

Air Quality and Dust Monitoring Monthly Report – **May** 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.

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, 2021, 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 Hillingdon (LBH) during April and May 2021 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 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 4, include:
- Gatemead Embankment, Breakspear Road South and River Pinn Underbridge groundworks and materials management;
 - Groundworks and materials management at Copthall North and South;
 - West Ruislip Portal and Retained Embankment piling, 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
 - Jetty piling: piling plant, support plant and compound;
 - HOAC Compound: compound operation and de-sanding compound;
 - 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;

- Haul Route: earthworks and drainage; and
- Ground Investigation Works: GI works.

CVV South Moorhall Road worksite:

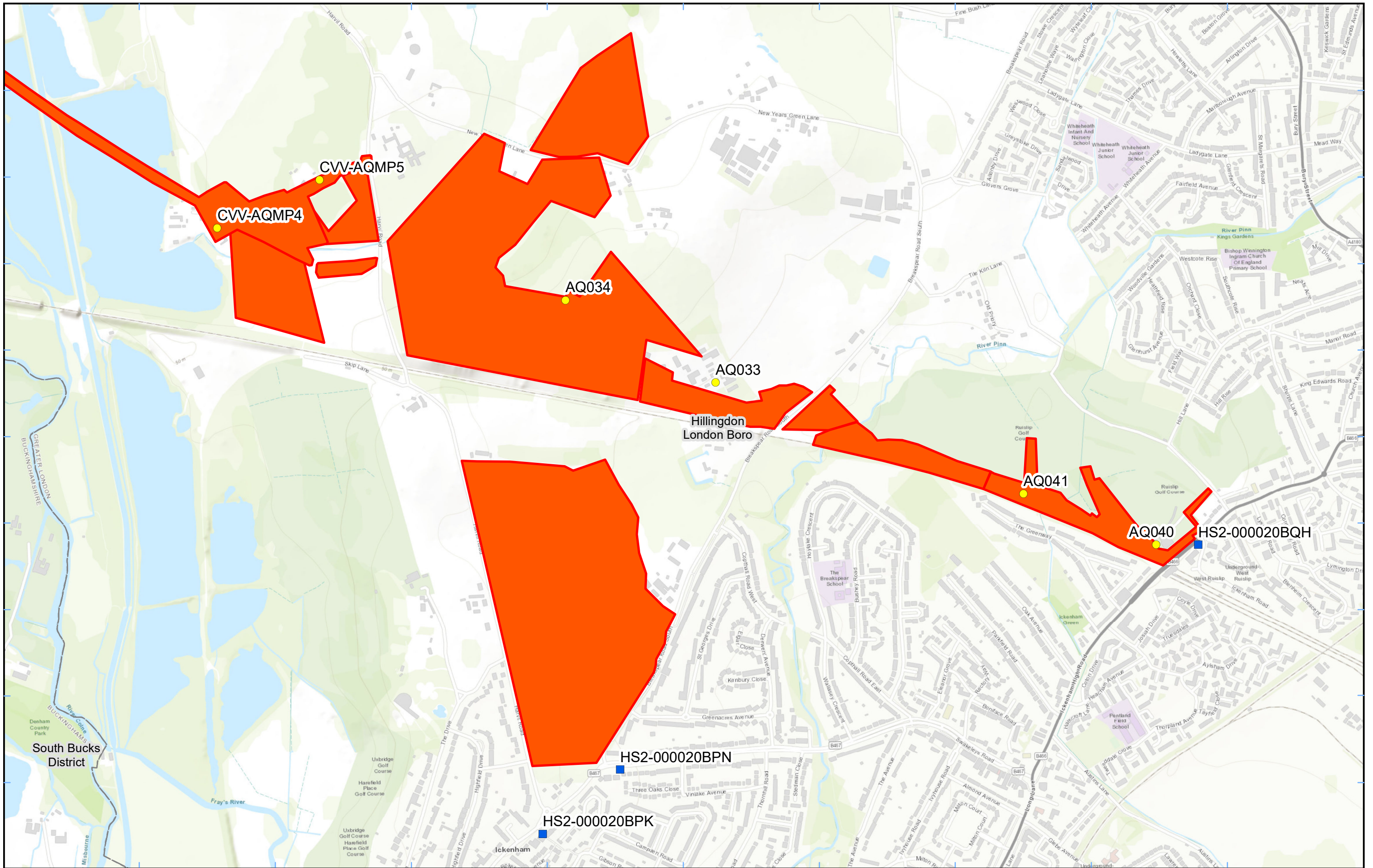
- Utilities: Sections H6 and H7;
- Jetty piling: piling plant, support plant and compound;
- INNS-GUC to Havril road: removal;
- South Moorhall road compound: compound operation and de-sanding compound;
- North Moorhall road compound: compound operation;
- Haul Route: civil works and earthworks and drainage;
- Moorhall Road Junction crossing Tarmac;
- Ground Investigation Works: GI works;
- Causeway Piling: sheet pile installation and support plant;
- Moorhall Road Junction: crossing tarmac;
- 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 Nine (9) dust monitors are installed around worksites, where demolition, earthworks, construction and trackout activities are underway. The sites returned a low to high 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 no (0) dust trigger alerts recorded during the monitoring period (May 2021).
- 1.1.10 Data capture for monitors AQ049 and CVV-AQMP5, was below 90% for the month of May 2021. Data missing for AQ049 was due to the monitor being installed on the 24/05/21 followed by a subsequent fault. Monitor CVV-AQMP5 did not record any data for the month of May as the power source was removed due to the relocation of the Dews Lane site offices. An alternative monitoring position is currently awaiting confirmation.

