July 2019

# HS2

### Air Quality and Dust Monitoring Monthly Report – July 2019

**London Borough of Camden** 



**SKANSKA** 



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High Speed Two (HS2) Limited, Two Snowhill Snow Hill Queensway Birmingham B4 6GA

Telephone: 08081 434 434

General email enquiries: HS2enquiries@hs2.org.uk

Website: www.gov.uk/hs2

A report prepared by Costain Skanska 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 2019 and July 2019 respectively.
- 1.1.2 Figure 1 to Figure 3 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 within the LBC during December 2017 and are expected to be completed by December 2019. The current, completed and planned worksites, include:

#### Current & Planned -

- Site office and welfare on the adjacent former Addison Lee compound on Granby Terrace, worksite ref. S001-WS01.
- Archaeological dig at St James' Gardens and construction of an enclosure over the entire works' site; worksite ref. S003-WS01.
- Demolition at:
  - the IBIS Hotel, 3 Cardington Street, worksite ref. S003-WS05;
  - o Thistle Hotel, Cardington Street, worksite ref. S003-WS04;
  - o A number of sites in Euston Street, worksite ref. S003-WS07;
  - o Regents Park Estate worksite ref. S001-WS07; and
  - o Walkden House, 67-75 & 77-79 Euston Street, worksite ref. S003-WS03.
  - One Euston Square, 40 Melton Street and Grant Thornton House, 22 Melton Street, worksite ref. S003-WS09.
- National Temperance Hospital, Site Office and Welfare 110-122 Hampstead Road and community garden, worksite ref. S003-WS06.
- Thames Water Compound, worksite ref. S001-WS05.
- Vehicle Holding Area, worksite ref. S001-WS04 (yet to be established).

#### Complete -

- Demolition of former accommodation block and train maintenance shed, at the DB Cargo shed, the site is currently being used for storage of spoil.
- Demolition at:

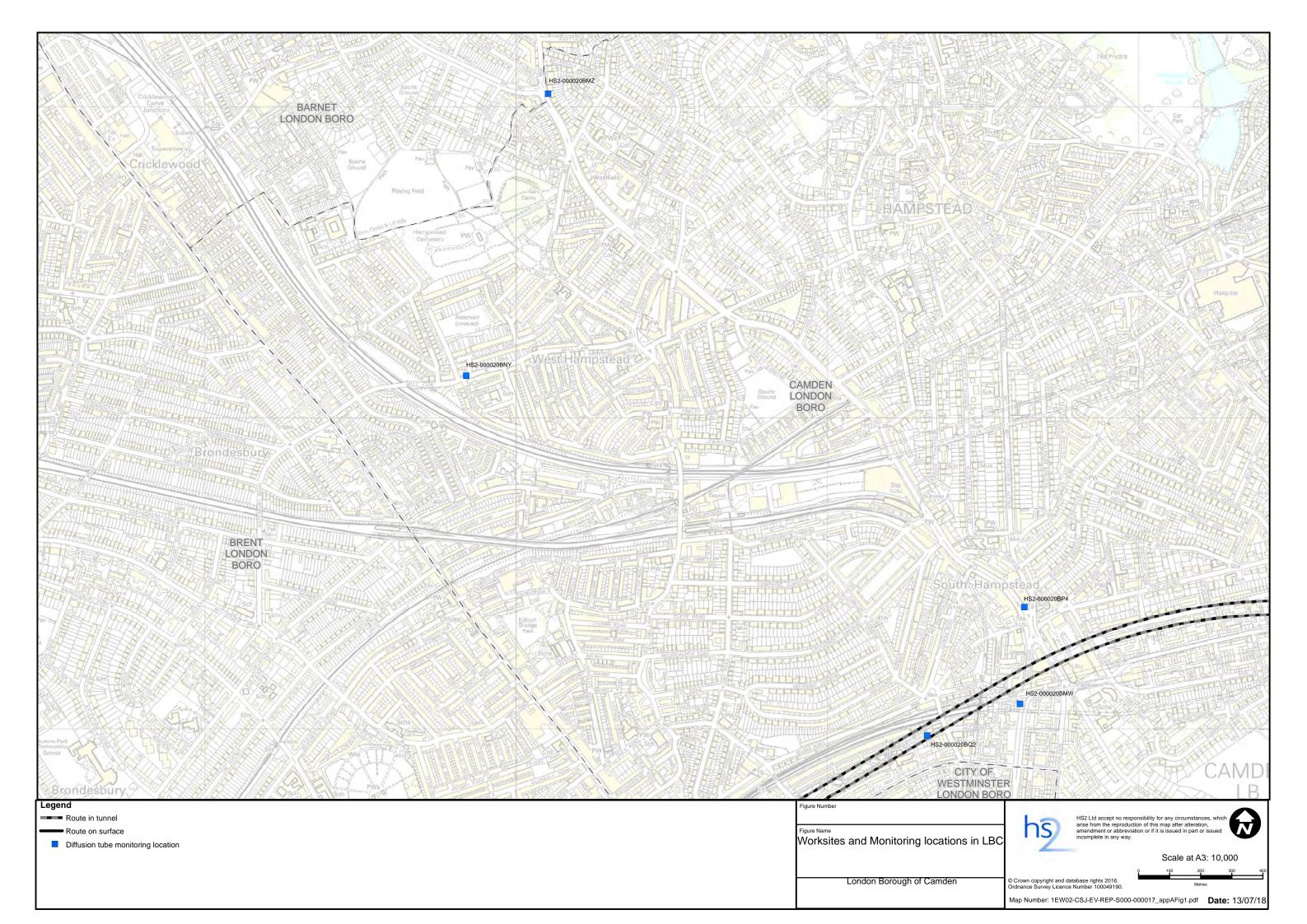
- National Temperance Hospital, Insull Wing, worksite ref. S003-WS02;
- o 1-3 Cobourg Street, worksite ref. S003-WS05; and
- 132 140 Hampstead Road and Petrol Station, worksite ref. S001-WS02.
- Taxi rank in Euston Square Gardens, worksite ref. S003-WS08.
- 1.1.5 Twenty (20) dust monitors are installed around worksites, where demolition and predemolition works are underway. These sites returned a medium or 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 4. 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 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 There were ten (10) dust trigger alerts recorded during the monitoring period (July 2019), of which upon investigation four (4) were linked to HS2 demolition works. Dust trigger alerts are presented in Appendix B, Table 3. All other results were in line with expected ranges.
- 1.1.9 Data capture for AQ006 and AQ017 was below 90% for the month of July 2019. This was due to equipment malfunction and the time required to replace or repair the monitors respectively.
- 1.1.10 Diffusion tube monitoring of Nitrogen Dioxide (NO<sub>2</sub>) was undertaken at sixty-five (65) locations in June 2019, 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 2019 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.

