July 2023



# Air Quality and Dust Monitoring Monthly Report – July 2023 London Borough of Camden

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A report prepared by EWCs and MWCCs on behalf of HS2 Ltd.

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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 June 2023 and July 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 <a href="www.gov.uk/government/collections/monitoring-the-environmental-effects-of-hs2">www.gov.uk/government/collections/monitoring-the-environmental-effects-of-hs2</a>, 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 December 2017 and 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; and
- Euston Cavern piling operations, groundworks and materials management.

#### Mace Dragados Joint Venture (MDjv)

#### Utilities

 Water supply to a new TSS building: ongoing connection into existing sewage via MH10A.

#### MF Old School

• Commenced site set up.

#### **ITR**

· Painting drain covers & kerb gullies;

- Install wiring for illuminated handrail on southwest corner & fit handrail on delivery back to site;
- Paint repairs to west handrail;
- Adjust & paint east handrail;
- Clear away temporary hoarding & reinstall CLD hoarding;
- Drill & tap columns for rainwater pipes to be installed;
- Reinstate CLD hoarding to northeast corner for security;
- Install delivery gates to northeast & northwest access;
- · Retaining wall infill cuts;
- Rain screens to make good & painting snags;
- Euston Road TM set up for south kerb changes & chamber build, NAL socket installs & relocations & paving reinstatement;
- Euston Road TM removal & set up to new approved TM for signal feeder pillar;
- ITR road line marking; and
- Canopy facia components delivery & install ongoing.

### **TSS**

- Completed all concrete works for structure;
- Completed premises fit out works in substructure; and
- Continue MEP install in substructure.

#### Maria Fidelis

- · Dry lining first & second fix;
- MEP first fix L1-L4:
- MEP second fix to CSC;
- Screed to CSC;
- Start install of joinery to CSC; and
- Continue roof and plant finishing works.
- 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  $\mu$ 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.

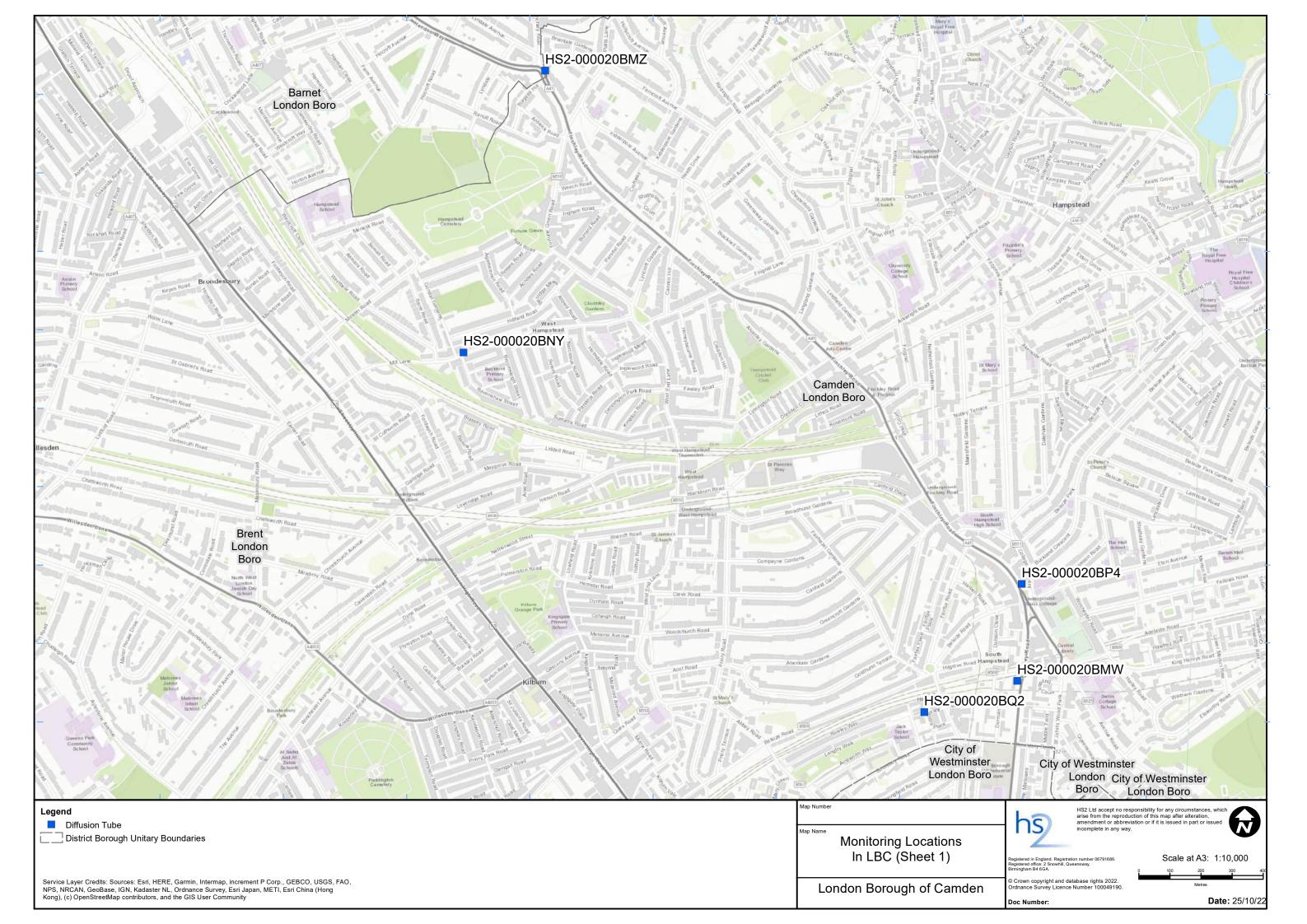
- 1.1.8 Dust trigger alerts were recorded during the monitoring period (July 2023) and are reported in Appendix B, Table 3.
- 1.1.9 Data capture was below 90% for multiple monitors in July 2023 due to power supply issues.
- 1.1.10 Diffusion tube monitoring of Nitrogen Dioxide (NO<sub>2</sub>) is undertaken 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  $NO_2$  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.

