April 2021



# Air Quality and Dust Monitoring Monthly Report - April 2021

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 March and April 2021 respectively.
- 1.1.2 Figure 1 to Figure 4 in Appendix A present the current worksites together with air quality and dust monitoring locations for April 2021.
- 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 within the LBC during December 2017 and is expected to be completed by July 2021. The next concurrent phase of construction works commenced in November 2019 and is expected to be completed by 2025. The current and planned worksites, include:

#### Costain Skanska Joint Venture (CSjv)

- Compound and Power Signal Box pile cap breakout and demolition works;
- Site Office and Welfare at 110-122 Hampstead Road;
- Archaeological dig at St James' Gardens, groundworks and materials management;
- Euston Street Walkden and Wolfson House demolition and groundworks; and
- Utilities ground excavation works on Harrington Street, Stephenson Way, Drummond Street and North Gower Street.

#### Skanska Costain Strabag Joint Venture (SCSjv)

- Adelaide Road Vent Shaft –concreting and utilities works, vegetation clearance and groundworks;
- Vehicle Holding Area concrete slab works, new accommodation deployment and fitout;
- Site office and welfare ground works, concrete slab construction and services by Granby Terrace Bridge;
- Euston Scissor Cut groundworks, piling operations and materials management;
- Euston Throat Retained Cut groundworks, piling operations, utilities diversion works and materials management; and
- Hampstead Road Bridge mobilisation and site setup.

#### **Mace Dragados Joint Venture (MDjv)**

#### ITR:

- Excavation of hoarding line and installation of Cellweb root protection system;
- Excavation of haul road to formation level along north elevation, level and compact 6F5 and installation of Cellweb where required;
- Installation of blocks for level change adjacent to Euston Tap and building ground to formation; and
- Heritage railing protection boxes installation along Euston Street elevation, and installation of hoarding along same elevation.

#### TTS:

• Site mobilisation for tunnel and shaft works. Delivery of 20' fitters stores and electrical cabins. Small tools and crawler crane delivery.

#### Early Works/MF:

- Hoarding works beside Margaret Centre;
- Inclinometers installation; and
- Site maintenance.

#### Tower Demolition:

• Piles investigation and basement propping (investigation for bollards).

#### **Ground Investigation:**

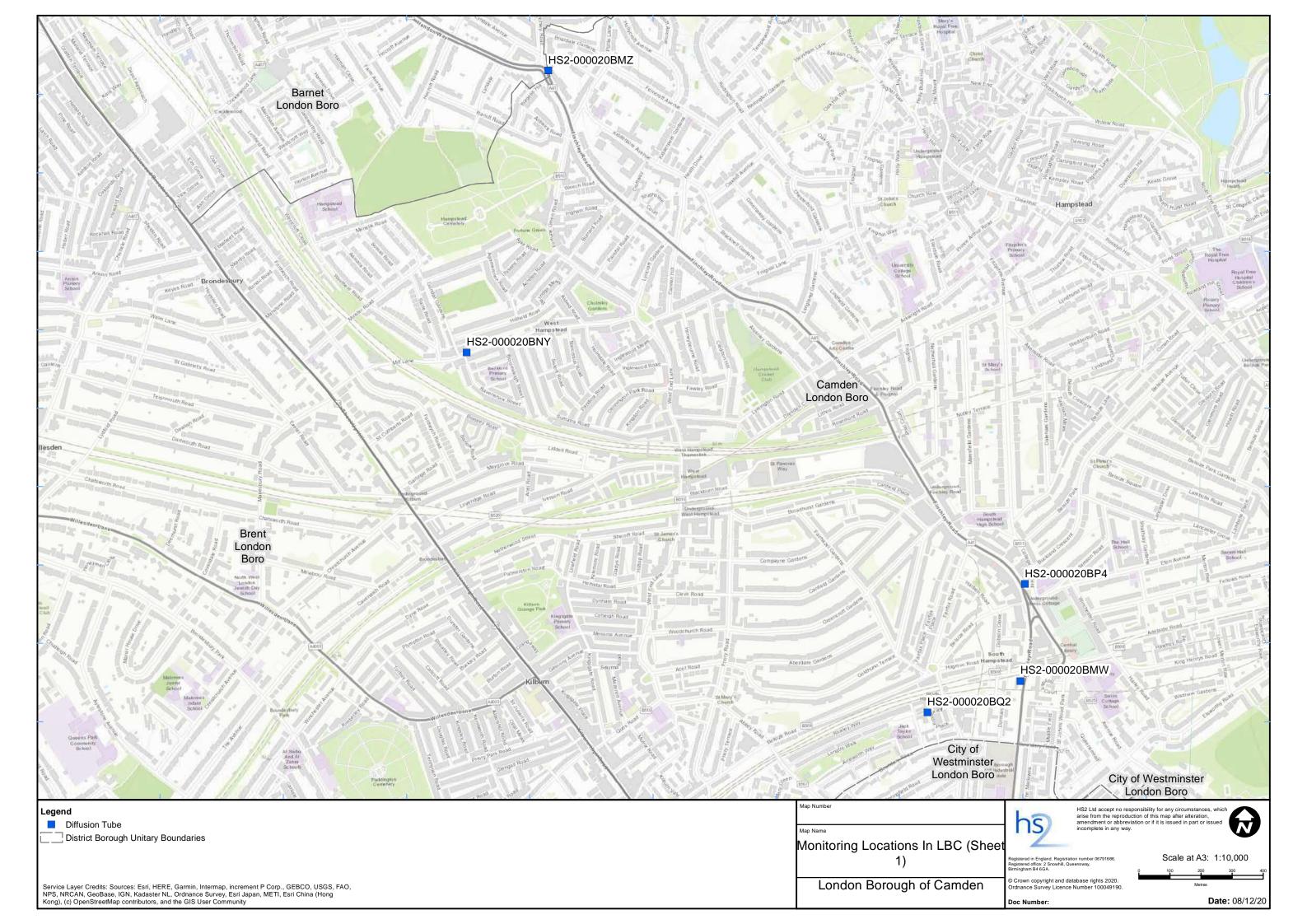
- Euston Road North and on Main Site.
- 1.1.5 Twenty-three (23) dust monitors are installed around worksites, where demolition, groundworks and materials management are underway. These sites returned a low to high dust risk rating.
- 1.1.6 Dust monitoring locations and results are presented in Appendix B, Table 2, together with line charts of monthly data from each dust monitor in Figure 5. 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.

