

Air Quality and Dust Monitoring Monthly Report – April 2022

London Borough of Camden



Department for Transport

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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 2022 and April 2022 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 enabling works commenced within the LBC during December 2017 and is now complete. The current phase of construction works commenced in November 2019 and is expected to be completed by 2025. The current and planned worksites, 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.

Mace Dragados Joint Venture (MDjv)

TSS

- Secondary lining works & Casted up to Bay;
- Crown waterproofing works & reinforcement halfway through;
- Casted base slab;
- Installed second level of props; and
- Continued excavating the box.

NTH

- Drainage Works;
- Ground Source Heat Pumps commenced; and
- Shuttering and slab preparation commenced.

Zone 5

- Finished piling mat;

- UKPN cable diversion works complete;
- Hoarding adjustment works;
- Mobilisation of piling contractor for piling extraction; and
- Breaking out piling cap on North of zone 5.

Two Towers

- Continue demo in basement and ground floor;
- Jacking frames installation in south and east;
- Old sheet piles removal in basement;
- Ground works in Piazza satellite site;
- Bollards installation on Piazza area;
- Installation of temporary works (props) to continue demo; and
- PRM Ramp installation.

ITR

- Shaft commission and decommission for deep drainage MH- 4A.

- 1.1.5 Twenty-one (21) 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 PM₁₀ concentrations of 190 µg/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 One (1) dust trigger alert was recorded during the monitoring period (April 2022) and is reported in Appendix B, Table 3.
- 1.1.9 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 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.

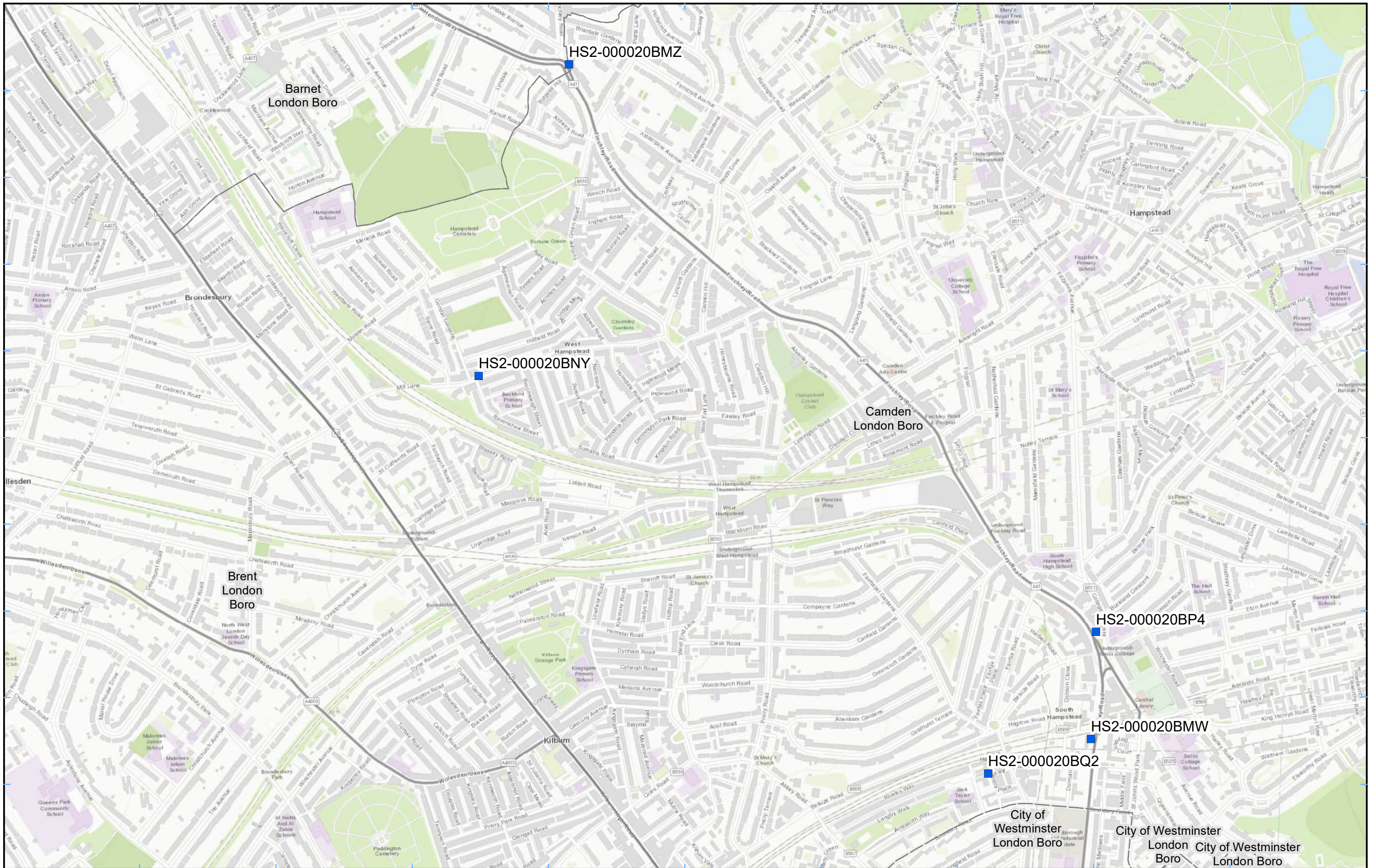
- 1.1.11 NO₂ monitoring locations and results are presented in Appendix C, Table 4, together with the 2022 running mean.
- 1.1.12 Table 1 provides a summary of the complaint information related to dust or air quality received during the reporting period, together with the findings of any related investigations.

Table 1: Summary of complaints received during April 2022

Complaint Reference No.	Worksite Reference	Description of complaint	Results of investigation
HS2-22-43520-C	N/A	Dust covering car on a regular basis.	Mitigations to minimise escape of dust particles provided & dust and pollution monitors around worksites and the broader area.
HS2-22-43531-C	N/A	Complaint regarding dust & dirt from construction works.	Measures taken to reduce the impact of works as much as possible. Property previously surveyed & secondary glazing manufactured but entry declined entry at the point of install. SCS happy to re-survey & look at installation options
HS2-22-43576-C	N/A	Ongoing dust pollution in flat. Vibrations also regularly experienced.	The contractor has confirmed that due to the increased level of dust evident they will dampen the area frequently when it is dry. The vibrations felt were during a piling mat formation. Agreement with stakeholder to contact them weekly during May to ascertain if any issues ongoing.

