

## Air Quality and Dust Monitoring Monthly Report – February 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 January 2022 and February 2022 respectively.
- 1.1.2 Figure 1 to Figure 4 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](http://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 4, 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)**

### ITR

- Stripping out backfill to progress to bottom of the shaft.

### TSS

- Continue with capping beam and excavation works, 3/4 sections poured.
- Waterproofing commenced on VPT tunnel and completed.
- Steel reinforcement installations started as well by middle of the month.
- 1<sup>st</sup> invert concrete pour took place.
- 4/986 LU shaft installation of scaffolding & render removals.

### Main Site (NTH)/ Maria Fidelis

- Structural Soils – Ground Investigation at St. James Gardens.
- Cropping piles in Maria Fidelis area.
- Preparing ground to formation level in Maria Fidelis.

#### Utilities

- Sewer manhole construction in Maria Fidelis.
- Lining of existing sewer below Maria Fidelis.
- Sewer inspection within Starcross Street.

#### Two Towers

- Saw cutting and north ramp demolition.
- Temporary ramp installation.
- Site formation level build up.

#### Zone 5

- Removal pile caps/asbestos from PSB area.
- Removing ground water off site as to remove existing basement slab.
- Delivery of 6f5 and removal of spoil and concrete off site.
- Excavating area 140 of obstructions and preparing for piling mat.

- 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 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 µg/m<sup>3</sup>, 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 (February 2022) and are reported in Appendix B, Table 3.
- 1.1.9 Data capture was below 90% for monitor AQ005 in February 2022 due to the monitor being temporarily removed to avoid damage from nearby works.
- 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 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.

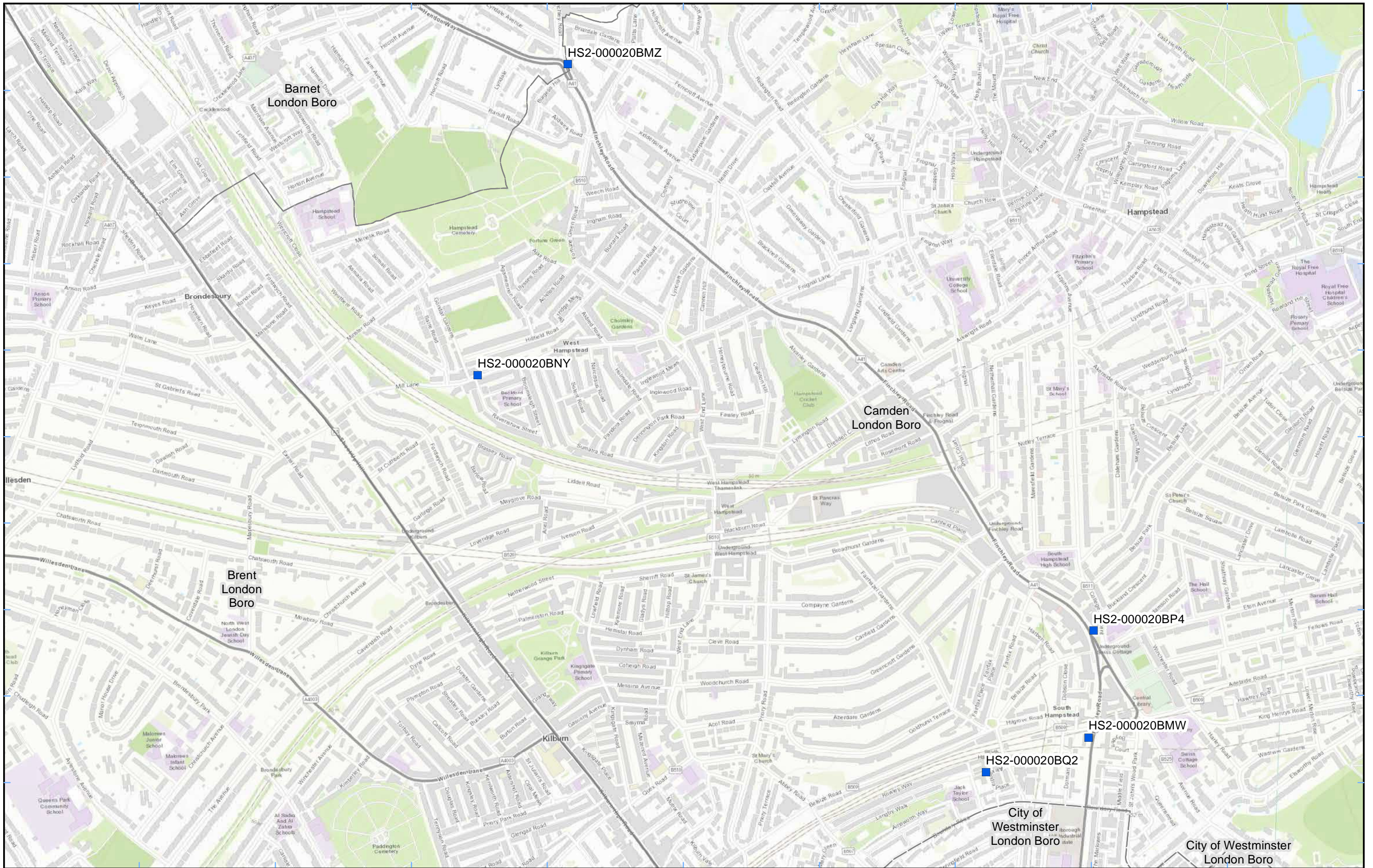
- 1.1.12 NO<sub>2</sub> monitoring locations and results are presented in Appendix C, Table 4, together with the 2022 running mean.
- 1.1.13 Table 1 provides a summary of the complaint information relating to dust or air quality received during the reporting period, together with the finding of any related investigations.