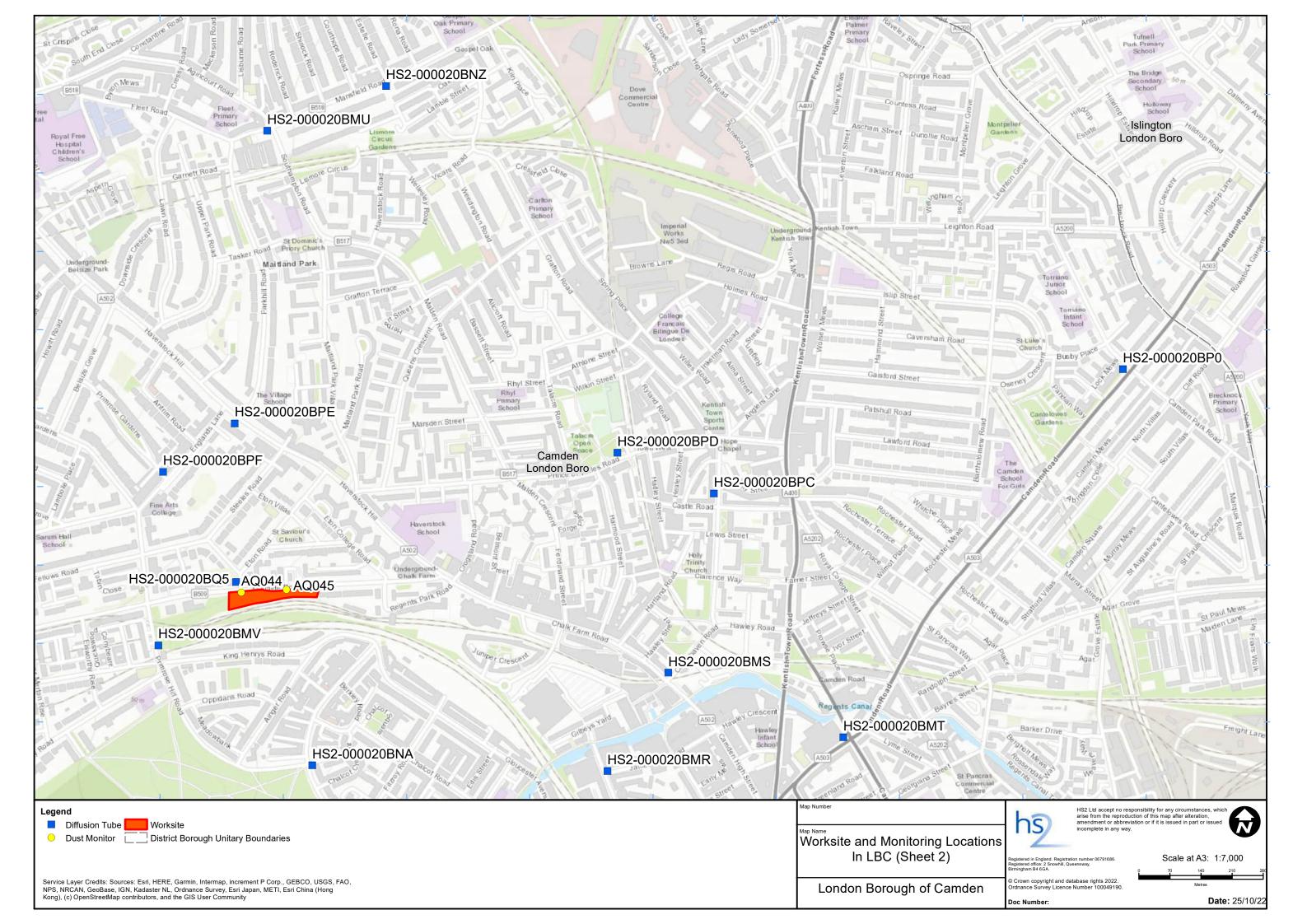
Table 1: Summary of complaints received during July 2023

