

Air Quality and Dust Monitoring Monthly Report – December 2018

London Borough of Hillingdon



SKANSKA



Department for Transport

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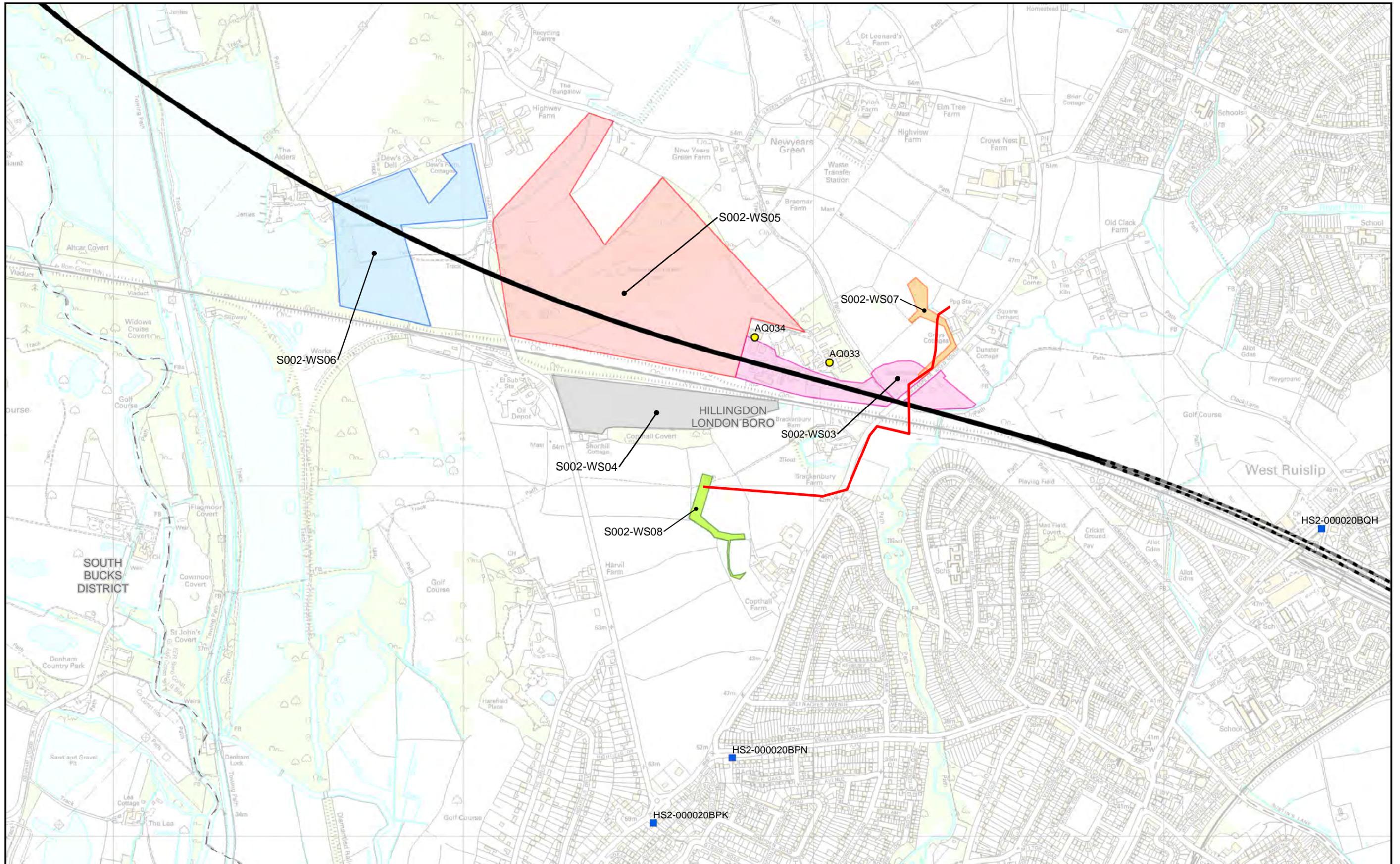
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Monthly Summary