Table 1: Summary of complaints received during February 2022

<b>Complaint Reference No.</b>	<b>Worksite Reference</b>	<b>Description of complaint</b>	<b>Results of investigation</b>
HS2-22-43151-C	n/a	5 generators running over the Christmas holiday	There was only have one generator in operation which was powered by diesel during the day and battery during the night. The generator was placed within a hush pod to reduce vibration and noise. At some point the generator will be connected to the site to main power supply, although cannot confirm when. HS2 has put mitigations in place to reduce the impact

# Appendix A – Worksites and Monitoring Locations


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





**Legend**  
■ Diffusion Tube  
 District Borough Unitary Boundaries

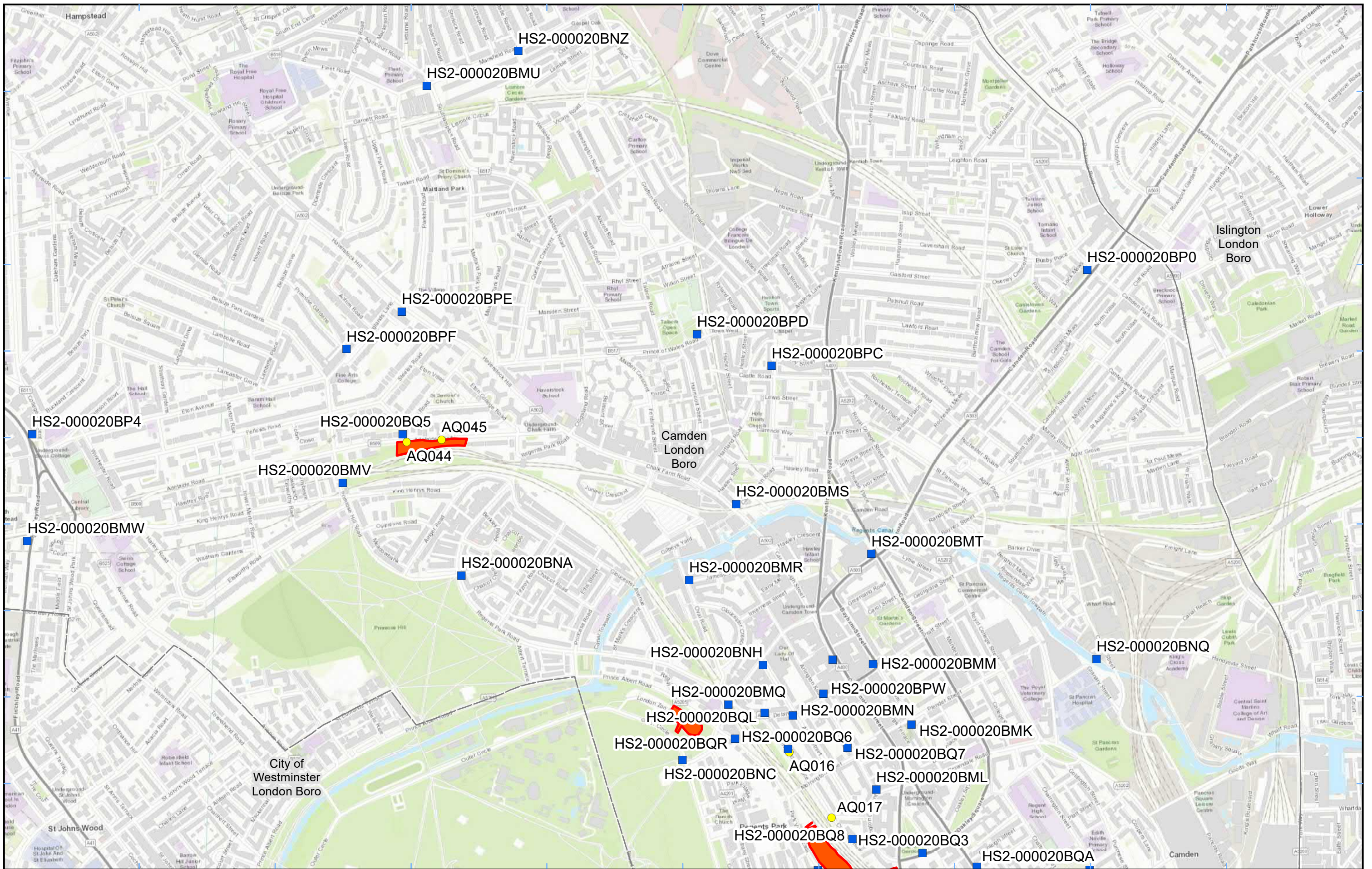
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Map Number  
 Map Name  
**Monitoring Locations In LBC (Sheet 1)**  
**London Borough of Camden**


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**Legend**


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

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Map Number  
 Worksite and Monitoring Locations  
 In LBC (Sheet 2)

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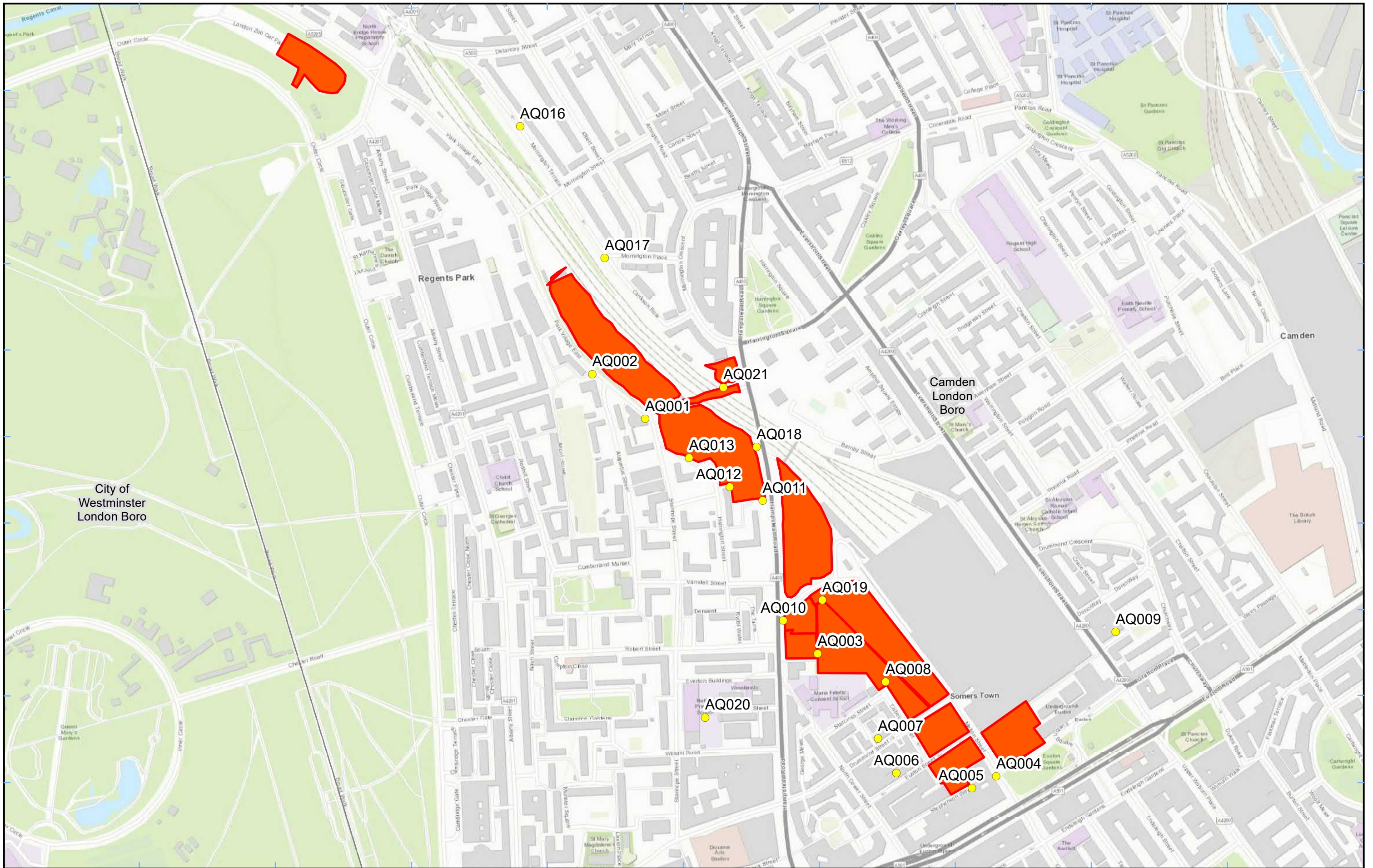
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Metres