Appendix A – Worksites and Monitoring Locations

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



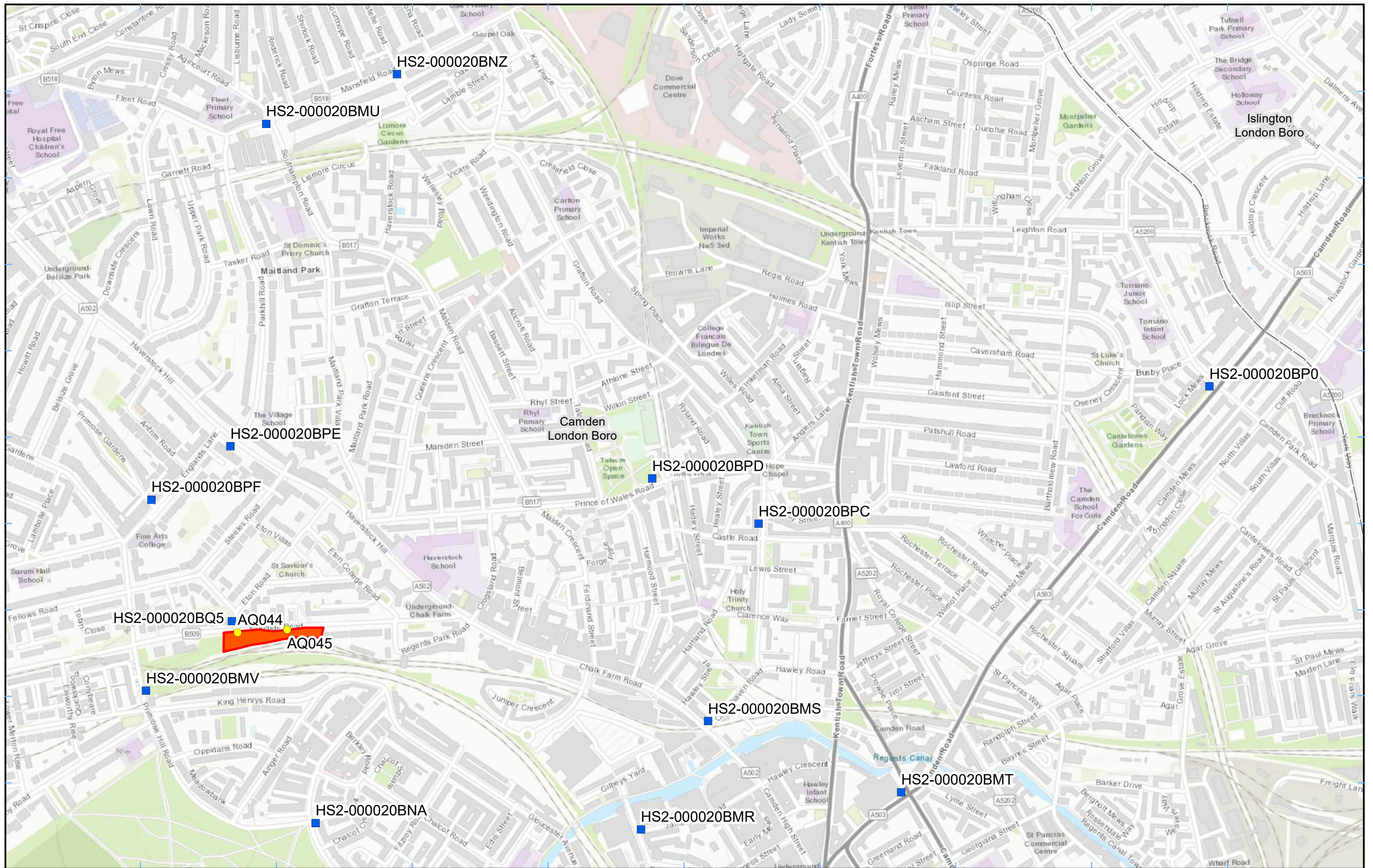
Legend
 Diffusion Tube
 District Borough Unitary Boundaries

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Map Number
 Map Name
**Monitoring Locations
 In LBC (Sheet 1)**
 London Borough of Camden

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Legend

- Diffusion Tube
- Worksite
- Dust Monitor
- District Borough Unitary Boundaries

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Map Number

Map Name
**Worksite and Monitoring Locations
In LBC (Sheet 2)**

London Borough of Camden

Map Number

Map Name
**Worksite and Monitoring Locations
In LBC (Sheet 2)**

London Borough of Camden

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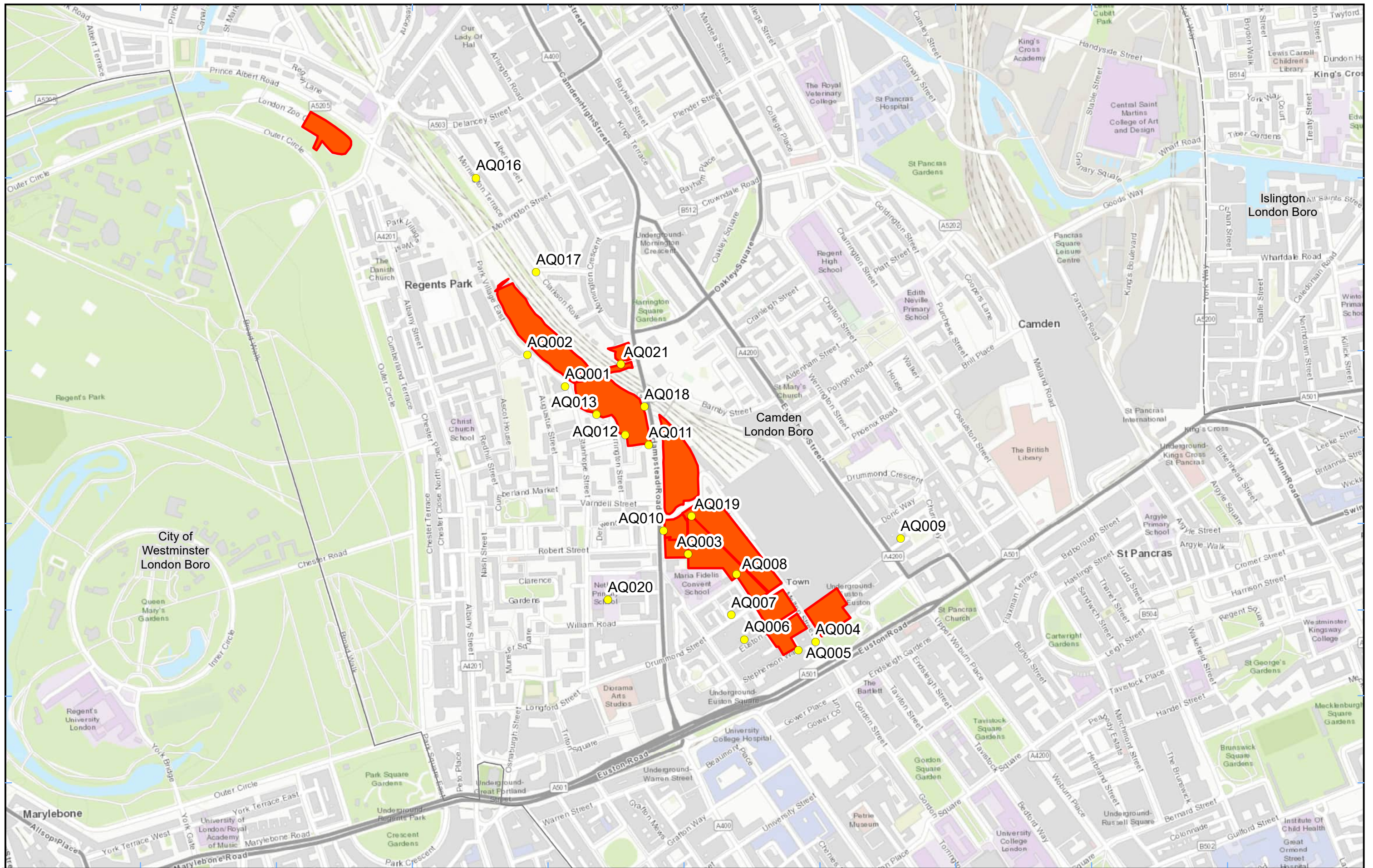
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Legend