- 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 2, together with the 2021 running mean.
- 1.1.14 There were no (0) complaints received, relating to air quality, during this reporting period (May 2021).

Appendix A – Worksites and Monitoring Locations

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



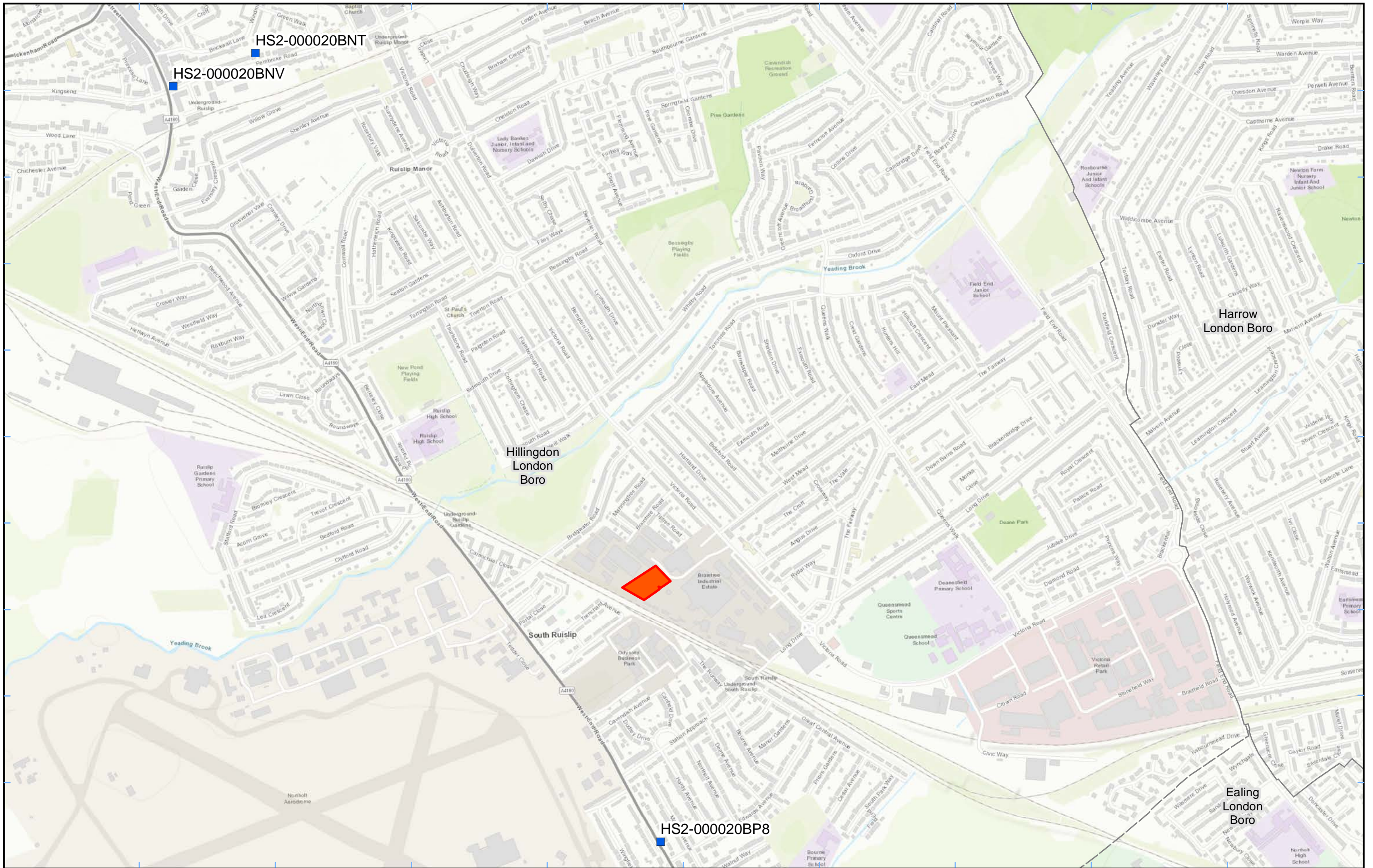
Legend
■ Diffusion Tube ■ Worksite
● Dust Monitor District Borough Unitary Boundaries

