March 2023



Air Quality and Dust Monitoring Monthly Report - March 2023 London Borough of Camden

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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 Camden (LBC) during February 2023 and March 2023 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 of 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 5, include:

Skanska Costain Strabag Joint Venture (SCSjv)

Adelaide Road Vent Shaft

- Piling operations; and
- Groundworks.

Euston Scissor Cut

- · Groundworks;
- Piling operations; and
- Materials management.

Euston Throat Retained Cut

- Groundworks;
- Piling operations; and
- Materials management.

Hampstead Road Bridge

• Utilities diversion works.

Euston Cavern

- Piling operations;
- · Groundworks; and
- Materials management.

Mace Dragados Joint Venture (MDjv)

Zone 5

- Barhale, demobilised and relocated to NTH, releasing section of Zone 5 to McGee;
- West wall piles. McGee completed break out of piling guide wall structure and backfilled; and
- McGee, ready to commence pile mat remediation but instructed to stand down.

<u>ITR</u>

- Install of mini beany;
- Drilling hold down bolts for south canopy install;
- Grout column bases to south canopy;
- Bedding chamber covers in place around site;
- Steel landscaping edging set into position;
- Cell web lay out for landscaping works;
- Topsoil lay down around south & east;
- Grading to roads around island area;
- Canopy soffits install to north & south;
- South canopy steel install to complete;
- M&E install on going to canopy soffits;
- Comms cable install for cameras & lampposts;
- Drilling & fitting service brackets to columns incl witness by HS2;
- Install CLT timber roofing onto canopy and protection install; and
- Combi safe edge protection installed for roof works.

<u>NTH</u>

- McGee Demobilised; and
- Constructed pile mat in Ibis slab.

TSS

- Start slipform installation.
- Completed blockwork on B3.
- Continued screeding on B3 & B2.
- Complete ground floor slab & walls.

Maria Fidelis - external

- Strip footing foundation in front of block B poured;
- West Substation painting;
- West Substation earthing installation;
- West Substation screed poured;
- West Substation installation of doors and louvres;
- Triangle basement 500mm ground removal;
- North West ducting installation;
- North corridor ducting installation;

Air Quality and Dust Monitoring Summary Report, March 2023 London Borough of Camden

- Manhole RS2 installation;
- Backfilling in South East corner, some land taken from Candem boundary;
- Firestopping installation between blockwork and steelframe;
- Waterproofing finish detail slab-blockwork;
- Midband cladding installation in North, South, and East; and
- VCL for Corrugated Cladding installation on South façade.

Maria Fidelis - internal

- Continue plasterboard removal; and
- Start fit out works.

Night Surveys

- Structural and MEP surveys carried out on the London underground at Euston Square and Euston Station by Survey Teams (Kilnbridge/Emico);
- Commenced demobilisation works; and
- Completed BT chamber surveys (Blu-3).

Day Surveys

- Noise Insulation works at Drummond, Euston, Starcross, and Cobourg streets and other locations affected by Utilities works – installation of double glazing and mechanical ventilation, asbestos surveys by Adept/Selectaglase. Full demobilisation from the sites;
- Monthly Sensat drone surveys of HS2 extended area. No more planned as far; and
- Completed Ground Investigation survey at Zone 2/5 by Structural Soils.
- 1.1.5 Twenty-two (22) dust monitors are installed around worksites, where works are underway. These sites returned a medium to high dust risk rating.
- 1.1.6 Dust monitoring locations and results are presented in Appendix B, Table 2, 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.
- 1.1.7 The trigger level for PM_{10} concentrations of 190 μ g/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.
- 1.1.8 Dust trigger alerts were recorded during the monitoring period (March 2023) and are reported in Appendix B, Table 3.
- 1.1.9 Data capture was below 90% for multiple monitors in March 2023 due to monitor faults which have since been restored.

Air Quality and Dust Monitoring Summary Report, March 2023 London Borough of Camden