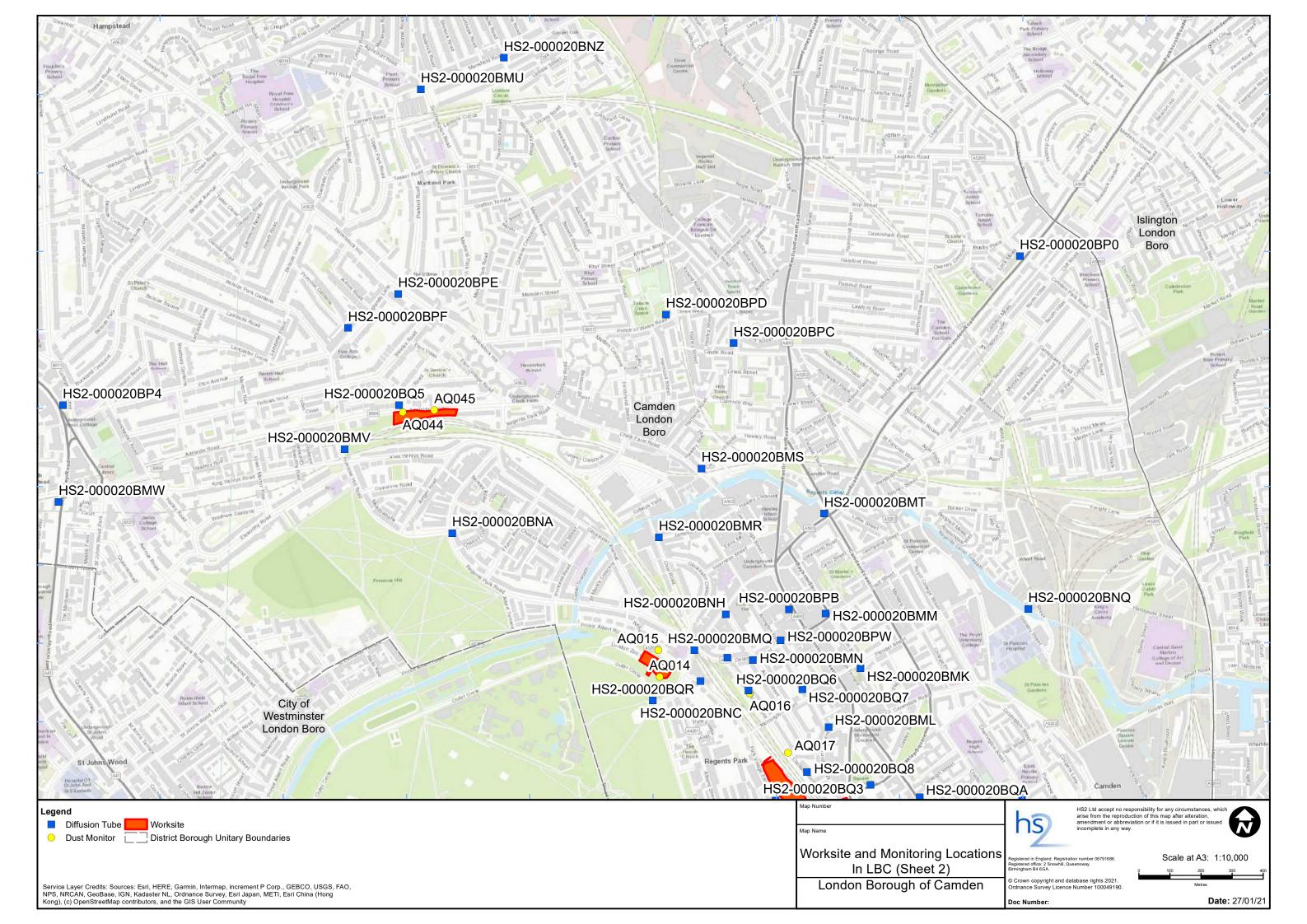
- 1.1.7 The trigger level for PM<sub>10</sub> concentrations of 190  $\mu$ g/m³, over a 1-hour period, in accordance with the updated guidance document 'Guidance on Monitoring in the Vicinity of Demolition and Construction Sites (October 2018)' has been applied.
- 1.1.8 There were three (3) dust trigger alerts recorded during the monitoring period (April 2021).