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 LBH (Sheet 1)**
 London Borough of Hillingdon

hs2
 Registered in England. Registration number 06791686.
 Registered office: 2 Snowhill, Queensway,
 Birmingham B4 6GA.
 © Crown copyright and database rights 2021.
 Ordnance Survey Licence Number 100049190.
Doc Number:
Date: 03/03/21

Scale at A3: 1:10,000
 0 100 200 300 400
 Metres



Legend
■ Diffusion Tube District Borough Unitary Boundaries
 Worksite

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

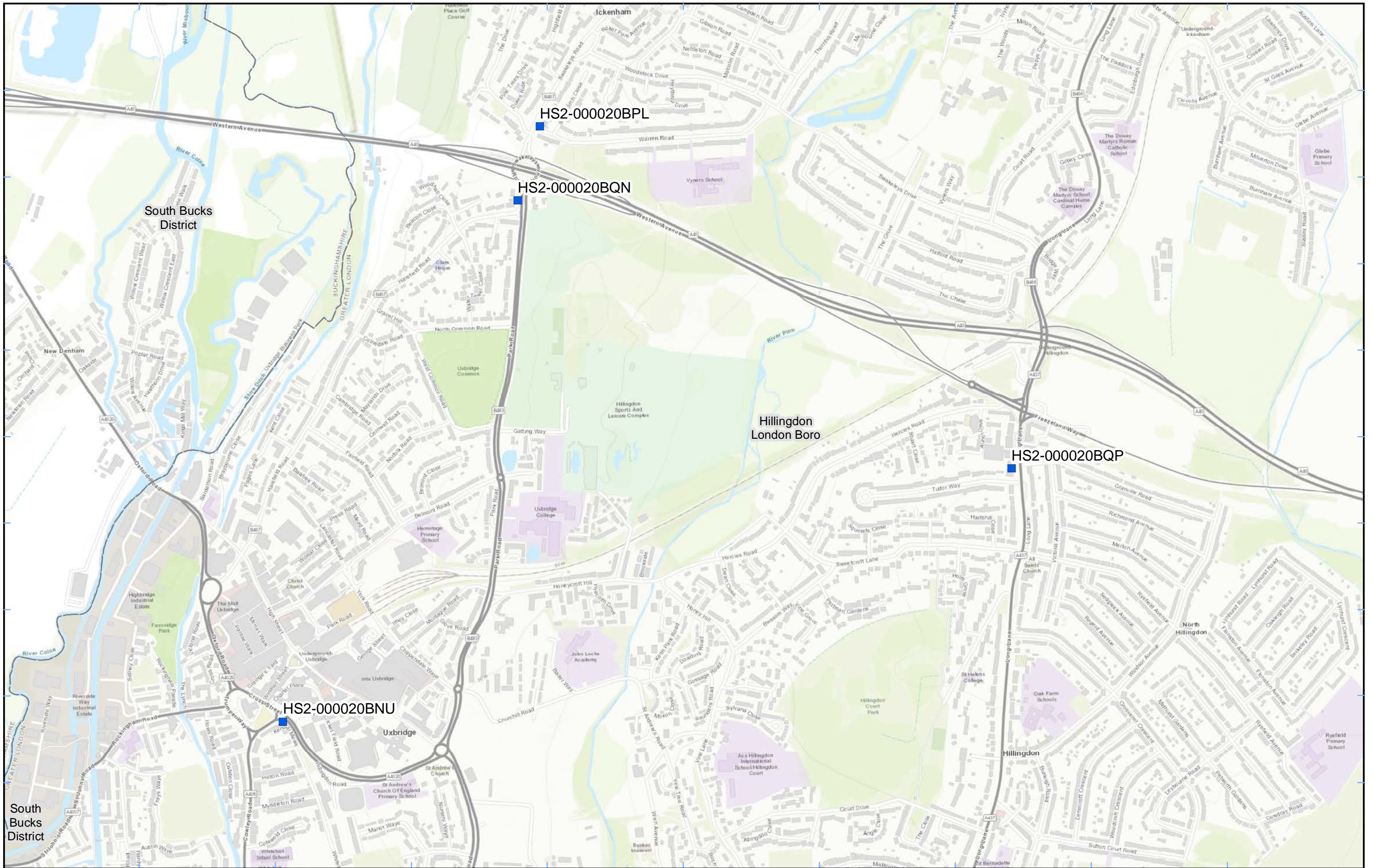
Map Number
 Map Name
**Worksite and Monitoring Locations
 In LBH (Sheet 2)**
 London Borough of Hillingdon

