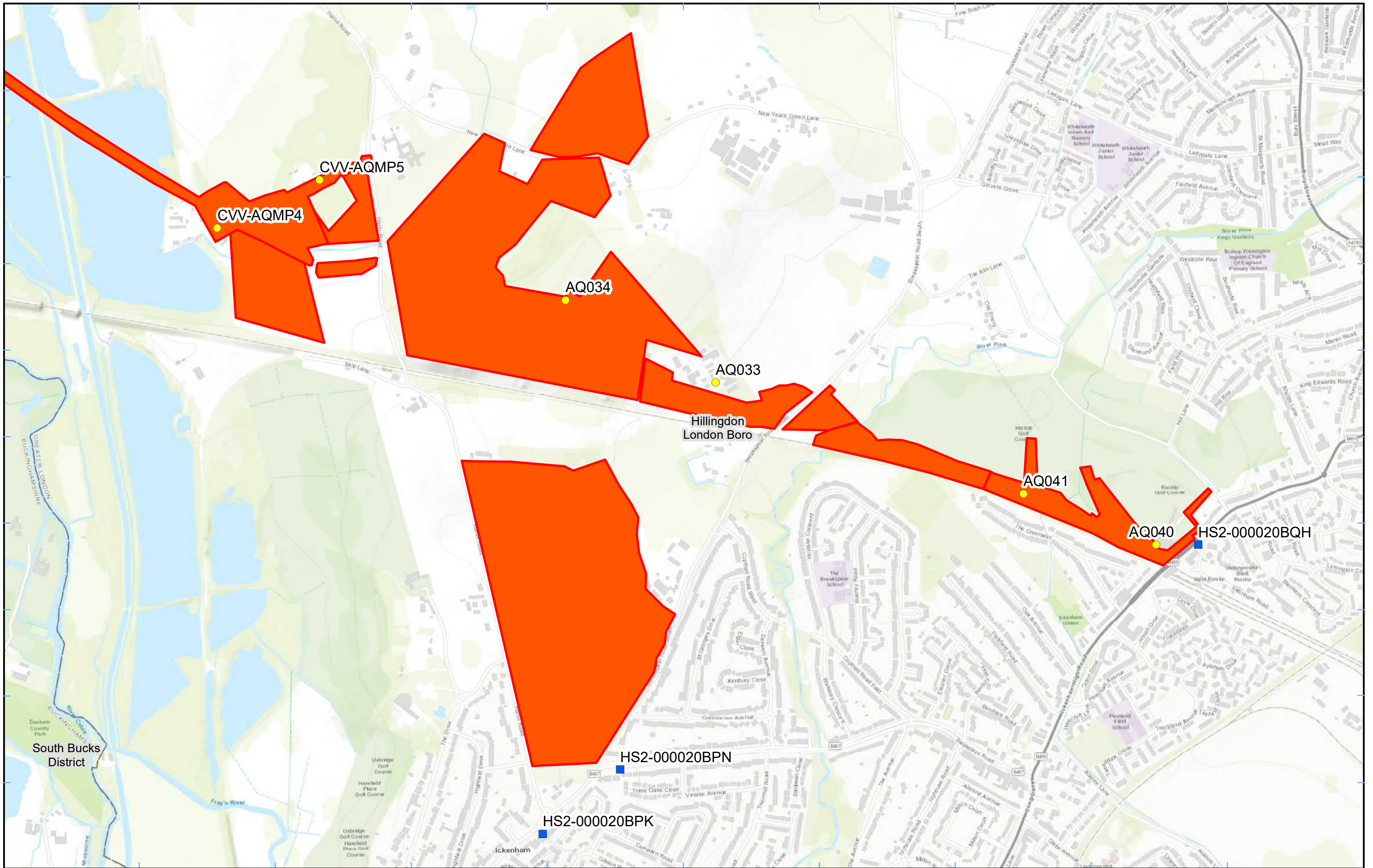
- 1.1.11 Diffusion tube monitoring of Nitrogen Dioxide (NO<sub>2</sub>) is undertaken at eleven (11) locations around highways within the LBH as part of the management of air quality where significant effects may occur as a result of the scheme.
- 1.1.12 Diffusion tube monitoring results are provided 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 NO<sub>2</sub> monitoring locations and results are presented in Appendix C, Table 3, together with the 2021 running mean.
- 1.1.14 Table 1 provides a summary of the complaint information related to dust or air quality received during this reporting period, together with the findings of any related investigations.

