HS2

November 2019

Air Quality and Dust Monitoring Monthly Report – November 2019

London Borough of Hillingdon

COSTAIN SKANSKA

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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 October and November 2019 respectively.

1.1.2 Figure 1 to Figure 4 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 during May 2018 and are expected to be completed by March 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, 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, completed worksite ref. S002-WS03;
- Utility diversions at Breakspear Road South; worksites ref. S002-WS07 and S002-WS08;
- Utility diversions at Copthall North, worksite ref. S002-WS06 and South, worksite ref. S002-WS04;
- Haul Road construction and site compound and vegetation clearance at West Ruislip Golf Course site, worksite ref. S002-WS09; and
- West Ruislip Portal site mobilisation and site set up, worksite ref: S002-WS09;

1.1.5 One (1) dust monitor is installed around worksite S002-WS03, where limited demolition works are underway. This site returned a high dust risk rating.

1.1.6 The dust monitoring location and results are presented in Appendix B, Table 1 together with line charts of monthly data from the dust monitor. 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.

1.1.7 The trigger level of 190 µg/m^3, 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.

1.1.8 There were no (0) dust trigger alerts recorded during this monitoring period (November 2019). All results were in line with expected ranges.

1.1.9 Diffusion tube monitoring of Nitrogen Dioxide (NO_2) was undertaken at eleven (11) locations in October 2019, around highways within the LBH as part of the management of air quality where significant effects may occur as a result of the scheme.

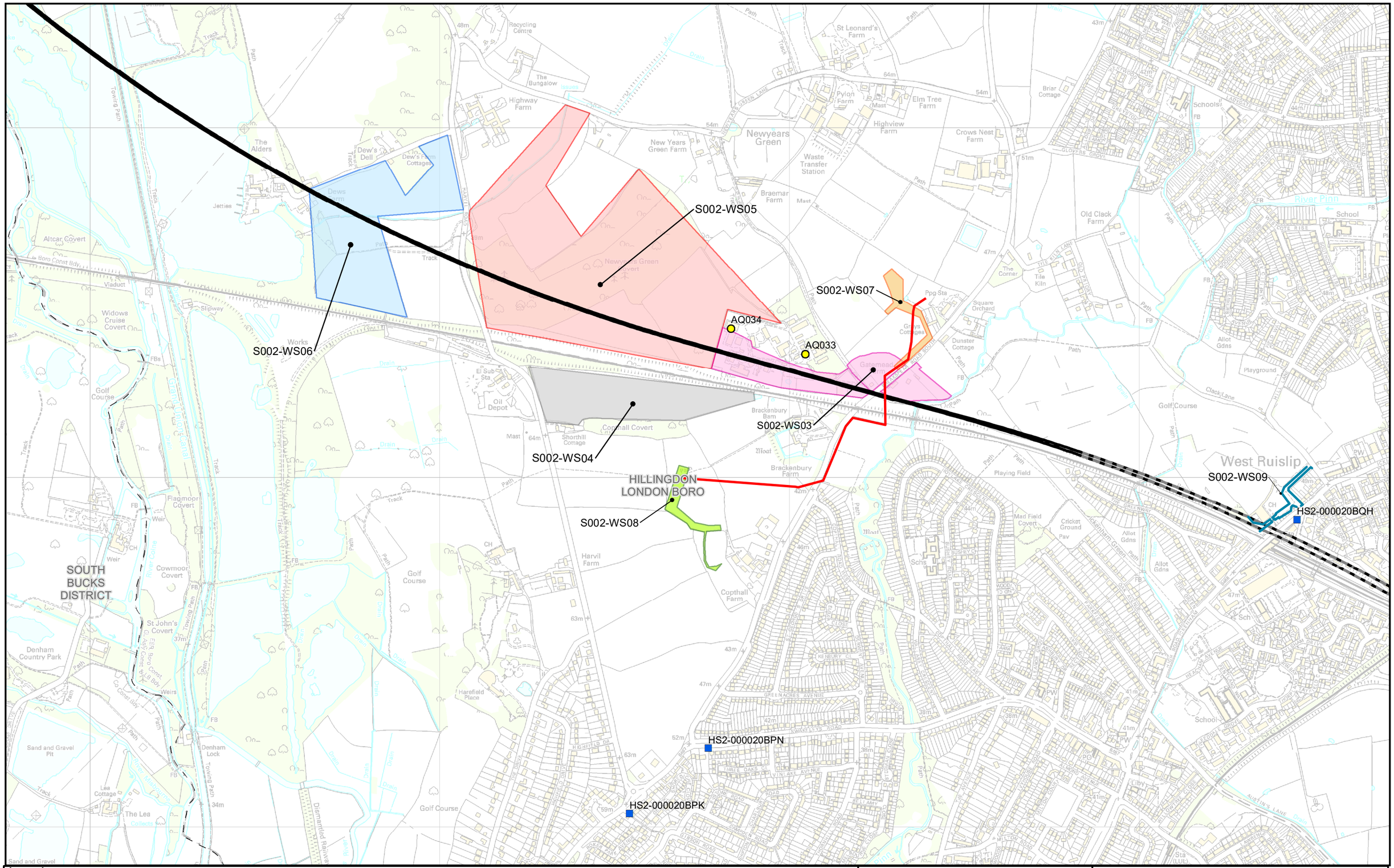
1.1.10 Diffusion tube monitoring results are provided from the laboratory analysis, and therefore still require various analysis and adjustments to be undertaken. Final corrected results will be presented and described in the annual report. However, based on the results to date, no unexpected values were recorded during the monitoring period.