hs2
 Registered in England. Registration number 06791686.
 Registered office: 2 Snowhill, Queensway,
 Birmingham B4 6GA.

Scale at A3: 1:10,000

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

Doc Number: **Date:** 08/12/20



Legend
 ■ Diffusion Tube
 □ 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

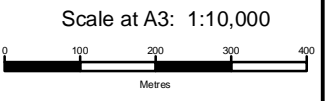
Map Number
 Map Name
Monitoring Locations In LBH (Sheet 3)
London Borough of Hillingdon



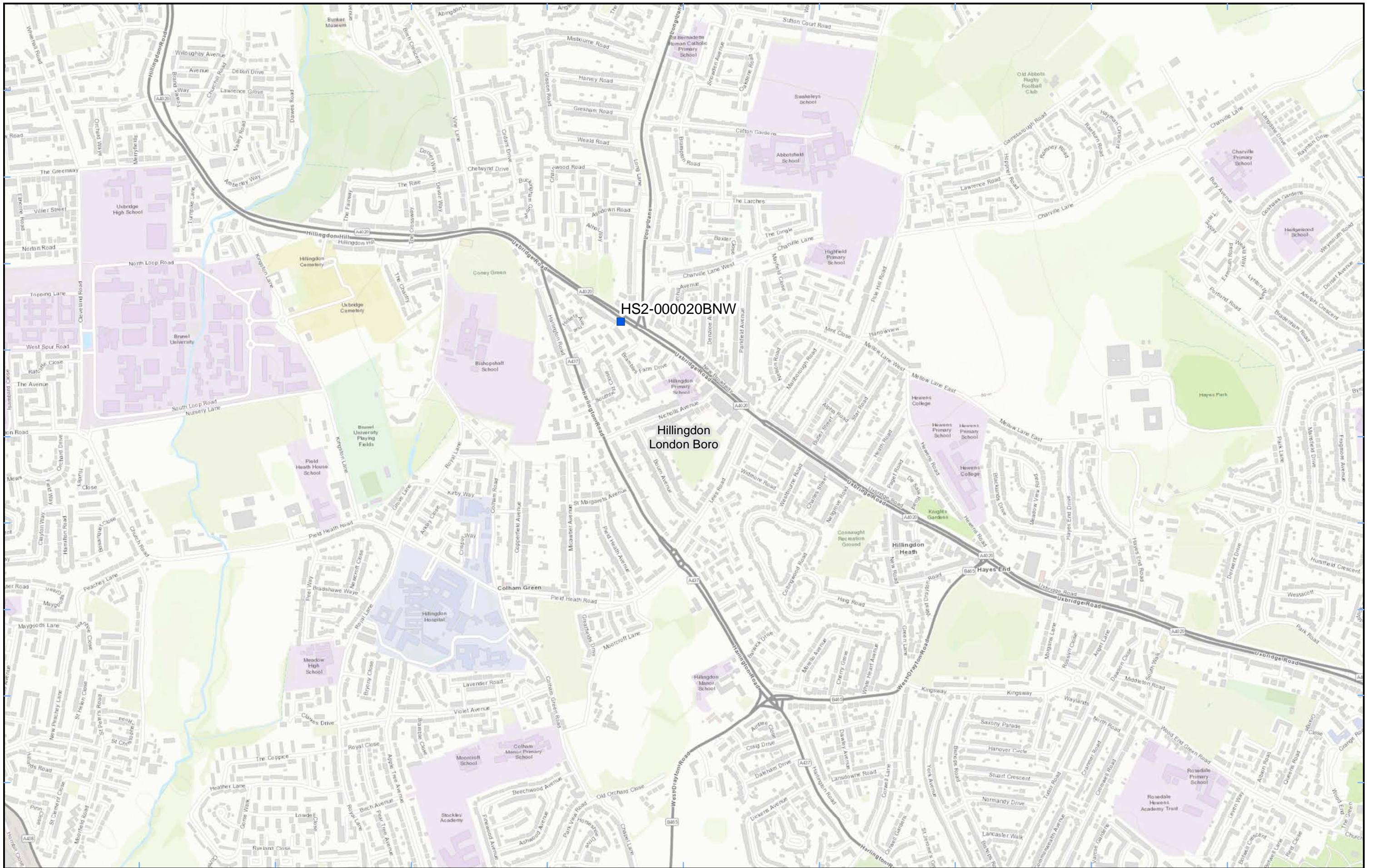
HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.



