

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

London Borough of Hillingdon



SKANSKA



Department for Transport

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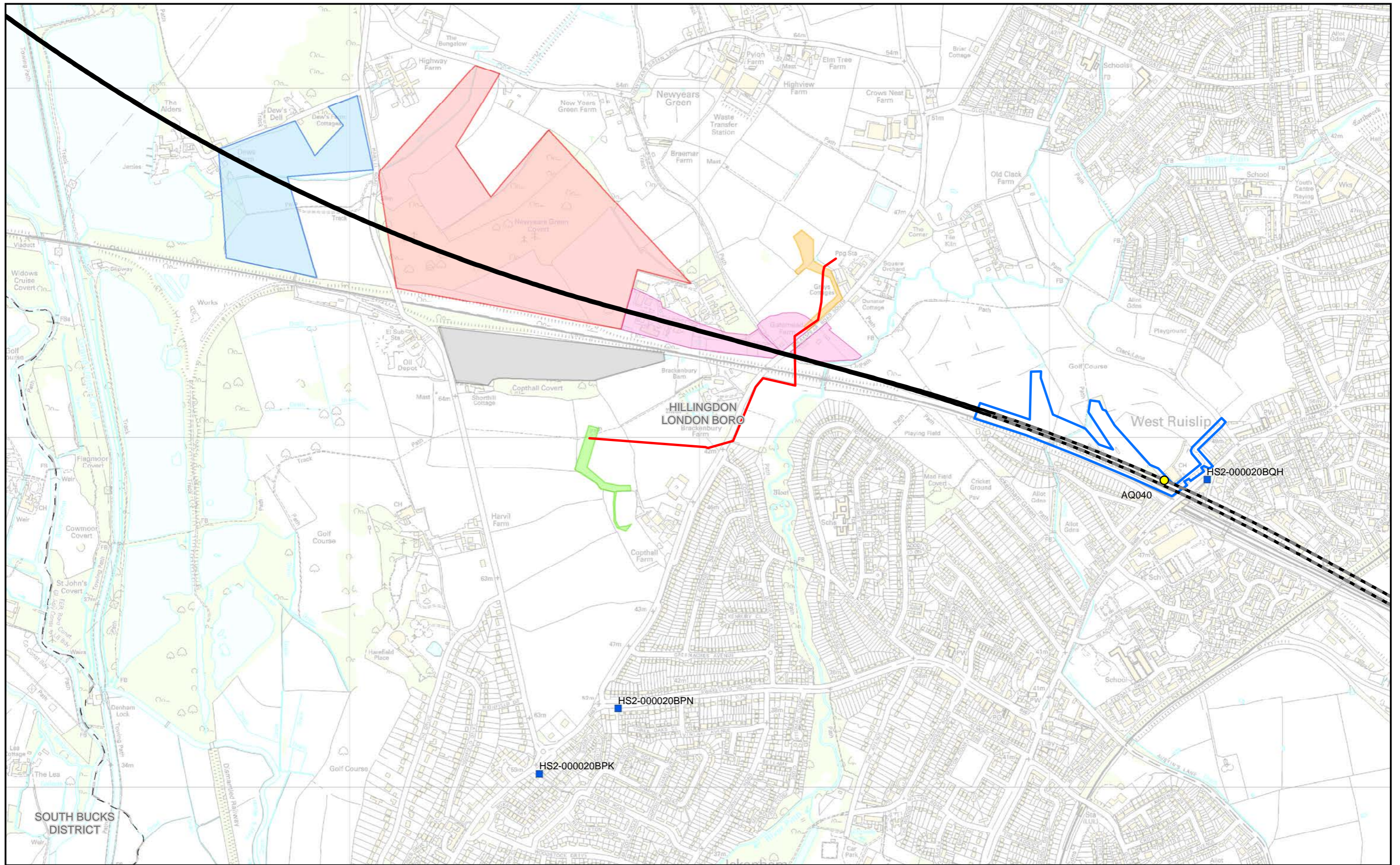
Monthly Summary