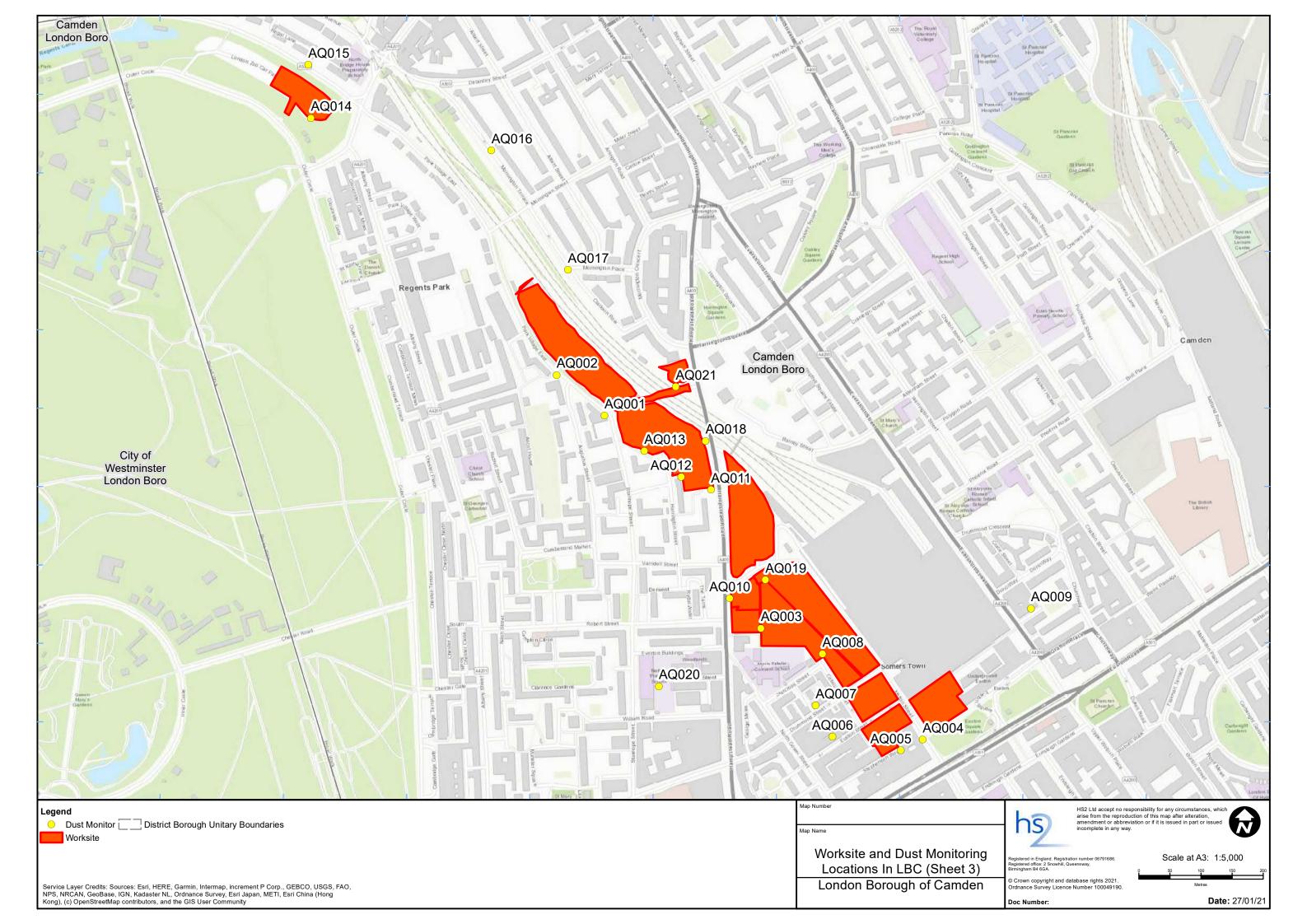
  Triggers are presented in Appendix B, Table 3. All other results were in line with the expected ranges.
- 1.1.9 Data capture for monitor AQ002, AQ016 and AQ018 was below 90% for the month of April 2021 due to faults with the monitors. Data capture for AQ014 was below 90% due to a loss of power, which has since been resolved.
- 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 may occur as a result of the scheme.
- 1.1.11 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.
- 1.1.12 NO<sub>2</sub> monitoring locations and results are presented in Appendix C, Table 4, together with the 2021 running mean.
- 1.1.13 There were no (0) complaints, relating to dust or air quality, received during this reporting period (April 2021).