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.



Doc Number: Date: 08/12/20




HS2-000020BNW

Hillingdon
London Boro

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


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



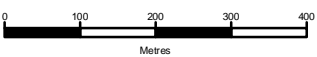
Registered in England. Registration number 06791686.
Registered office: 2 Snowhill, Queensway,
Birmingham B4 6GA.

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

Doc Number:



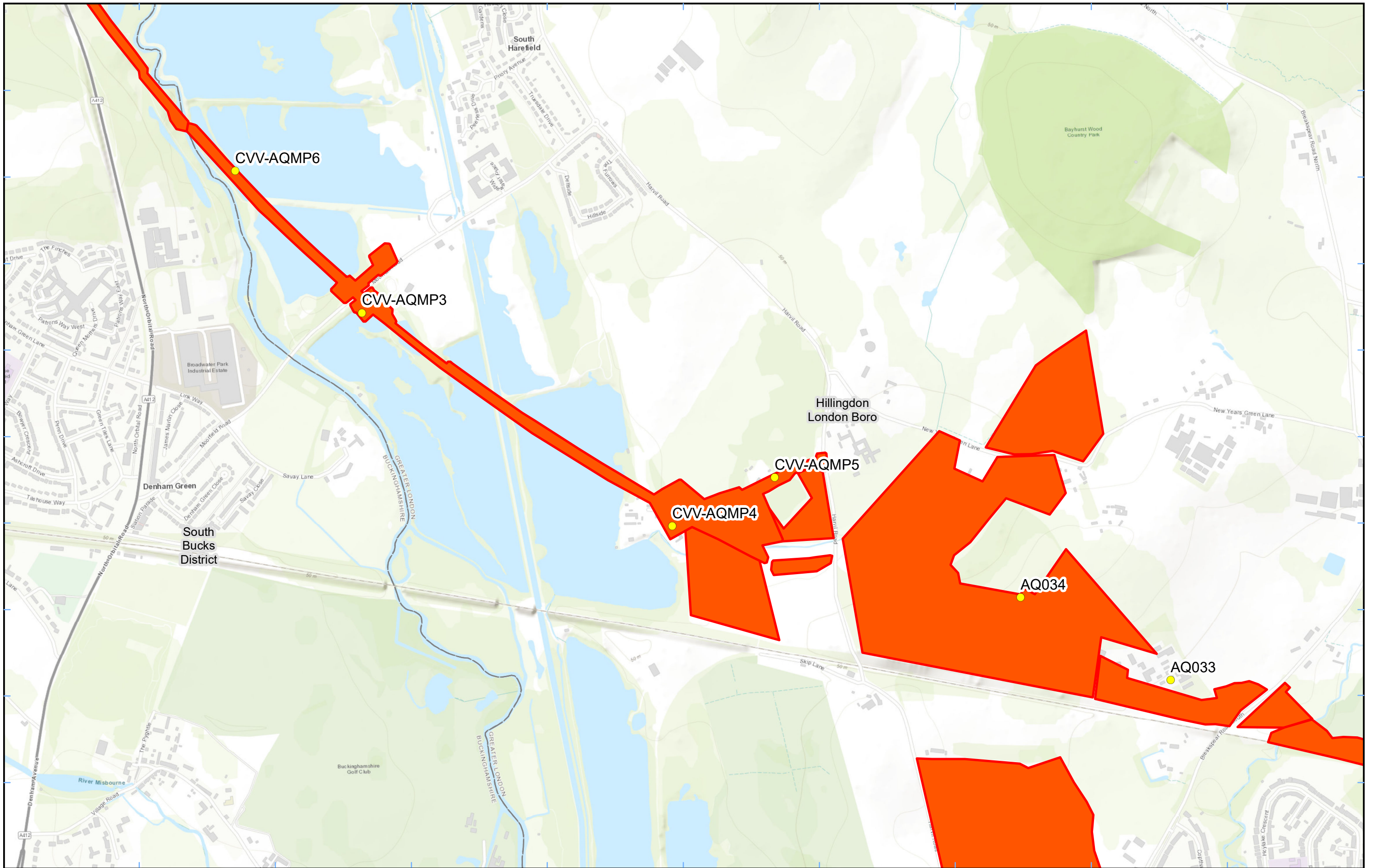
Scale at A3: 1:10,000



Metres

Date: 08/12/20

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



Legend
● Dust Monitor District Borough Unitary Boundaries
 Worksite

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

hs2
 Registered in England. Registration number 06791686.
 Registered office: 2 Snowhill, Queensway,
 Birmingham B4 6GA.