Date: 27/08/21






**Legend**  
 ● Dust Monitor □ District Borough Unitary Boundaries  
 ■ Worksite

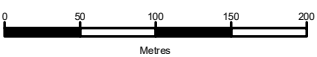
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Map Number  
 Worksite and Monitoring Locations  
 In LBC (Sheet 3)  
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## Appendix B – Dust Monitoring Results

Table 2: Dust monitoring locations and February 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 <sub>10</sub> concentration (µg/m <sup>3</sup> )	Minimum 1-hour PM <sub>10</sub> concentration (µg/m <sup>3</sup> )	Maximum 1-hour PM <sub>10</sub> concentration (µg/m <sup>3</sup> )	Number of 1- hour periods exceeding trigger level of 190 µg/m <sup>3</sup>	Data capture (%)
AQ001	529016, 183049	Junction of Park Village East, Stanhope Street and Granby Terrace	M	Yes	N	16.6	1.2	58.5	0	100.0
AQ002	528924, 183130	Park Village East	M	Yes	N	12.9	1.3	50.4	0	100.0
AQ003	529273, 182698	St James' Gardens	M	Yes	N/A	6.0	0.4	24.4	0	99.9
AQ004	529533, 182519	Melton Street	H	Yes	N/A	15.4	1.7	64.0	0	100.0
AQ005	529498, 182502	Stephenson Way	H	Yes	N/A	10.7	1.1	51.6	0	77.1
AQ006	529388, 182524	Euston Street	H	Yes	N/A	11.3	1.1	40.9	0	99.9
AQ007	529361, 182574	Drummond Street	H	Yes	N/A	10.7	1.1	40.5	0	100.0
AQ008	529372, 182657	Cobourg Street	H	Yes	N/A	13.1	1.5	59.1	0	100.0
AQ009	529707, 182730	Eversholt Street	H	Yes	N/A	12.2	1.2	40.4	0	100.0
AQ010	529223, 182746	Hampstead Road South	M	Yes	N/A	14.5	1.6	50.4	0	100.0
AQ011	529176, 182922	Hampstead Road	M	Yes	N	16.5	1.3	433.4	4	96.6

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/m <sup>3</sup> )	Minimum 1-hour PM <sub>10</sub> concentration (µg/m <sup>3</sup> )	Maximum 1-hour PM <sub>10</sub> concentration (µg/m <sup>3</sup> )	Number of 1-hour periods exceeding trigger level of 190 µg/m <sup>3</sup>	Data capture (%)
AQ012	529144, 182941	Rear of Coniston House	M	Yes	N	15.5	1.5	129.6	0	99.1
AQ013	529066, 182990	Regents Park Estate	M	Yes	N	19.0	1.2	881.6	5	96.6
AQ016	528820, 183498	Mornington Terrace North	M	Yes	N	13.9	1.3	50.2	0	100.0
AQ017	528962, 183274	Mornington Terrace South	M	Yes	N	9.5	1.0	39.9	0	100.0
AQ018	529192, 183071	Hampstead Road North	M	Yes	N	10.5	1.1	40.3	0	100.0
AQ019	528689, 183500	Park Village East (North)	M	Yes	N	10.4	1.2	40.0	0	98.4
AQ020	529109, 182605	Netley School	n/a	Yes	N/A	14.6	1.4	60.3	0	99.9
AQ021	529136, 183086	Site compound at the Junction of Hampstead Road & Granby Terrace Bridge	M	Yes	N	12.5	1.3	41.2	0	99.4
AQ044	527725, 184369	Adelaide Road 1	M	Yes	N	15.5	1.6	66.3	0	99.3
AQ045	527826, 184375	Adelaide Road 2	M	Yes	N	11.5	1.1	90.5	0	99.6