- 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 November and December 2018, respectively.
- 1.1.2 Figure 1 to Figure 4 in Appendix A indicate the current work sites, 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 commenced within the LBH during May 2018 and are expected to be completed by February 2019. The current worksites, as presented in Appendix A, Figure 1, include:
- 18' and 48' gas pipeline diversions, advanced planting and habitat creation, worksite ref. S002-WS05;
 - Merck Sharpe Dohme, demolition works and new access road construction, worksite reference S002-WS03;
 - Utility diversions at Breakspear Road South; work sites ref. S002-WS07 and S002-WS08; and
 - Utility diversions at Copthall North, worksite ref. S002-WS06 and South, worksite ref. S002-WS04.
- 1.1.5 Two (2) dust monitors were installed around worksite S002-WS03, where site establishment works are underway. This site returned a 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.
- 1.1.7 There were twelve (12) exceedances of the dust trigger level recorded during December 2018. Exceedances are presented in Appendix B, Table 2.
- 1.1.8 Diffusion tube monitoring of Nitrogen Dioxide (NO₂) was undertaken at eleven (11) locations in November 2018, around highways within the LBH as part of the management of air quality where significant effects may occur as a result of the scheme.
- 1.1.9 Diffusion tube monitoring results were 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.

- 1.1.10 NO₂ monitoring locations and results are presented in Appendix C, Table 3, together with the 2018 running mean.
- 1.1.11 There were no complaints received, relating to dust or air quality, during this monitoring period.

Appendix A – Worksites and Monitoring Locations



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

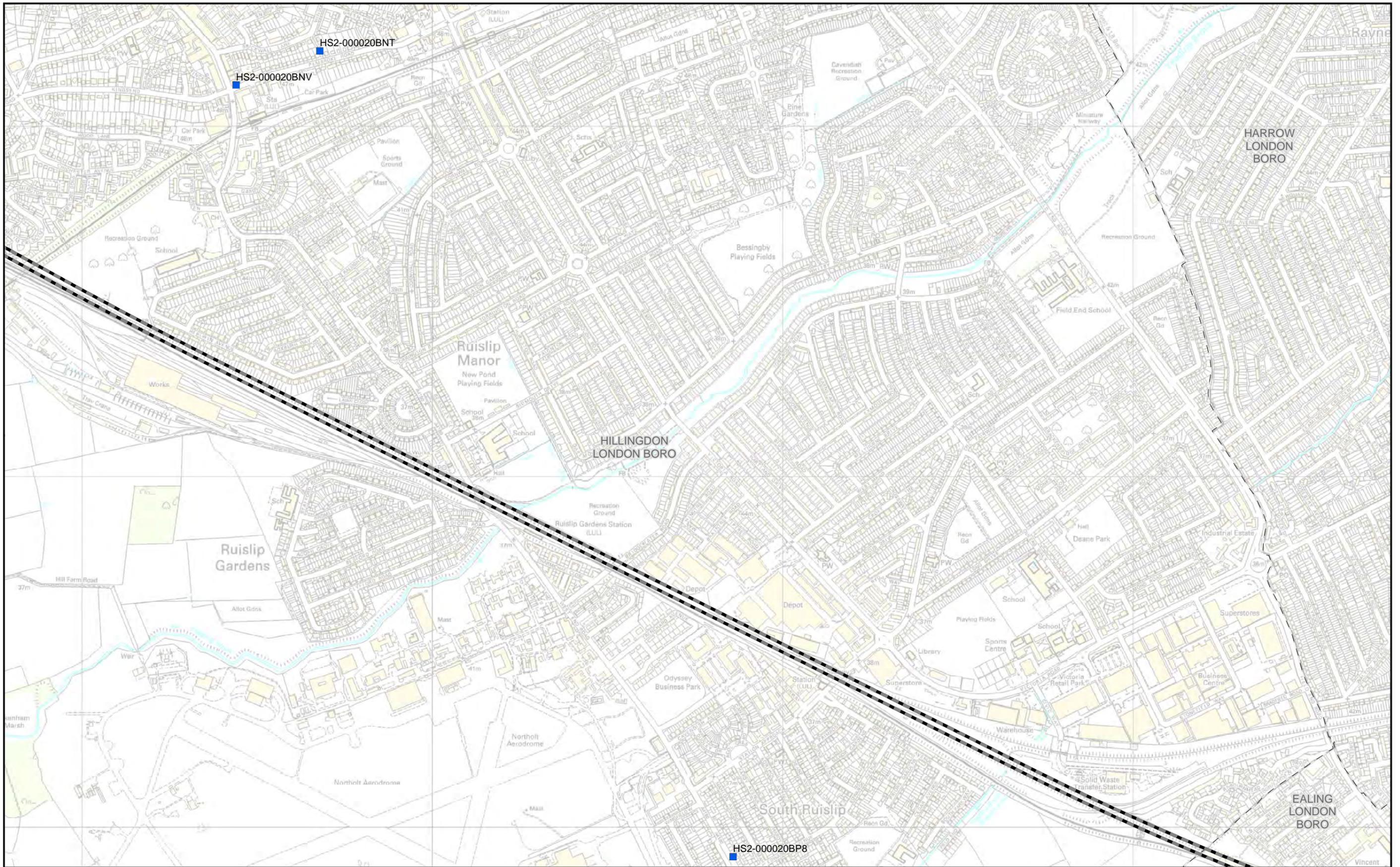
Figure Number
Figure Name
Worksites and Monitoring locations in LBH (sheet 1)
London Borough of Hillingdon