Table 1: Summary of complaints received during April 2021

Complaint Reference No.	Worksite Reference	Description of complaint	Results of investigation
HS2-21-41774-C	N/A	A complaint was received that there was a large amount of dust from site.	Dust as a result of the on-site activities is managed through a range of mitigation measures deployed on site – these are set out in the Code of Construction Practice. These will continue to be implemented across all HS2 sites.

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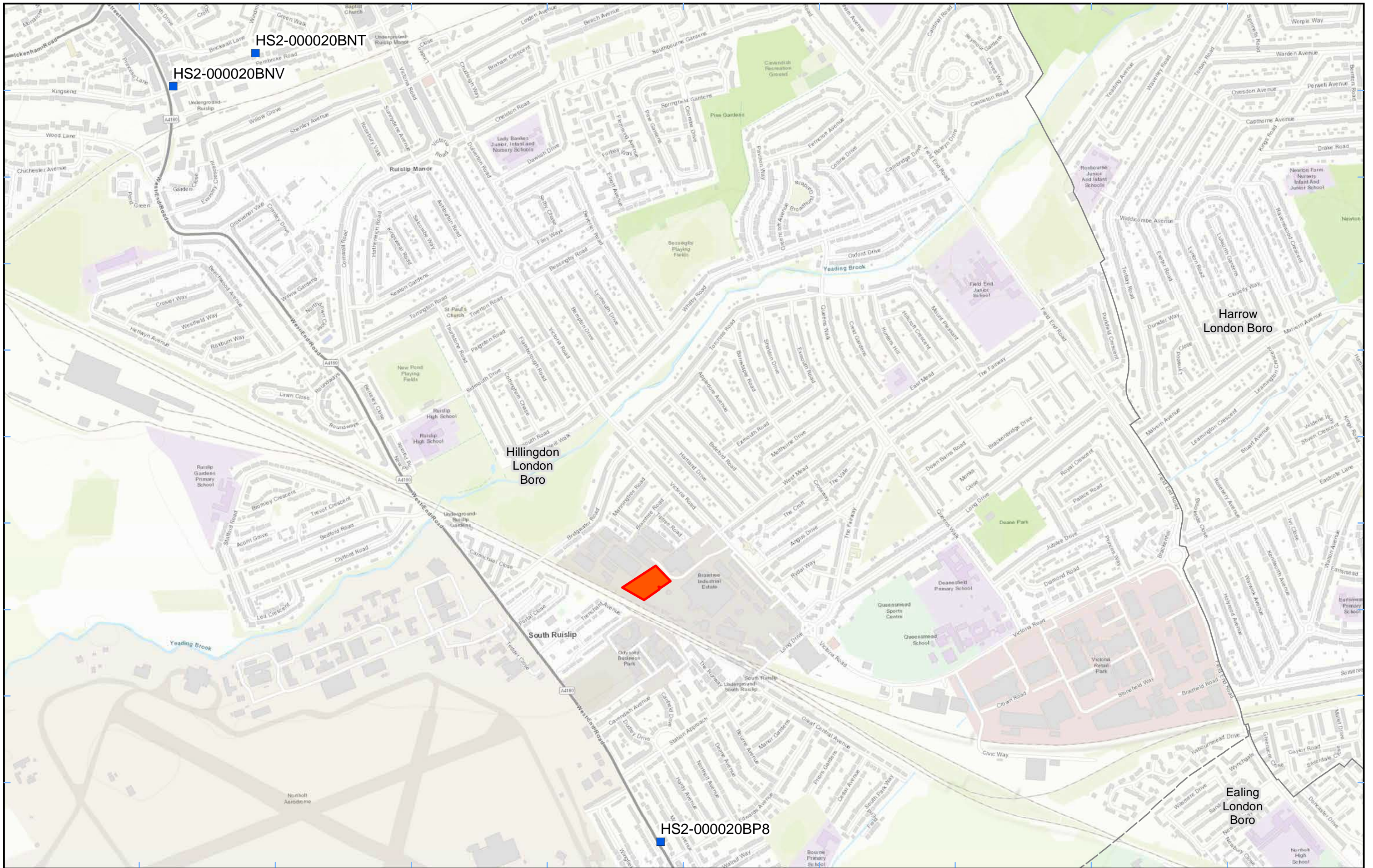
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 Map Name  
**Worksite and Monitoring Locations  
 In LBH (Sheet 1)**  
 London Borough of Hillingdon