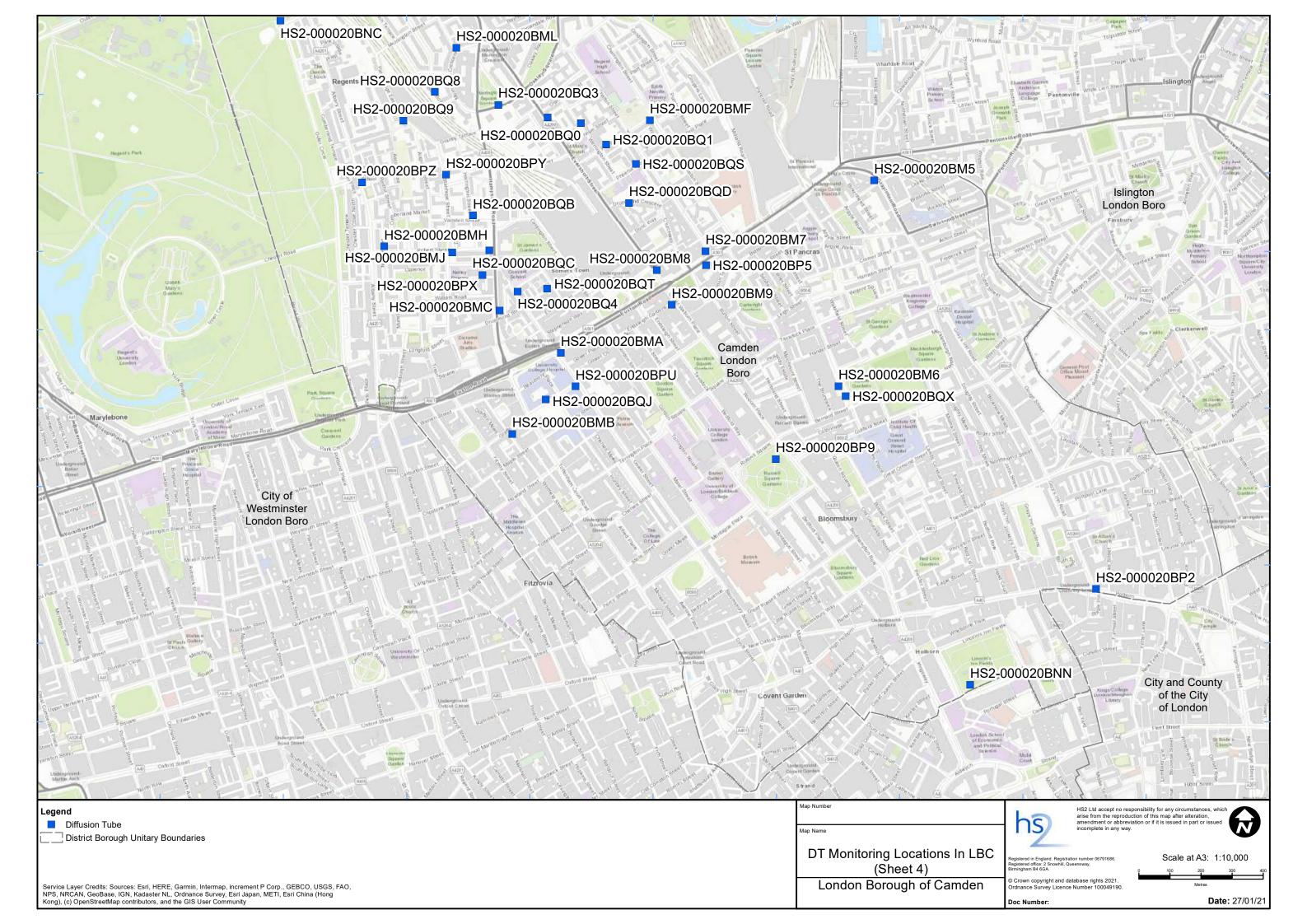
## **Appendix A – Worksites and Monitoring Locations**

Figure 1 to Figure 4: Worksites and monitoring locations within the LBC









## **Appendix B – Dust Monitoring Results**

Table 2: Dust monitoring locations and April 2021 Results

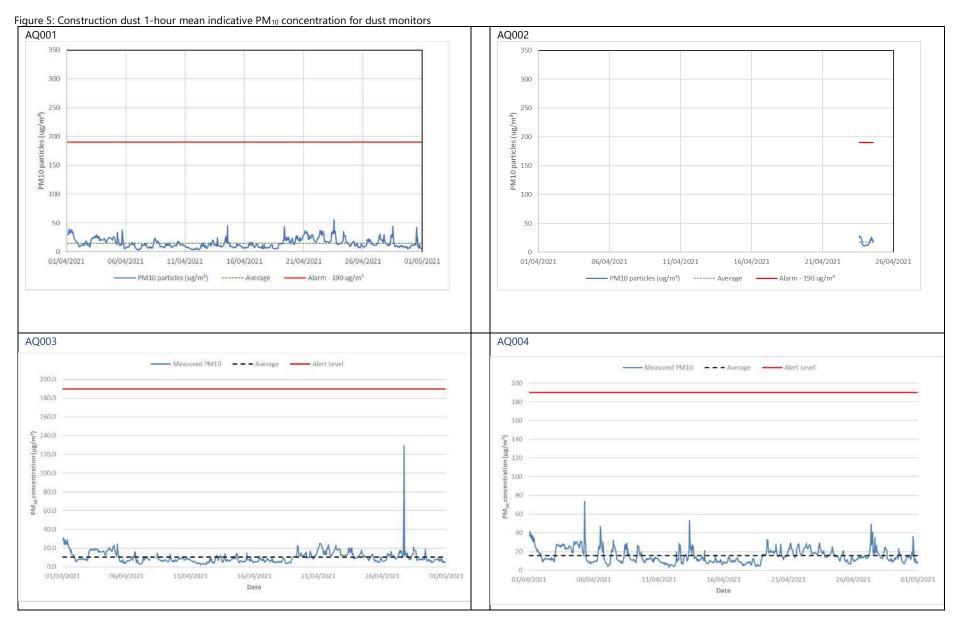
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM <sub>10</sub> concentration (μg/m³)	Minimum 1- hour PM <sub>10</sub> concentration (μg/m³)	Maximum 1- hour PM <sub>10</sub> concentration (μg/m³)	Number of 1- hour periods exceeding trigger level of 190 µg/m³	Data capture (%)
AQ001	529022, 183040	Junction of Park Village East, Stanhope Street and Granby Terrace	М	Yes	N	14.9	3.0	56.0	0	99.9
AQ002	528945, 183105	Park Village East	М	Yes	N	17.4	10.9	28.2	0	3.5
AQ003	529273, 182698	St James' Gardens	М	Yes	N/A	10.3	2.3	129.1	0	98.5a
AQ004	529533, 182519	Melton Street	Н	Yes	N/A	15.5	3.3	73.3	0	100.0
AQ005	529498, 182502	Stephenson Way	Н	Yes	N/A	16.7	2.6	92.3	0	100.0
AQ006	529388, 182524	Euston Street	Н	Yes	N/A	11.4	2.6	54.7	0	100.0
AQ007	529361, 182574	Drummond Street	Н	Yes	N/A	12.2	2.3	58.8	0	100.0
AQ008	529372, 182657	Cobourg Street	Н	Yes	N/A	15.8	2.5	209.8	1	99.0ª
AQ009	529707, 182730	Eversholt Street	Н	Yes	N/A	14.6	2.9	51.9	0	100.0
AQ010	529223, 182746	Hampstead Road South	М	Yes	N/A	27.2	6.1	101.2	0	100.0
AQ011	529193, 182921	Hampstead Road	М	No	N	14.3	2.6	89.0	0	99.6