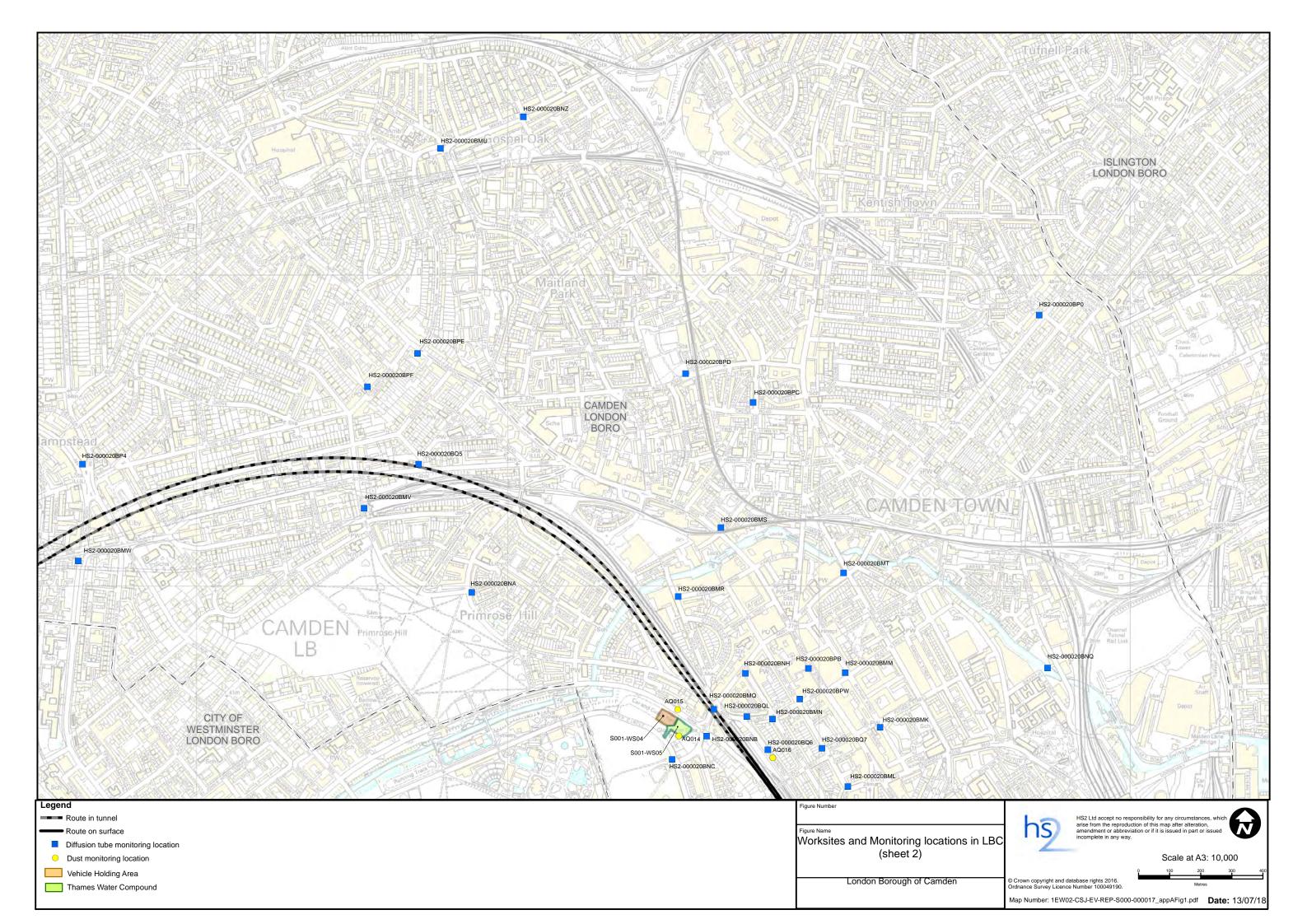
Table 1: Summary of complaints received during July 2019 in LBC