Scale at A3: 1:10,000

© Crown copyright and database rights 2021.
 Ordnance Survey Licence Number 100049190.

Doc Number: Date: 06/05/21

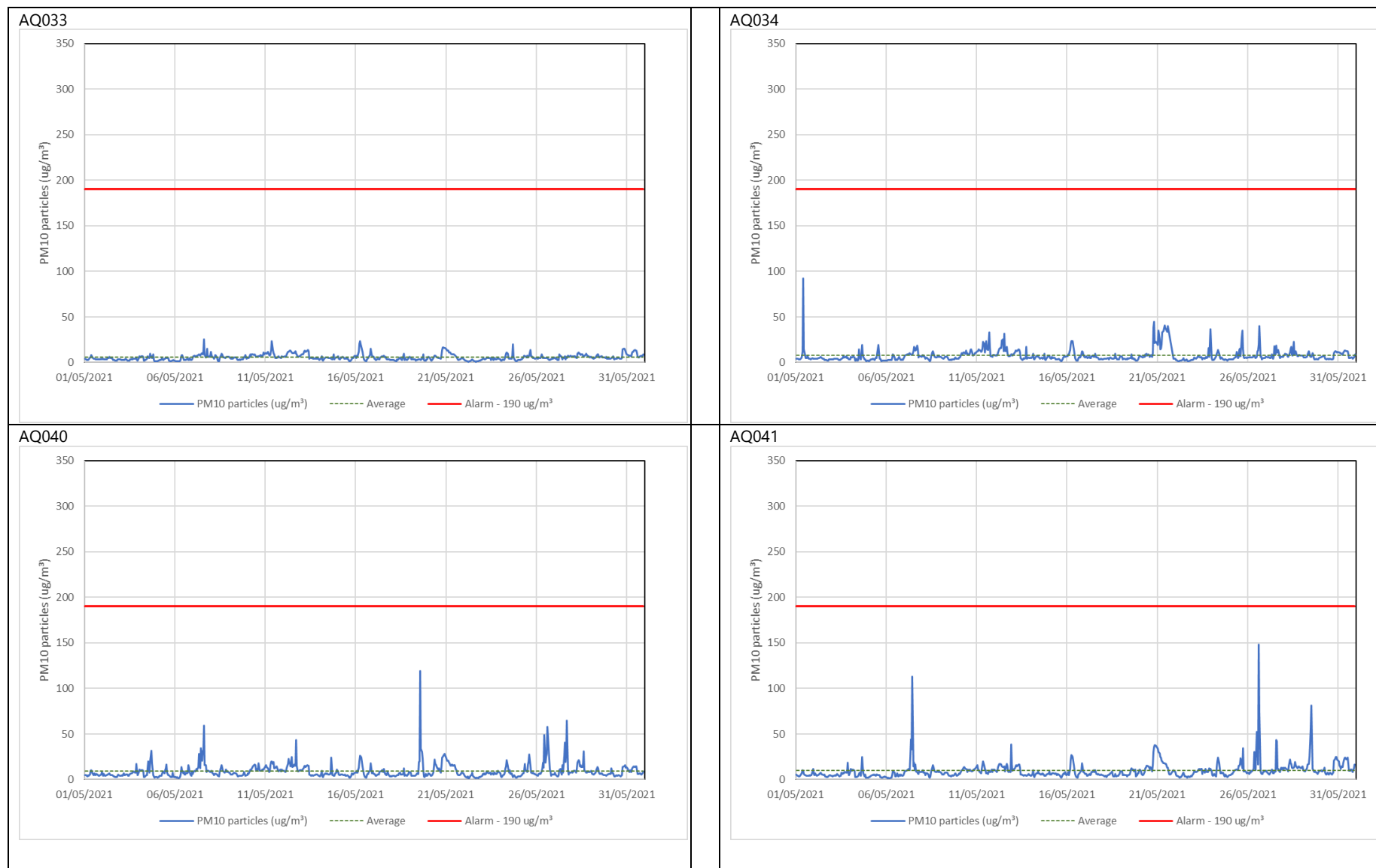
Appendix B – Dust Monitoring Results

Table 1: Dust monitoring locations and May 2021 Results

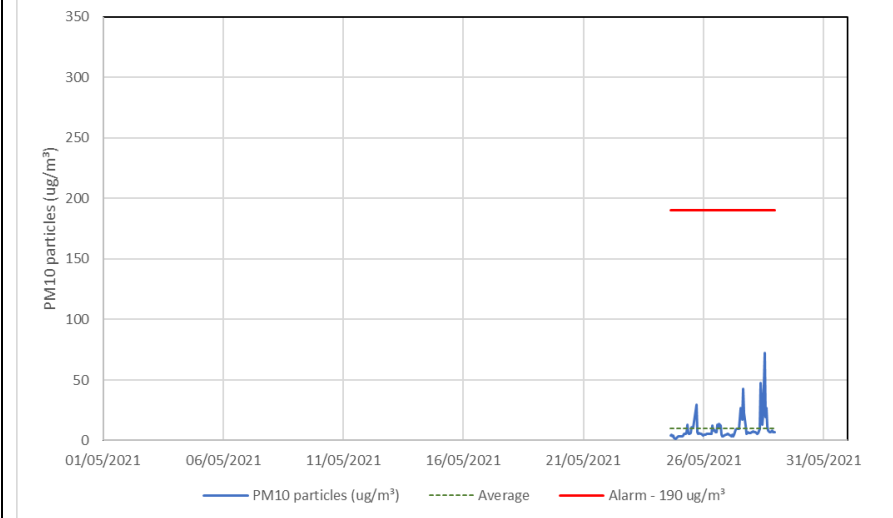
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM ₁₀ concentration (µg/m ³)	Minimum 1-hour PM ₁₀ concentration (µg/m ³)	Maximum 1-hour PM ₁₀ concentration (µg/m ³)	Number of 1-hour periods exceeding trigger level of 190 µg/m ³	Data capture (%)
AQ033	507045, 187352	Breakspears Road South	M	Yes	N	5.7	1	25.3	0	100.0
AQ034	506608, 187592	Cophall Cutting	L	Yes	N	7.6	1.3	92.7	0	99.1
AQ040	508328, 186880	West Ruislip Golf Course	M	Yes	N	9.2	1.5	119.2	0	100.0