1.1.11 NO_2 monitoring locations and results are presented in Appendix C, Table 2, together with the 2019 running mean.

1.1.12 There were no (0) complaints received, relating to air quality, during this monitoring period (November 2019).

Appendix A – Worksites and Monitoring Locations

Figure 1 to Figure 4: Current monitoring locations within the LBH



Legend

- Route in tunnel
- Route on surface
- Dust monitoring location
- Diffusion tube monitoring location
- Trunk Main Diversion Route
- West Ruislip Golf Course
- 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

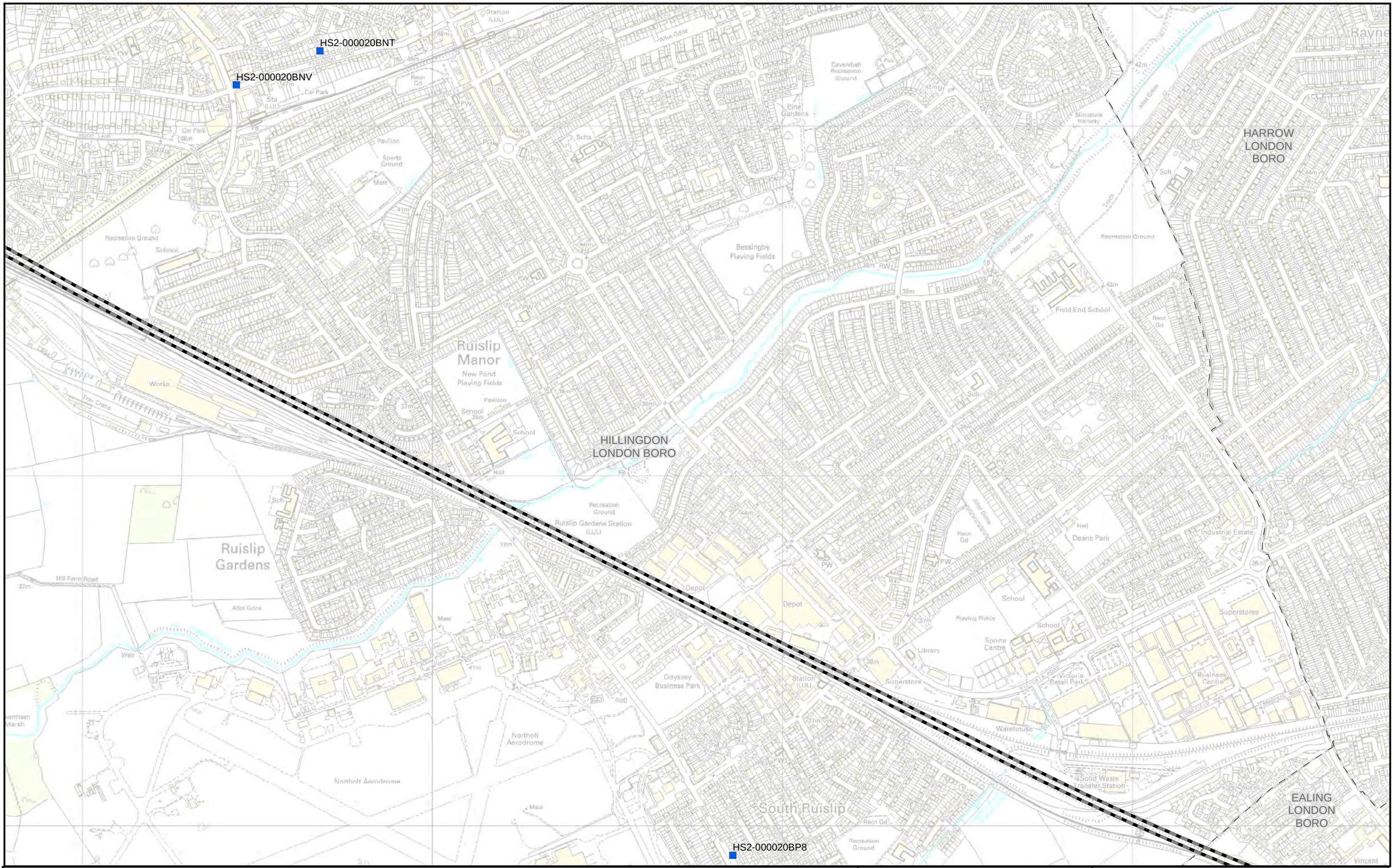
Worksites and Monitoring locations in LBH (sheet 1)