- Dust Monitor
- District Borough Unitary Boundaries
- Worksite

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Map Number

Map Name
**Worksite and Monitoring Locations
 In LBC (Sheet 3)**

London Borough of Camden

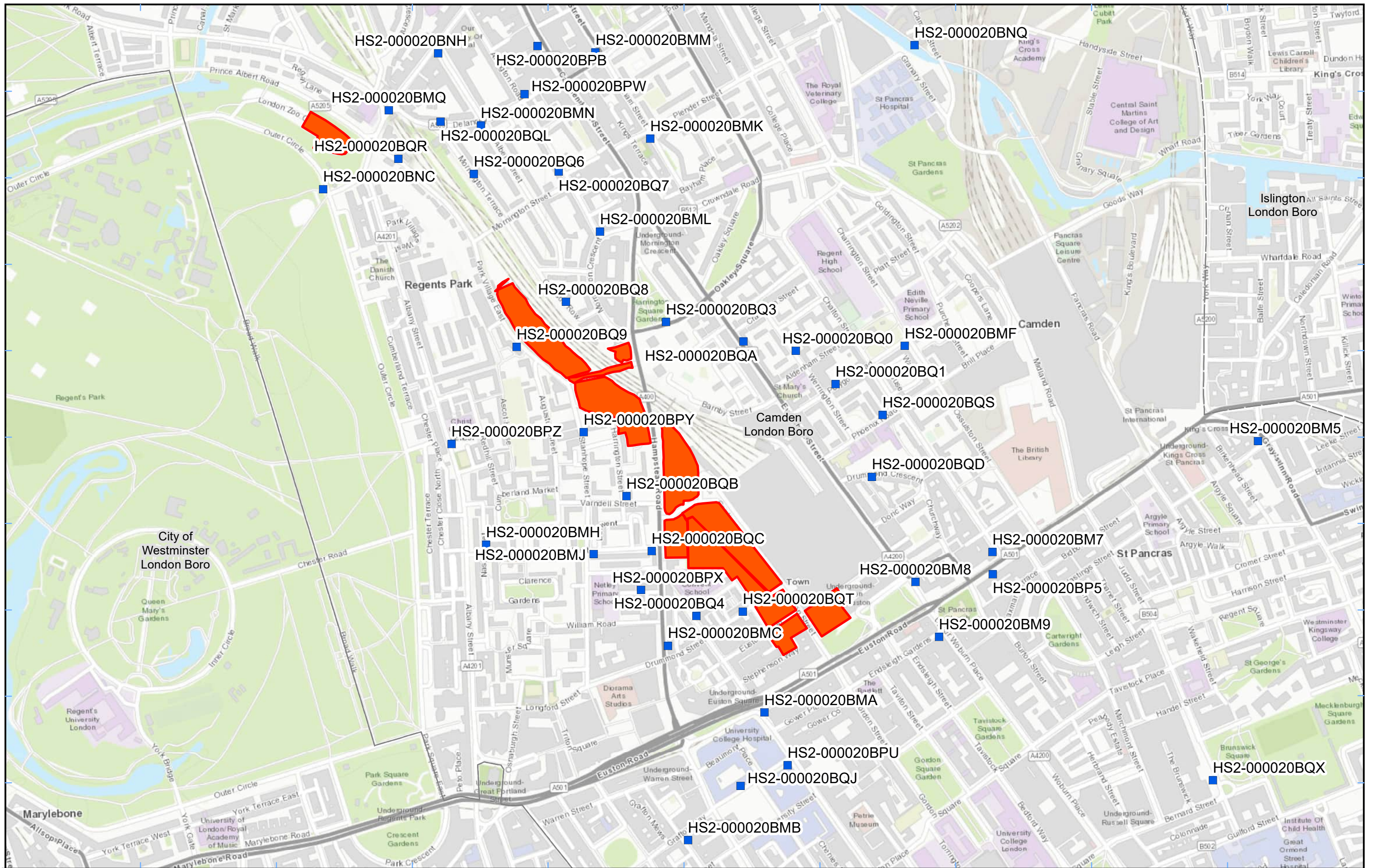
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Legend
■ Diffusion Tube District Borough Unitary Boundaries
 Worksite

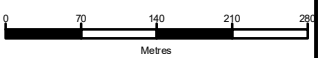
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Map Number
 Map Name
**Worksite and Monitoring Locations
 In LBC (Sheet 4)**
 London Borough of Camden