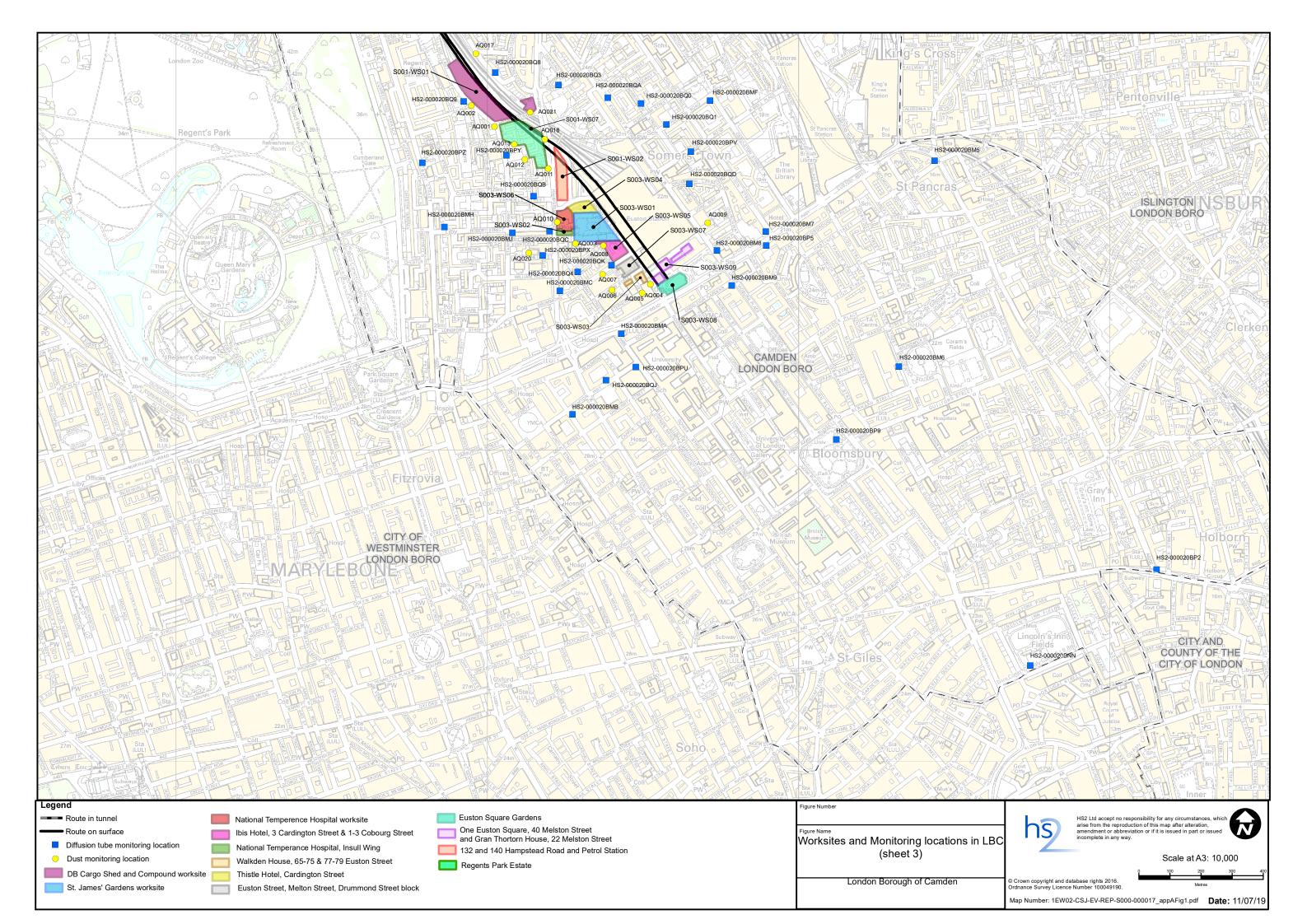
Complaint Reference	Worksite Reference	Description of complaint	Results of investigation
HS2-19-05082-C	S001-WS07	A complaint was received on 02/07/2019 around a cloud of dust being observed as a result of the Ainsdale Building demolition in the Regents Park Estate.	A follow up email detailing the measures that the project is doing to minimise its impact of dust was sent. An on-site review of dust suppression techniques was also undertaken and additional dust mitigation was implemented.
HS2-19-05082-C HS2-19-05161-C HS2-19-05938-C HS2-19-05821-C	S001-WS07	Complaint were received on 03/07/2019 and 04/07/2019 and 17/09/2019 regarding the levels of dust from the Silverdale west wing (nearest to Coniston House) and Ainsdale Building demolition works.	A follow up email detailing the measures that the project is doing to minimise its impact of dust was sent. An on-site review of dust suppression techniques was also undertaken and additional dust mitigation was implemented.
HS2-19-05940-C	S001-WS07	A complaint was received on 17/07/2019 with regards to the impact of HS2 works into local air quality from the residents of Langdale Building, Stanhope Street. This included concerns around stockpile management and location.	A follow up email detailing the measures that the project is doing to minimise its impact of dust was sent. An on-site review of dust suppression techniques.  Reference was also made to the CoCP highlighting out HS2's approach to stockpile management.
HS2-19-06176-C	S001-WS07?	A complaint about the lack of fresh air and dust getting into a resident's property adjacent to a building listed for demolition was received on 18/07/2019.	A follow up email detailing the measures that the project is doing to minimise its impact of dust was sent. An on-site review of dust suppression techniques was also undertaken and additional dust mitigation was implemented.