London Borough of Hillingdon

Scale at A3: 10,000

0 100 200 300 400 Metres

Map Number: 1EW02-CSJ-EV-REP-S000-000017_appA_fig1.pdf **Date:** 09/04/19



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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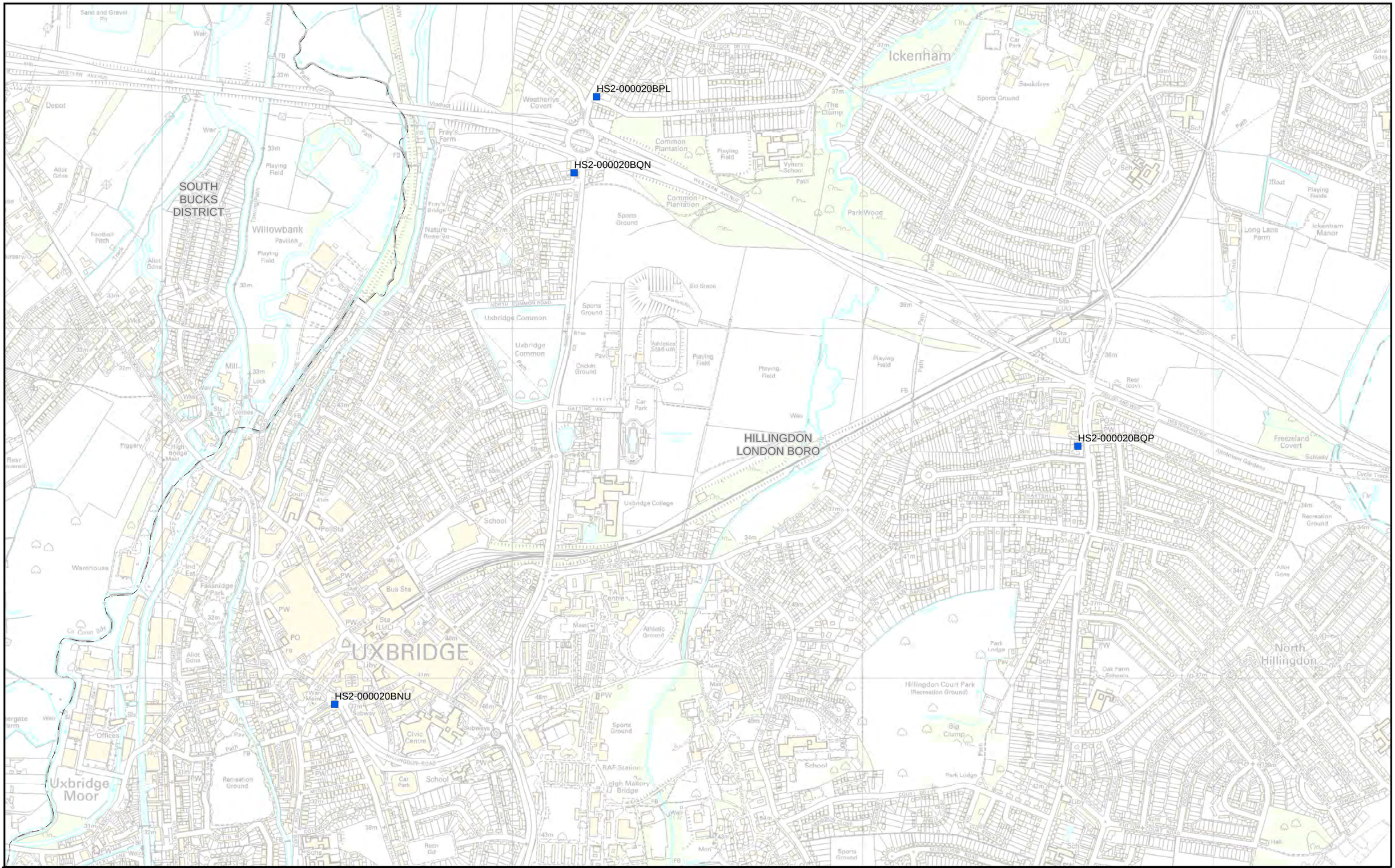
Scale at A3: 10,000