- 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 July and August 2020 respectively.
- 1.1.2 Figure 1 to Figure 5 in Appendix A indicate the current worksites, together with air quality 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 LBH in May 2018, the remaining of which are expected to be completed later in 2020. The next phase of construction works commenced 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:
- 18' and 48' gas pipeline diversions, advanced planting and habitat creation, compound establishment and haul road creation;
 - Merck Sharpe Dohme (MSD) new site set up and haul road creation;
 - Utility diversions at Breakspear Road South;
 - Utility diversions at Copthall North and Copthall South;
 - West Ruislip Portal site set up, haul road creation and groundworks; and
 - South Ruislip mobilisation, site set up and ground works.
- 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 is expected to be completed by September 2020 at the LTP2 worksite and by the end of April 2021 at the Dews Lane site. Activities within August 2020, as presented in Appendix A, Figure 5 included:
- Ongoing works at the HOAC/Dews Lane site which include ground investigation works, mobilisation and installing site welfare units; and
 - Ongoing works at the CVV LTP2 site which include: Installation and removal of casings, excavation of pile, removal of chalk arising, drilling fluid exchange, site maintenance, deliveries and collection of plant and equipment, reinforcement installation, concreting of pile, demobilising of piling equipment, collection of bentonite fluid, dynamic testing of driven piles using impact hammer, reduction of pile length, derig of crawler crane and load testing rotary test piles.

- 1.1.6 Two (2) dust monitors are installed around the worksites, where demolition, groundworks, construction, track out and materials management activities are underway. These sites returned a medium or 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 5. 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 (August 2020). All results were in line with expected ranges.
- 1.1.10 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.
- 1.1.11 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. However, based on the results to date, no unexpected values were recorded during the monitoring period.
- 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, relating to air quality, during this reporting period (August 2020).

Appendix A – Worksites and Monitoring Locations

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




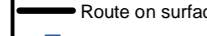



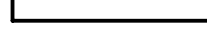
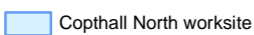
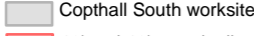
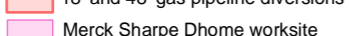

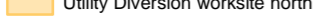
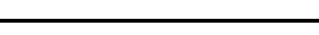


- Legend**
-  Route in tunnel
 -  Route on surface
 -  Diffusion tube monitoring location
 -  Dust monitoring location
 -  Trunk Main Diversion Route
 -  West Ruislip Portal
 -  Cophall North worksite
 -  Cophall South worksite
 -  18' and 48' gas pipeline diversions
 -  Merck Sharpe Dhome worksite
 -  Utility Diversion worksite south
 -  Utility Diversion worksite north

Figure Number

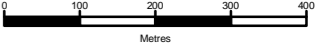
Figure Name
**Worksites and Monitoring locations in LBH
 (sheet 1)**