AQ041	507942, 187028	West Ruislip Portal	M	Yes	N	9.9	1.5	147.9	0	100.0
AQ049	506531, 187865	Cophall North, Ancient Woodland	M	Yes	N	9.7	1.48	72.7	0	14.0
CVV-AQMP3	504743, 188459	On the eastern boundary along south side of Moorhall Road	M	Yes	Yes	6.3	1.0	32.0	0	97.2
CVV-AQMP4	505589, 187793	On the western boundary of HOAC at Dews Lane	M	Yes	Yes	5.9	1.0	35.0	0	100.0
CVV-AQMP5*	505907, 187943	Adjacent to Dew's Farm Cottages on Dews Lane.	M	No	Yes	-	-	-	-	-
CVV-AQMP6	504321, 188835	Korda Lake Compound, along haul route north of Moorhall road.	M	Yes	Yes	5.9	1.0	32.0	0	99.6

* CVV-AQMP5 installed from 05/07/2021.

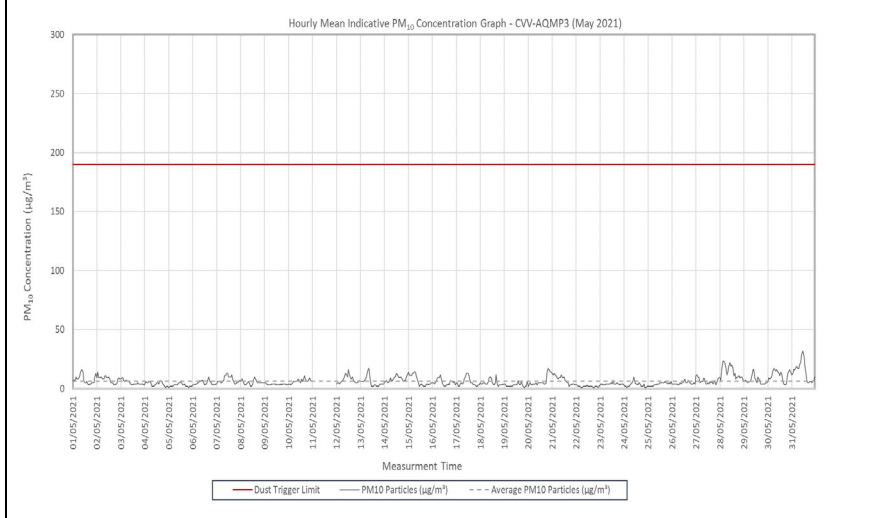
Figure 5: Construction dust 1-hour mean indicative PM₁₀ concentration for dust monitors