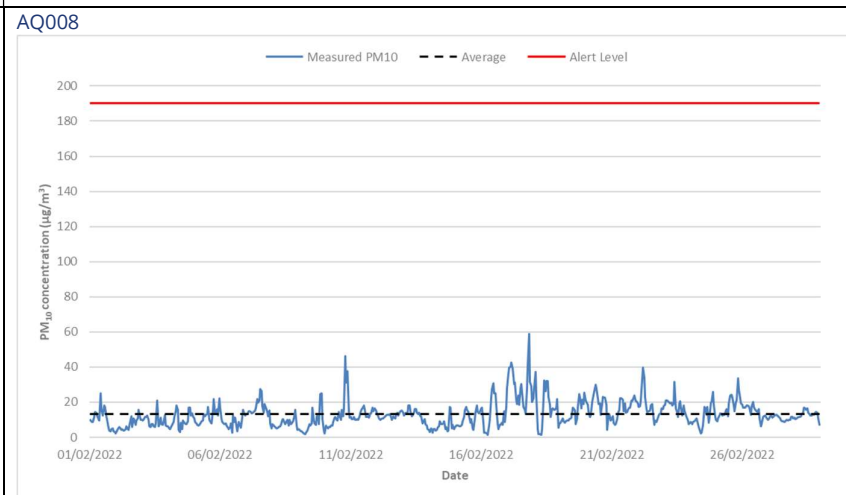
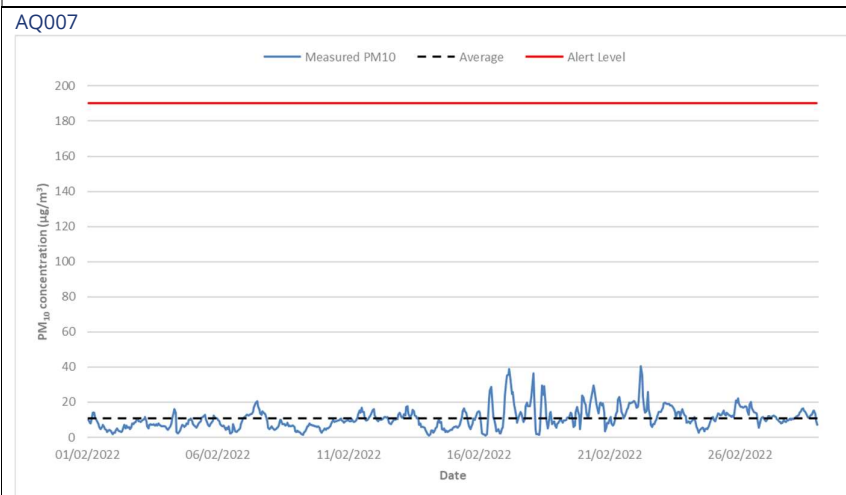
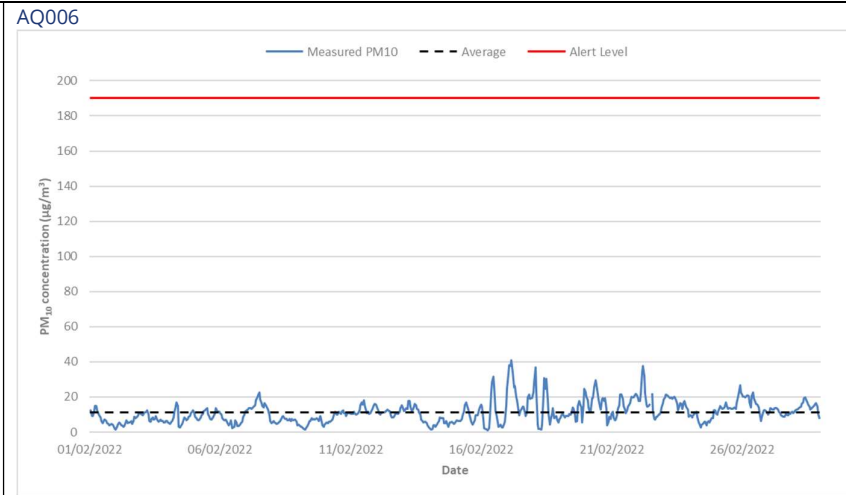
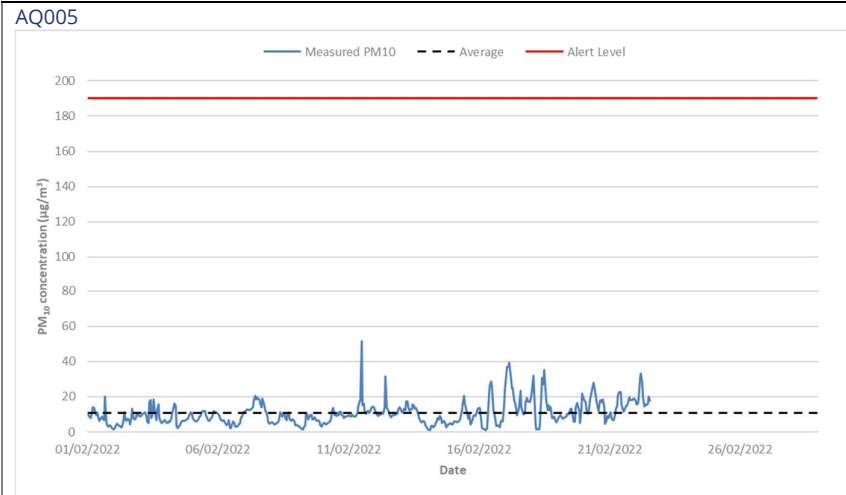
Table 3: Summary of exceedances of trigger level in February 2022

Monitoring site ID	Period exceeding trigger level	Investigation	Outcomes / Resolution / Remedial measures implemented
AQ011	09/02/2022 13:01 – 14:00; 356.1 µg/m <sup>3</sup> 14:01 – 15:00; 433.4 µg/m <sup>3</sup>	It was considered that the triggers were a result of the monitor falsely recording the mist from the dust suppression as dust.	The works remained damped down throughout the operations on each day and site works continued.
AQ011	10/02/2022 08:01 – 09:00; 191.4 µg/m <sup>3</sup>		
AQ011	24/02/2022 08:01 – 09:00; 236.7 µg/m <sup>3</sup>		
AQ013	08/02/2022 11:01 – 12:00; 438.2 µg/m <sup>3</sup> 12:01 – 13:00; 280.2 µg/m <sup>3</sup>	It was considered that the triggers were a result of works taking place nearby including concrete cutting, drilling, and fixing for the newly erected adjacent fence line.	The activities were completed, and the area damped down, but the team was informed to ensure similar future activities were suitably damped down during the work.
AQ013	12/02/2022 09:01 – 10:00; 881.6 µg/m <sup>3</sup> 11:01 – 12:00; 268.1 µg/m <sup>3</sup> 12:01 – 13:00; 392.7 µg/m <sup>3</sup>	It was considered that the triggers were a result of housekeeping activities such as sweeping directly adjacent to the monitor. The elevated levels during the period indicate more damping down was needed during the housekeeping activities.	The team was instructed to ensure that future housekeeping activities are sufficiently dampened down.