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Legend

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

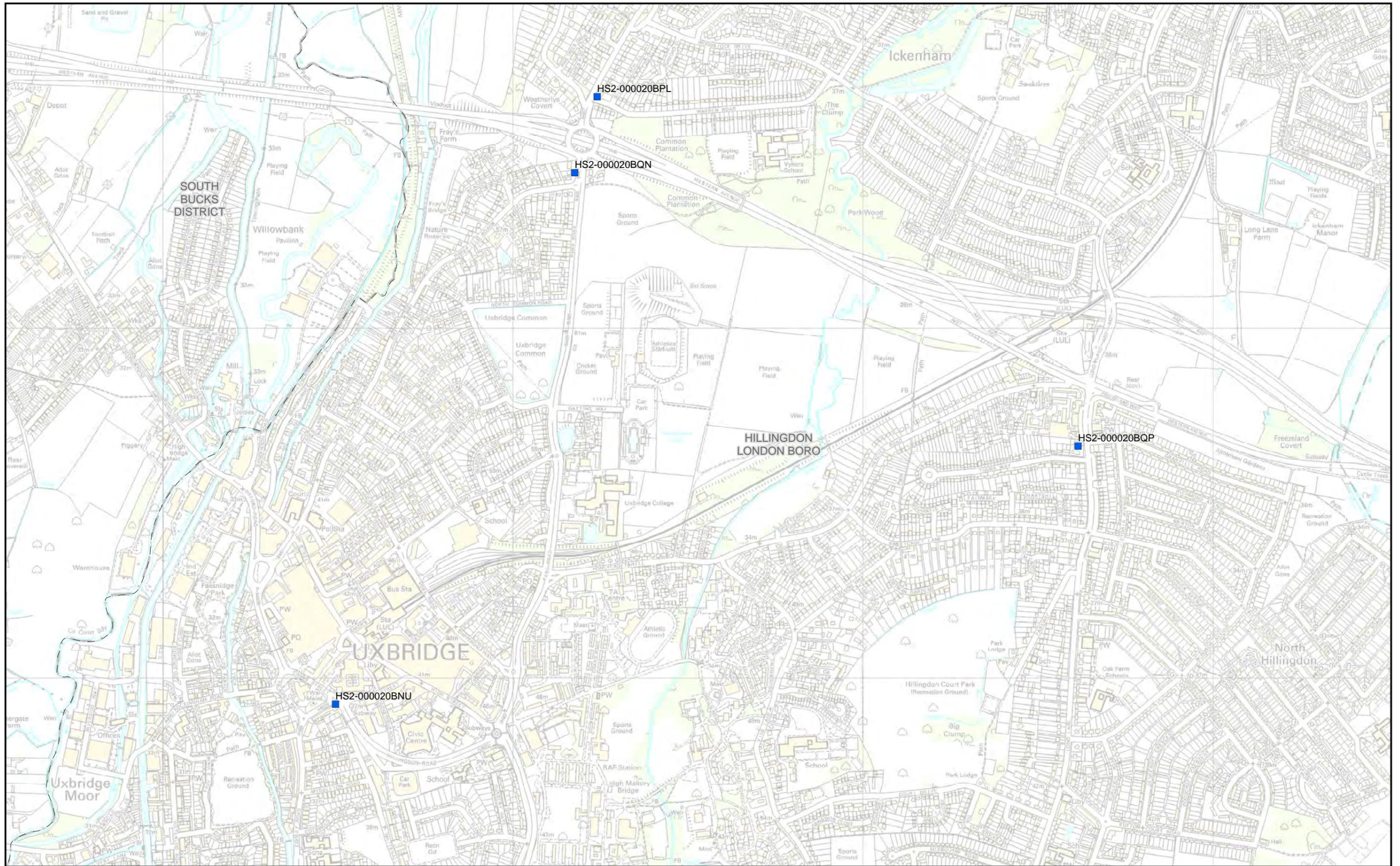
Figure Number	Figure Name
	Worksites and Monitoring locations in LBH (sheet 2)
London Borough of Hillingdon	