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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)**  
 London Borough of Hillingdon

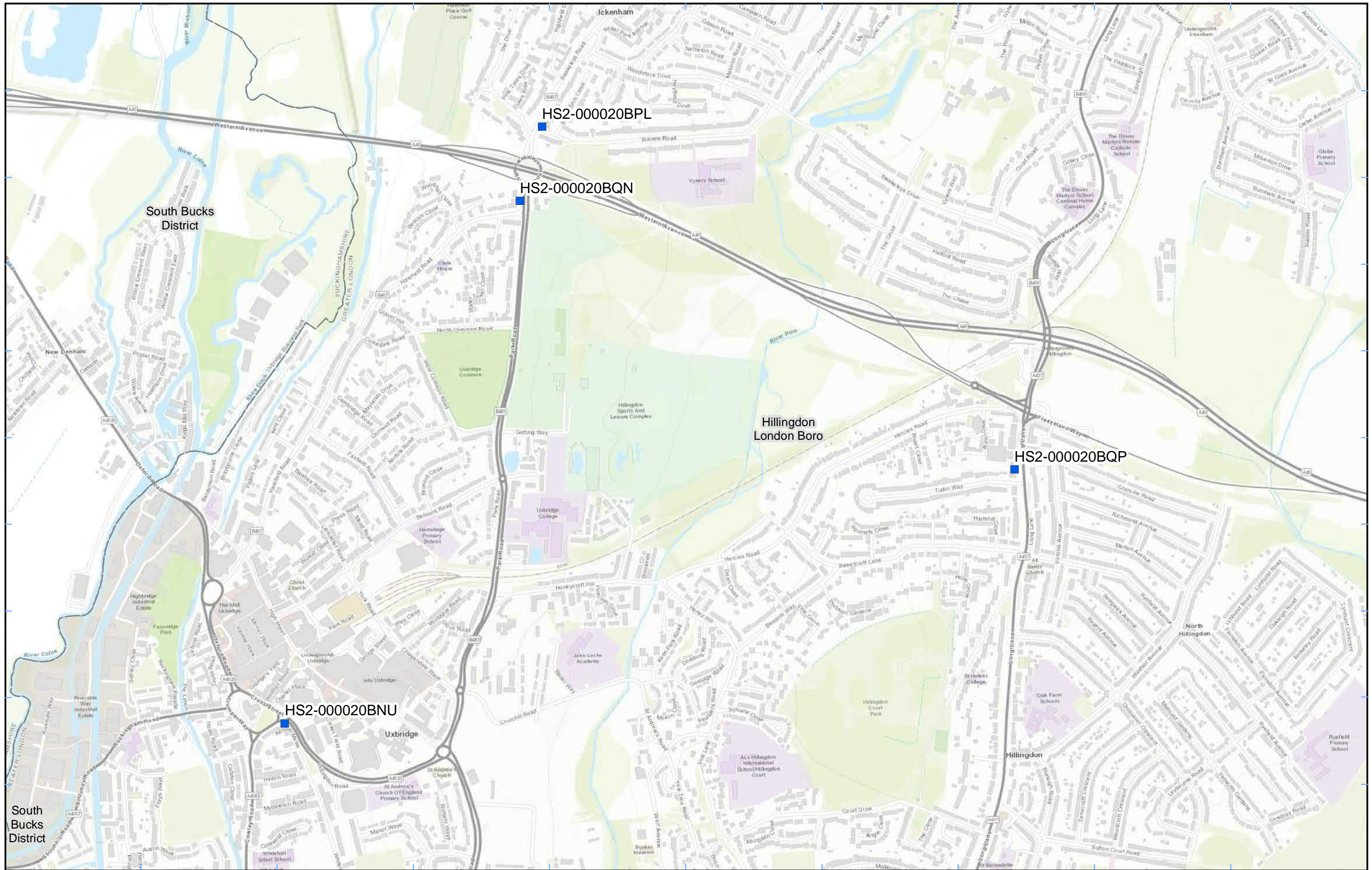
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**Legend**  
 ■ Diffusion Tube  
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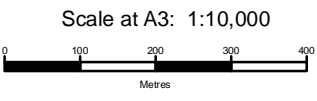
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**Monitoring Locations In LBH (Sheet 3)**  
**London Borough of Hillingdon**