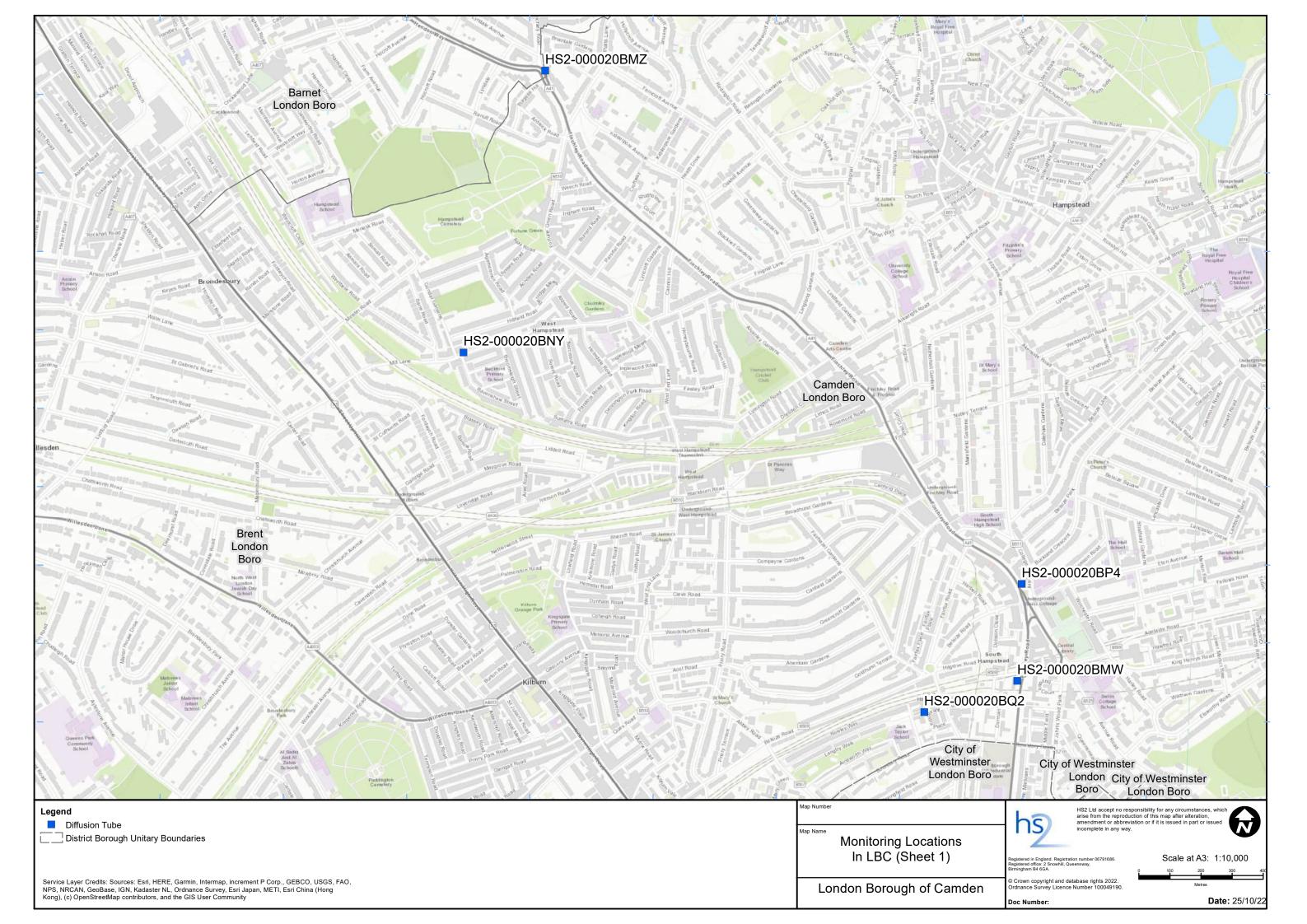
- 1.1.10 Diffusion tube monitoring of Nitrogen Dioxide (NO₂) is undertaken at sixty-four (64) locations around highways within the LBC as part of the management of air quality where significant effects August occur as a result of the scheme.
- 1.1.11 Diffusion tube monitoring results are as provided 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 4, together with the 2023 running mean.
- 1.1.13 Table 1 provides a summary of the complaint information related to dust or air quality received during the reporting period, together with the findings of any related investigations.

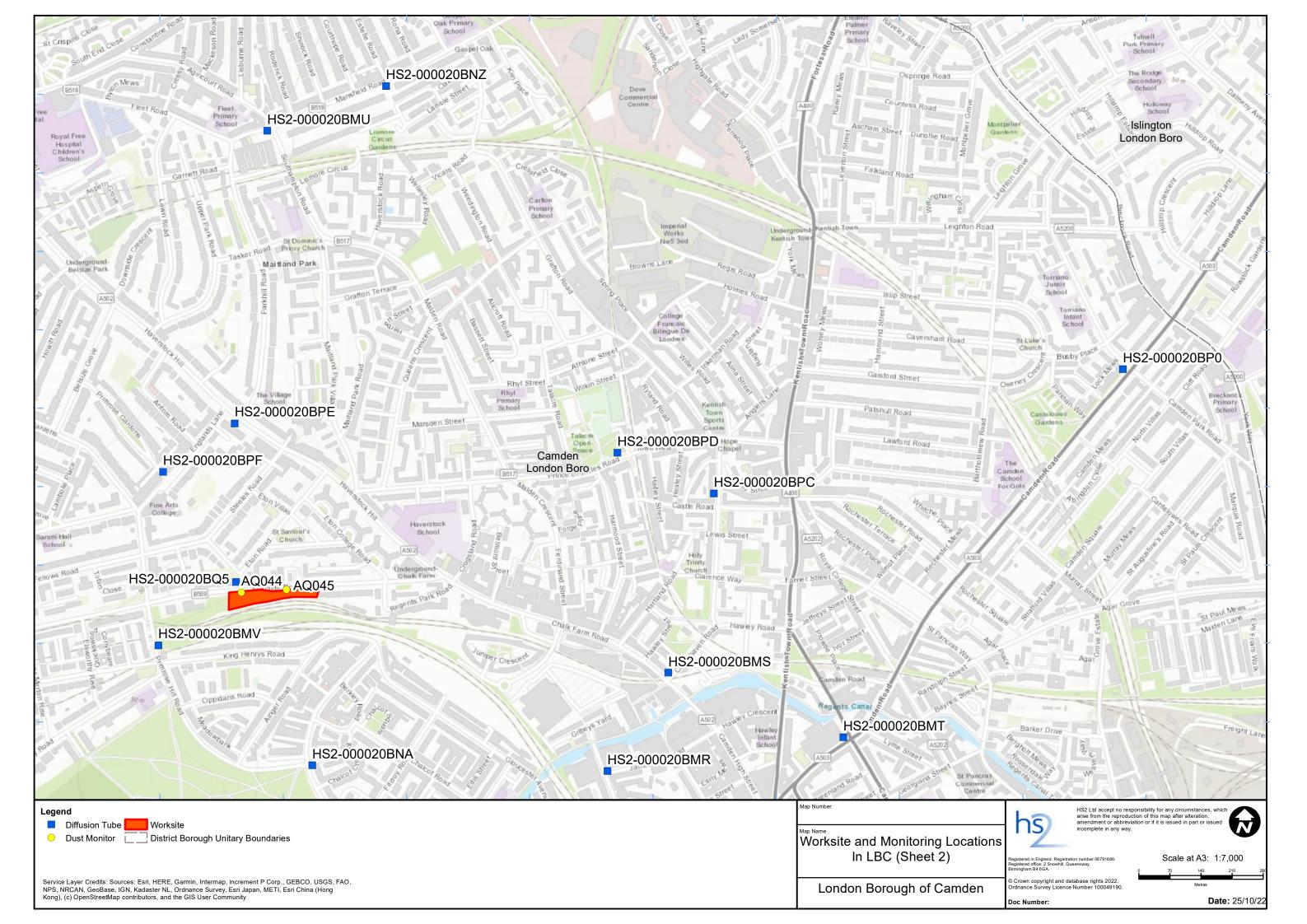
Table 1: Summary of complaints received during March 2023