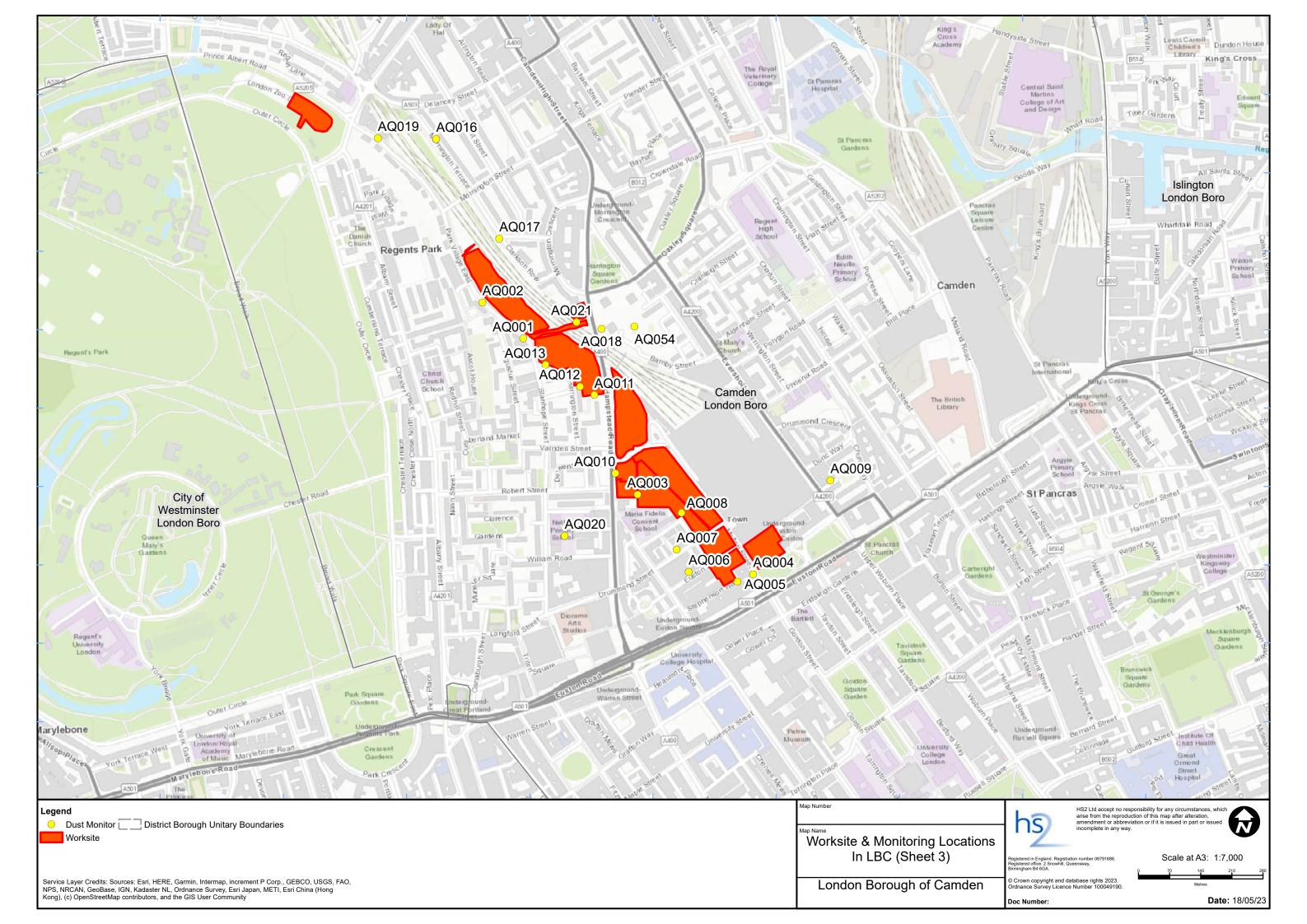
Complaint Reference No.	Worksite Reference	Description of complaint	Results of investigation
UHS2-23-44812-C	TSS	Construction workers are sweeping and causing construction dust to go into the air and flying around in people's faces and going into shops. The noise is also very loud, they are not using enough noise defence barriers. Underneath the fencing, there are rocks and stones which are flying out hitting residents going by. Noisy building works must be minimised and controlled with noise damping devices. The complainant claims the site manager claimed BRM do not use water to minimise dust pollution and noise defence barriers are not used around the whole entire excavation site when carrying out noisy works.	MDjv operatives will use dust suppression when using breaking and cutting tools as required in the Dust Risk Assessment, as well as barriers to help minimise the dust and debris. Operatives are mindful of potential dust escaping from the site. To ensure a tidy and safe working area for both public and operatives, they will naturally hand sweep and make tidy. MDjv have, to date, had no complaints from the shop owners regarding this action.  MDjv operatives have undertaken works within this area for many weeks and in this particular section of works, the operatives have been challenged with rubbish and litter being dumped around the outside of the site as well as over the Heras fencing including rubbish strewn across the footway impacting on the pedestrians. This has also included flying debris coming from outside the works area into the works area, which the operatives have also had to dispose of.  MDjv will take on board the comments and re-look at the Dust Risk Assessment to see if they can make any adjustments for further safe dust suppression if this can be achieved.

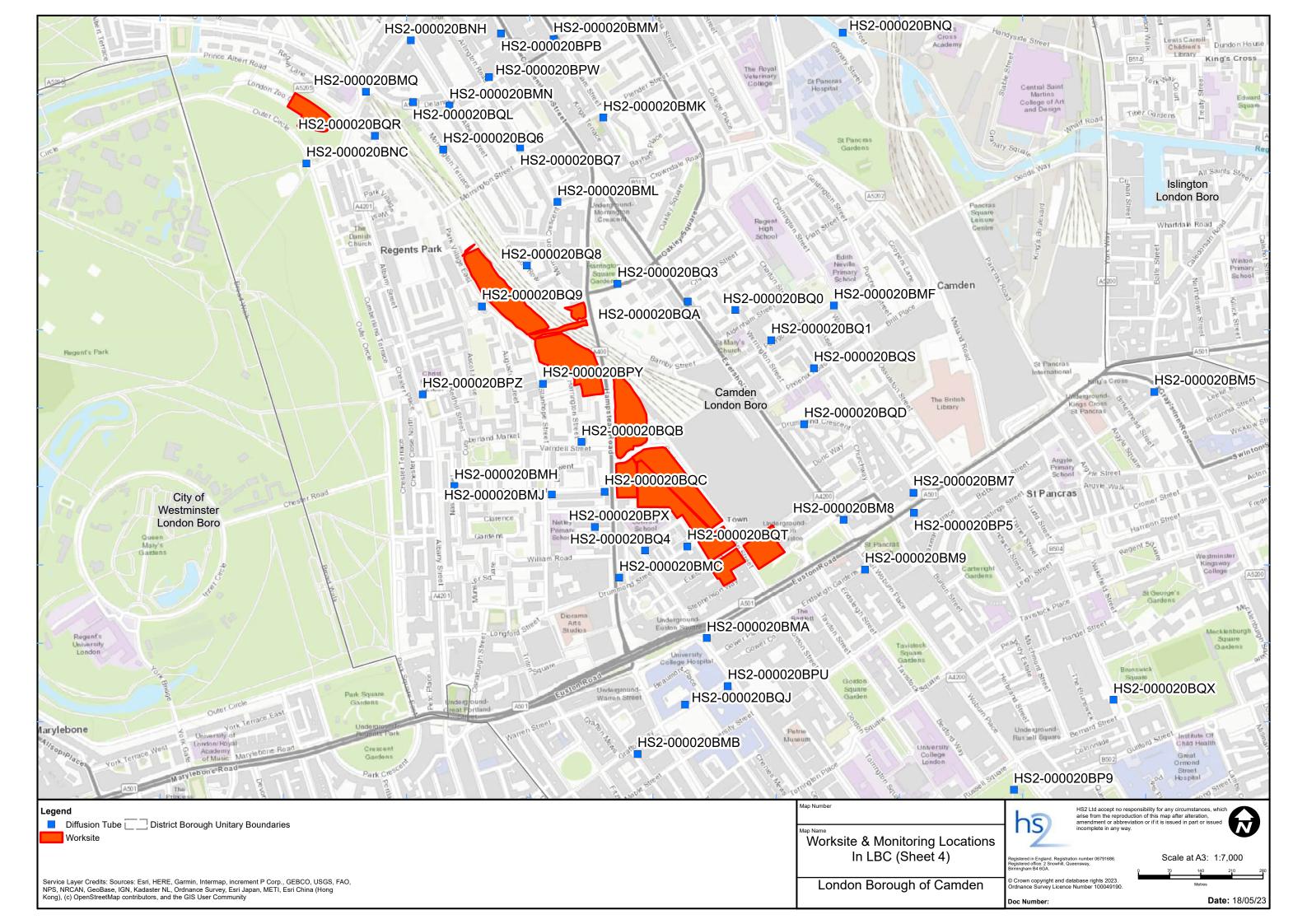
## **Appendix A – Worksites and Monitoring Locations**

