HS2

September 2018

Air Quality and Dust Monitoring Monthly Report – September 2018

London Borough of Hammersmith and Fulham

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 Hammersmith and Fulham (LBHF) during August and September 2018 respectively.

1.1.2 Figure 1 and Figure 2 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 LBHF during May 2018, and are expected to be completed by July 2019. The current worksite, as presented in Appendix A, Figure 1, includes:

- Demolition and groundworks at Old Oak Common Depot, worksite ref. S004-WS01.

1.1.5 Four (4) dust monitors were installed around the worksite, where pre-demolition works are underway. This site returned a high dust risk rating, in accordance with the methodology described in the Overview Monitoring Report, available from www.gov.uk/government/collections/monitoring-the-environmental-effects-of-hs2, in line with the IAQM Guidance (2014) on the assessment of dust from demolition and construction activities.

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 Three (3) exceedances of the dust trigger level were recorded during the month of September 2018. However, following investigation it was noted that the exceedance was not related to HS2 site activities. Exceedances are presented in Appendix B, Table 2. All other results were in line with the expected ranges.

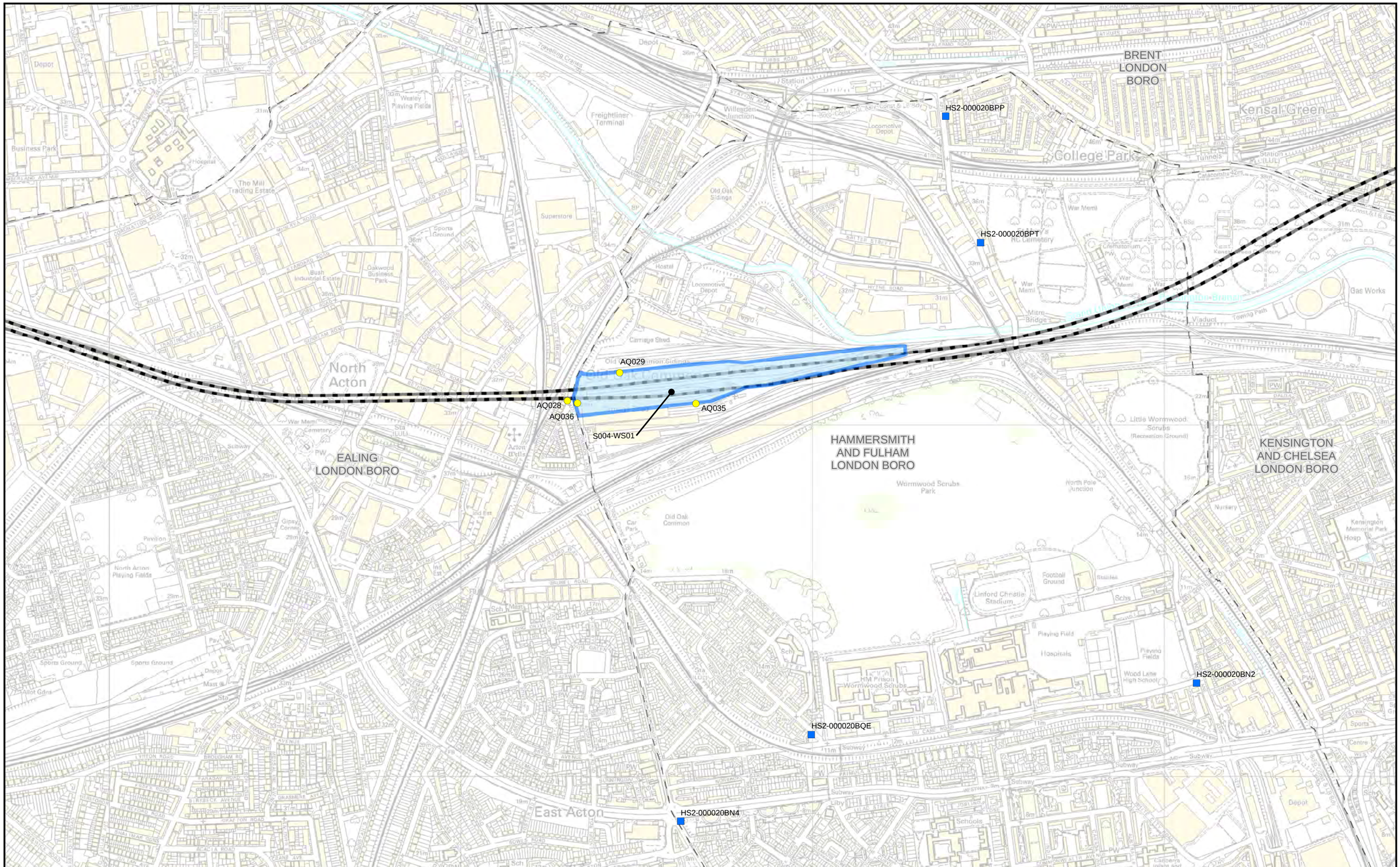
1.1.8 Diffusion tube monitoring of Nitrogen Dioxide (NO_2) was undertaken at seven (7) locations in August 2018, around highways within the LBHF as part of the management of air quality where significant effects may occur as a result the scheme.