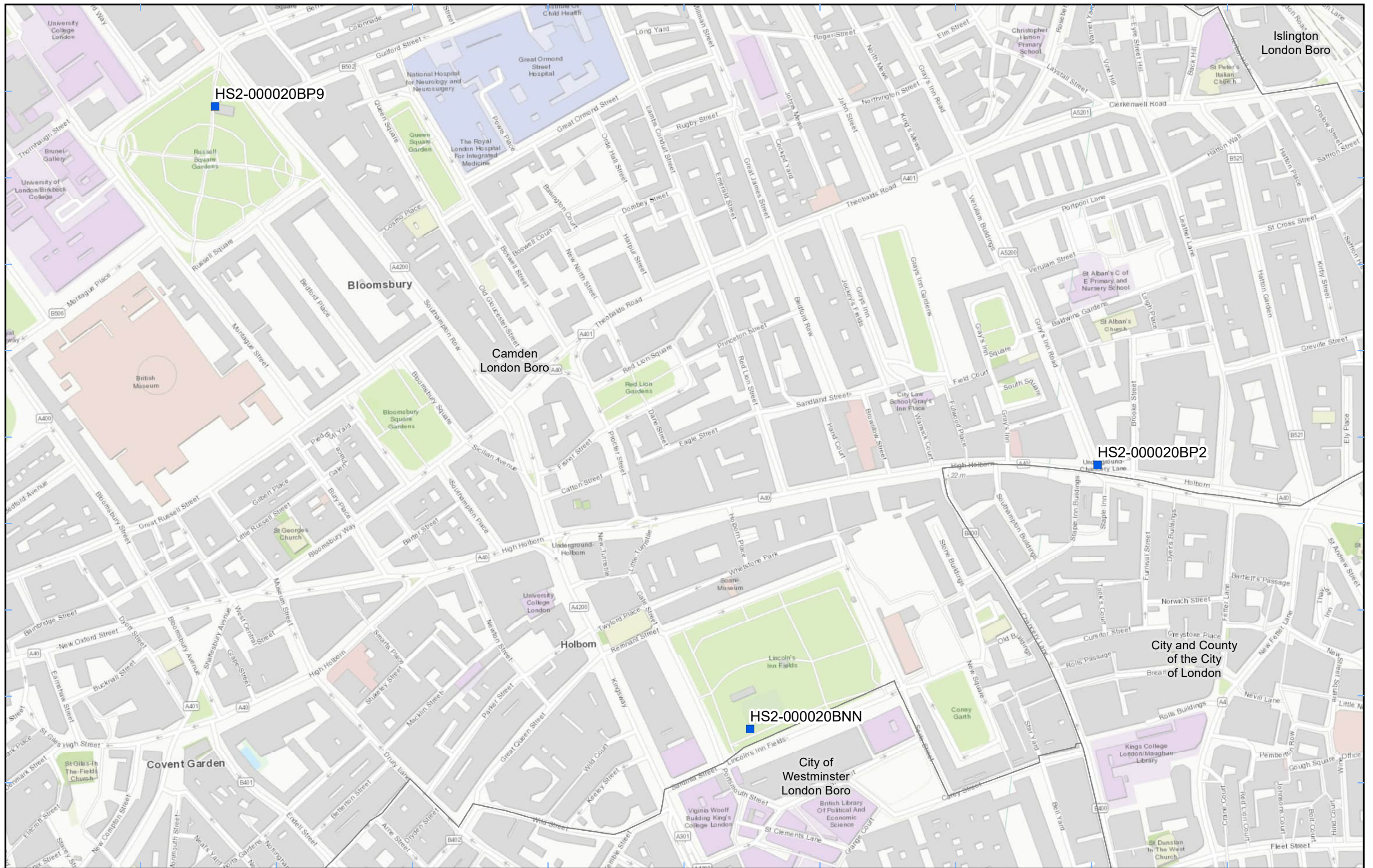

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Legend
 ■ Diffusion Tube
 - - - District Borough Unitary Boundaries

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Map Number
 Map Name
**Monitoring Locations
 In LBC (Sheet 5)**
 London Borough of Camden

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Appendix B – Dust Monitoring Results

Table 2: Dust monitoring locations and March 2022 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/m ³)	Minimum 1-hour PM ₁₀ concentration (µg/m ³)	Maximum 1-hour PM ₁₀ concentration (µg/m ³)	Number of 1- hour periods exceeding trigger level of 190 µg/m ³	Data capture (%)
AQ001	529016, 183049	Junction of Park Village East, Stanhope Street and Granby Terrace	M	Yes	N	15.0	2.0	65.9	0	100.0
AQ002	528924, 183130	Park Village East	M	Yes	N	11.5	1.7	35.5	0	99.9
AQ003	529273, 182698	St James' Gardens	M	Yes	N/A	7.5	0.7	35.8	0	100.0
AQ004	529533, 182519	Melton Street	H	Yes	N/A	11.5	1.7	69.4	0	100.0
AQ005	529498, 182502	Stephenson Way	H	No	N/A	-	-	-	-	0.0
AQ006	529388, 182524	Euston Street	H	Yes	N/A	11.8	1.4	28.4	0	100.0
AQ007	529361, 182574	Drummond Street	H	Yes	N/A	9.8	1.1	46.9	0	100.0
AQ008	529372, 182657	Cobourg Street	H	Yes	N/A	11.0	1.1	42.8	0	100.0
AQ009	529707, 182730	Eversholt Street	H	Yes	N/A	10.8	1.3	27.6	0	100.0
AQ010	529223, 182746	Hampstead Road South	M	Yes	N/A	11.8	1.6	75.2	0	100.0
AQ011	529176, 182922	Hampstead Road	M	Yes	N	12.3	1.3	171.0	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/m ³)	Minimum 1-hour PM ₁₀ concentration (µg/m ³)	Maximum 1-hour PM ₁₀ concentration (µg/m ³)	Number of 1-hour periods exceeding trigger level of 190 µg/m ³	Data capture (%)
AQ012	529144, 182941	Rear of Coniston House	M	Yes	N	18.3	2.0	93.0	0	99.7
AQ013	529066, 182990	Regents Park Estate	M	Yes	N	11.6	1.2	115.5	0	94.0
AQ016	528820, 183498	Mornington Terrace North	M	Yes	N	12.6	2.3	41.1	0	100.0
AQ017	528962, 183274	Mornington Terrace South	M	Yes	N	9.9	1.1	35.1	0	100.0
AQ018	529192, 183071	Hampstead Road North	M	Yes	N	9.7	1.5	42.7	0	100.0
AQ019	528689, 183500	Park Village East (North)	M	Yes	N	10.0	1.3	37.0	0	100.0
AQ020	529109, 182605	Netley School	n/a	Yes	N/A	13.5	1.3	77.6	0	100.0
AQ021	529136, 183086	Site compound at the Junction of Hampstead Road & Granby Terrace Bridge	M	Yes	N	11.4	1.8	38.0	0	96.7
AQ044	527725, 184369	Adelaide Road 1	M	Yes	N	15.7	1.8	252.7	1	100.0
AQ045	527826, 184375	Adelaide Road 2	M	Yes	N	10.4	1.3	99.6	0	100.0