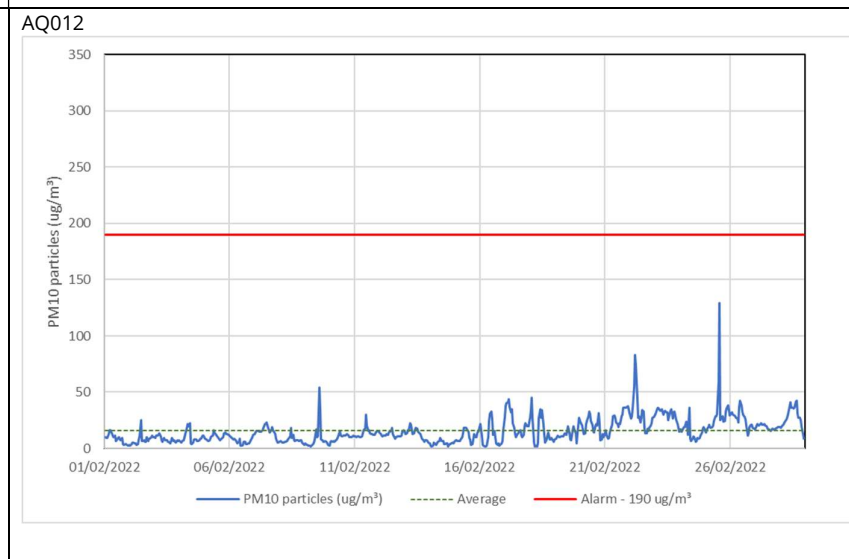
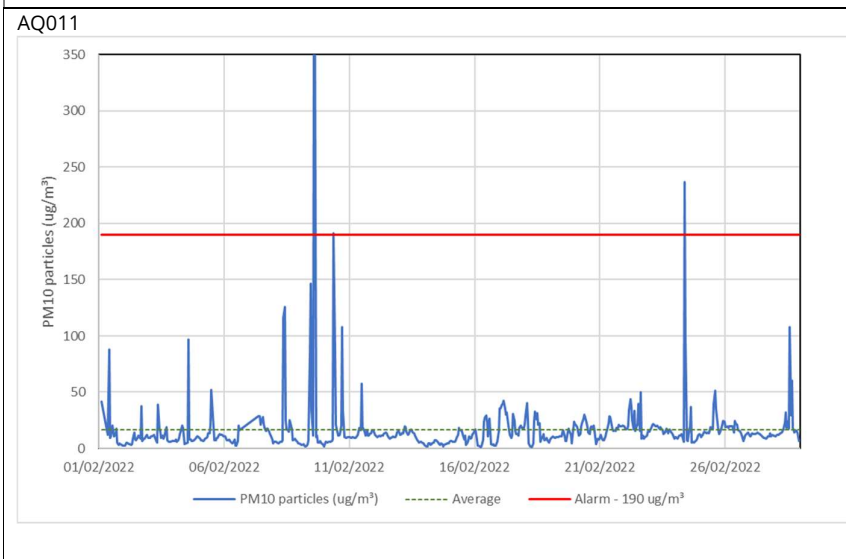
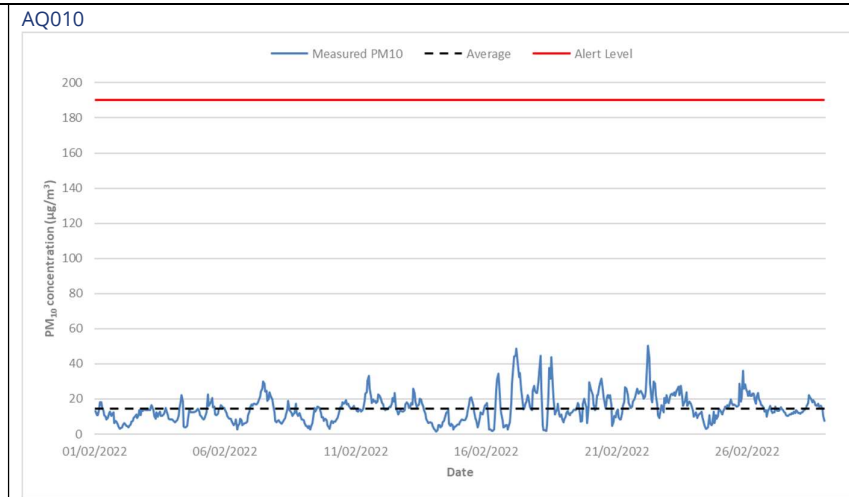
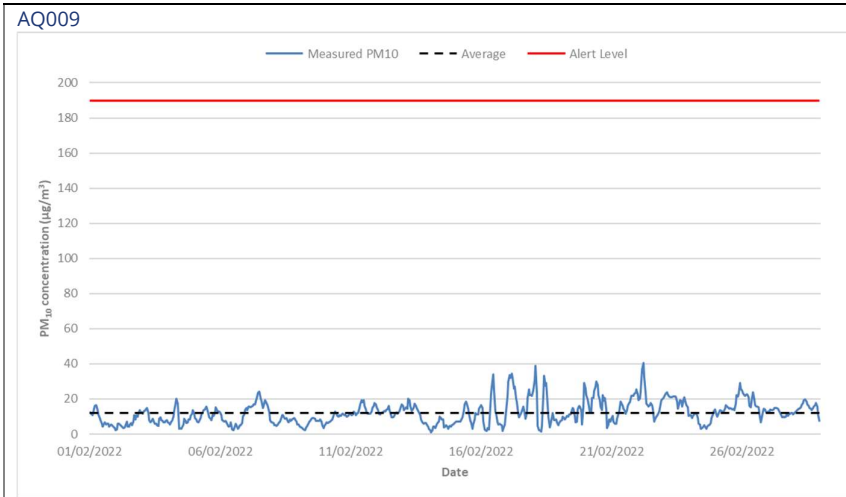
Figure 4: Construction dust 1-hour mean indicative PM<sub>10</sub> concentration for dust monitors