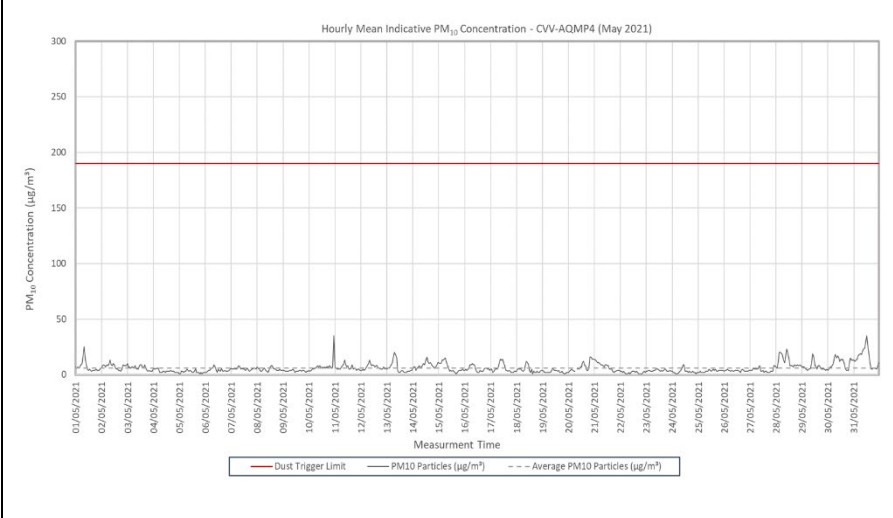
AQ049



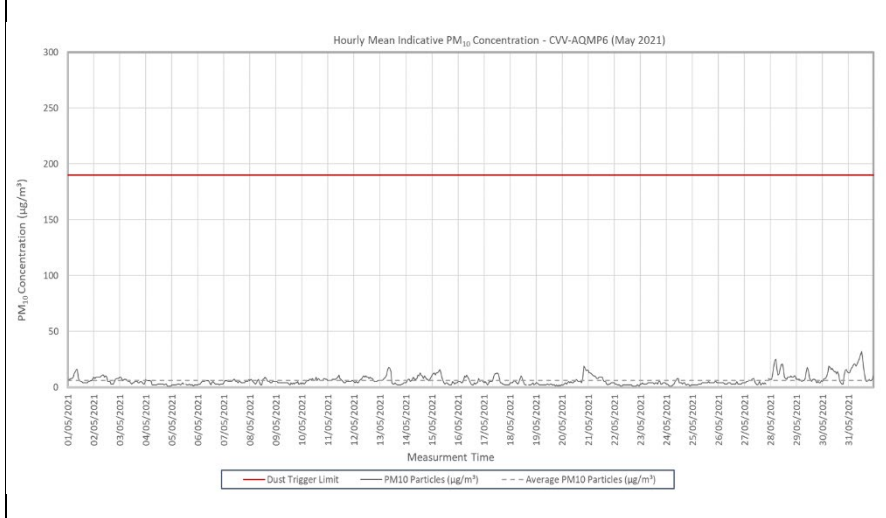
CVV-AQMP3



CVV-AQMP4



CVV-AQMP6



Appendix C – Air Quality Monitoring Results

Table 2: 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
HS2-000020BNT	Lamp post on Pembroke Road	509678, 187214	30	30	24	23									27
HS2-000020BNU	Cowley Road sign post at junction with Hillingdon Road	505492, 183926	45	46	44	38									43
HS2-000020BNV	High Street sign post at junction with Pembroke Road	509439, 187117	Tube Missing	40	37	36									38
HS2-000020BNW	Signpost on A4020 Uxbridge Road at junction with Long Lane	507365, 182687	40	48	39	46									43
HS2-000020BPK	Lamp post in crescent off Swakeleys Road	506542, 186037	40	40	38	36									38
HS2-000020BPL	Warren Road sign post on corner of Swakeleys Road and Warren Road	506240, 185660	Tube Missing	39	37	30									35
HS2-000020BPN	Lamp post on B467	506767, 186224	36	38	32	32									34
HS2-000020BQH	Lamp post on High Road Ickenham	508451, 186879	Tube Missing	Tube Missing	42	42									42

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.

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean ¹
HS2-000020BQN	Lamp post on Park Road	506176, 185444	40	52	31	42									42
HS2-000020BQP	Sign post on Long Lane	507614, 184663	38	39	36	41									39
HS2-000020BP8	Triplicate site at South Ruislip roadside automatic monitoring station	510858, 184916	39	40	33	33									37