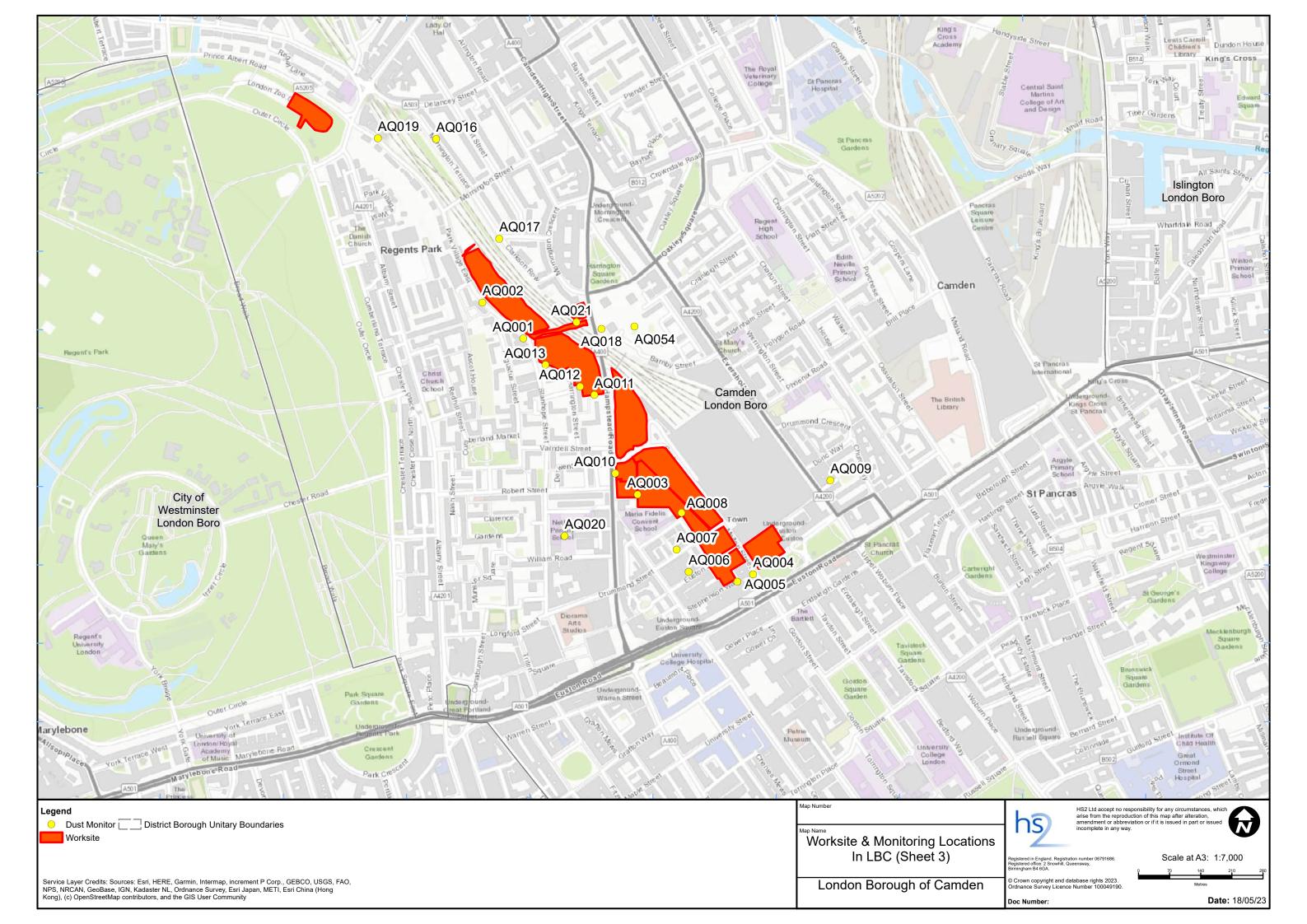
Complaint Reference No.	Worksite Reference	Description of complaint	Results of investigation
		Stakeholder has noticed a	
		high level of pollution due	Monitors have been checked and no
HS2-23-44458-C	N/A	to the diesel generators,	exceedances recorded. This has been relayed
		Idling trucks etc outside of	back to local authority to pass onto the resident.
		property.	