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 NO_2 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
- Old Oak Common worksite

Figure Number

Figure Name

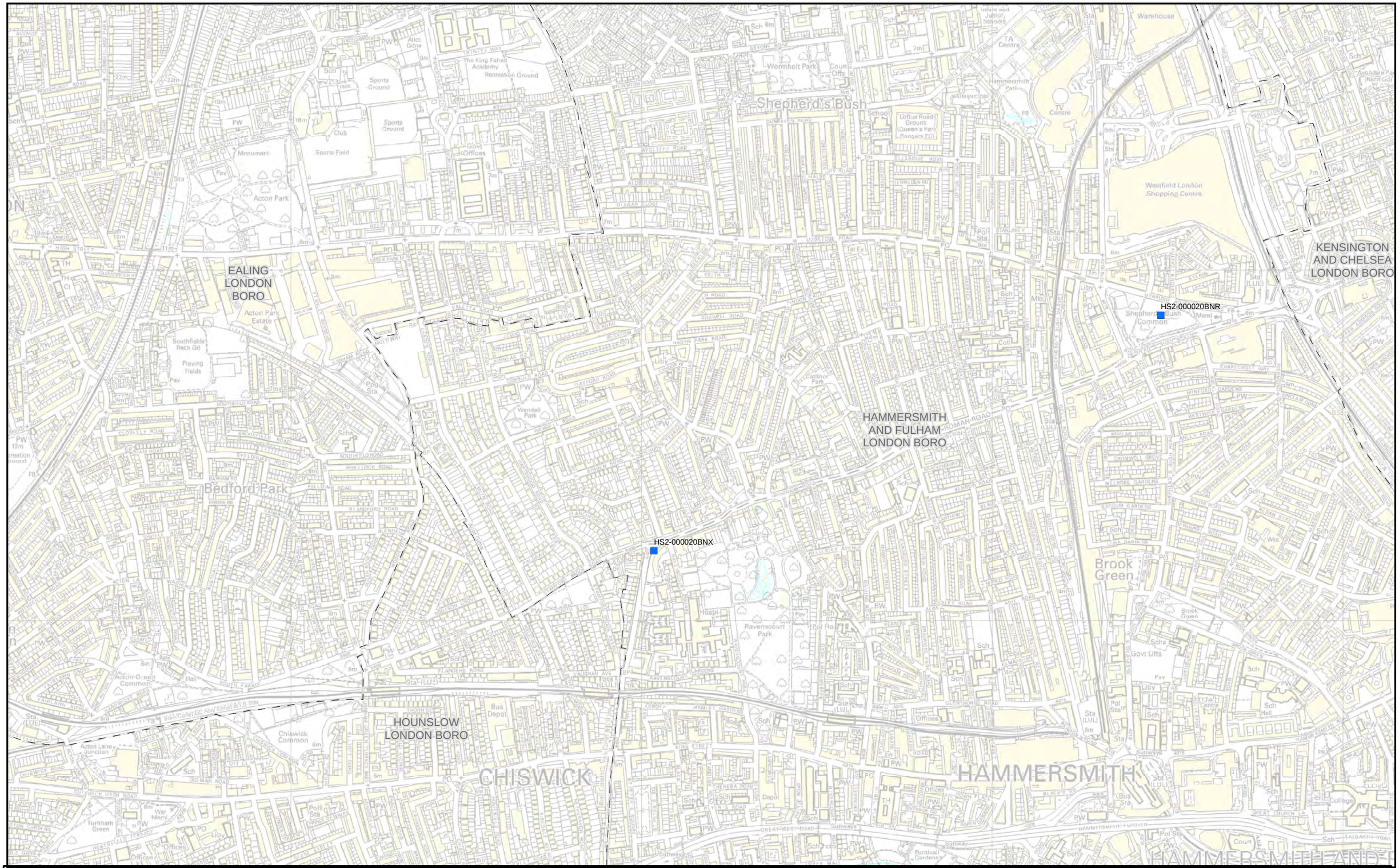
Worksites and Monitoring locations in LBHF (sheet 1)