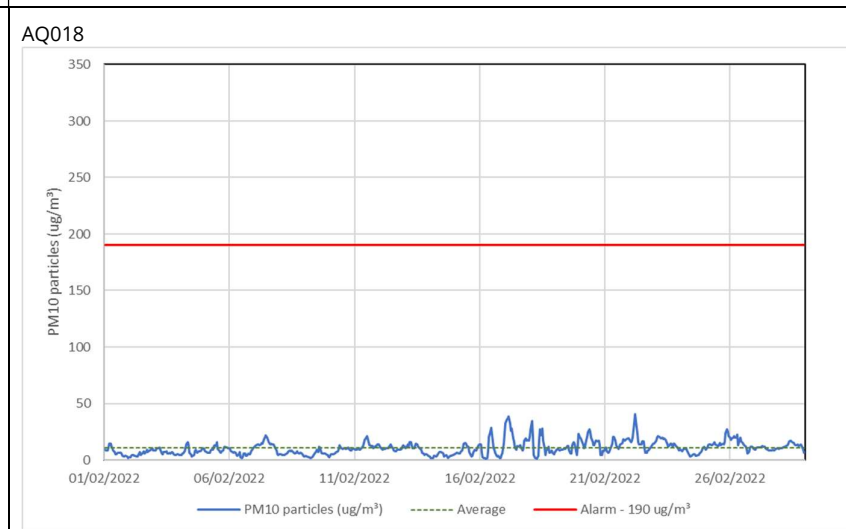
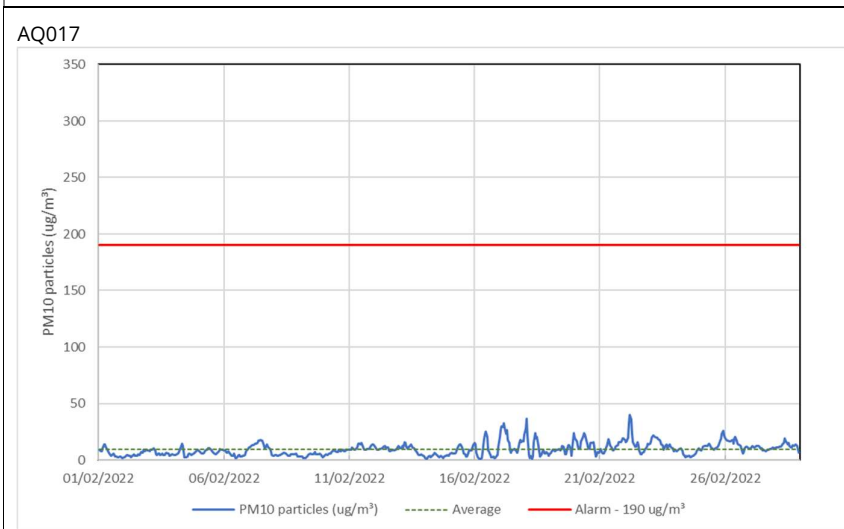
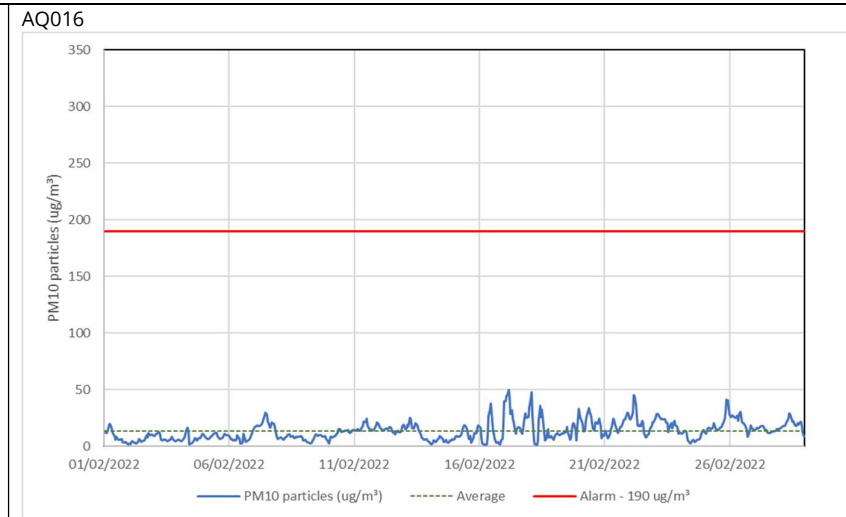
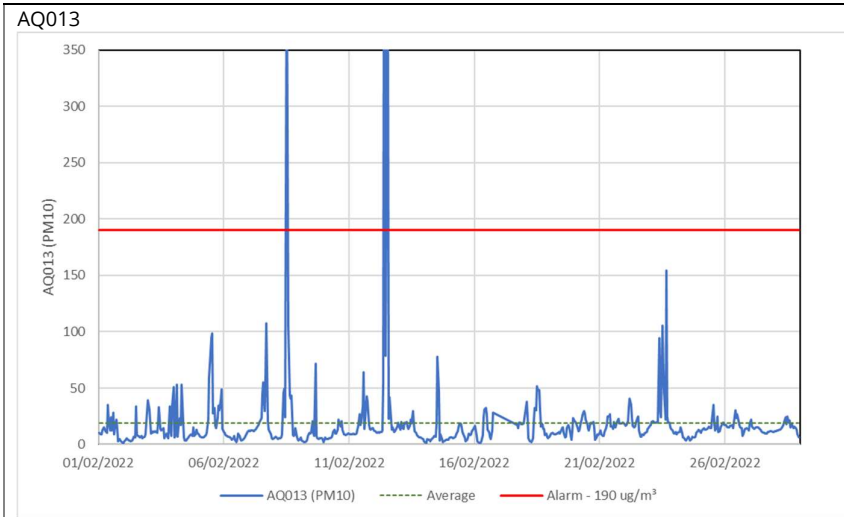
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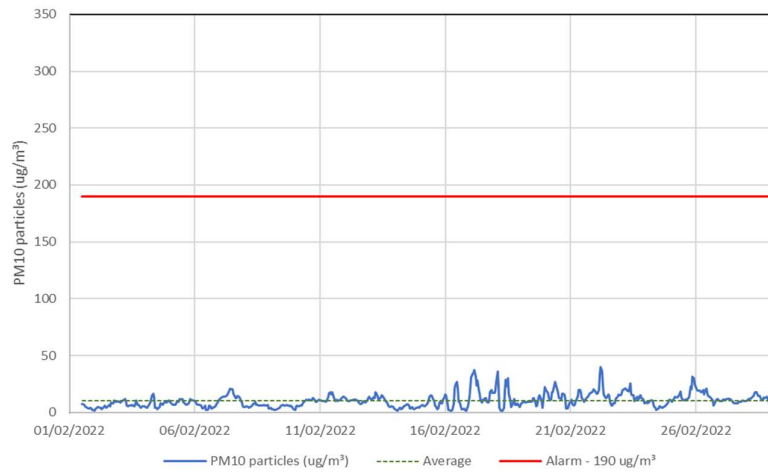
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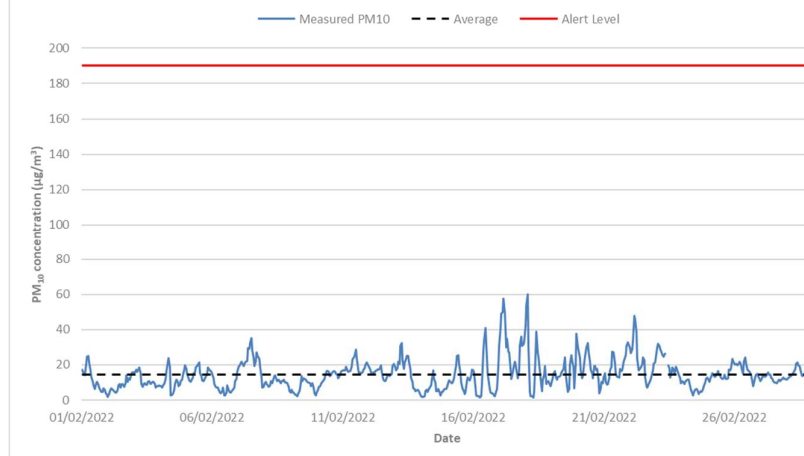