0 100 200 300 400 Metres

Map Number: 1EW02-CSJ-EV-REP-S000-000017_appA_fig1.pdf **Date:** 13/07/18



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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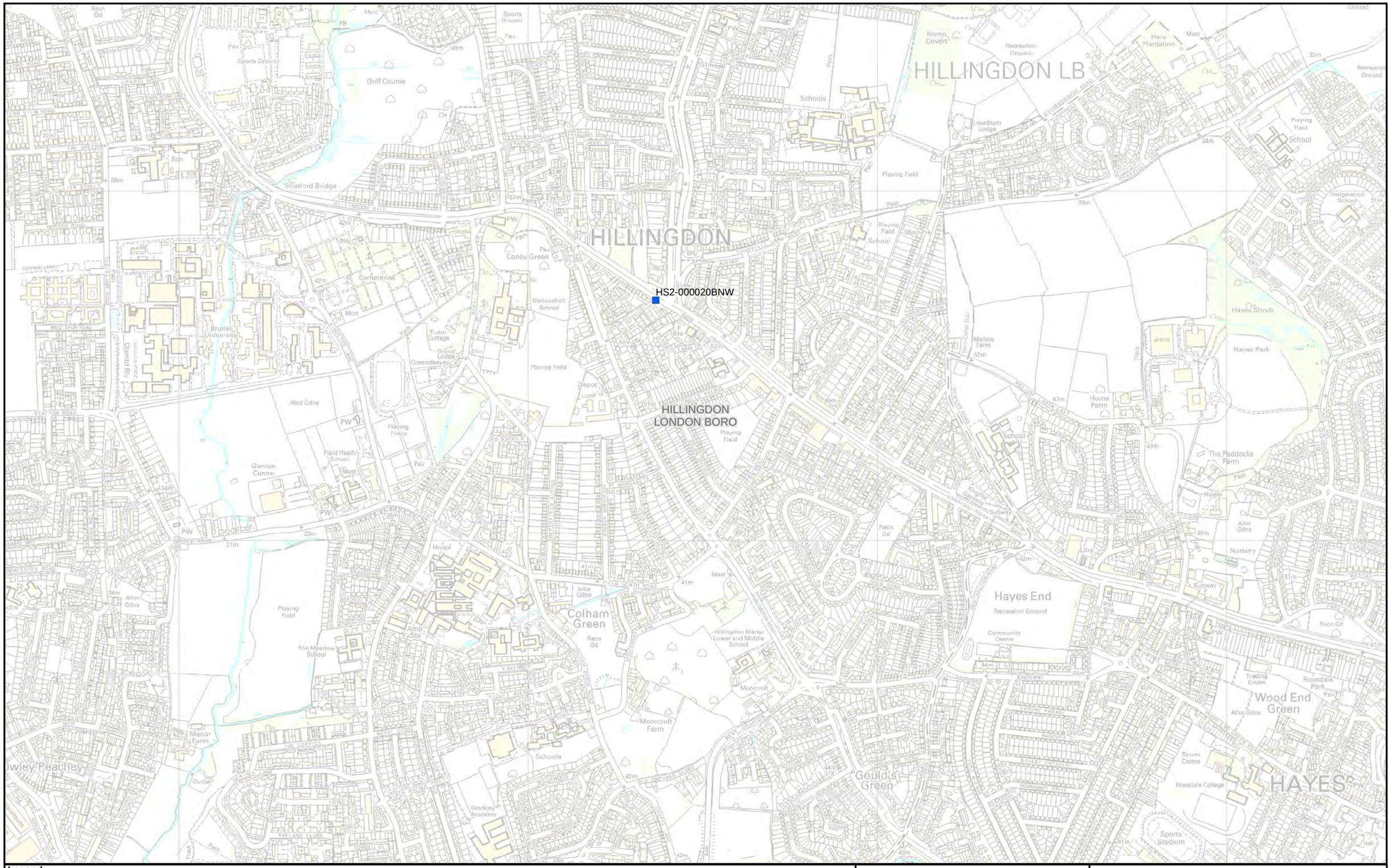