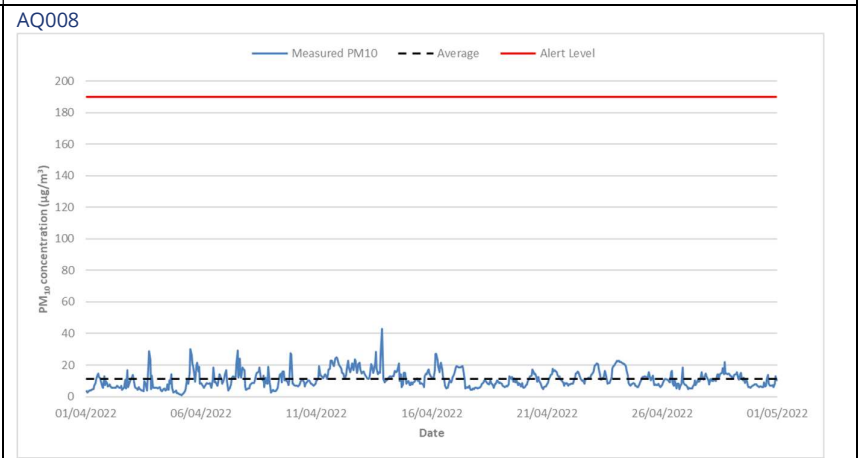
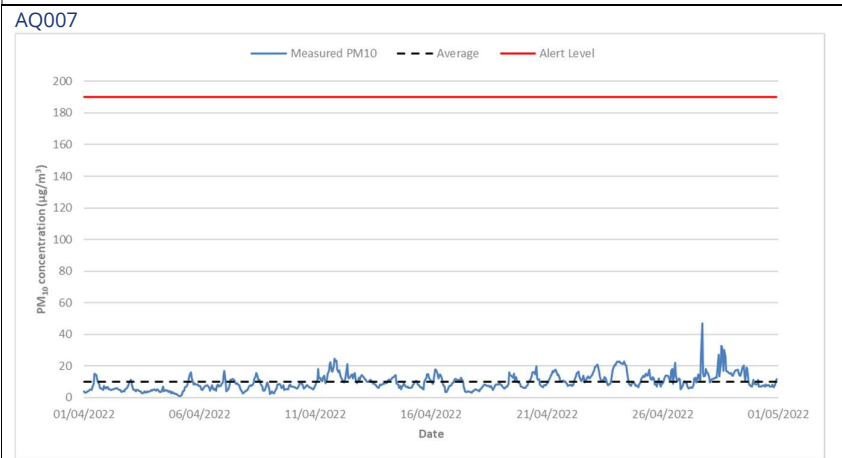
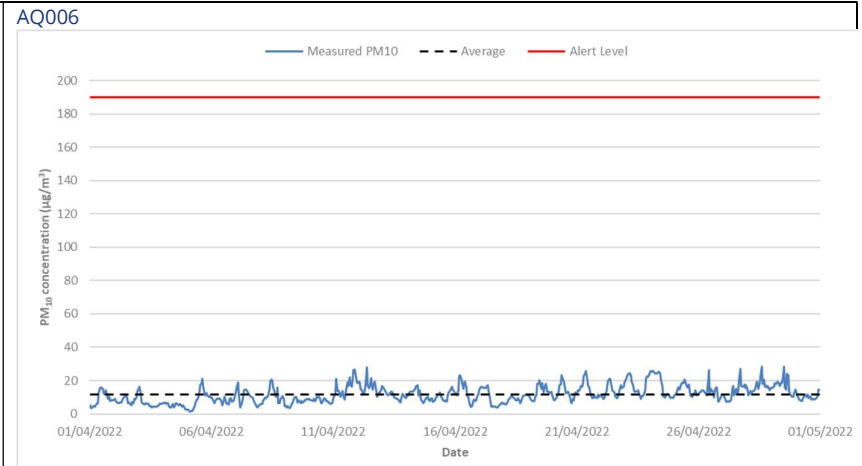
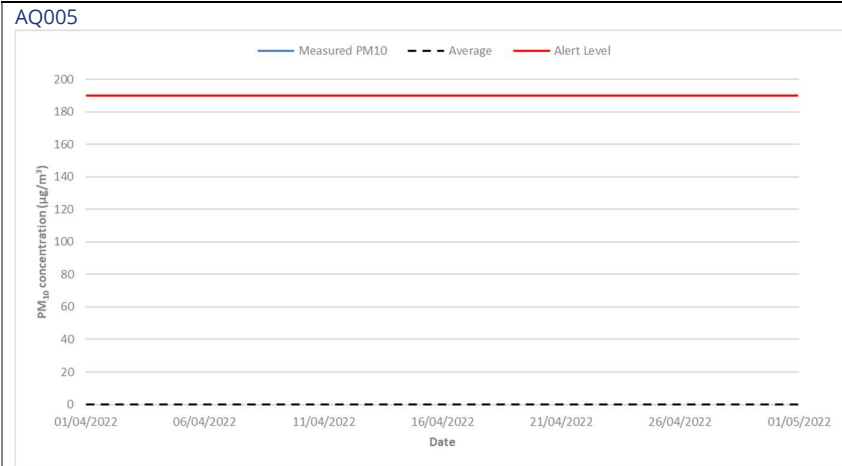
Table 3: Summary of exceedances of trigger level in April 2022

Monitoring site ID	Period exceeding trigger level	Investigation	Outcomes/ Resolution/ Remedial measures implemented
AQ044	21/04/2022 14:00-15:00; 252.7 µg/m ³	At the time of the trigger alert housekeeping was underway in the area including sweeping. However, the area was not damped down in advance and the activity gave rise to localised dust. On receipt of the trigger the sweeping was stopped, and the area damped down. Subsequent monitored levels reduced accordingly. The other monitor (AQ045) towards the central/eastern end of the site showed no elevated levels.	The operative carrying out the works was re-briefed regarding the need to use dust suppression during housekeeping activities. Dust suppression will continue to be employed as required across all site activities.

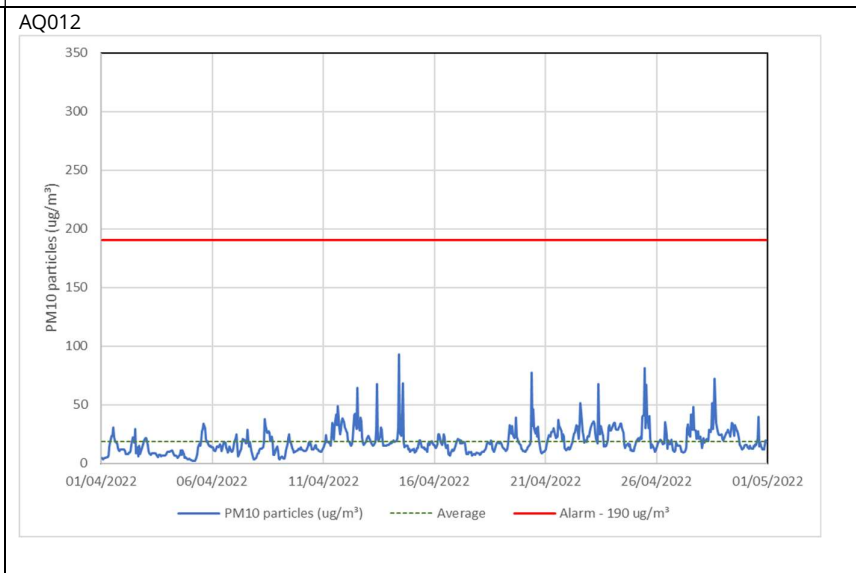
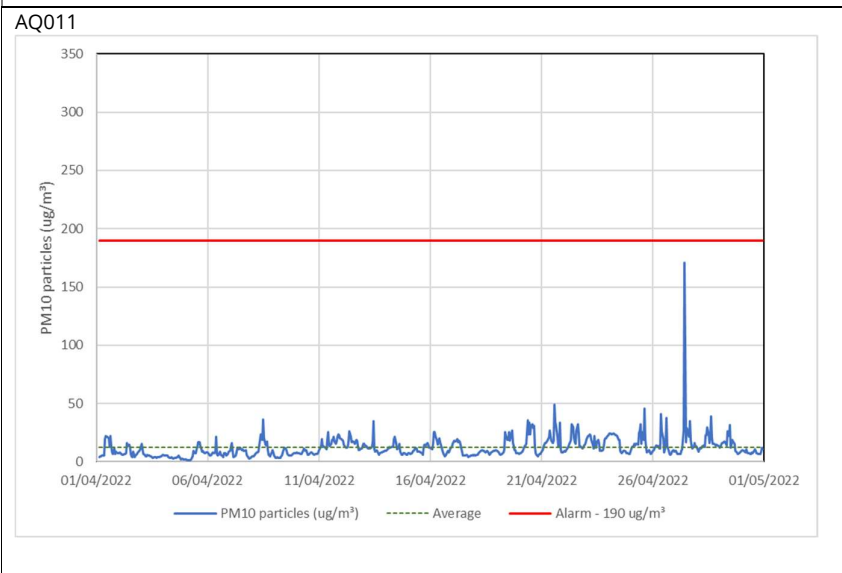
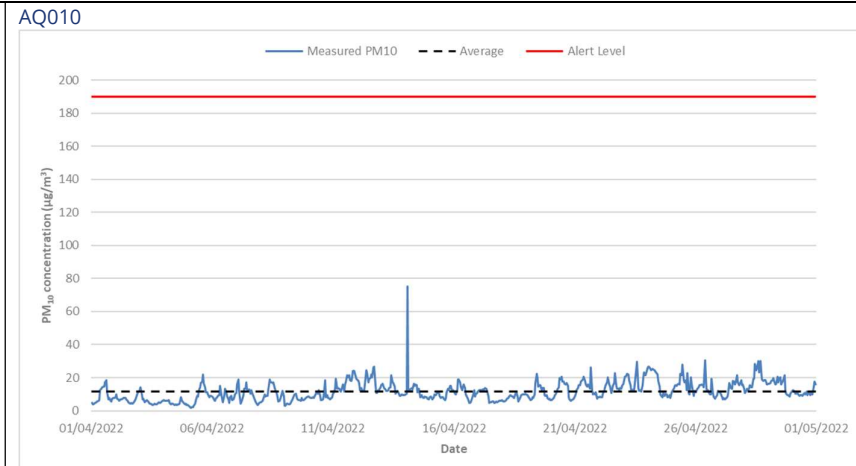
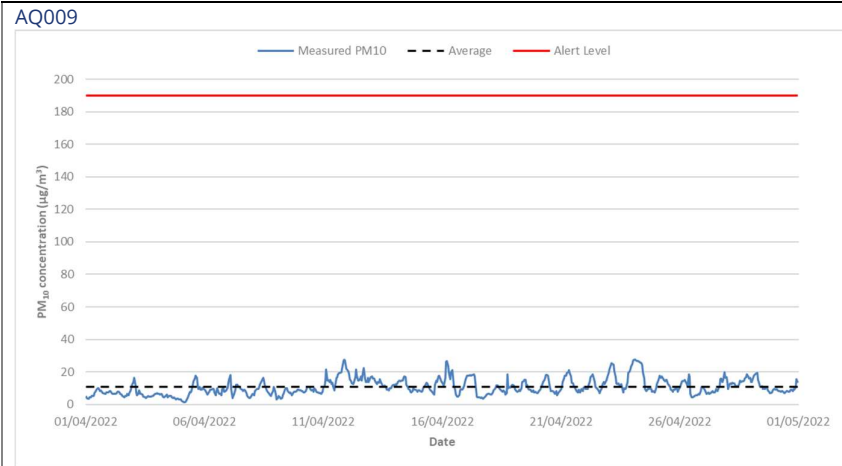
Figure 6: Construction dust 1-hour mean indicative PM₁₀ concentration for dust monitors