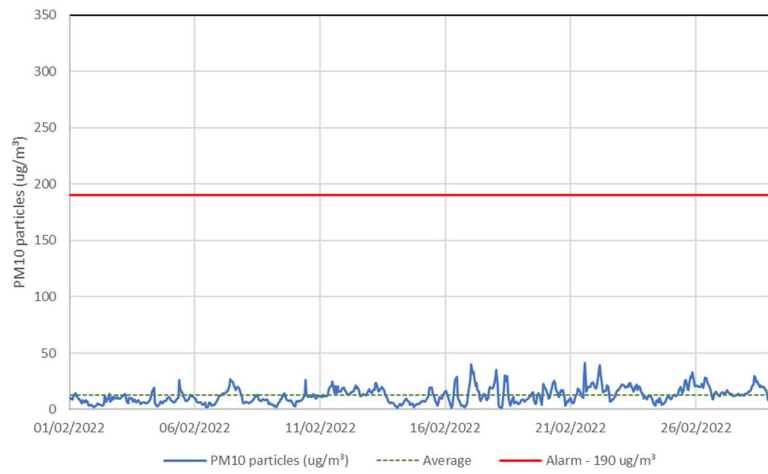
AQ019



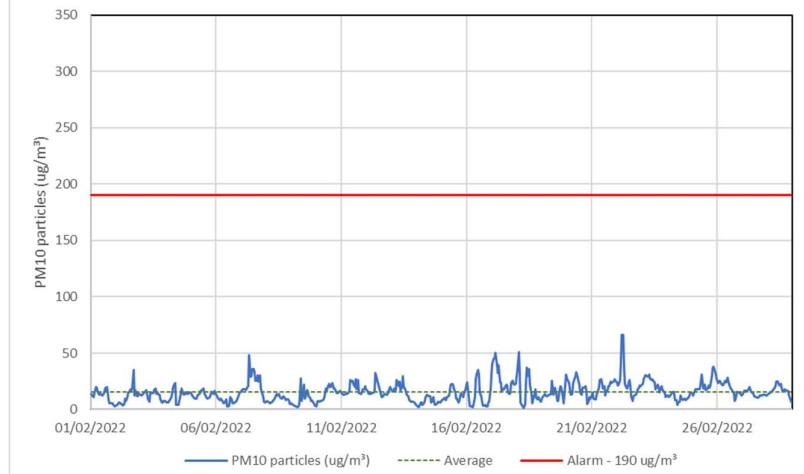
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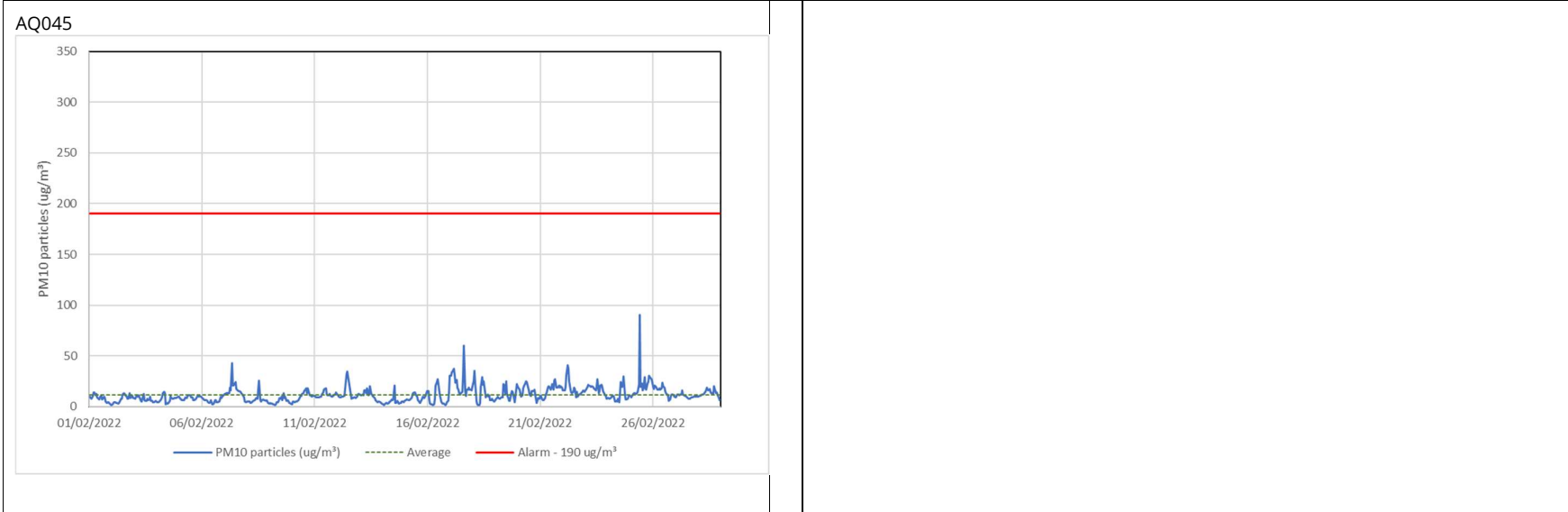