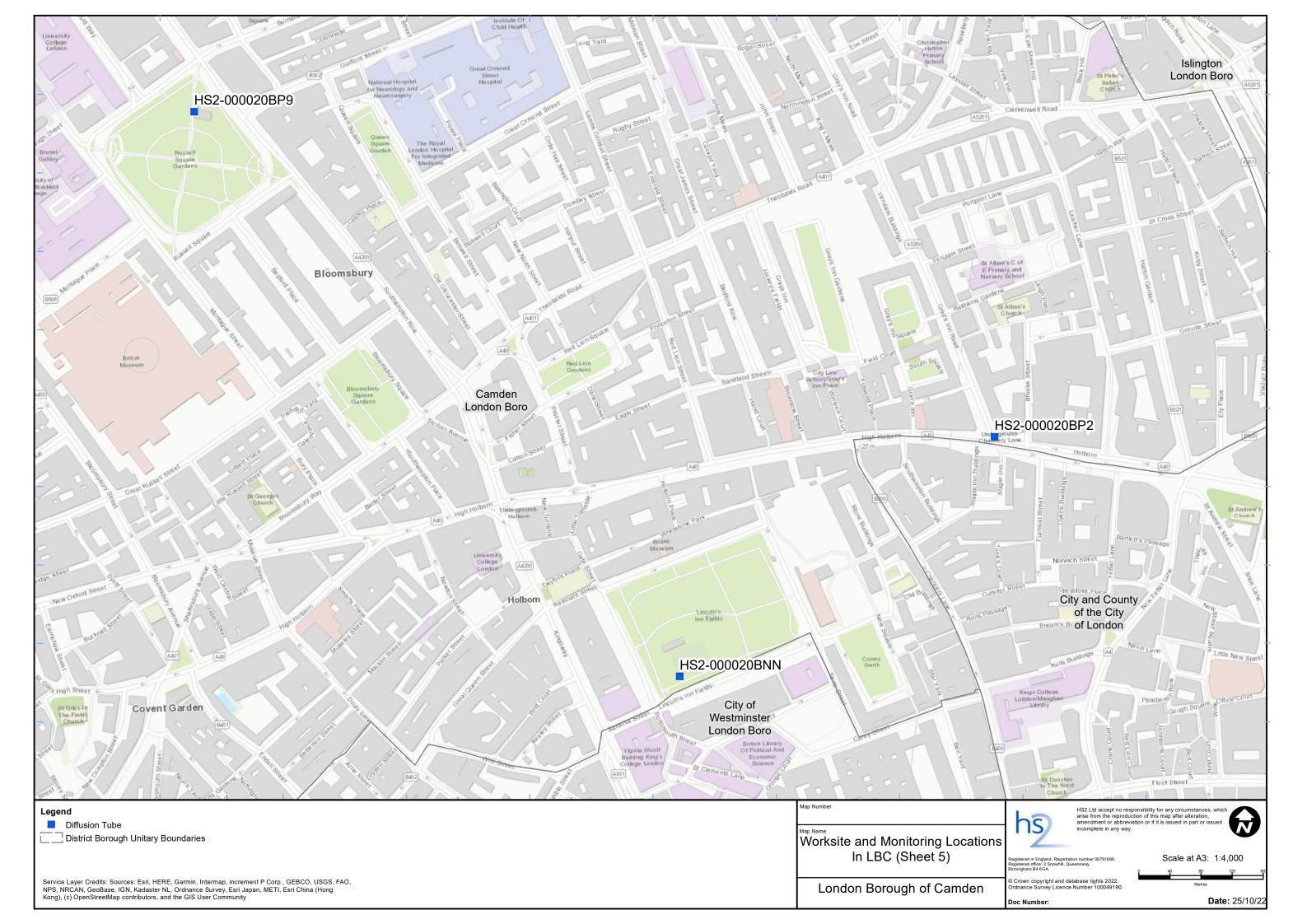
Figure 1 to Figure 5: Worksites and monitoring locations within the LBC