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

Figure 1 to Figure 3: Worksites and monitoring locations within the LBC







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

Table 2: Dust monitoring locations and July 2019 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	Н	Yes	N	9.1	1.5	71.2	0	92.7
AQ002	528947, 183107	Park Village East	Н	Yes	N	8.8	1.8	61.1	0	100.0
AQ003	529282, 182663	St James Gardens	М	Yes	N	12.8	2.5	90.4	0	95.0
AQ004	529523, 182533	Melton Street	Н	Yes	N	6.9	0.4	104.3	0	96.9
AQ005	529496, 182505	Stephenson Way	Н	Yes	N	20.6	2.7	511.6	3	96.8
AQ006	529399, 182514	Euston Street	Н	Yes	N	9.5	2.4	40.7	0	80.4
AQ007	529369, 182564	Drummond Street	Н	Yes	N	10.7	2.1	50.1	0	96.9
AQ008	529369, 182648	Cobourg Street	Н	Yes	N	13.1	1.8	69.3	0	100.0
AQ009	529707, 182730	Lancing Street	Н	Yes	N	11.5	2.4	28.4	0	96.8
AQ010	529223, 182732	Hampstead Road South	Н	Yes	N	11.9	2.9	36.8	0	97.0
AQ011	529195, 182904	Hampstead Road	Н	Yes	Υ	12.8	2.7	50.0	0	100.0
AQ012	529119, 182934	Mackworth Street	Н	Yes	Υ	12.1	2.1	279.4	1	100.0