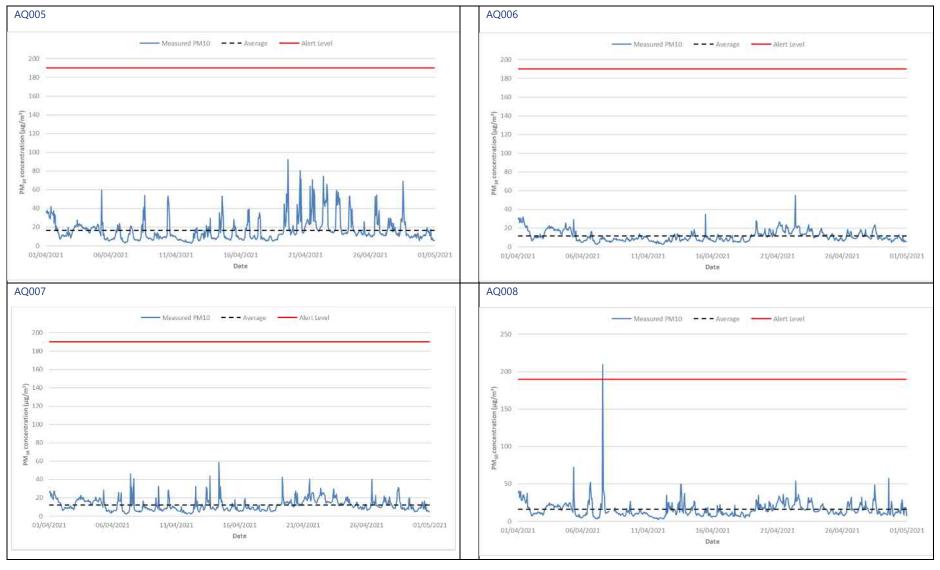
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM <sub>10</sub> concentration (μg/m³)	Minimum 1- hour PM <sub>10</sub> concentration (µg/m³)	Maximum 1- hour PM <sub>10</sub> concentration (μg/m³)	Number of 1- hour periods exceeding trigger level of 190 µg/m³	Data capture (%)
AQ012	529145, 182941	Rear of Coniston House	М	Yes	N	12.9	2.4	66.7	0	98.9
AQ013	529086, 182983	Regents Park Estate	М	Yes	N	28.2	3.9	262.3	2	99.9
AQ014	528550, 183518	Vehicle Holding Area	L	Yes	N	8.6	2.1	90.9	0	83.3
AQ015	528546, 183604	Prince Albert Road	L	Yes	N	7.9	1.7	33.9	0	99.9
AQ016	528840, 183466	Mornington Terrace North	М	Yes	N	17.4	6.4	40.7	0	12.5
AQ017	528963, 183274	Mornington Terrace South	М	Yes	N	12.9	3.1	94.0	0	99.9
AQ018	529184, 182999	Hampstead Road North	М	Yes	N	10.5	2.4	36.3	0	81.3
AQ019	529280, 182776	Park Village East (North)	М	Yes	N	10.8	2.7	49.7	0	99.9
AQ020	529109, 182605	Netley School	n/a	Yes	N/A	10.4	2.3	68.0	0	100.0
AQ021	529136, 183086	Site compound at the Junction of Hampstead Road & Granby Terrace Bridge.	М	Yes	N	17.3	3.5	65.7	0	91.0
AQ044	527725, 184369	Adelaide Road Vent Shaft (west)	М	Yes	N	2.1	0.0	12.1	0	95.3
AQ045	527826, 184375	Adelaide Road Vent Shaft (east)	М	Yes	N	14.9	3.3	168.7	0	94.2