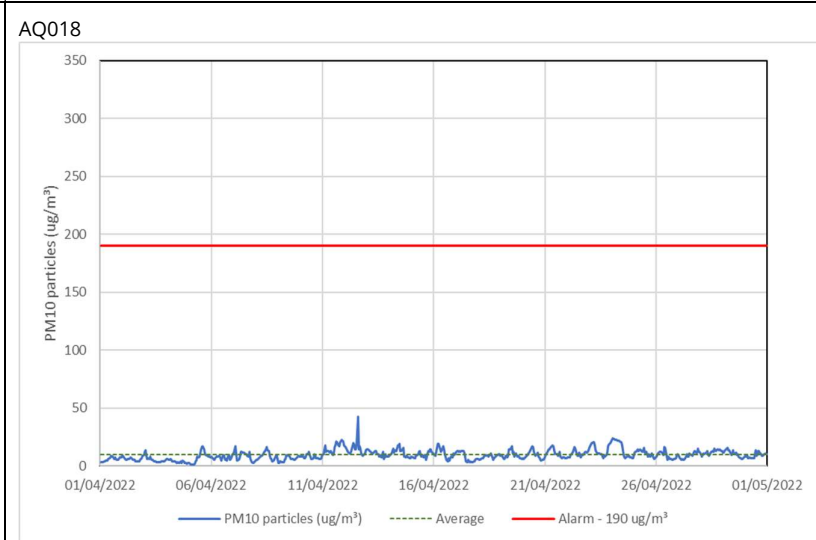
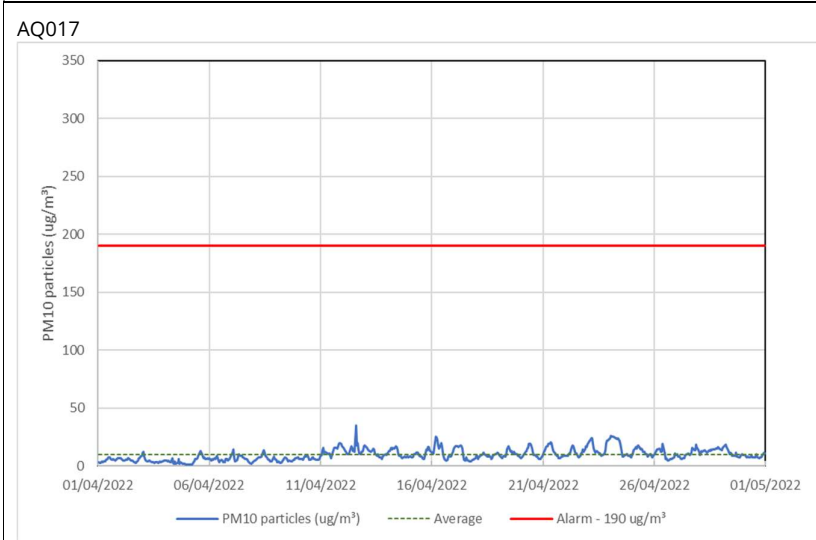
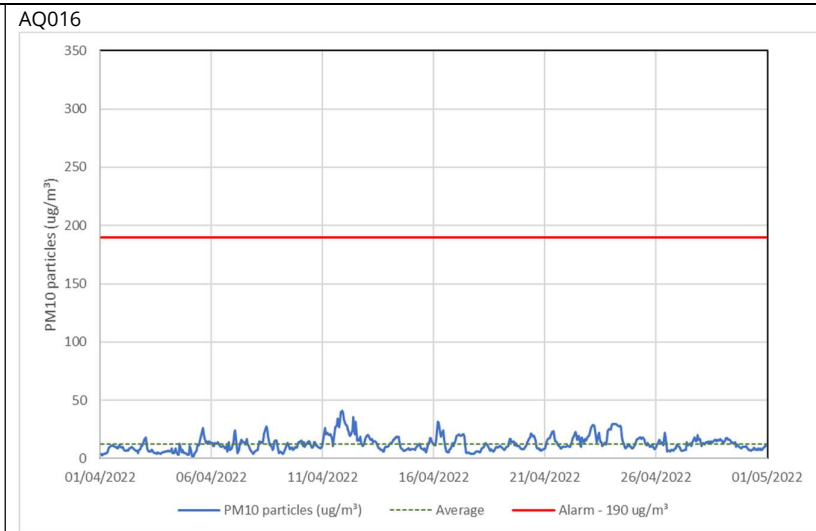
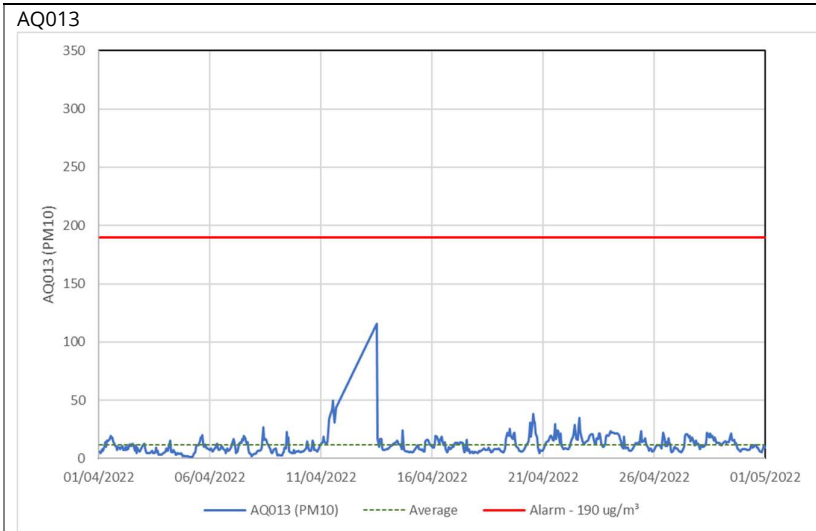