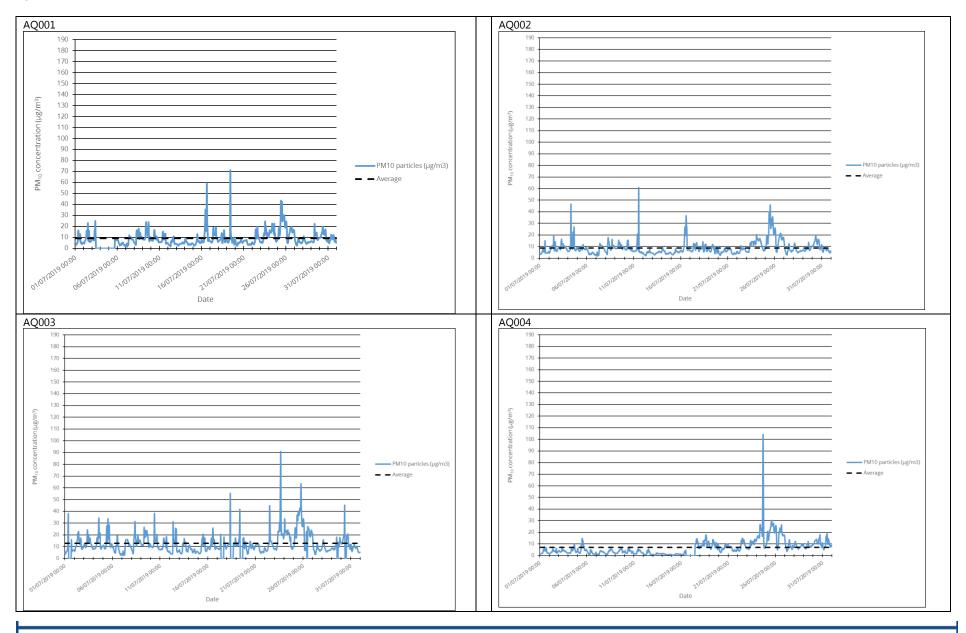
Monitoring site ID	Coordinates (X,Y)	Location description	Dust risk rating for site	Monitoring site active during period	Change to site since previous period report	Mean 1-hour PM <sub>10</sub> concentration (μg/m³)	Minimum 1- hour PM <sub>10</sub> concentration (μg/m³)	Maximum 1- hour PM <sub>10</sub> concentration (μg/m³)	Number of 1- hour periods exceeding trigger level of 190 µg/m³	Data capture (%)
AQ013	529066, 182990	Regents Park Estate	Н	Yes	Υ	14.1	1.7	328.7	4	100.0
AQ014	528550, 183518	Thames Water Compound	L	Yes	N	12.3	2.0	252.4	2	97.2
AQ015	528546, 183604	Prince Albert Road	L	Yes	N	8.5	1.9	33.0	0	99.6
AQ016	528851, 183448	Mornington Terrace North	Н	Yes	N	6.0	1.6	19.8	0	99.5
AQ017	528963, 183274	Mornington Terrace South	Н	Yes	N	8.1	2.3	28.5	0	56.5
AQ018	529184, 182999	Hampstead Road North	Н	Yes	Υ	11.8	2.0	72.3	0	100.0
AQ020	529132, 182633	Netley School	n/a	Yes	N	9.3	2.1	40.7	0	100.0
AQ021	529127, 183116	Site compound at the Junction of Hampstead Road & Granby Terrace Bridge.	Н	Yes	N	10.2	2.9	40.7	0	100.0

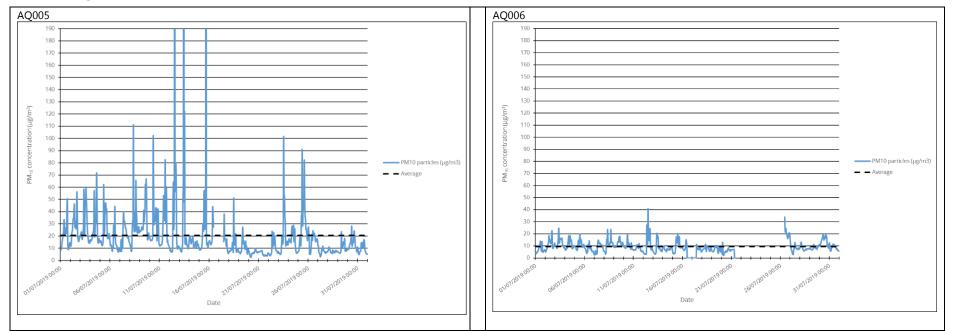
Table 3: Summary of exceedances of trigger level in July 2019

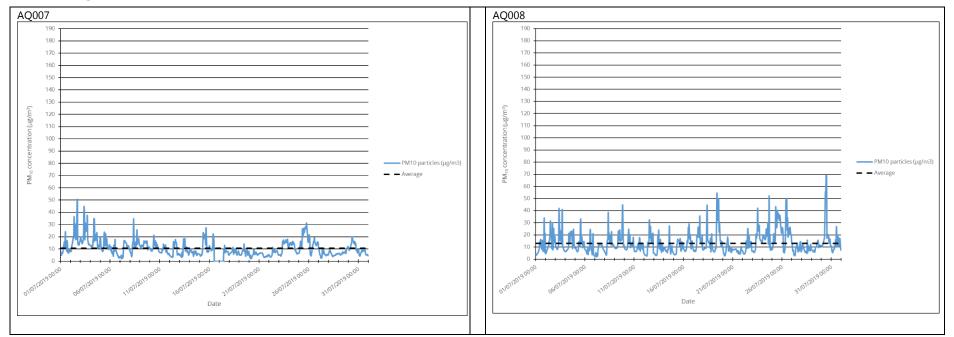
Period exceeding trigger level	Worksite reference	Monitoring site	Complaint reference number (if applicable)	Reason	Resolution		
12/07/2019 12:01-13:00	S003-WS03	AQ005		Each trigger was investigated at the time of the trigger, however the cause could not be identified on each occasion. During the			
13/07/2019 10:01 – 11:00	S003-WS03	AQ005	n/a	monitors annual calibration and service on the 17 <sup>th</sup> July it was discovered that the heating inlet on the dust monitor was not functioning	The monitoring unit was temporarily replaced whilst		
15/07/2019 16:01-17:00	S003-WS03	AQ005		correctly.  It is likely that the faulty heater was the cause of the excessive data spikes resulting from other nearby sources and not from on-site activities.	repaired.		
02/07/2019 09:01-10:00	S001-WS07	AQ012	HS2-19-05082-C	Upon investigation it was noted that this trigger was linked to the dust generation at the Ainsdale demolition on the Regents Park Estate albeit dust suppression was being employed.	Work was stopped and the area was damped down. Dust suppression was re-sited and adjusted to better target the specific areas needing suppression. Works were also slowed down in response as an additional measure. When restarted the dust suppression was again proven effective and no further triggers were received.		
15/07/2019 08:01-11:00 (3x trigger alerts)				The four trigger alerts were received on 15/07/2019. Upon investigation it was determined that this was due to dust from the demolition of the last section of the Ainsdale	Works were stopped until later in the week following a comprehensive review of works methodology and dust		
15/07/2019 12:01-13:00	S001-WS07	AQ013	HS2-19-05821-C	building on the Regents Park Estate. Dust suppression was being employed at the time. Each trigger was investigated and works methodology and dust suppression reviewed and adjusted on each occasion.	suppression means. Additional dust suppression for the final elements of the building demolition were provided and proved effective.		