London Borough of Hammersmith and Fulham

Scale at A3: 10,000

0 100 200 300 400 Metres

Map Number: 1EW02-CSJ-EV-REP-S000-000017_appA_fig1.pdf **Date:** 05/09/18



Legend

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

Figure Number

Figure Name

Worksites and Monitoring locations in LBHF
(sheet 2)

London Borough of Hammersmith and Fulham

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 September 2018 Results

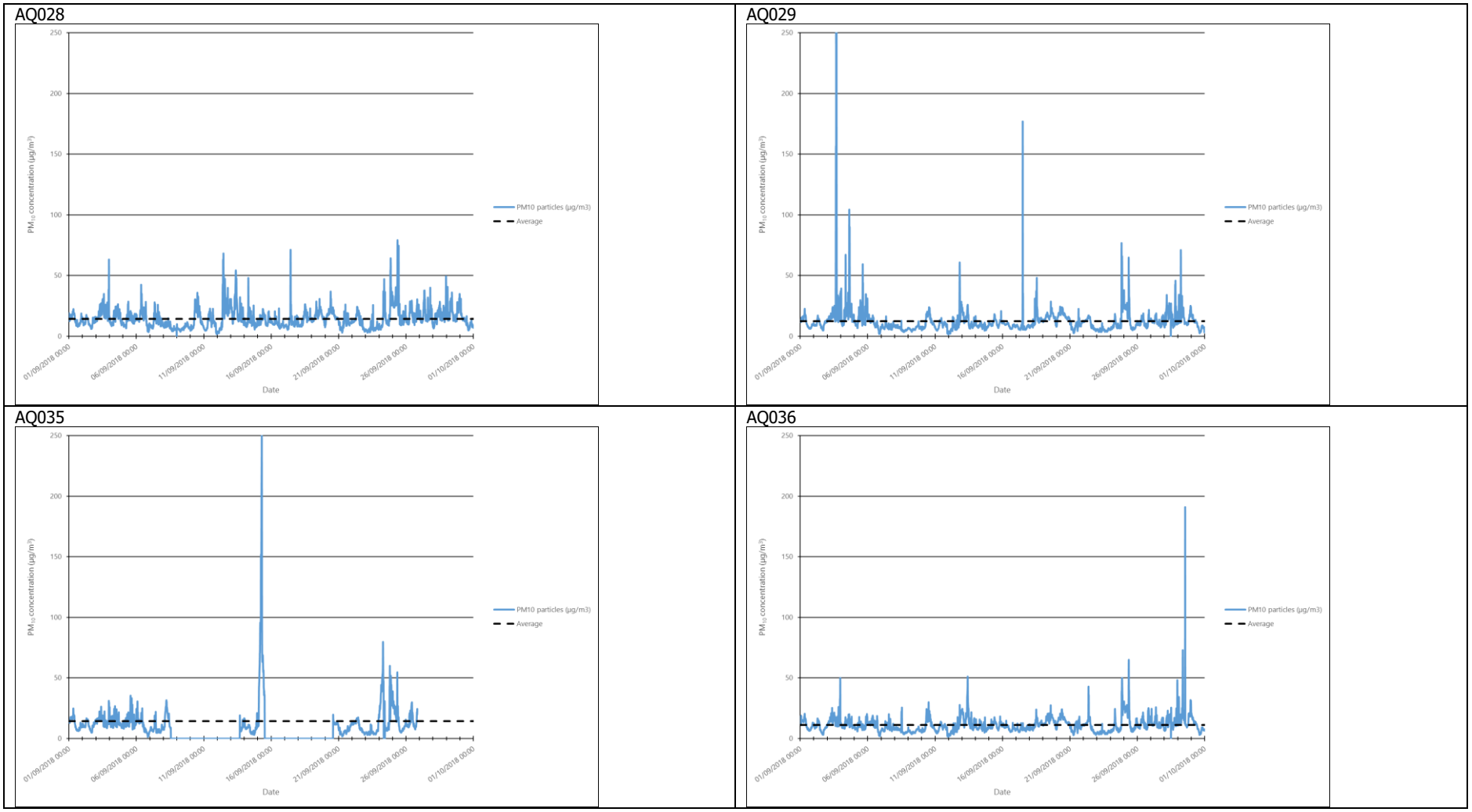
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site[1]	Monitoring site active during period	Change to site since previous period report	Mean 15-minute PM_{10} concentration ($\mu g/m^3$)	Minimum 15-minute PM_{10} concentration ($\mu g/m^3$)	Maximum 15-minute PM_{10} concentration ($\mu g/m^3$)	Number of 15-min periods exceeding trigger level of 250 $\mu g/m^3$	15-min data capture (%)
AQ028	521302, 182067	Wells House Road	H	Yes	Y	14.4	1.7	78.8	0	100.0
AQ029	521451, 182148	Old Oak Common	H	Yes	Y	12.5	1.6	484.6	2	100.0
AQ035	521668, 182060	Old Oak Common	H	Yes	Y	14.5	1.4	252.4	1	51.9
AQ036	521331, 182061	Old Oak Common	H	Yes	Y	11.2	1.4	190.9	0	100.0