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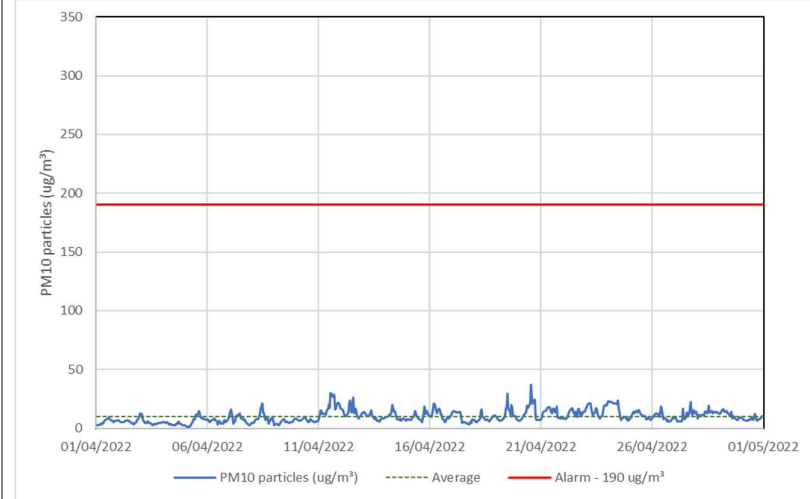


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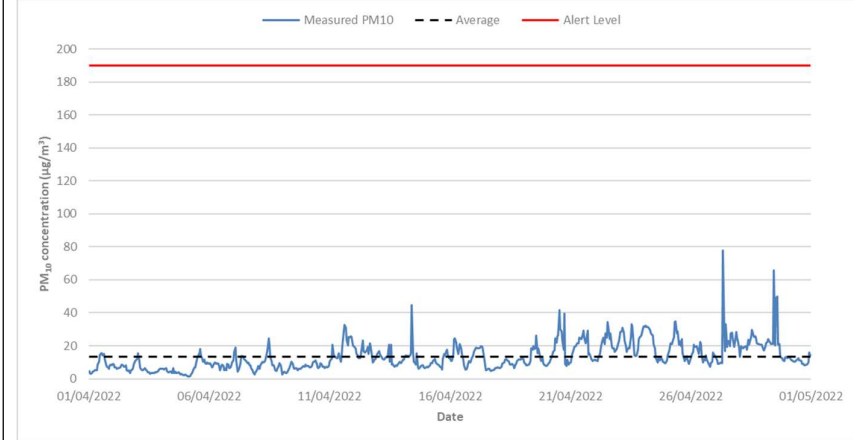