Legend

- 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

Scale at A3: 10,000

0 100 200 300 400

Metres

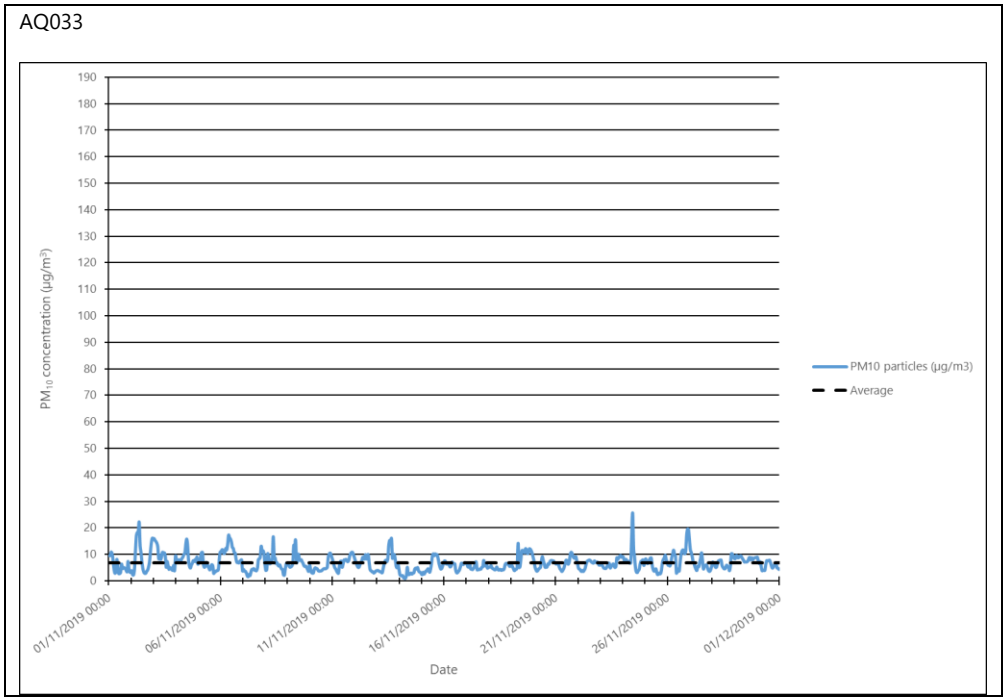
Map Number: 1EW02-CSJ-EV-REP-S000-000017_appA_fig1.pdf **Date:** 13/07/18

Appendix B – Dust Monitoring Results

Table 1: Dust monitoring locations and November 2019 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 ($\mu g/m^3$)	Minimum 1-hour PM_{10} concentration ($\mu g/m^3$)	Maximum 1-hour PM_{10} concentration ($\mu g/m^3$)	Number of 1-hour periods exceeding trigger level of 190 $\mu g/m^3$	Data capture (%)
AQ033	507045, 187352	Merck Sharp Dohme, Building 24	H	Yes	Y	6.8	0.9	25.7	0	100.0

Figure 5: Construction dust 1-hour mean indicative PM_{10} concentration for dust monitors



Appendix C – Air Quality Monitoring Results

Table 2: NO_2 monitoring locations around highways, NO_2 concentrations and monthly monitoring results with running mean for 2019 (µg/m^3)

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	34	41	28	26	20	23	17	22	25	27			26
HS2-000020BNU	Cowley Road sign post at junction with Hillingdon Road	505492, 183926	47	49	41	38	39	43	36	46	46	46			43
HS2-000020BNV	High Street sign post at junction with Pembroke Road	509439, 187117	46	47	38	45	27	39	34	35	37	40			39
HS2-000020BNW	Signpost on A4020 Uxbridge Road at junction with Long Lane	507365, 182687	54	47	41	50	38	41	36	32	42	42			42
HS2-000020BPK	Lamp post in crescent off Swakeleys Road	506542, 186037	45	48	39	31	33	28	34	33	35	34			36
HS2-000020BPL	Warren Road sign post on corner of Swakeleys Road and Warren Road	506240, 185660	43	61	Tube missing	30	37	36	38	40	38	35			40
HS2-000020BPN	Lamp post on B467	506767, 186224	39	No data	36	31	32	28	26	27	31	34			31
HS2-000020BQH	Lamp post on High Road Ickenham	508451, 186879	51	49	42	38	35	31	35	36	38	43			40

[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	45	54	54	52	40	48	41	37	47	49			47
HS2-000020BQP	Sign post on Long Lane	507614, 184663	43	47	43	48	38	45	38	34	44	44			42
HS2-000020BP8	Triplicate site at South Ruislip roadside automatic monitoring station	510858, 184916	46	44	34	36	29	37	Tubes missing	Tubes missing	39	35			38