London Borough of Hillingdon

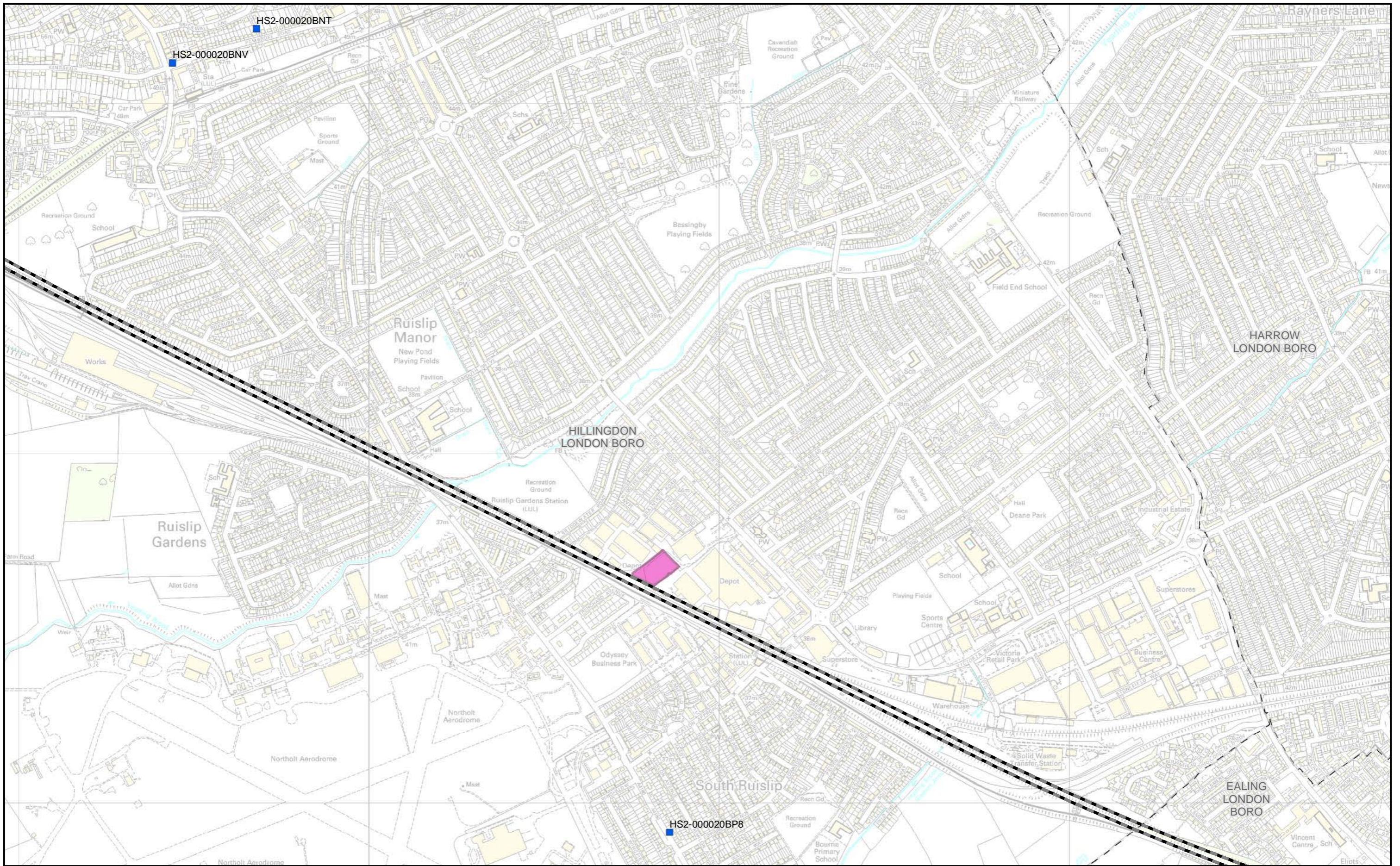
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- Legend**
- Route in tunnel
 - Route on surface
 - Diffusion tube monitoring location
 - South Ruislip Vent Shaft