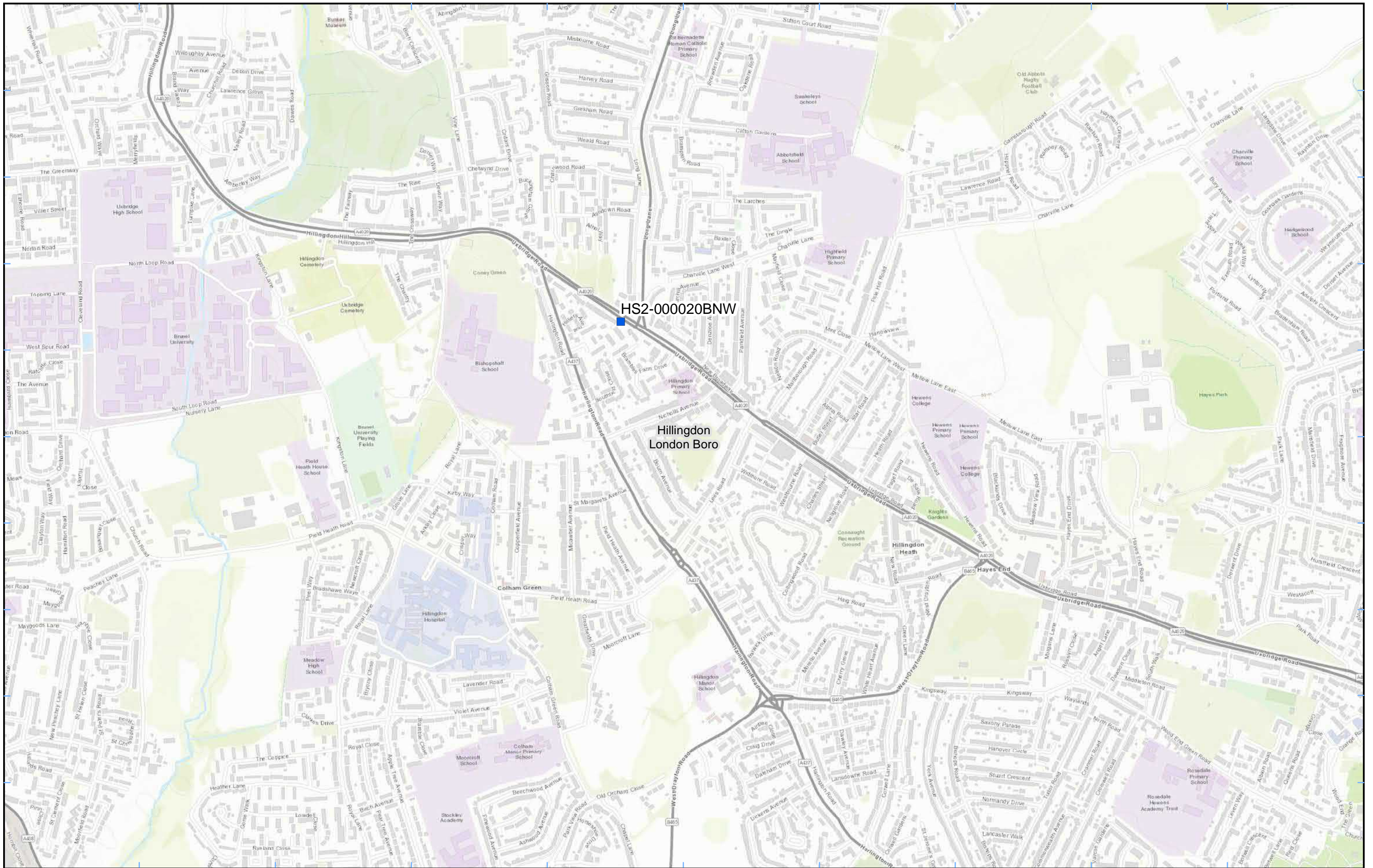
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- Legend**
- Diffusion Tube
  - District Borough Unitary Boundaries