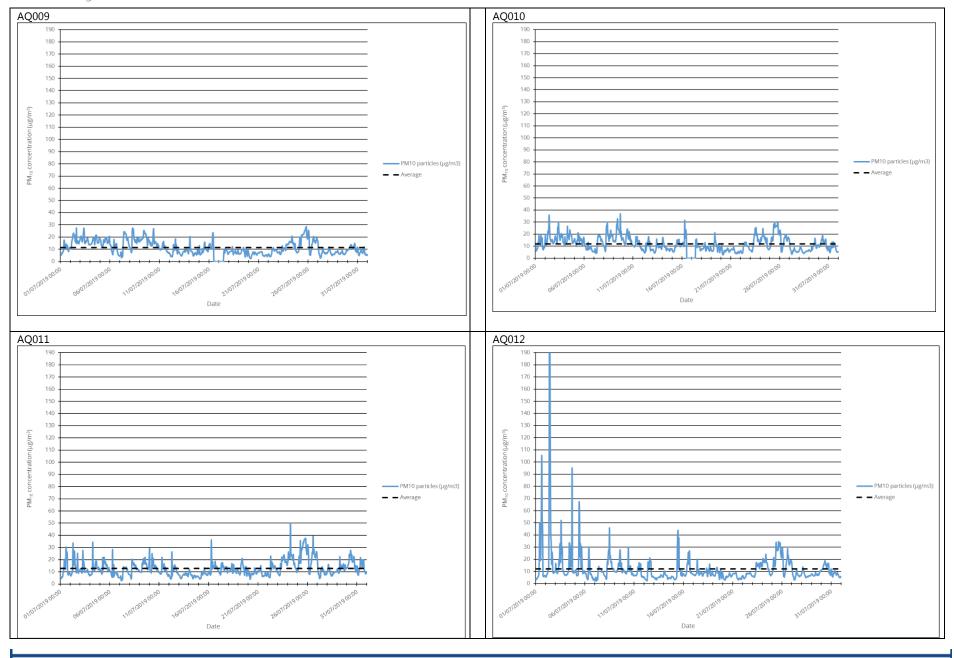
Period exceeding trigger level	Worksite reference	Monitoring site	Complaint reference number (if applicable)	Reason	Resolution
12/07/2019 13:01- 14:00				Each trigger was investigated at the time of the trigger, however cause could not be identified on each occasion. There were no nearby works underway within the compound at the time of the triggers. During the monitor's annual calibration and service,	The monitoring unit was
12/07/2019 15:01-16:00	S001-WS05	AQ014	n/a	carried out on the 17 <sup>th</sup> July, the inlet pipe was found to have a higher than average build-up of debris lining the inlet pipe (potentially exacerbated by the pollen from the numerous trees around the compound). It is likely that the two recent data spikes were due to tiny particles of the build-up loosening from the inlet and being measured.	serviced and calibrated including the sample inlet pipe being cleaned.