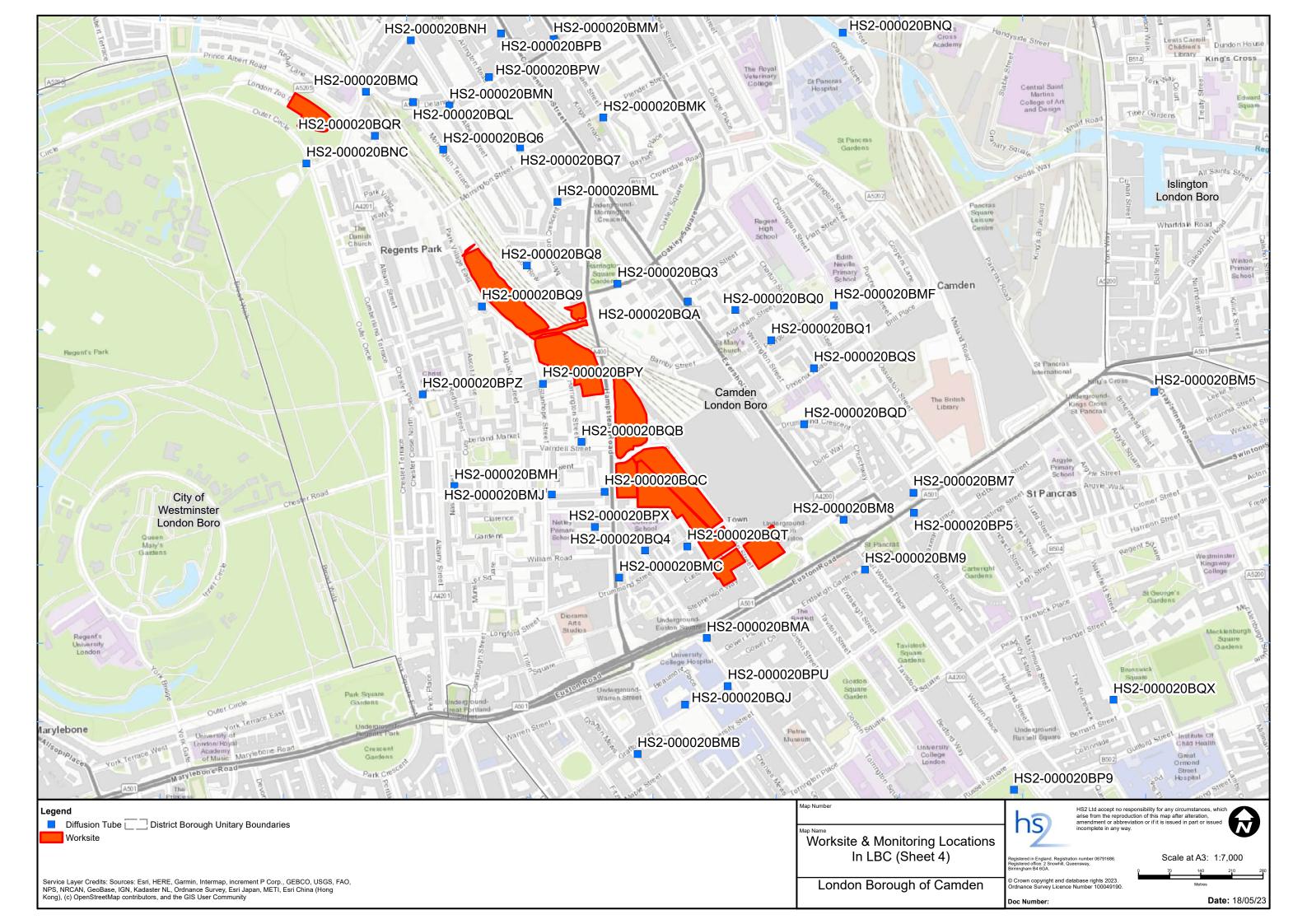
Appendix A - Worksites and Monitoring Locations

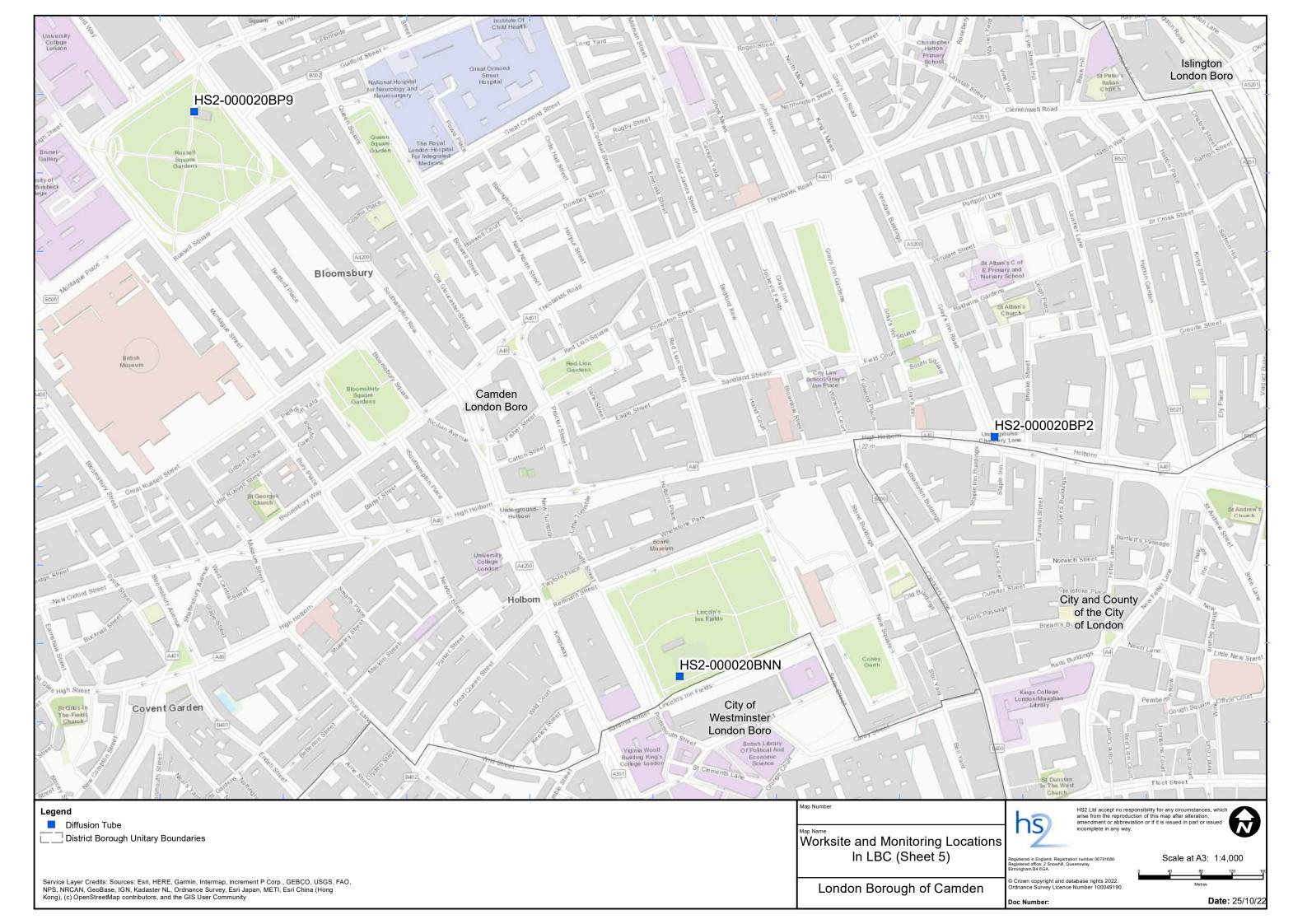
Figure 1 to Figure 5: Worksites and monitoring locations within the LBC