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



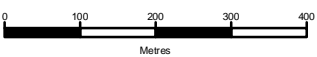
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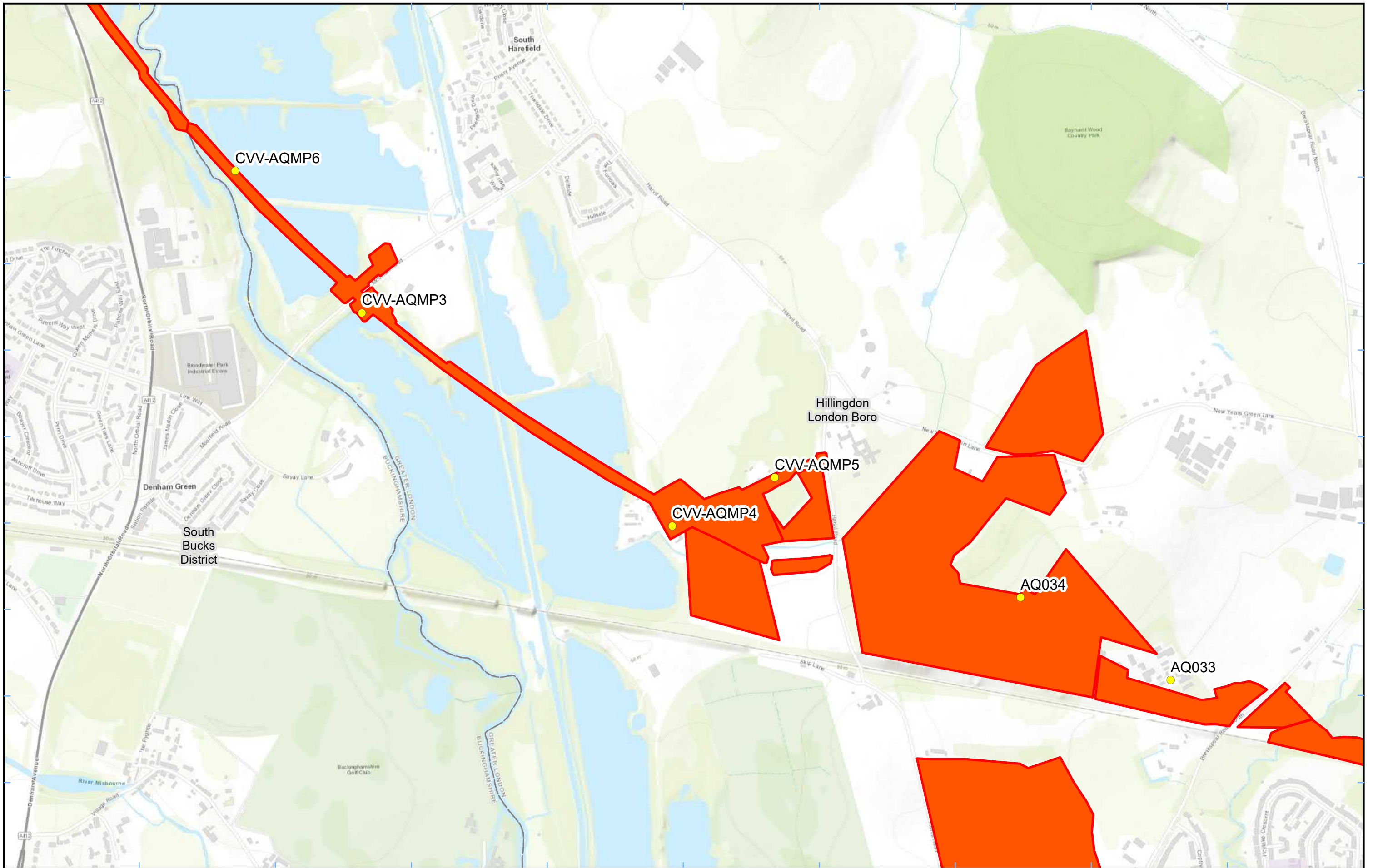