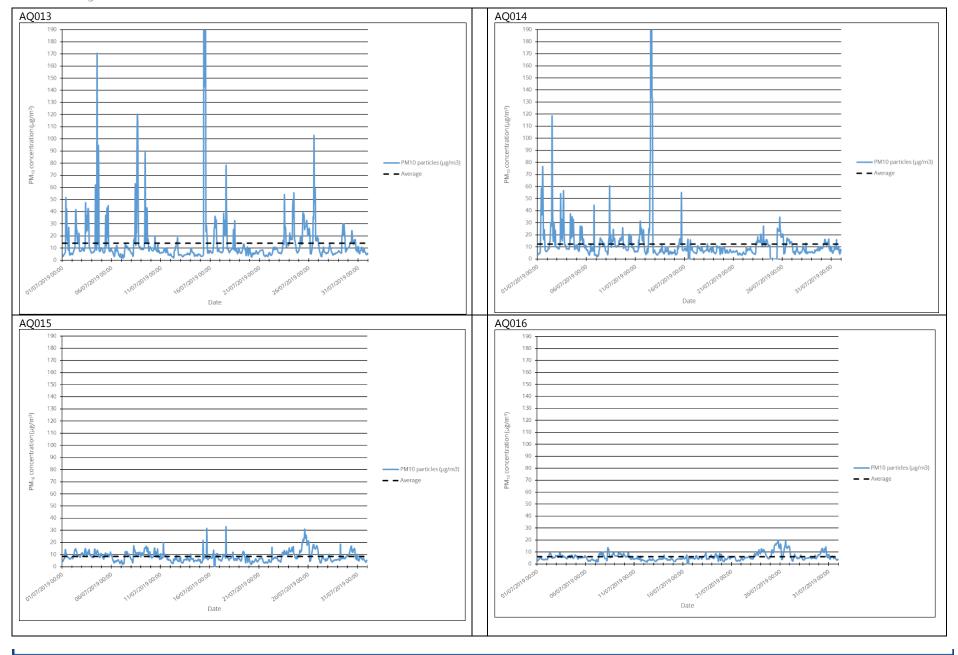
Figure 1: Construction dust 1-hour mean indicative PM<sub>10</sub> concentration for dust monitors

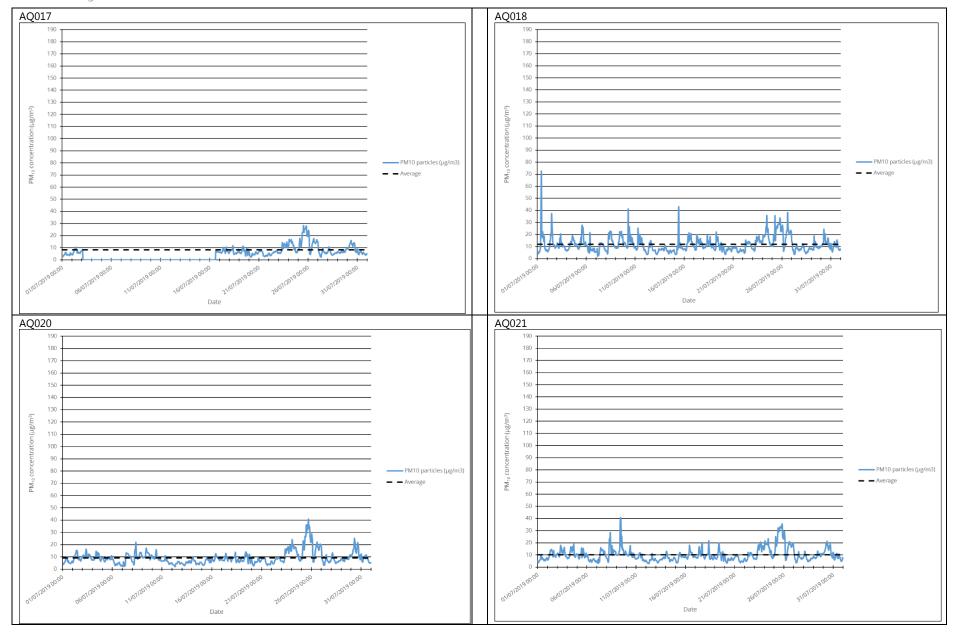












### **Appendix C – Air Quality Monitoring Results**

Table 4: NO<sub>2</sub> monitoring locations around highways, NO<sub>2</sub> concentrations and monthly monitoring results with running mean for 2019 (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	58	64	46	53	49	43							52
HS2-000020BM6	Brunswick Square	530321, 182268	51	63	49	42	35	36							46
HS2-000020BM7	Chalton Street	529894, 182702	63	83	66	72	Tube m	issing							71
HS2-000020BM8	Junction of Euston Square and Grafton Place	529737, 182641	63	72	66	75	61	53							65
HS2-000020BM9	Junction of Endsleigh Gardens and Upper Woburn Place	529785, 182529	47	63	56	59	56	48							55
HS2-000020BMA	Junction of Euston Road and Gower Street	529429, 182375	51	76	63	56	46	52							57
HS2-000020BMB	Whitfield Street	529273, 182114	49	58	43	48	33	33							44
HS2-000020BMC	Hampstead Road	529232, 182511	53	84	71	74	62	61							67
HS2-000020BMF	Junction of Polygon Road and Ossulston Street	529715, 183123	39	47	Tube missin g	40	27	29							36
HS2-000020BMH	Nash Street	528861, 182717	43	51	35	37	30	28							37
HS2-000020BMJ	Junction on Robert Street and Stanhope Street	529080, 182698	39	43	37	30	28	31							35