# **Appendix B – Dust Monitoring Results**

Table 2: Dust monitoring locations and July 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 <sub>10</sub> concentration (μg/m³)	Minimum 1- hour PM <sub>10</sub> concentration (µg/m³)	Maximum 1- hour PM <sub>10</sub> 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	7.9	1.1	21.2	0	100.0
AQ002	528924, 183130	Park Village East	М	Yes	N	9.5	2.0	19.8	0	5.9
AQ003	529273, 182698	St James' Gardens	М	Yes	N/A	7.5	0.9	85.7	0	100.0
AQ004	529533, 182519	Melton Street	Н	Yes	N/A	12.9	1.8	81.0	0	100.0
AQ005	529498, 182502	Stephenson Way	Н	Yes	N/A	14.4	1.5	466.0	2	83.1
AQ006	529388, 182524	Euston Street	Н	Yes	N/A	13.6	2.4	34.1	0	100.0
AQ007	529361, 182574	Drummond Street	Н	Yes	N/A	3.8	0.5	10.8	0	100.0
AQ008	529372, 182657	Cobourg Street	Н	Yes	N/A	13.3	1.2	60.8	0	97.6
AQ009	529707, 182730	Eversholt Street	Н	Yes	N/A	11.9	1.4	348.7	2	100.0
AQ010	529223, 182746	Hampstead Road South	М	Yes	N/A	16.7	2.7	124.9	0	100.0
AQ011	529176, 182922	Hampstead Road	М	Yes	N	14.7	1.5	513.6	5	100.0

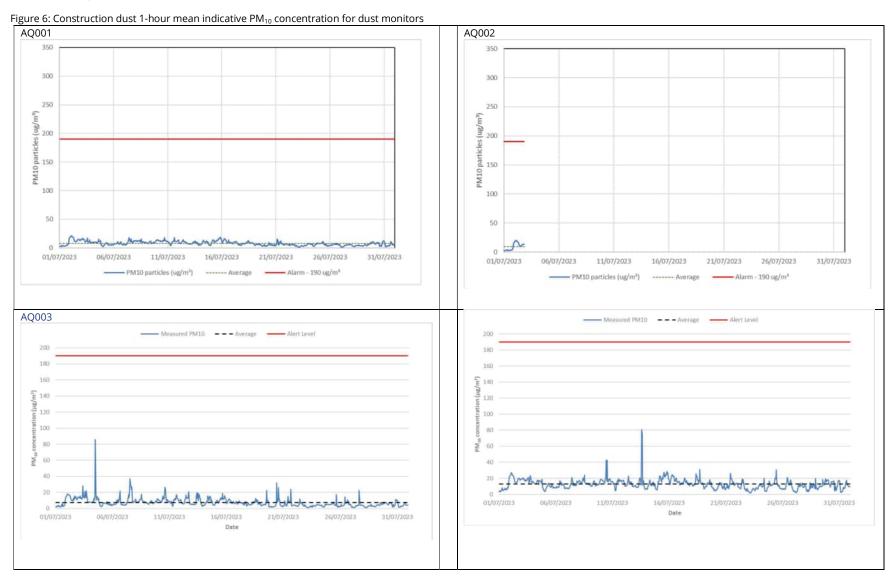
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM <sub>10</sub> concentration (μg/m³)	Minimum 1- hour PM <sub>10</sub> concentration (μg/m³)	Maximum 1- hour PM <sub>10</sub> 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	10.9	1.6	595.9	1	100.0
AQ013	529066, 182990	Regents Park Estate	М	Yes	N	10.0	1.6	31.7	0	100.0
AQ016	528820, 183498	Mornington Terrace North	М	Yes	N	8.1	1.1	25.2	0	100.0
AQ017	528962, 183274	Mornington Terrace South	М	Yes	N	6.8	0.9	21.9	0	100.0
AQ018	529192, 183071	Hampstead Road North	М	Yes	N	7.3	1.1	22.1	0	100.0
AQ019	528689, 183500	Park Village East (North)	М	Yes	N	8.2	1.7	25.5	0	100.0
AQ020	529109, 182605	Netley School	n/a	Yes	N/A	4.7	0.3	21.9	0	100.0
AQ021	529136, 183086	Site compound at the Junction of Hampstead Road & Granby Terrace Bridge	М	Yes	N	8.2	1.1	61.4	0	79.8
AQ044	527725, 184369	Adelaide Road 1	М	Yes	N	15.6	2.3	145.2	0	100.0
AQ045	527826, 184375	Adelaide Road 2	М	Yes	N	9.1	1.4	77.8	0	100.0
AQ054	529266, 183076	Ampthill Estate, Hampstead Road	М	Yes	N	No data	No data	No data	No data	No data

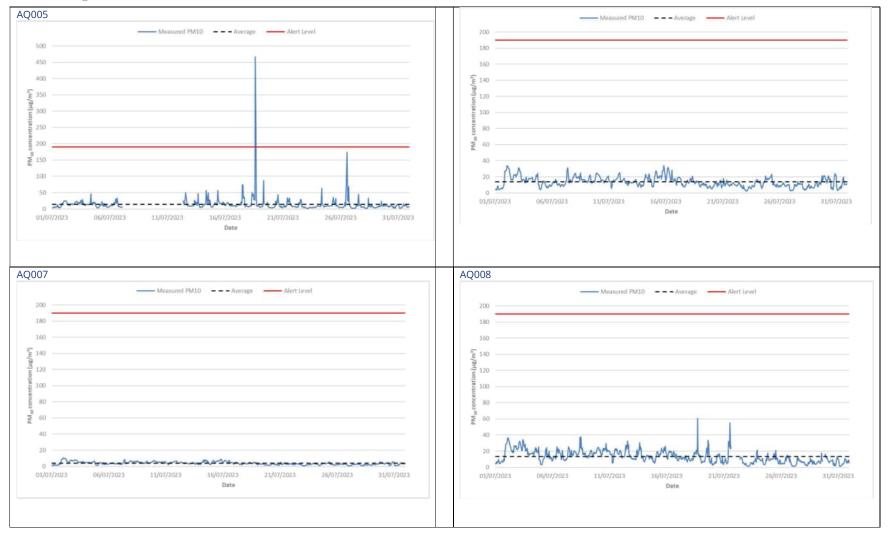
Table 3: Summary of exceedances of trigger level in July 2023