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**Legend**  
 ● Dust Monitor  
 □ District Borough Unitary Boundaries  
 ■ Worksite

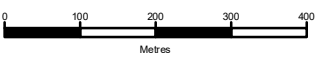
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Map Number  
 Worksite and Monitoring Locations  
 In LBH (Sheet 5)  
 London Borough of Hillingdon


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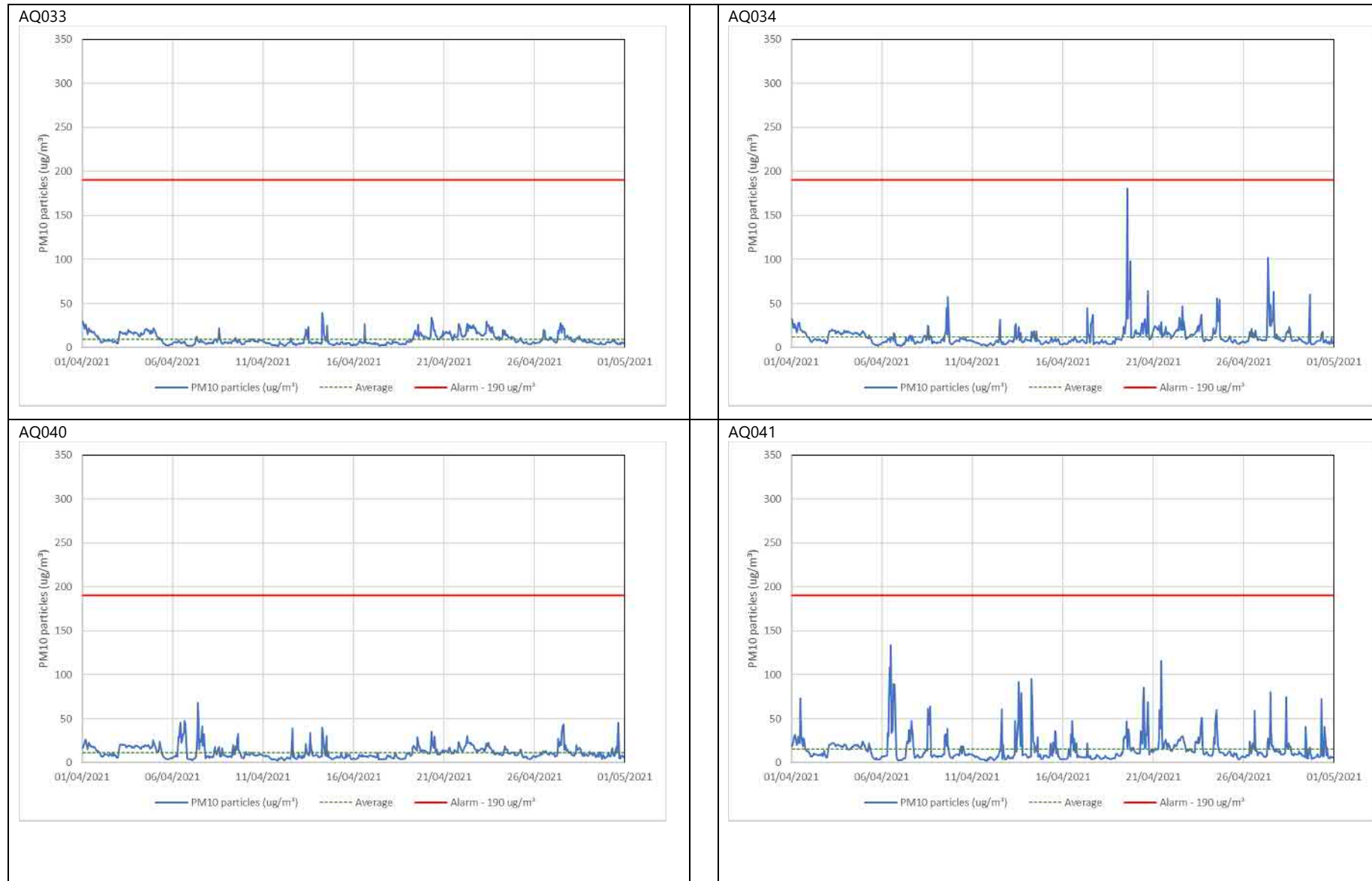
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## Appendix B – Dust Monitoring Results