Figure Number

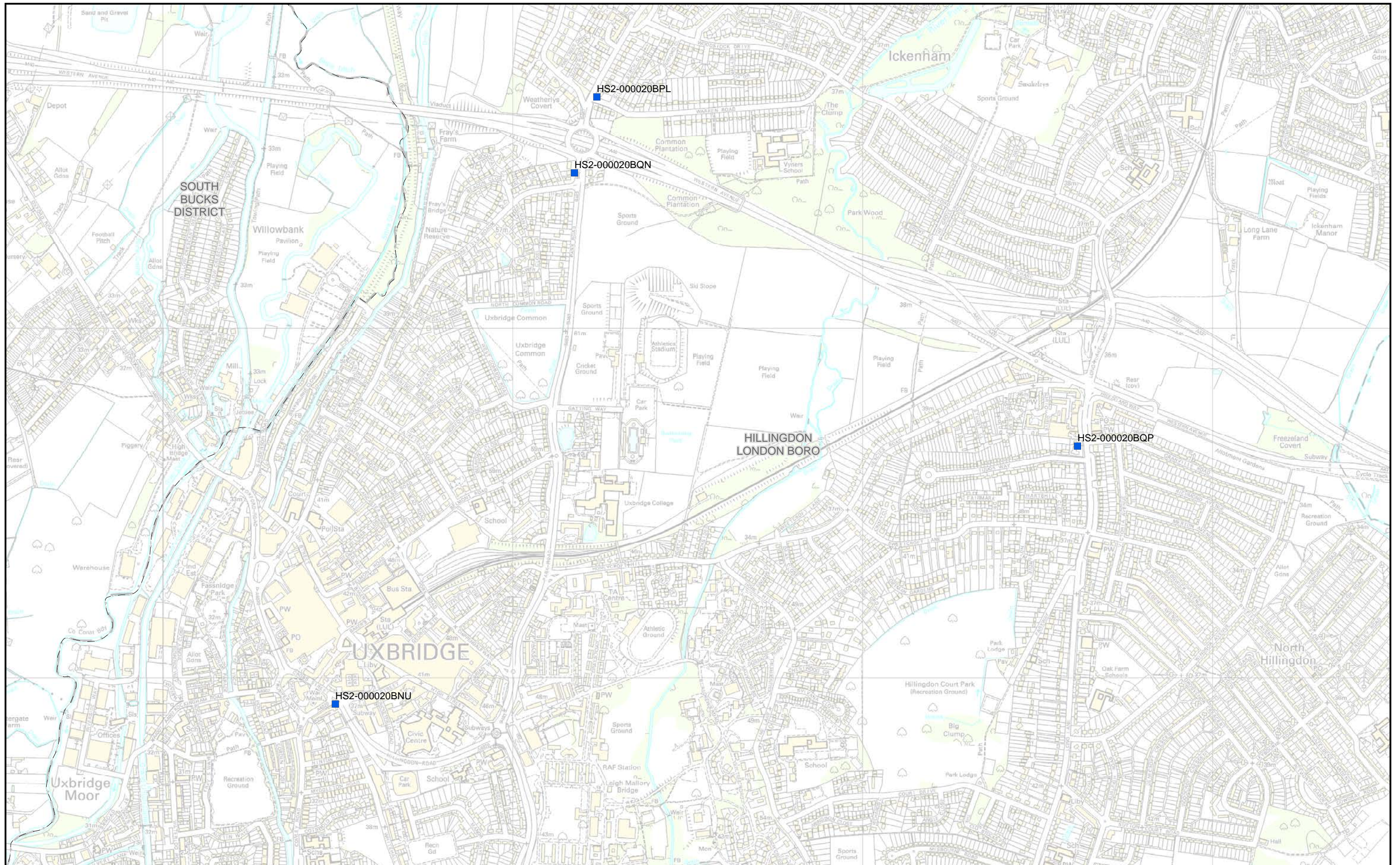
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Worksites and Monitoring locations in LBH
 (sheet 2)

London Borough of Hillingdon

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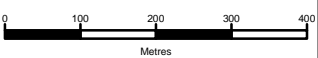
- Legend**
- Route in tunnel
 - Route on surface
 - Diffusion tube monitoring location

Figure Number
Figure Name
Worksites and Monitoring locations in LBH (sheet 3)
London Borough of Hillingdon