Appendix B - Dust Monitoring Results

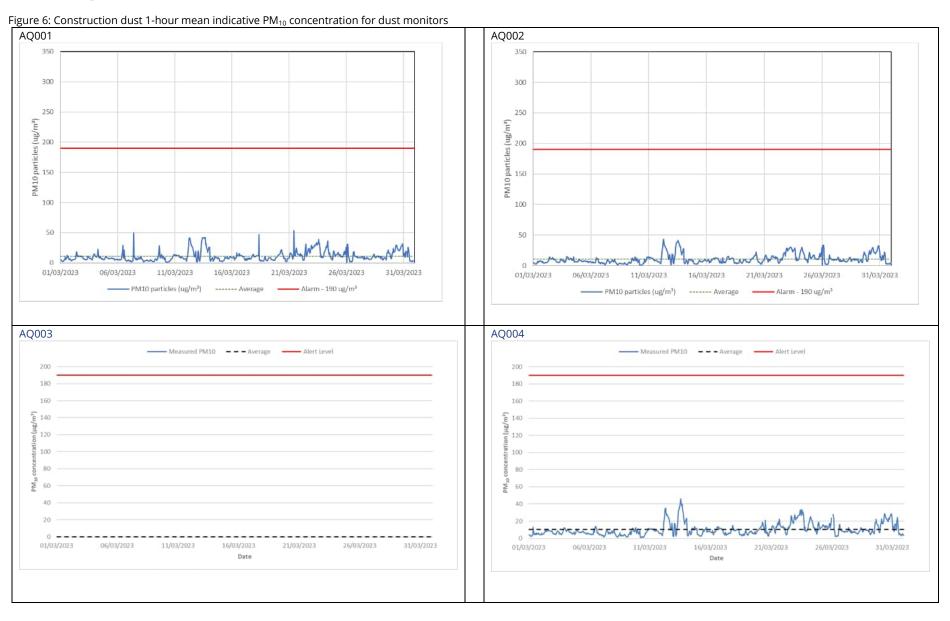
Table 2: Dust monitoring locations and March 2023 Results

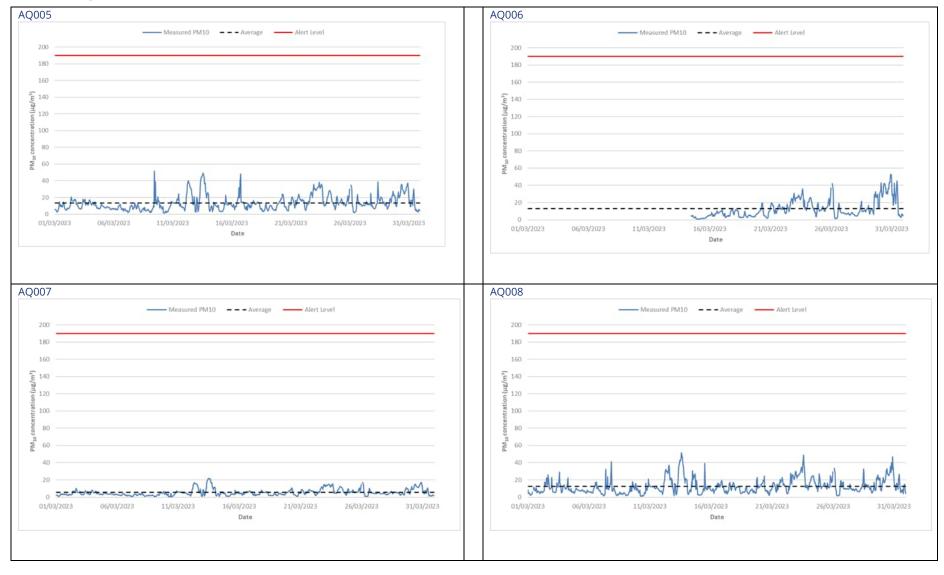
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM ₁₀ concentration (μg/m³)	Minimum 1- hour PM ₁₀ concentration (μg/m³)	Maximum 1- hour PM ₁₀ concentration (μg/m³)	Number of 1- hour periods exceeding trigger level of 190 µg/m³	Data capture (%)
AQ001	529016, 183049	Junction of Park Village East, Stanhope Street and Granby Terrace	М	Yes	N	11.2	0.7	53.2	0	100.0
AQ002	528924, 183130	Park Village East	М	Yes	N	10.6	0.6	43.2	0	100.0
AQ003	529273, 182698	St James' Gardens	М	Yes	N/A	-	-	-	-	-
AQ004	529533, 182519	Melton Street	Н	Yes	N/A	10.3	0.8	45.9	0	100.0
AQ005	529498, 182502	Stephenson Way	Н	Yes	N/A	13.3	1.2	51.5	0	100.0
AQ006	529388, 182524	Euston Street	Н	Yes	N/A	12.8	0.7	52.8	0	56.5
AQ007	529361, 182574	Drummond Street	Н	Yes	N/A	5.4	0.3	21.8	0	100.0
AQ008	529372, 182657	Cobourg Street	Н	Yes	N/A	12.6	0.7	51.5	0	99.9
AQ009	529707, 182730	Eversholt Street	Н	Yes	N/A	6.3	0.3	23.8	0	100.0
AQ010	529223, 182746	Hampstead Road South	М	Yes	N/A	12.2	0.8	47.2	0	100.0
AQ011	529176, 182922	Hampstead Road	М	Yes	N	15.2	1.2	112.6	0	100.0