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

Figure Number

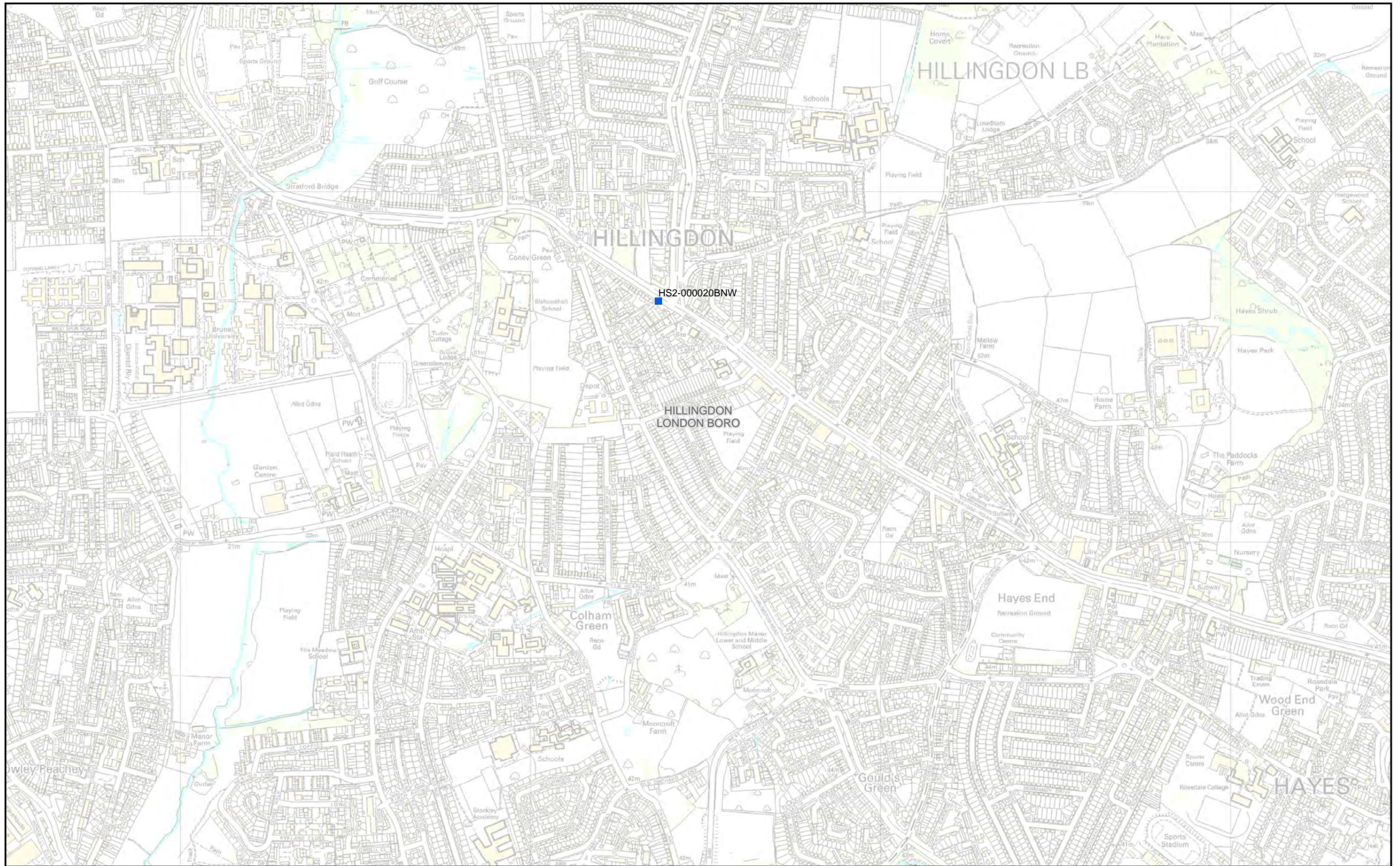
Figure Name
**Worksites and Monitoring locations in LBH
 (sheet 3)**