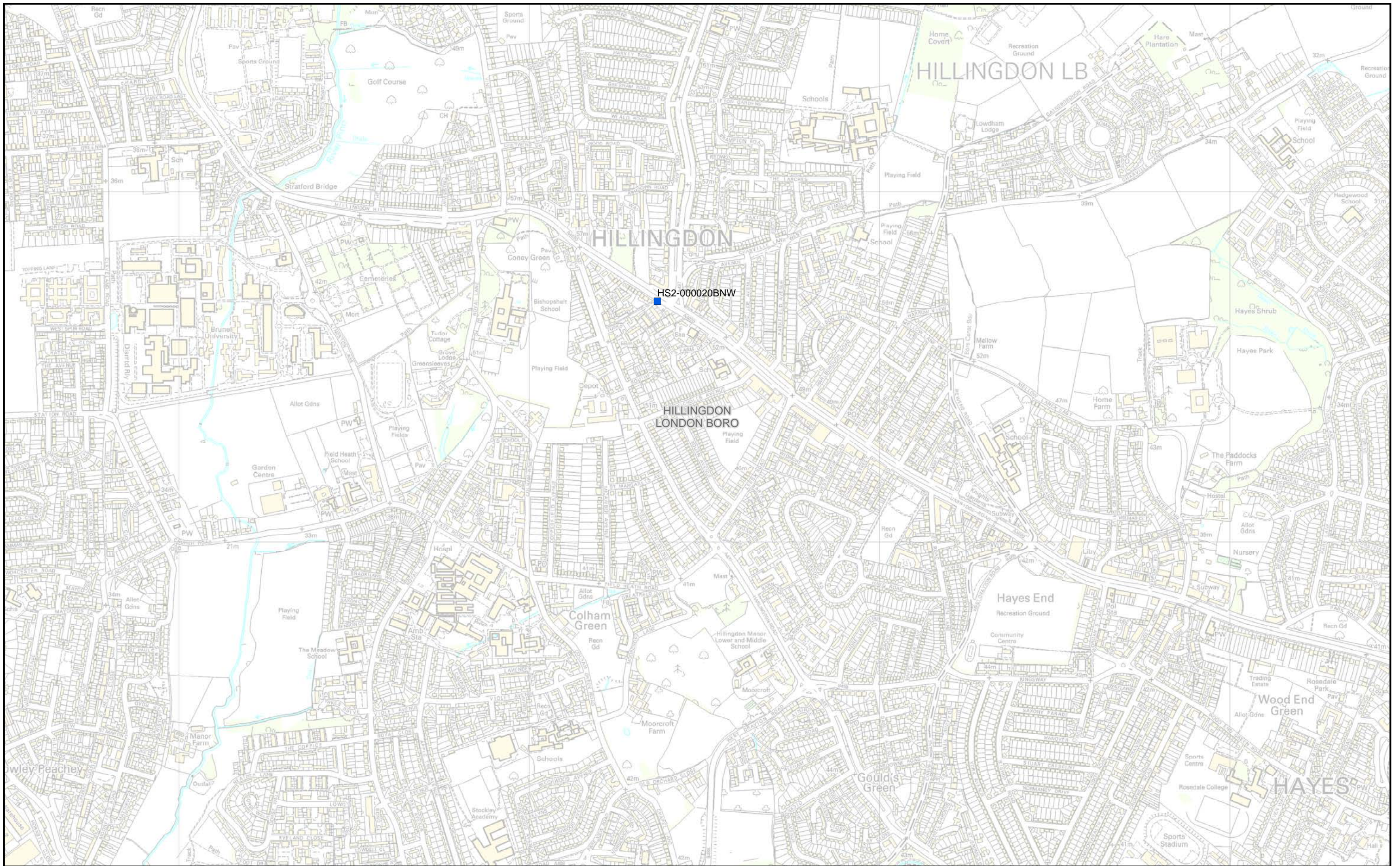

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- Legend**
- Route in tunnel
 - Route on surface
 - Diffusion tube monitoring location

Figure Number
Figure Name Worksites and Monitoring locations in LBH (sheet 4)
London Borough of Hillingdon