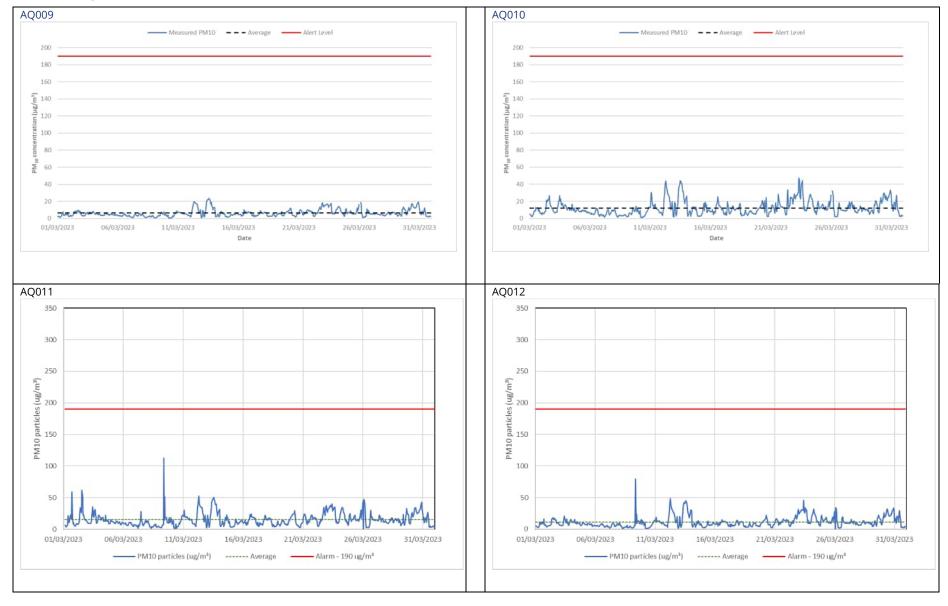
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM ₁₀ concentration (μg/m³)	Minimum 1- hour PM ₁₀ concentration (µg/m³)	Maximum 1- hour PM ₁₀ concentration (µg/m³)	Number of 1- hour periods exceeding trigger level of 190 µg/m³	Data capture (%)
AQ012	529144, 182941	Rear of Coniston House	М	Yes	N	11.3	0.8	79.6	0	100.0
AQ013	529066, 182990	Regents Park Estate	М	Yes	N	13.1	0.9	53.5	0	100.0
AQ016	528820, 183498	Mornington Terrace North	М	Yes	N	9.0	0.7	37.9	0	100.0
AQ017	528962, 183274	Mornington Terrace South	М	Yes	N	9.0	0.6	39.6	0	100.0
AQ018	529192, 183071	Hampstead Road North	М	Yes	N	9.5	0.7	63.1	0	100.0
AQ019	528689, 183500	Park Village East (North)	М	Yes	N	10.9	0.7	250.6	1	100.0
AQ020	529109, 182605	Netley School	n/a	Yes	N/A	10.4	0.6	61.9	0	100.0
AQ021	529136, 183086	Site compound at the Junction of Hampstead Road & Granby Terrace Bridge	М	Yes	N	14.8	1.2	54.8	0	99.9
AQ044	527725, 184369	Adelaide Road 1	М	Yes	N	12.8	0.5	291.0	1	99.5
AQ045	527826, 184375	Adelaide Road 2	М	Yes	N	12.5	0.7	350.9	1	99.9
AQ054	529266, 183076	Ampthill Estate, Hampstead Road	М	Yes	N	9.6	0.6	38.3	0	100.0

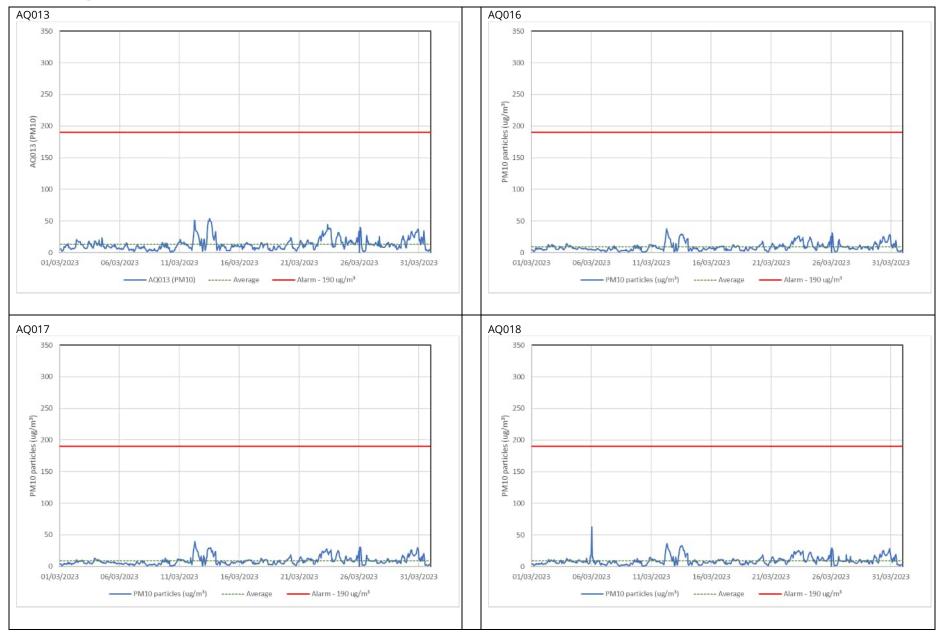
Table 3: Summary of exceedances of trigger level in March 2023