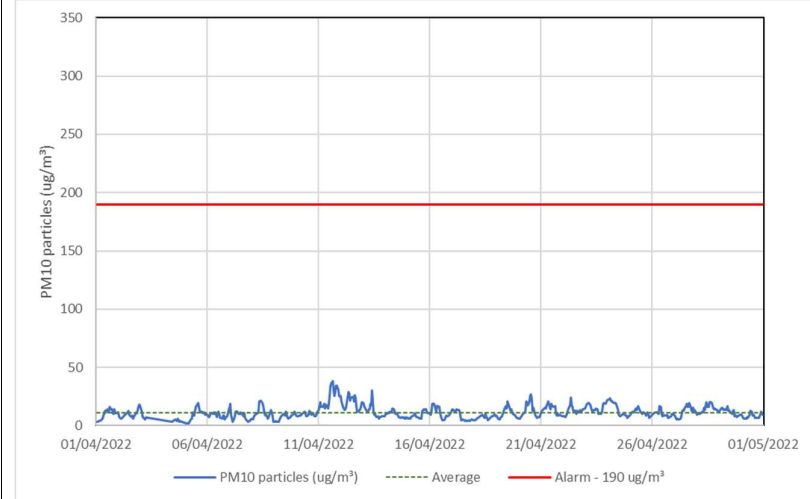
AQ019



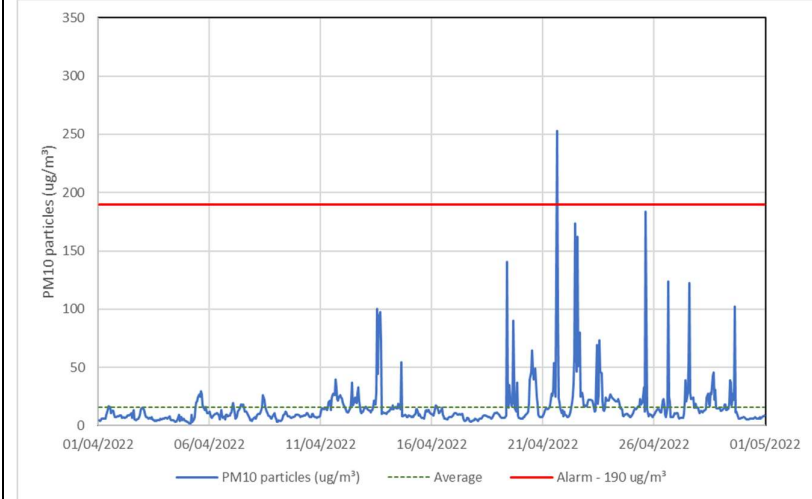
AQ020

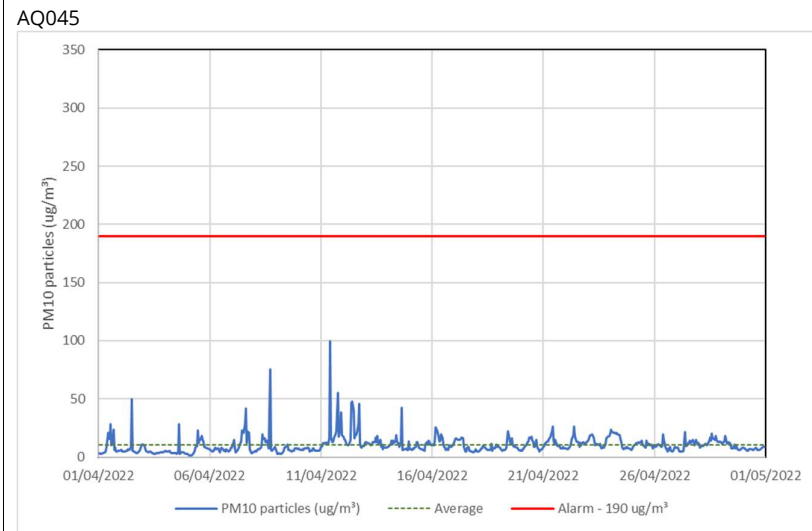


AQ021



AQ044





Appendix C – Air Quality Monitoring Results

Table 4: NO₂ monitoring locations around highways, NO₂ concentrations and monthly monitoring results with running mean for 2022 (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	55	40	48										48
HS2-000020BM7	Chalton Street	529894, 182702	Tube Missing	Tube Missing	62										62
HS2-000020BM8	Junction of Euston Square and Grafton Place	529737, 182641	Tube Missing	51	59										55
HS2-000020BM9	Junction of Endsleigh Gardens and Upper Woburn Place	529785, 182529	61	44	58										54
HS2-000020BMA	Junction of Euston Road and Gower Street	529429, 182375	Tube Missing	44	57										51
HS2-000020BMB	Whitfield Street	529273, 182114	51	37	50										46
HS2-000020BMC	Hampstead Road	529232, 182511	70	52	71										64
HS2-000020BMF	Junction of Polygon Road and Ossulston Street	529715, 183123	42	27	55										42
HS2-000020BMH	Nash Street	528861, 182717	46	31	45										41
HS2-000020BMJ	Junction on Robert Street and Stanhope Street	529080, 182698	41	31	47										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.

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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 ¹
HS2-000020BMK	Junction of Plender Street and Bayham Street	529196, 183546	56	Tube Missing	54										55
HS2-000020BML	Junction of Arlington Road and Mornington Crescent	529093, 183356	48	30	44										41
HS2-000020BMM	Junction of Bayham Street and Pratt Street	529084, 183722	Tube Missing	49	52										50
HS2-000020BMN	Junction of Delancey Street and Albert Street	528850, 183573	53	34	43										43
HS2-000020BMQ	Junction of Parkway and Delancey Street	528662, 183604	51	30	60										47
HS2-000020BMR	Junction of Oval Road and Jamestown Road	528548, 183967	49	31	43										41
HS2-000020BMS	Junction of Chalk Farm Road and Castlehaven Road	528685, 184188	50	41	50										47
HS2-000020BMT	Junction of Camden Road and Camden Street	529079, 184043	60	Tube Missing	53										57
HS2-000020BMU	Junction of Southampton Road and Fleet Road	527783, 185407	53	37	53										48
HS2-000020BMV	Primrose Hill Road	527538, 184250	57	Tube Missing	42										49
HS2-000020BMW	Junction of Finchley Road and Hilgrove Road	526619, 184081	66	52	64										61
HS2-000020BMZ	Junction of Finchley Road and Hendon Way	525102, 186042	88	62	83										77

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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 ¹
HS2-000020BNA	Junction of Regent's Park Road and Rothwell Street	527884, 183980	48	33	38										40
HS2-000020BNC	Junction of Outer Circle and Gloucester Gate	528528, 183443	38	19	39										32
HS2-000020BNH	Junction of Parkway and Albert Street	528763, 183720	50	Tube Missing	Tube Missing										50
HS2-000020BNN	Lincoln's Inn Fields	530744, 181308	47	34	39										40
HS2-000020BNQ	Camley Street	529735, 183737	62	Tube Missing	42										52
HS2-000020BNY	Junction of Mill Lane and Hillfield Road	524839, 185136	60	39	43										47
HS2-000020BNZ	Mansfield Road	528050, 185508	50	36	37										41
HS2-000020BP0	Junction of Camden Road and Torriano Avenue	529708, 184871	63	Tube Missing	56										59
HS2-000020BP2	Junction of Grays Inn Road and Holborn	531149, 181616	59	40	48										49
HS2-000020BPB	Camden High Street	528966, 183735	78	Tube Missing	65										71
HS2-000020BPC	Castlehaven Road	528788, 184591	52	Tube Missing	39										45
HS2-000020BPD	Prince of Wales Road	528571, 184683	46	32	37										39
HS2-000020BPE	Haverstock Hill	527710, 184749	55	41	39										45
HS2-000020BPF	Junction of Primrose Gardens and England's Lane	527549, 184640	54	38	49										47

Air Quality and Dust Monitoring Summary Report, April 2022
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
HS2-000020BPU	Junction of Gower Street and Grafton Way	529476, 182267	Tube Missing	37	49										43
HS2-000020BPW	Junction of Delancey Street and Arlington Road	528939, 183637	53	34	49										45
HS2-000020BPX	Netley Street	529177, 182625	48	30	50										43
HS2-000020BPY	Stanhope Street	529060, 182947	47	Tube Missing	46										47
HS2-000020BPZ	Albany Street	528790, 182923	31	29	45										35
HS2-000020BQ0	Werrington Street	529493, 183113	44	28	40										37
HS2-000020BQ1	Polygon Road	529574, 183045	44	31	42										39
HS2-000020BQ2	Alexandra Place	526320, 183980	45	30	42										39
HS2-000020BQ3	Harrington Square	529228, 183172	55	Tube Missing	60										57
HS2-000020BQ4	Junction of North Gower Street and Starcross Street	529290, 182572	52	25	52										43
HS2-000020BQ5	Adelaide Road	527713, 184392	53	41	48										48
HS2-000020BQ6	Mornington Terrace	528836, 183474	47	30	42										40
HS2-000020BQ7	Arlington Road	529009, 183479	46	28	38										37
HS2-000020BQ8	Clarkson Row	529024, 183213	48	33	44										42
HS2-000020BQ9	Park Village East	528923, 183121	Tube Missing	28	44										36
HS2-000020BQA	Eversholt Street	529386, 183132	50	52	60										54

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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 ¹
HS2-000020BQB	Junction of Harrington Street and Vardell Street	529147, 182816	45	27	42										38
HS2-000020BQC	Junction of Robert Street and Hampstead Road	529199, 182704	51	30	53										45
HS2-000020BQD	Drummond Crescent	529648, 182856	52	35	51										46
HS2-000020BQJ	Grafton Way	529380, 182225	Tube Missing	47	50										48
HS2-000020BQL	Delancey Street	528768, 183581	60	37	57										51
HS2-000020BQR	Lamp post on Park Village East	528682, 183505	47	29	47										41
HS2-000020BQS	Opposite Maria fidelis school on Phoenix Road	529670, 182982	39	28	45										37
HS2-000020BQT	Drummond Street	529385, 182581	50	32	52										44
HS2-000020BQX	Lamp post on Brunswick Square	530344, 182236	56	37	45										46
HS2-000020BP4	Triplicate site on Finchley Road next to Swiss Cottage kerbside automatic monitoring station	526633, 184392	74	50	76										66
HS2-000020BP5	Triplicate site next to the Euston Road roadside automatic monitoring stations	529895, 182657	Tube Missing	Tube Missing	67										67

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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 ¹
HS2-000020BP9	Triplicate site in Russell Square next to Bloomsbury urban background automatic monitoring station	530120, 182034	54	36	42										44