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Figure 5: Colne Valley Viaduct (CVV), Dews Lane and LTP2 Worksites



Appendix B – Dust Monitoring Results

Table 1: Dust monitoring locations and August 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 (%)
AQ040	508328, 186880	West Ruislip Golf Course	M	Yes	N	13.2	2.0	73.8	0	96.4
HOAC-AQMP ₁ -HC	505594, 187801	On the western boundary of HOAC at Dews Lane	M	Yes	Yes	16.0	2.0	112.2	0	100.0

Figure 6: Construction dust 1-hour mean indicative PM₁₀ concentration for dust monitor AQ040

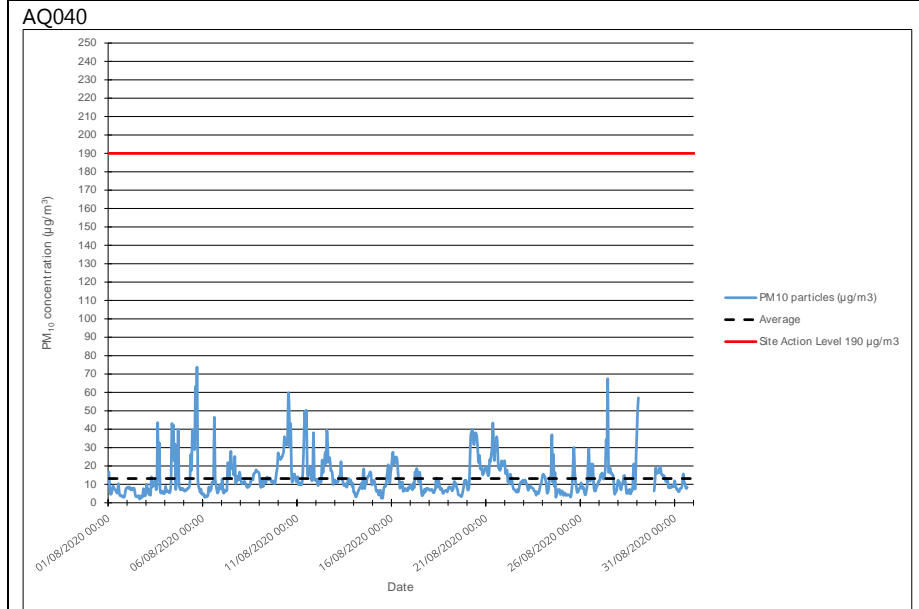
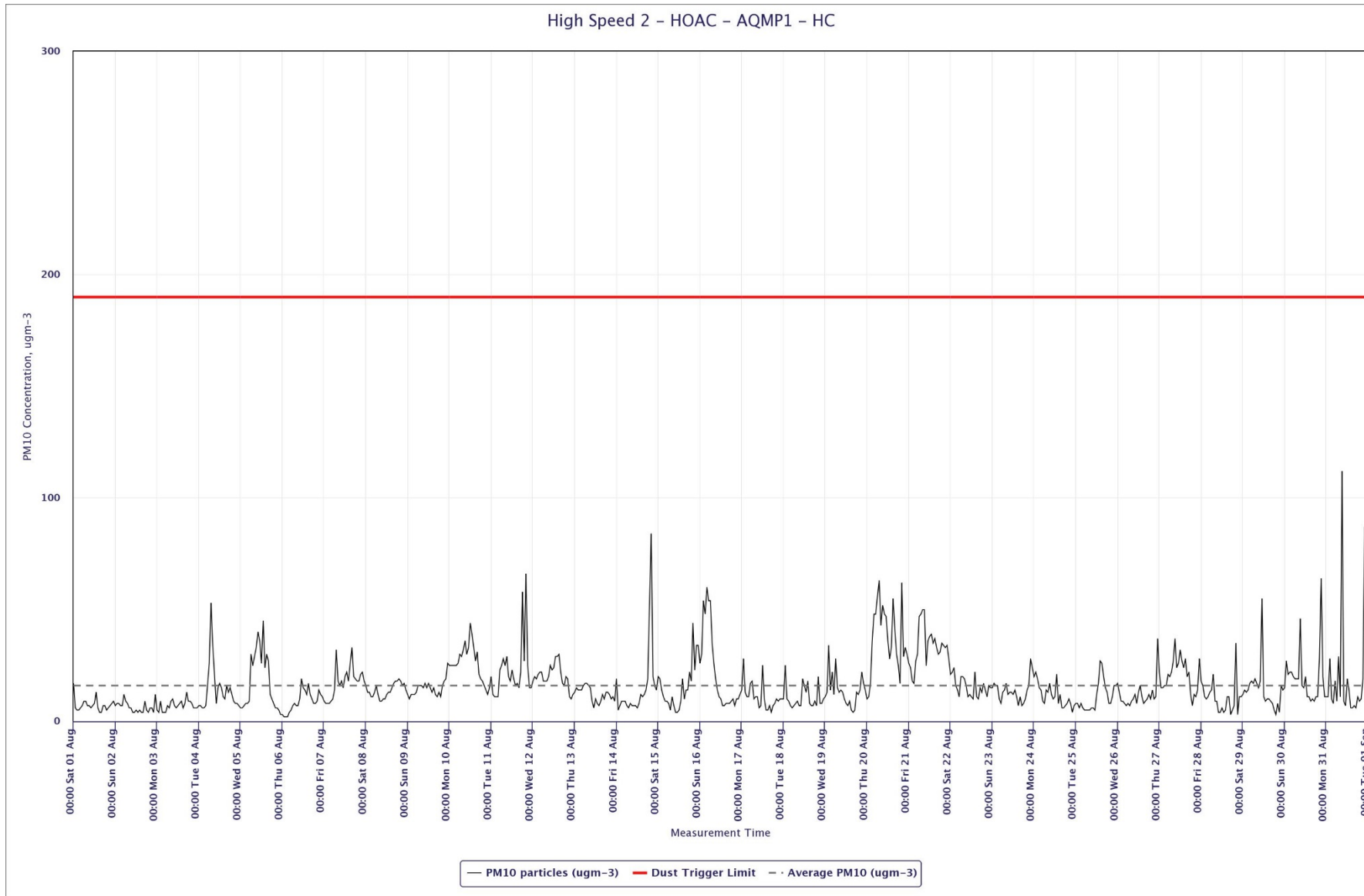