London Borough of Hillingdon

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

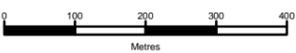
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Figure Name Worksites and Monitoring locations in LBH (sheet 4)
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Appendix B – Dust Monitoring Results

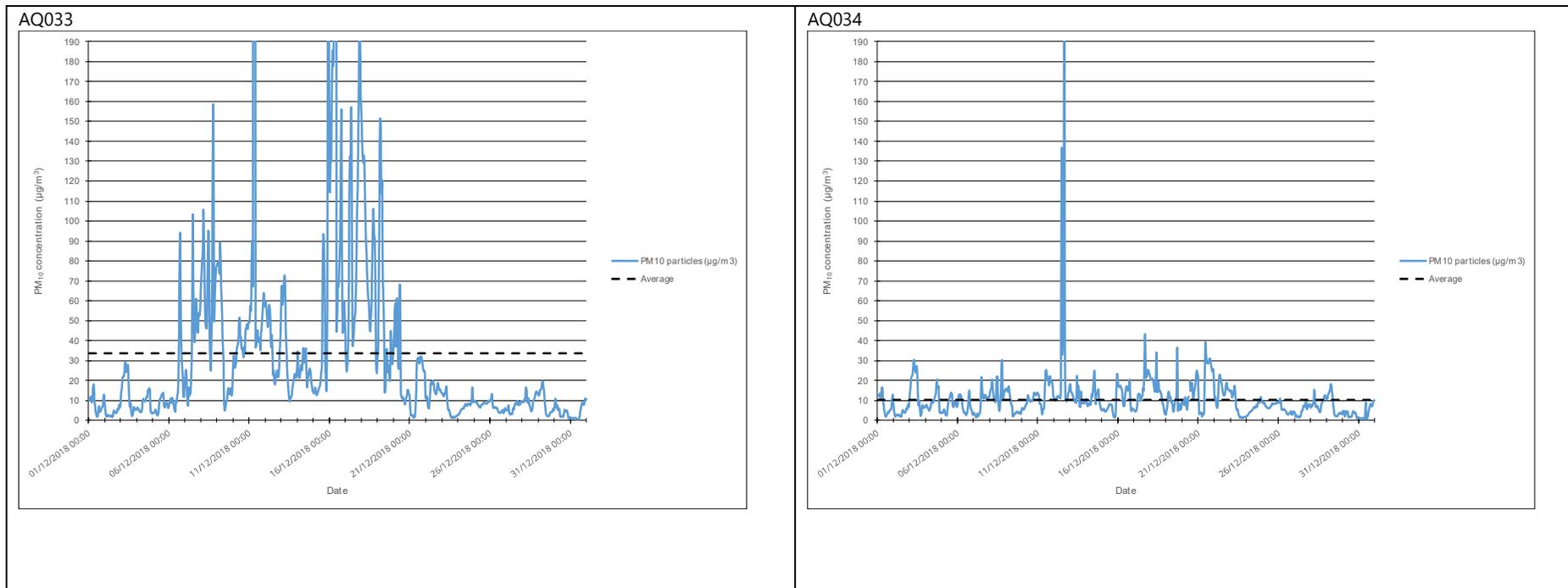
Table 1: Dust monitoring locations and December 2018 Results