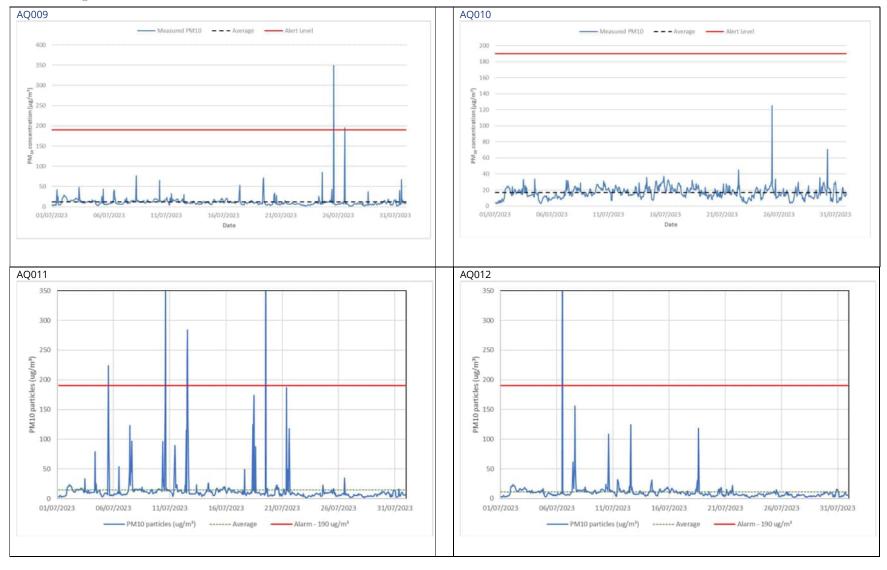
Monitoring site ID	Period exceeding trigger level	Investigation	Outcomes / Resolution / Remedial measures implemented
AQ005	18/07/2023 14:01 – 15:00; 466.0 μg/m <sup>3</sup> 15:01 – 16:00; 256.2 μg/m <sup>3</sup>	In order to prepare a capping beam to be waterproofed, the surface needs to be clean and dry. A broom and blower was therefore used to help clean the capping beam however no dust mitigation measures were implemented when this was undertaken.	When preparing capping beams in future instances, either a vacuum will be used to remove the dust without dispersing it or it will be dampened with water and allowed time for the surface to dry before it is then waterproofed.
AQ009	25/07/2023 14:01 – 15:00; 348.7 μg/m³ 26/07/2023 13:01 – 14:00; 195.5 μg/m³	The exceedances are thought to be the result of demolition/ refurbishment works being undertaken at Euston House, which is located adjacent to the monitor. The works at Euston House are unrelated to HS2.	MDJV will continue to ensure all the activities being undertaken have appropriate mitigation measures applied (in line with the CoCP).  Any further exceedances at this monitor will continue to be investigated to confirm whether the exceedance is caused by HS2 activities.  MDjv has also spoken with the contractor at Euston House.
AQ011	05/07/2023 12:01 – 13:00; 223.8 μg/m <sup>3</sup> 10/07/2023 14:01 – 15:00; 370.5 μg/m <sup>3</sup> 12/07/2023 12:01 – 13:00; 233.8 μg/m <sup>3</sup> 13:01 – 14:00; 284.1 μg/m <sup>3</sup> 19/07/2023 12:01 – 13:00; 513.6 μg/m <sup>3</sup>	At the time of the first trigger alert concrete slab breakout was being carried within metres of the monitor. A dedicated dust cannon was already deployed to the breakout operation and had effectively been in use prior to the trigger alert. However, there was a short period at the end of the operation where it wasn't being used (the area was very wet/damp) but the breakout operation created dust. Works had already stopped on receipt of the trigger and the subsequent monitored levels dropped.  Over the course of the next 2 weeks further isolated triggers were received and relate to the same concrete breakout works near the Cartmel House/ Coniston House boundary monitor. Each trigger was investigated by the site team and acted upon thus the reason for the isolated triggers during this period over which the breakout works continued most days. An activity specific dust cannon had been deployed throughout the period too to provide the necessary dust suppression for the works.  During each of the trigger alerts the dust cannon was in full use.  It is considered that the mist from the dust cannon may have contributed to causing false triggers (i.e. the monitor reading the mist as dust which the monitors are known to do). The dust cannon spray was directed at the breakout / material management works but also towards the nearby monitors. This may have been the reason for the triggers as it has on many previous occasions in the past.  The triggers were relatively high also and it would've have been visibly excessively dusty, which was not observed on site.	The site team were briefed to keep up the dust suppression as they have been doing but to direct the dust cannon away from the boundary monitors where possible.