Figure 2: Continuous dust 1-hour mean indicative PM₁₀ concentration for HOAC-AQMP1-HC for August 2020



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 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						24
HS2-000020BNU	Cowley Road sign post at junction with Hillingdon Road	505492, 183926	49	46	No data			33	31						40
HS2-000020BNV	High Street sign post at junction with Pembroke Road	509439, 187117	45	33	No data			32	26						34
HS2-000020BNW	Signpost on A4020 Uxbridge Road at junction with Long Lane	507365, 182687	43	32	No data			35	22						33
HS2-000020BPK	Lamp post in crescent off Swakeleys Road	506542, 186037	40	34	No data			27	28						32
HS2-000020BPL	Warren Road sign post on corner of Swakeleys Road and Warren Road	506240, 185660	51	40	No data			28	28						37
HS2-000020BPN	Lamp post on B467	506767, 186224	41	30	No data			24	21						29
HS2-000020BQH	Lamp post on High Road Ickenham	508451, 186879	44	37	No data			27	24						33

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
HS2-000020BQN	Lamp post on Park Road	506176, 185444	47	34	No data			34	26						35
HS2-000020BQP	Sign post on Long Lane	507614, 184663	45	33	No data			30	24						33
HS2-000020BP8	Triplicate site at South Ruislip roadside automatic monitoring station	510858, 184916	39	32	No data			29	22						31