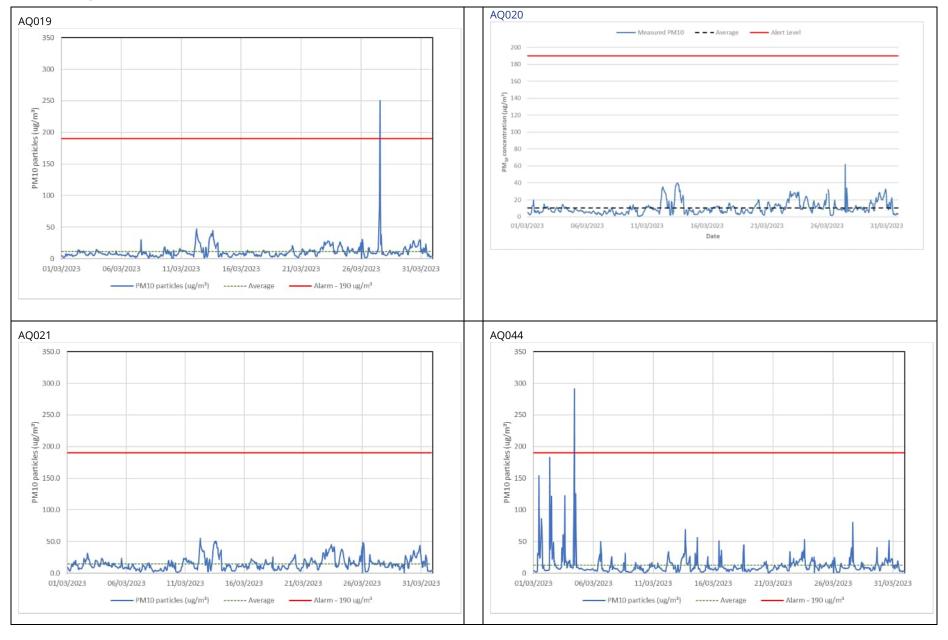
Monitoring site ID	Period exceeding trigger level	Investigation	Outcomes / Resolution / Remedial measures implemented
AQ044	04/03/2023 09:01 – 10:00; 291.0 μg/m ³	At the time of trigger alert housekeeping including sweeping and tidying was being undertaken directly adjacent to the monitor. Throughout the preceding week the area directly adjacent to the dust monitor was being used to store excavated spoil ready for removal from site on Thursday and Friday. Dust suppression was used throughout the weeklong operation and the monitoring data was regularly checked given the immediate proximity of the works along with regular liaison between the site team to ensure dust suppression was effective. The spoil had all been removed by Friday without a trigger, albeit there were several elevated readings even with the dust suppression. It is considered the sweeping and tidying of the area was the cause of the trigger on Saturday morning. The nearby monitor (AQ045) recorded no elevated levels over the same period.	Further spoil storage and removal as well as concrete breakout was planned in the same immediate area for the week. Dust suppression continued to be employed as required and the activity was closely managed and monitored.
AQ045	06/03/2023 15:01 – 16:00; 350.9 μg/m³	The monitor was stopped for a short period in the hour preceding the trigger to reconfigure the monitor and it is thought that this is the reason for the trigger. Loose debris in the inlet being dislodged subsequent to restart.	n/a
AQ019	27/03/2023 13:01 – 14:00; 250.6 μg/m ³	At the time of trigger alert from dust monitor (AQ019), which is located on Park Village East near the Euston Cavern works there were no dusty HS2 works being undertaken on site or at the nearby compound on Park Village East. There were third party contractors working nearby at the time cutting two large openings into a brickwork façade of a neighbouring property creating a lot of dust – thus the elevated readings.	n/a

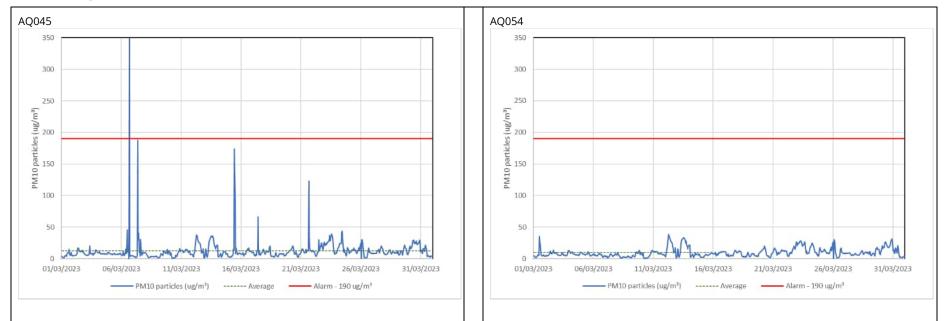












Appendix C - Air Quality Monitoring Results

Table 3: NO₂ monitoring locations around highways, NO₂ concentrations and monthly monitoring results with running mean for 2023 (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- 000020BM5	Junction of St Chad's Street and Grays Inn Road	530436, 182929	45	46											46
HS2- 000020BM7	Chalton Street	529894, 182702	50	53											51
HS2- 000020BM8	Junction of Euston Square and Grafton Place	529737, 182641	48	62											55
HS2- 000020BM9	Junction of Endsleigh Gardens and Upper Woburn Place	529785, 182529	43	50											46
HS2- 000020BMA	Junction of Euston Road and Gower Street	529429, 182375	51	59											55
HS2- 000020BMB	Whitfield Street	529273, 182114	38	43											40
HS2- 000020BMC	Hampstead Road	529232, 182511	56	69											62
HS2- 000020BMF	Junction of Polygon Road and Ossulston Street	529715, 183123	36	34											35
HS2- 000020BMH	Nash Street	528861, 182717	37	30											34
HS2-000020BMJ	Junction on Robert Street and Stanhope Street	529080, 182698	37	37											37