AQ021



AQ044





## 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 2022 (µg/m<sup>3</sup>)

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	55												55
HS2-000020BM7	Chalton Street	529894, 182702	Tube Missing												N/A
HS2-000020BM8	Junction of Euston Square and Grafton Place	529737, 182641	Tube Missing												N/A
HS2-000020BM9	Junction of Endsleigh Gardens and Upper Woburn Place	529785, 182529	61												61
HS2-000020BMA	Junction of Euston Road and Gower Street	529429, 182375	Tube Missing												N/A
HS2-000020BMB	Whitfield Street	529273, 182114	51												51
HS2-000020BMC	Hampstead Road	529232, 182511	70												70
HS2-000020BMF	Junction of Polygon Road and Ossulston Street	529715, 183123	42												42
HS2-000020BMH	Nash Street	528861, 182717	46												46
HS2-000020BMJ	Junction on Robert Street and Stanhope Street	529080, 182698	41												41

<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.

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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>
HS2-000020BMK	Junction of Plender Street and Bayham Street	529196, 183546	56												56
HS2-000020BML	Junction of Arlington Road and Mornington Crescent	529093, 183356	48												48
HS2-000020BMM	Junction of Bayham Street and Pratt Street	529084, 183722	Tube Missing												N/A
HS2-000020BMN	Junction of Delancey Street and Albert Street	528850, 183573	53												53
HS2-000020BMQ	Junction of Parkway and Delancey Street	528662, 183604	51												51
HS2-000020BMR	Junction of Oval Road and Jamestown Road	528548, 183967	49												49
HS2-000020BMS	Junction of Chalk Farm Road and Castlehaven Road	528685, 184188	50												50
HS2-000020BMT	Junction of Camden Road and Camden Street	529079, 184043	60												60
HS2-000020BMU	Junction of Southampton Road and Fleet Road	527783, 185407	53												53
HS2-000020BMV	Primrose Hill Road	527538, 184250	57												57
HS2-000020BMW	Junction of Finchley Road and Hilgrove Road	526619, 184081	66												66

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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>
HS2-000020BMZ	Junction of Finchley Road and Hendon Way	525102, 186042	88												88
HS2-000020BNA	Junction of Regent's Park Road and Rothwell Street	527884, 183980	48												48
HS2-000020BNC	Junction of Outer Circle and Gloucester Gate	528528, 183443	38												38
HS2-000020BNH	Junction of Parkway and Albert Street	528763, 183720	50												50
HS2-000020BNN	Lincoln's Inn Fields	530744, 181308	47												47
HS2-000020BNQ	Camley Street	529735, 183737	62												62
HS2-000020BNY	Junction of Mill Lane and Hillfield Road	524839, 185136	60												60
HS2-000020BNZ	Mansfield Road	528050, 185508	50												50
HS2-000020BP0	Junction of Camden Road and Torriano Avenue	529708, 184871	63												63
HS2-000020BP2	Junction of Grays Inn Road and Holborn	531149, 181616	59												59
HS2-000020BPB	Camden High Street	528966, 183735	78												78
HS2-000020BPC	Castlehaven Road	528788, 184591	52												52
HS2-000020BPD	Prince of Wales Road	528571, 184683	46												46
HS2-000020BPE	Haverstock Hill	527710, 184749	55												55

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean <sup>1</sup>
HS2-000020BPF	Junction of Primrose Gardens and England's Lane	527549, 184640	54												54
HS2-000020BPU	Junction of Gower Street and Grafton Way	529476, 182267	Tube Missing												N/A
HS2-000020BPW	Junction of Delancey Street and Arlington Road	528939, 183637	53												53
HS2-000020BPX	Netley Street	529177, 182625	48												48
HS2-000020BPY	Stanhope Street	529060, 182947	47												47
HS2-000020BPZ	Albany Street	528790, 182923	31												31
HS2-000020BQ0	Werrington Street	529493, 183113	44												44
HS2-000020BQ1	Polygon Road	529574, 183045	44												44
HS2-000020BQ2	Alexandra Place	526320, 183980	45												45
HS2-000020BQ3	Harrington Square	529228, 183172	55												55
HS2-000020BQ4	Junction of North Gower Street and Starcross Street	529290, 182572	52												52
HS2-000020BQ5	Adelaide Road	527713, 184392	53												53
HS2-000020BQ6	Mornington Terrace	528836, 183474	47												47
HS2-000020BQ7	Arlington Road	529009, 183479	46												46
HS2-000020BQ8	Clarkson Row	529024, 183213	48												48

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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>
HS2-000020BQ9	Park Village East	528923, 183121	Tube Missing												N/A
HS2-000020BQA	Eversholt Street	529386, 183132	50												50
HS2-000020BQB	Junction of Harrington Street and Varndell Street	529147, 182816	45												45
HS2-000020BQC	Junction of Robert Street and Hampstead Road	529199, 182704	51												51
HS2-000020BQD	Drummond Crescent	529648, 182856	52												52
HS2-000020BQJ	Grafton Way	529380, 182225	Tube Missing												N/A
HS2-000020BQL	Delancey Street	528768, 183581	60												60
HS2-000020BQR	Lamp post on Park Village East	528682, 183505	47												47
HS2-000020BQS	Opposite Maria fidelis school on Phoenix Road	529670, 182982	39												39
HS2-000020BQT	Drummond Street	529385, 182581	50												50
HS2-000020BQX	Lamp post on Brunswick Square	530344, 182236	56												56
HS2-000020BP4	Triplicate site on Finchley Road next to Swiss Cottage kerbside automatic monitoring station	526633, 184392	74												74



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	Tube Missing												N/A
HS2-000020BP9	Triplicate site in Russell Square next to Bloomsbury urban background automatic monitoring station	530120, 182034	54												54