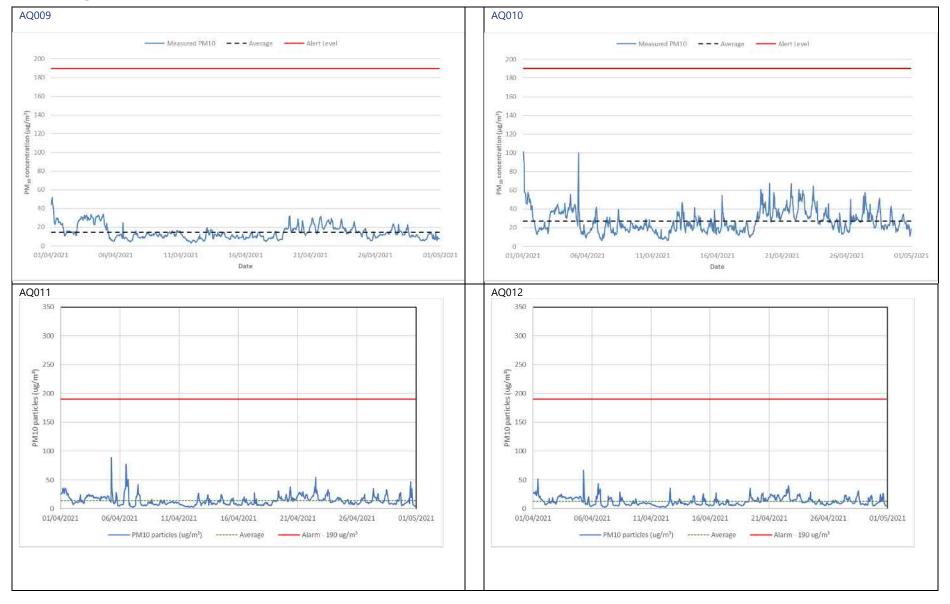
<sup>&</sup>lt;sup>a</sup> Data loss associated with planned power cuts at the site on the 7<sup>th</sup> and 26<sup>th</sup> April (power cuts were related to internal surveys and the Humanities Block power isolation works).

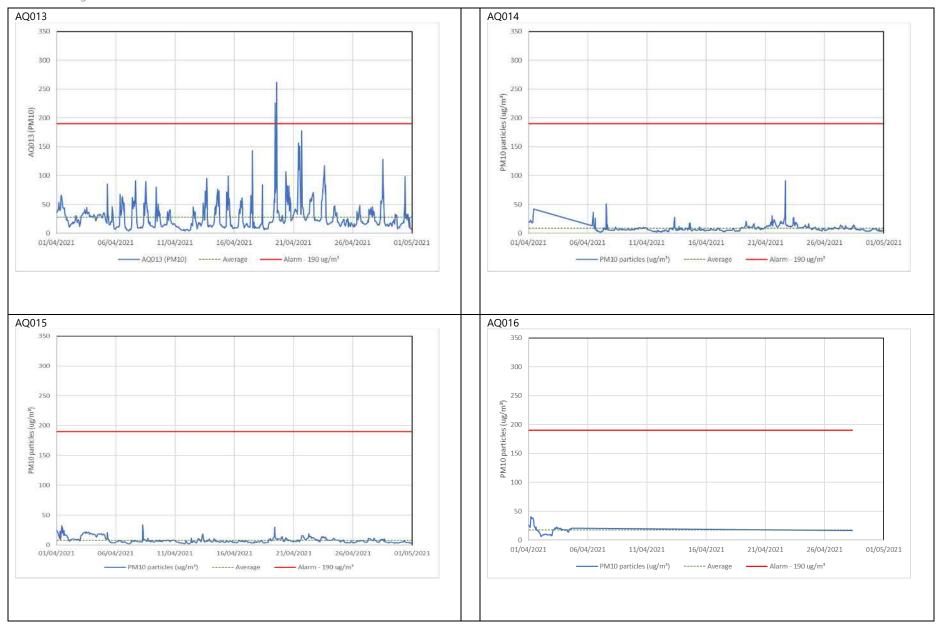
Table 3: Summary of exceedances of trigger level in April 2021