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	Location	Coordinates	lan	r.h	Man	A	Mari	Lum	led.	A	Com	0-4	New	Dos	Manual .
Site ID	description	(X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean ¹
HS2- 000020BMK	Junction of Plender Street and Bayham Street	529196, 183546	47	52											50
HS2- 000020BML	Junction of Arlington Road and Mornington Crescent	529093, 183356	35	37											36
HS2- 000020BMM	Junction of Bayham Street and Pratt Street	529084, 183722	57	59											58
HS2- 000020BMN	Junction of Delancey Street and Albert Street	528850, 183573	41	46											44
HS2- 000020BMQ	Junction of Parkway and Delancey Street	528662, 183604	42	42											42
HS2- 000020BMR	Junction of Oval Road and Jamestown Road	528548, 183967	32	38											35
HS2- 000020BMS	Junction of Chalk Farm Road and Castlehaven Road	528685, 184188	43	45											44
HS2- 000020BMT	Junction of Camden Road and Camden Street	529079, 184043	48	50											49
HS2- 000020BMU	Junction of Southampton Road and Fleet Road	527783, 185407	44	45											44
HS2- 000020BMV	Primrose Hill Road	527538, 184250	35	44											40
HS2- 000020BMW	Junction of Finchley Road and Hilgrove Road	526619, 184081	Tube Missing	50											50
HS2- 000020BMZ	Junction of Finchley Road and Hendon Way	525102, 186042	71	67											69

Monitoring	Location	Coordinates		e.b					11		6	0-4	None	Des	1
Site ID	description	(X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean ¹
HS2- 000020BNA	Junction of Regent's Park Road and Rothwell Street	527884, 183980	36	37											36
HS2- 000020BNC	Junction of Outer Circle and Gloucester Gate	528528, 183443	27	27											27
HS2- 000020BNH	Junction of Parkway and Albert Street	528763, 183720	32	40											36
HS2- 000020BNN	Lincoln's Inn Fields	530744, 181308	36	36											36
HS2- 000020BNQ	Camley Street	529735, 183737	25	41											33
HS2- 000020BNY	Junction of Mill Lane and Hillfield Road	524839, 185136	35	32											33
HS2- 000020BNZ	Mansfield Road	528050, 185508	40	44											42
HS2-000020BP0	Junction of Camden Road and Torriano Avenue	529708, 184871	46	56											51
HS2-000020BP2	Junction of Grays Inn Road and Holborn	531149, 181616	41	40											41
HS2-000020BPB	Camden High Street	528966, 183735	60	65											63
HS2-000020BPC	Castlehaven Road	528788, 184591	39	39											39
HS2- 000020BPD	Prince of Wales Road	528571, 184683	31	35											33
HS2-000020BPE	Haverstock Hill	527710, 184749	36	39											37
HS2-000020BPF	Junction of Primrose Gardens and England's Lane	527549, 184640	42	42											42

Monitoring	Location	Coordinates	la a	E-h	Man	A	Mari	Loren	11	A	Com	0-4	New	Des	NA 1
Site ID	description	(X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean ¹
HS2- 000020BPU	Junction of Gower Street and Grafton Way	529476, 182267	51	47											49
HS2- 000020BPW	Junction of Delancey Street and Arlington Road	528939, 183637	40	45											43
HS2-000020BPX	Netley Street	529177, 182625	32	Tube Missing											32
HS2-000020BPY	Stanhope Street	529060, 182947	31	37											34
HS2-000020BPZ	Albany Street	528790, 182923	27	40											33
HS2- 000020BQ0	Werrington Street	529493, 183113	34	35											34
HS2- 000020BQ1	Polygon Road	529574, 183045	30	36											33
HS2- 000020BQ2	Alexandra Place	526320, 183980	32	35											34
HS2- 000020BQ3	Harrington Square	529228, 183172	42	38											40
HS2- 000020BQ4	Junction of North Gower Street and Starcross Street	529290, 182572	43	41											42
HS2- 000020BQ5	Adelaide Road	527713, 184392	35	41											38
HS2- 000020BQ6	Mornington Terrace	528836, 183474	34	34											34
HS2- 000020BQ7	Arlington Road	529009, 183479	33	35											34
HS2- 000020BQ8	Clarkson Row	529024, 183213	39	39											39
HS2- 000020BQ9	Park Village East	528923, 183121	30	33											31
HS2- 000020BQA	Eversholt Street	529386, 183132	52	45											49

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean ¹
HS2- 000020BQB	Junction of Harrington Street and Varndell Street	529147, 182816	30	34											32
HS2- 000020BQC	Junction of Robert Street and Hampstead Road	529199, 182704	40	40											40
HS2- 000020BQD	Drummond Crescent	529648, 182856	38	33											35
HS2-000020BQJ	Grafton Way	529380, 182225	56	56											56
HS2- 000020BQL	Delancey Street	528768, 183581	46	50											48
HS2- 000020BQR	Lamp post on Park Village East	528682, 183505	36	40											38
HS2- 000020BQS	Opposite Maria fidelis school on Phoenix Road	529670, 182982	37	36											37
HS2- 000020BQT	Drummond Street	529385, 182581	42	46											44
HS2- 000020BQX	Lamp post on Brunswick Square	530344, 182236	44	46											45
HS2-000020BP4	Triplicate site on Finchley Road next to Swiss Cottage kerbside automatic monitoring station	526633, 184392	51	54											52
HS2-000020BP5	Triplicate site next to the Euston Road roadside automatic monitoring stations	529895, 182657	46	64											55

Air Quality and Dust Monitoring Summary Report, March 2023 London Borough of Camden

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean ¹
HS2-000020BP9	Triplicate site in	530120,													
	Russell Square	182034													
	next to														
	Bloomsbury		39	40											40
	urban background														
	automatic														
	monitoring station														