[1] The dust risk rating (H – High, M – Medium, L – Low) has been assigned in accordance with the methodology described in the Overview Monitoring Report, available from www.gov.uk/government/collections/monitoring-the-environmental-effects-of-hs2, in line with the IAQM Guidance (2014) on the assessment of dust from demolition and construction activities.

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

Period exceeding trigger level	Worksite reference	Monitoring site ID	Complaint reference number (if applicable)	Reason	Resolution
03/09/2018 15:46 – 03/09/2018 16:00	S004-WS01	AQ029	n/a	Albeit works were being carried out on the depot site, these works were at a significant distance (150-200m) away from the Old Oak Common Lane / Wells House Road boundary. All dust suppression and bowsers were in full operation for these works as standard. There was no notable activity as the cause of these two particular triggers.	n/a
03/09/2018 16:16 – 03/09/2018 16:30	S004-WS01	AQ029			
15/09/2018 07:01 – 15/09/2018 07:15	S004-WS01	AQ035	n/a	Intermittent power supply and changeable weather conditions (dry and wet) meant that debris in the sampling inlet loosened and generated a trigger.	Monitor subsequently serviced.

Figure 3: Construction dust 15-minute mean indicative PM_{10} concentration for dust monitors



Appendix C – Air Quality Monitoring Results

Table 3: NO_2 monitoring locations around highways NO_2 concentrations and monthly monitoring results with running mean for 2018 (µg/m^3)

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean[2]
HS2-000020BN2	Lamp post on Du Cane Road	523092, 181264	61	Tube missing	67	60	59	47	63	54					59
HS2-000020BN4	End of cycle lane sign on Old Oak Road	521625, 180871	56	59	67	49	68	58	55	46					57
HS2-000020BNR	Lamp posts in Shepherd's Bush Common	523481, 179871	54	51	49	41	49	40	37	Tube missing					46
HS2-000020BNX	Signpost on A402 Goldhawk Road	522035, 179199	54	46	53	43	48	42	46	39					46
HS2-000020BPP	Sign post on A219 Scrubs Lane, South of Harrow Road	522378, 182877	50	54	57	52	50	38	49	43					49
HS2-000020BPT	Controlled Zone/Zone Ends road sign on A219 Scrubs Lane, north of Hythe Road	522478, 182517	56	50	51	50	Tube missing	43	51	46					50
HS2-000020BQE	Lamp post next to No 11 Wulfstan Street	521996, 181118	41	38	40	39	37	31	36	33					37

[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.*