Table 2: Dust monitoring locations and April 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 <sub>10</sub> concentration (µg/m <sup>3</sup> )	Minimum 1-hour PM <sub>10</sub> concentration (µg/m <sup>3</sup> )	Maximum 1-hour PM <sub>10</sub> concentration (µg/m <sup>3</sup> )	Number of 1-hour periods exceeding trigger level of 190 µg/m <sup>3</sup>	Data capture (%)
AQ033	507045, 187352	Breakspeare Road South	M	Yes	N	9.3	1.6	39.1	0	100.0
AQ034	506608, 187592	Copthall Cutting	L	Yes	N	12.2	1.7	180.4	0	100.0
AQ040	508328, 186880	West Ruislip Golf Course	M	Yes	N	11.6	2.1	67.9	0	100.0
AQ041	507942, 187028	West Ruislip Portal	M	Yes	N	15.3	1.9	133.5	0	100.0
CVV-AQMP3	504743, 188459	On the eastern boundary along south side of Moorhall Road	M	Yes	Yes	9.7	2.0	82.0	0	82.9
CVV-AQMP4	505589, 187793	On the western boundary of HOAC at Dews Lane	M	Yes	Yes	10.1	2.0	79.0	0	76.9
CVV-AQMP5	505907, 187943	Adjacent to Dew's Farm Cottages on Dews Lane.	M	Yes	Yes	8.0	2.0	50.0	0	38.2
CVV-AQMP6	504321, 188835	Korda Lake Compound, along haul route north of Moorhall road.	M	Yes	Yes	10.0	2.0	93.0	0	77.9

Figure 6: Construction dust 1-hour mean indicative PM10 concentration for dust monitors



## Appendix C – Air Quality Monitoring Results

Table 3: NO<sub>2</sub> monitoring locations around highways, NO<sub>2</sub> concentrations and monthly monitoring results with running mean for 2021 (µg/m<sup>3</sup>)

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean <sup>1</sup>
HS2-000020BNT	Lamp post on Pembroke Road	509678, 187214	30	30	24										28
HS2-000020BNU	Cowley Road sign post at junction with Hillingdon Road	505492, 183926	45	46	44										45
HS2-000020BNV	High Street sign post at junction with Pembroke Road	509439, 187117	Tube Missing	40	37										39
HS2-000020BNW	Signpost on A4020 Uxbridge Road at junction with Long Lane	507365, 182687	40	48	39										42
HS2-000020BPK	Lamp post in crescent off Swakeleys Road	506542, 186037	40	40	38										39
HS2-000020BPL	Warren Road sign post on corner of Swakeleys Road and Warren Road	506240, 185660	Tube Missing	39	37										38
HS2-000020BPN	Lamp post on B467	506767, 186224	36	38	32										35
HS2-000020BQH	Lamp post on High Road Ickenham	508451, 186879	Tube Missing	Tube Missing	42										42

<sup>1</sup> 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	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean <sup>1</sup>
HS2-000020BQN	Lamp post on Park Road	506176, 185444	40	52	31										41
HS2-000020BQP	Sign post on Long Lane	507614, 184663	38	39	36										38
HS2-000020BP8	Triplicate site at South Ruislip roadside automatic monitoring station	510858, 184916	39	40	33										37