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	1-hour data capture (%)
AQ033	507045, 187352	Merck Sharp Dohme, Building 24	H	Yes	N	33.6	0.6	1,207.9	11	100.0
AQ034	506832, 187425	Merck Sharpe Dohme Building 43	H	Yes	N	10.5	0.6	310.3	1	99.9

Table 2: Summary of exceedances of trigger level in December 2018

Period exceeding trigger level	Worksite reference	Monitoring site ID	Complaint reference number (if applicable)	Reason	Resolution
11/12/2018 06:01 – 11/12/2018 09:00 (3 x triggers)	S002-WS03	AQ033	n/a	No works were being undertaken during the trigger alerts. Weather conditions were very misty. Triggers considered to be 'false' and attributable to the high humidity levels and a faulty heated inlet.	Heated inlet on monitor checked, found to be faulty and repaired on the 20/12/18. Monitoring results subsequently return to normal.
15/12/2018 21:01 – 15/12/2018 23:00 (2 x triggers)	S002-WS03	AQ033	n/a		
16/12/2018 06:01 – 16/12/2018 10:00 (4 x triggers)	S002-WS03	AQ033	n/a		
17/12/2018 20:01 – 17/12/2018 22:00 (2 x triggers)	S002-WS03	AQ033	n/a		
12/12/2018 15:01 – 12/12/2018 16:00 (1 x trigger)	S002-WS03	AQ034	n/a	Demolition rubble was being moved in the area adjacent to the monitor near Building 43. Although the dust cannon was in operation in the location it was not sufficiently covering the works area.	Work was stopped and the dust cannon repositioned to ensure the entire working area was dampened down before working started again. No further triggers relating to these activities were received.

Figure 5: 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 2018 (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	39	35	34	29	24	21	23	24	24	26	35		29
HS2-000020BNU	Cowley Road sign post at junction with Hillingdon Road	505492, 183926	58	52	51	49	48	38	51	42	49	48	46		48
HS2-000020BNV	High Street sign post at junction with Pembroke Road	509439, 187117	48	51	50	45	49	Tube missing	47	41	39	41	47		46
HS2-000020BNW	Signpost on A4020 Uxbridge Road at junction with Long Lane	507365, 182687	50	56	57	53	60	53	50	38	37	41	44		49
HS2-000020BPK	Lamp post in crescent off Swakeleys Road (installed at end of January)	506542, 186037	No data	42	39	34	35	32	42	34	32	46	41		38
HS2-000020BPL	Warren Road sign post on corner of Swakeleys Road and Warren Road (installed at end of January)	506240, 185660	No data	48	46	43	39	33	52	44	Tube missing	Tube missing	46		44

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
HS2-000020BPN	Lamp post on B467 (installed at end of January)	506767, 186224	No data	Tube missing	35	34	32	27	32	30	28	33	39		32
HS2-000020BQH	Lamp post on High Road Ickenham	508451, 186879	49	49	43	41	47	39	49	37	36	44	48		44
HS2-000020BQN	Lamp post on Park Road (installed at end of January)	506176, 185444	No data	52	54	49	56	47	60	48	50	51	62		53
HS2-000020BQP	Sign post on Long Lane (installed at end of January)	507614, 184663	No data	45	50	37	50	38	50	39	38	43	53		44
HS2-000020BP8	Triplicate site at South Ruislip roadside automatic monitoring station (installed at end of January)	510858, 184916	No data	37	36	35	46	40	46	36	38	36	45		40