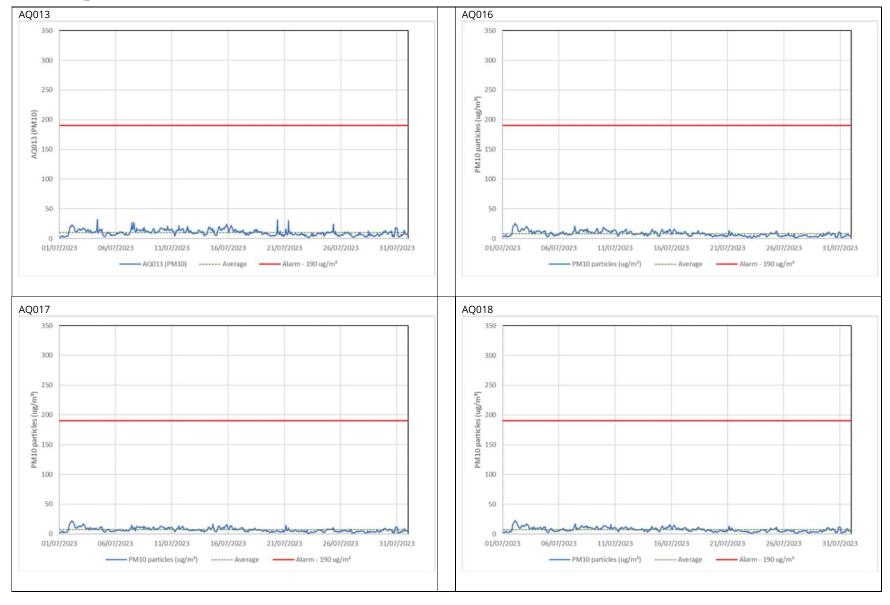
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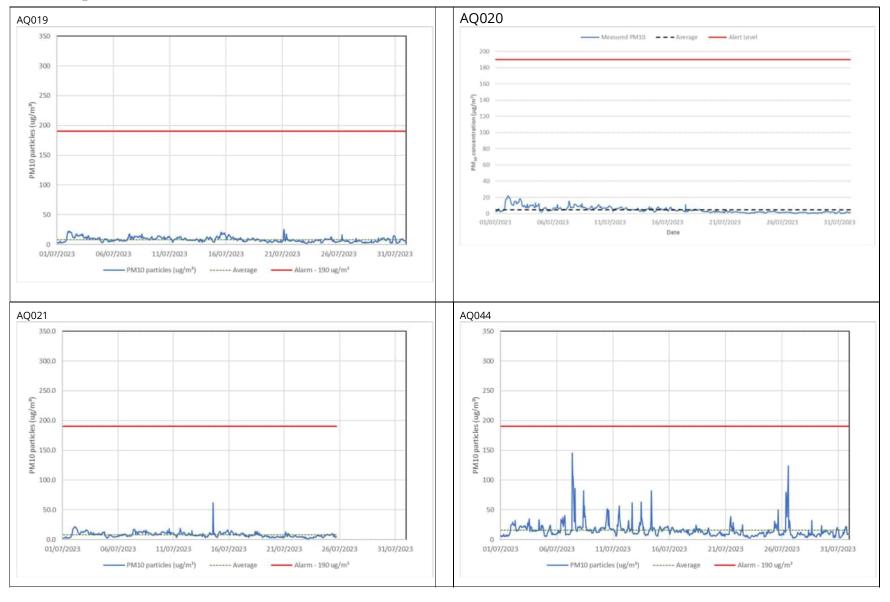
Monitoring site ID	Period exceeding trigger level	Investigation	Outcomes / Resolution / Remedial measures implemented
AQ012	06/07/2023 11:01 – 12:00; 595.9 μg/m <sup>3</sup>	Related to the same triggers as detailed above for monitor AQ011	The site team were briefed to keep up the dust suppression as they have been doing but to direct the dust cannon away from the boundary monitors where possible.



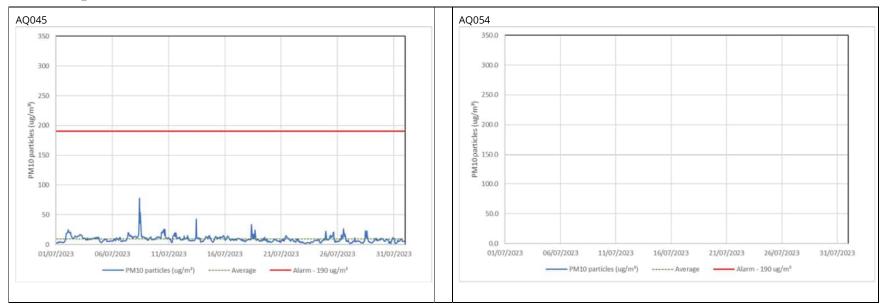








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## **Appendix C – Air Quality Monitoring Results**

Table 4: NO<sub>2</sub> monitoring locations around highways, NO<sub>2</sub> 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 <sup>1</sup>
HS2- 000020BM5	Junction of St Chad's Street and Grays Inn Road	530436, 182929	45	46	37	40	36	36							40
HS2- 000020BM7	Chalton Street	529894, 182702	50	53	48	41	36	30							43
HS2- 000020BM8	Junction of Euston Square and Grafton Place	529737, 182641	48	62	41	Tube Missing	42	43							47
HS2- 000020BM9	Junction of Endsleigh Gardens and Upper Woburn Place	529785, 182529	43	50	25	47	49	46							43
HS2- 000020BMA	Junction of Euston Road and Gower Street	529429, 182375	51	59	37	Tube Missing	37	34							44
HS2- 000020BMB	Whitfield Street	529273, 182114	38	43	33	33	29	30							34
HS2- 000020BMC	Hampstead Road	529232, 182511	56	69	63	52	52	53							58
HS2- 000020BMF	Junction of Polygon Road and Ossulston Street	529715, 183123	36	34	24	28	30	Tube Missing							30
HS2- 000020BMH	Nash Street	528861, 182717	37	30	24	24	21	20							26

<sup>&</sup>lt;sup>1</sup> 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 <sup>1</sup>
HS2- 000020BMJ	Junction on Robert Street and Stanhope Street	529080, 182698	37	37	14	29	25	25							28
HS2- 000020BMK	Junction of Plender Street and Bayham Street	529196, 183546	47	52	38	40	38	38							42
HS2- 000020BML	Junction of Arlington Road and Mornington Crescent	529093, 183356	35	37	Tube Missing	26	25	25							29
HS2- 000020BMM	Junction of Bayham Street and Pratt Street	529084, 183722	57	59	35	39	32	48							45
HS2- 000020BMN	Junction of Delancey Street and Albert Street	528850, 183573	41	46	23	24	21	24							30
HS2- 000020BMQ	Junction of Parkway and Delancey Street	528662, 183604	42	42	30	Tube Missing	35	34							37
HS2- 000020BMR	Junction of Oval Road and Jamestown Road	528548, 183967	32	38	27	28	25	24							29
HS2- 000020BMS	Junction of Chalk Farm Road and Castlehaven Road	528685, 184188	43	45	36	35	38	35							39
HS2- 000020BMT	Junction of Camden Road and Camden Street	529079, 184043	48	50	31	38	40	34							40
HS2- 000020BMU	Junction of Southampton Road and Fleet Road	527783, 185407	44	45	38	36	33	35							38
HS2- 000020BMV	Primrose Hill Road	527538, 184250	35	44	29	25	25	25							30