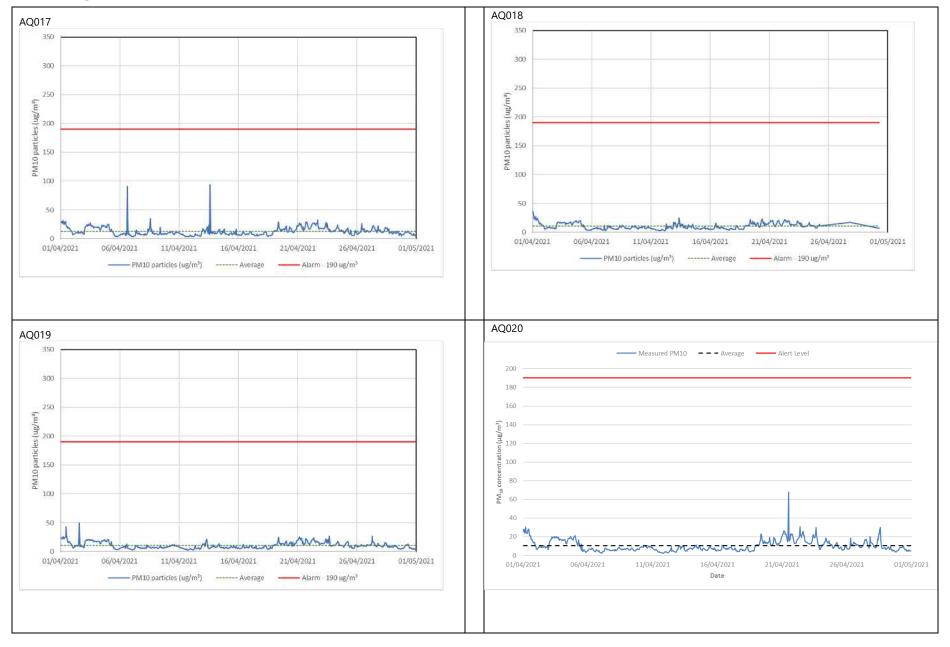
Monitoring site ID	Period exceeding trigger level	Investigation	Outcomes / Resolution / Remedial measures implemented
		On consultation with the construction team, it has been confirmed that no works were carried out by MDJV on the NTH- Euston North site.	
		Site maintenance, including damping down was performed.	MDJV will continue to control re-suspension of dust damping down the site while no construction activities are carried out.
AQ008	07/04/2021 13:00-14:00: 209.8 μg/m <sup>3</sup>	An internal asbestos survey was carried out within Maria Fidelis building which is believe could not have contributed to the alert.	MDJV will continue to ensure all the activities being undertaken on site have appropriate mitigation measures applied (in line with the CoCP).
		It is expected that works unrelated to HS2 undertaken at the junction of Cobourg Street and Drummond Street have caused the exceedance.	
AQ013	19/04/2021 10:00 -11:00: 226.3 μg/m <sup>3</sup> 13:00-14:00: 262.3 μg/m <sup>3</sup>	At the time of the trigger alert from dust monitor (AQ013), which is located on the south western boundary of the Euston Throat Retained Cut (ETRC) site, activities associated with the new welfare ground slab construction were being carried out in the immediate locality of the dust monitor.  The general movement of large machinery and aggregate materials were taking place directly next to the monitor.  Dust suppression was deployed across these activities and monitored levels dropped again and prior to the second trigger a large vehicle bowser was deployed to dowse the whole area. It is considered the elevated levels were localised to that area of the site.  The subsequent readings dropped again and remained low for the rest of the day. Nearby monitors, AQ001, AQ012 and AQ011, showed no elevated levels during the same period.	The site team will continue to ensure dust suppression is available and deployed where required on site.

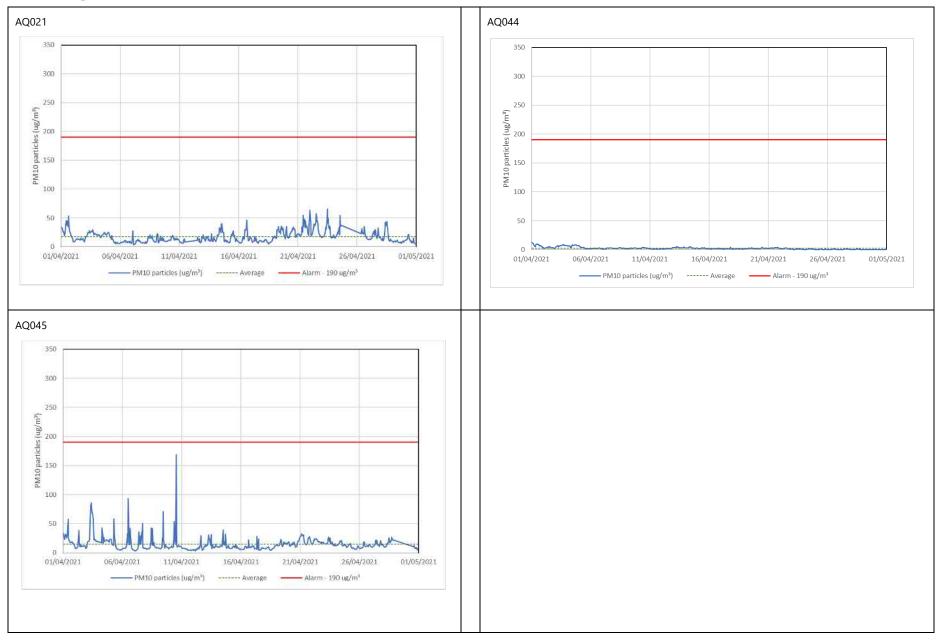












## **Appendix C – Air Quality Monitoring Results**

Table 3: NO<sub>2</sub> monitoring locations around highways, NO<sub>2</sub> concentrations and monthly monitoring results with running mean for 2021 (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	50	41	39										43
HS2-000020BM7	Chalton Street	529894, 182702	53	57	48										53
HS2-000020BM8	Junction of Euston Square and Grafton Place	529737, 182641	58	60	48										55
HS2-000020BM9	Junction of Endsleigh Gardens and Upper Woburn Place	529785, 182529	52	48	43										48
HS2-000020BMA	Junction of Euston Road and Gower Street	529429, 182375	53	47	44										48
HS2-000020BMB	Whitfield Street	529273, 182114	44	45	37										42
HS2-000020BMC	Hampstead Road	529232, 182511	68	73	65										69
HS2-000020BMF	Junction of Polygon Road and Ossulston Street	529715, 183123	38	37	28										34
HS2-000020BMH	Nash Street	528861, 182717	39	38	30										36
HS2-000020BMJ	Junction on Robert Street and Stanhope Street	529080, 182698	37	39	33										36
HS2-000020BMK	Junction of Plender Street and Bayham Street	529196, 183546	50	51	44										48

<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>
HS2-000020BML	Junction of Arlington Road and Mornington Crescent	529093, 183356	42	38	31										37
HS2-000020BMM	Junction of Bayham Street and Pratt Street	529084, 183722	57	50	49										52
HS2-000020BMN	Junction of Delancey Street and Albert Street	528850, 183573	Tube Missing	38	38										38
HS2-000020BMQ	Junction of Parkway and Delancey Street	528662, 183604	46	47	41										45
HS2-000020BMR	Junction of Oval Road and Jamestown Road	528548, 183967	39	33	36										36
HS2-000020BMS	Junction of Chalk Farm Road and Castlehaven Road	528685, 184188	50	43	40										44
HS2-000020BMT	Junction of Camden Road and Camden Street	529079, 184043	50	49	49										49
HS2-000020BMU	Junction of Southampton Road and Fleet Road	527783, 185407	40	38	36										38
HS2-000020BMV	Primrose Hill Road	527538, 184250	41	37	30										36
HS2-000020BMW	Junction of Finchley Road and Hilgrove Road	526619, 184081	50	51	45										49
HS2-000020BMZ	Junction of Finchley Road and Hendon Way	525102, 186042	Tube Missing	Tube Missing	50										50
HS2-000020BNA	Junction of Regent's Park Road and Rothwell Street	527884, 183980	40	33	26										33
HS2-000020BNC	Junction of Outer Circle and Gloucester Gate	528528, 183443	32	32	26										30
HS2-000020BNH	Junction of Parkway and Albert Street	528763, 183720	42	36	Tube Missing										39

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean <sup>1</sup>
HS2-000020BNN	Lincoln's Inn Fields	530744, 181308	38	33	29										33
HS2-000020BNQ	Camley Street	529735, 183737	Tube Missing	50	37										44
HS2-000020BNY	Junction of Mill Lane and Hillfield Road	524839, 185136	48	43	39										43
HS2-000020BNZ	Mansfield Road	528050, 185508	38	37	29										35
HS2-000020BP0	Junction of Camden Road and Torriano Avenue	529708, 184871	52	56	50										53
HS2-000020BP2	Junction of Grays Inn Road and Holborn	531149, 181616	39	32	32										34
HS2-000020BPB	Camden High Street	528966, 183735	69	Tube Missing	56										63
HS2-000020BPC	Castlehaven Road	528788, 184591	43	37	29										36
HS2-000020BPD	Prince of Wales Road	528571, 184683	39	33	25										32
HS2-000020BPE	Haverstock Hill	527710, 184749	44	38	36										39
HS2-000020BPF	Junction of Primrose Gardens and England's Lane	527549, 184640	43	40	30										38
HS2-000020BPU	Junction of Gower Street and Grafton Way	529476, 182267	Tube Missing	43	39										41
HS2-000020BPW	Junction of Delancey Street and Arlington Road	528939, 183637	39	40	39										39
HS2-000020BPX	Netley Street	529177, 182625	44	40	34										39
HS2-000020BPY	Stanhope Street	529060, 182947	38	32	32										34
HS2-000020BPZ	Albany Street	528790, 182923	39	35	33										36
HS2-000020BQ0	Werrington Street	529493, 183113	38	34	28										33

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean <sup>1</sup>
HS2-000020BQ1	Polygon Road	529574, 183045	Tube Missing	Tube Missing	29										29
HS2-000020BQ2	Alexandra Place	526320, 183980	37	35	29										34
HS2-000020BQ3	Harrington Square	529228, 183172	53	51	44										49
HS2-000020BQ4	Junction of North Gower Street and Starcross Street	529290, 182572	45	41	30										39
HS2-000020BQ5	Adelaide Road	527713, 184392	44	40	32										39
HS2-000020BQ6	Mornington Terrace	528836, 183474	38	33	27										33
HS2-000020BQ7	Arlington Road	529009, 183479	35	35	29										33
HS2-000020BQ8	Clarkson Row	529024, 183213	37	39	31										36
HS2-000020BQ9	Park Village East	528923, 183121	37	37	31										35
HS2-000020BQA	Eversholt Street	529386, 183132	55	47	42										48
HS2-000020BQB	Junction of Harrington Street and Varndell Street	529147, 182816	32	40	31										34
HS2-000020BQC	Junction of Robert Street and Hampstead Road	529199, 182704	47	49	38										45
HS2-000020BQD	Drummond Crescent	529648, 182856	47	47	33										42
HS2-000020BQJ	Grafton Way	529380, 182225	47	46	41										45
HS2-000020BQL	Delancey Street	528768, 183581	46	46	42										45
HS2-000020BQR	Lamp post on Park Village East	528682, 183505	37	35	29										34

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean <sup>1</sup>
HS2-000020BQS	Opposite Maria fidelis	529670,													
	school on Phoenix	182982	42	42	30										38
	Road														
HS2-000020BQT	Drummond Street	529385,	40	44	37										40
		182581	40	44	37										40
HS2-000020BQX	Lamp post on	530344,	45	40	36										40
	Brunswick Square	182236	45	40	30										40
HS2-000020BP4	Triplicate site on	526633,													
	Finchley Road next to	184392	Tubes Missing		Tube										
	Swiss Cottage kerbside			52											52
	automatic monitoring				Missing										
	station														
HS2-000020BP5	Triplicate site next to	529895,													
	the Euston Road	182657	55	62	57										58
	roadside automatic		55	02	37										30
	monitoring stations														
HS2-000020BP9	Triplicate site in Russell	530120,													
	Square next to	182034													
	Bloomsbury urban		38	36	36										37
	background automatic														
	monitoring station														