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean <sup>1</sup>
HS2- 000020BMW	Junction of Finchley Road and Hilgrove Road	526619, 184081	Tube Missing	50	33	41	42	43							42
HS2- 000020BMZ	Junction of Finchley Road and Hendon Way	525102, 186042	71	67	53	62	53	60							61
HS2- 000020BNA	Junction of Regent's Park Road and Rothwell Street	527884, 183980	36	37	25	25	19	19							27
HS2- 000020BNC	Junction of Outer Circle and Gloucester Gate	528528, 183443	27	27	21	21	21	21							23
HS2- 000020BNH	Junction of Parkway and Albert Street	528763, 183720	32	40	30	29	27	Tube Missing							32
HS2- 000020BNN	Lincoln's Inn Fields	530744, 181308	36	36	24	Tube Missing	21	20							28
HS2- 000020BNQ	Camley Street	529735, 183737	25	41	26	29	24	23							28
HS2- 000020BNY	Junction of Mill Lane and Hillfield Road	524839, 185136	35	32	Tube Missing	32	Tube Missing	Tube Missing							33
HS2- 000020BNZ	Mansfield Road	528050, 185508	40	44	27	23	19	25							30
HS2- 000020BP0	Junction of Camden Road and Torriano Avenue	529708, 184871	46	56	42	43	40	40							44
HS2- 000020BP2	Junction of Grays Inn Road and Holborn	531149, 181616	41	40	32	30	27	25							33
HS2- 000020BPB	Camden High Street	528966, 183735	60	65	40	49	50	47							52
HS2- 000020BPC	Castlehaven Road	528788, 184591	39	39	30	26	21	Tube Missing							31
HS2- 000020BPD	Prince of Wales Road	528571, 184683	31	35	16	27	19	17							24

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean <sup>1</sup>
HS2-000020BPE	Haverstock Hill	527710, 184749	36	39	27	24	22	Tube Missing							30
HS2-000020BPF	Junction of Primrose Gardens and England's Lane	527549, 184640	42	42	33	27	25	27							33
HS2- 000020BPU	Junction of Gower Street and Grafton Way	529476, 182267	51	47	36	Tube Missing	34	30							40
HS2- 000020BPW	Junction of Delancey Street and Arlington Road	528939, 183637	40	45	30	28	26	28							33
HS2- 000020BPX	Netley Street	529177, 182625	32	Tube Missing	21	31	30	27							28
HS2-000020BPY	Stanhope Street	529060, 182947	31	37	19	25	19	19							25
HS2- 000020BPZ	Albany Street	528790, 182923	27	40	25	27	25	22							28
HS2- 000020BQ0	Werrington Street	529493, 183113	34	35	19	24	20	19							25
HS2- 000020BQ1	Polygon Road	529574, 183045	30	36	22	25	23	19							26
HS2- 000020BQ2	Alexandra Place	526320, 183980	32	35	23	24	20	22							26
HS2- 000020BQ3	Harrington Square	529228, 183172	42	38	26	33	41	31							35
HS2- 000020BQ4	Junction of North Gower Street and Starcross Street	529290, 182572	43	41	28	26	27	23							31
HS2- 000020BQ5	Adelaide Road	527713, 184392	35	41	17	Tube Missing	25	23							28
HS2- 000020BQ6	Mornington Terrace	528836, 183474	34	34	26	25	22	21							27
HS2- 000020BQ7	Arlington Road	529009, 183479	33	35	24	25	Tube Missing	Tube Missing	-						29

Monitoring	Location	Coordinates	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean <sup>1</sup>
Site ID	description	(X, Y)													
HS2- 000020BQ8	Clarkson Row	529024, 183213	39	39	25	25	Tube Missing	20							30
HS2- 000020BQ9	Park Village East	528923, 183121	30	33	17	22	20	18							23
HS2- 000020BQA	Eversholt Street	529386, 183132	52	45	34	38	35	37							40
HS2- 000020BQB	Junction of Harrington Street and Varndell Street	529147, 182816	30	34	27	24	21	21							26
HS2- 000020BQC	Junction of Robert Street and Hampstead Road	529199, 182704	40	40	33	25	34	27							33
HS2- 000020BQD	Drummond Crescent	529648, 182856	38	33	Tube Missing	Tube Missing	31	30							33
HS2-000020BQJ	Grafton Way	529380, 182225	56	56	38	34	36	33							42
HS2- 000020BQL	Delancey Street	528768, 183581	46	50	Tube Missing	34	31	39							40
HS2- 000020BQR	Lamp post on Park Village East	528682, 183505	36	40	26	29	Tube Missing	Tube Missing							33
HS2- 000020BQS	Opposite Maria fidelis school on Phoenix Road	529670, 182982	37	36	25	26	23	23							28
HS2- 000020BQT	Drummond Street	529385, 182581	42	46	29	31	28	25							33
HS2- 000020BQX	Lamp post on Brunswick Square	530344, 182236	44	46	32	30	24	21							33
HS2- 000020BP4	Triplicate site on Finchley Road next to Swiss Cottage kerbside automatic monitoring station	526633, 184392	51	54	45	42	47	40							46

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Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean <sup>1</sup>
HS2- 000020BP5	Triplicate site next to the Euston Road roadside automatic monitoring stations	529895, 182657	46	64	59	Tube Missing	59	59							58
HS2- 000020BP9	Triplicate site in Russell Square next to Bloomsbury urban background automatic monitoring station	530120, 182034	39	40	30	30	27	21							31