<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>
HS2-000020BMK	Junction of Plender Street and Bayham Street	529196, 183546	66	68	55	50	39	40							53
HS2-000020BML	Junction of Arlington Road and Mornington Crescent	529093, 183356	47	44	38	41	26	27							37
HS2-000020BMM	Junction of Bayham Street and Pratt Street	529084, 183722	52	75	62	47	49	47							55
HS2-000020BMN	Junction of Delancey Street and Albert Street	528850, 183573	43	53	43	40	36	33							42
HS2-000020BMQ	Junction of Parkway and Delancey Street	528662, 183604	50	57	43	58	45	46							50
HS2-000020BMR	Junction of Oval Road and Jamestown Road	528548, 183967	44	49	41	41	30	Tube missi ng							41
HS2-000020BMS	Junction of Chalk Farm Road and Castlehaven Road	528685, 184188	59	52	50	52	47	45							51
HS2-000020BMT	Junction of Camden Road and Camden Street	529079, 184043	57	57	55	55	46	43							52
HS2-000020BMU	Junction of Southampton Road and Fleet Road	527783, 185407	47	51	39	43	28	Tube missi ng							42
HS2-000020BMV	Primrose Hill Road	527538, 184250	46	45	38	No data	29	22							36
HS2-000020BMW	Junction of Finchley Road and Hilgrove Road	526619, 184081	61	59	55	60	47	50							55
HS2-000020BMZ	Junction of Finchley Road and Hendon Way	525102, 186042	87	92	87	90	73	74							84
HS2-000020BNA	Junction of Regent's Park Road and Rothwell Street	527884, 183980	45	48	30	27	25	28							34
HS2-000020BNB	Junction of Gloucester Gate Bridge and Park Village East	528639, 183518	53	45	41	37	Tube m	issing							44

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean <sup>1</sup>
HS2-000020BNC	Junction of Outer Circle and Gloucester Gate	528528, 183443	35	36	24	33	21	25							29
HS2-000020BNH	Junction of Parkway and Albert Street	528763, 183720	43	53	37	41	30	34							40
HS2-000020BNN	Lincoln's Inn Fields	530744, 181308	50	Tube missing	Tube missin	35	29	Tube missi ng							38
HS2-000020BNQ	Camley Street	529735, 183737	50	49	Tube missin	Tube missi ng	19	29							37
HS2-000020BNY	Junction of Mill Lane and Hillfield Road	524839, 185136	53	50	44	38	34	36							42
HS2-000020BNZ	Mansfield Road	528050, 185508	24	44	34	30	Tube missin	29							32
HS2-000020BP0	Junction of Camden Road and Torriano Avenue	529708, 184871	52	70	56	54	46	54							55
HS2-000020BP2	Junction of Grays Inn Road and Holborn	531149, 181616	65	52	49	48	43	43							50
HS2-000020BPB	Camden High Street	528966, 183735	65	81	75	58	63	61							67
HS2-000020BPC	Castlehaven Road	528788, 184591	45	47	40	33	31	32							38
HS2-000020BPD	Prince of Wales Road	528571, 184683	35	43	37	28	28	25							33
HS2-000020BPE	Haverstock Hill	527710, 184749	54	62	53	37	Tube missin g	37							49
HS2-000020BPF	Junction of Primrose Gardens and England's Lane	527549, 184640	44	52	41	35	32	31							39
HS2-000020BPU	Junction of Gower Street and Grafton Way	529476, 182267	54	60	56	50	Tube missin g	42							53

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean <sup>1</sup>
HS2-000020BPW	Junction of Delancey Street and Arlington Road	528939, 183637	48	51	44	44	40	39							44
HS2-000020BPX	Netley Street	529177, 182625	43	50	40	48	32	36							42
HS2-000020BPY	Stanhope Street	529060, 182947	34	46	32	36	24	24							33
HS2-000020BPZ	Albany Street	528790, 182923	44	57	42	43	34	34							43
HS2-000020BQ0	Werrington Street	529493, 183113	43	Tube missing	39	39	26	28							35
HS2-000020BQ1	Polygon Road	529574, 183045	41	46	37	34	Tube missin	28							37
HS2-000020BQ2	Alexandra Place	526320, 183980	42	Tube missing	30	39	25	Tube missi ng							34
HS2-000020BQ3	Harrington Square	529228, 183172	46	60	45	48	40	42							47
HS2-000020BQ4	Junction of North Gower Street and Starcross Street	529290, 182572	51	54	41	44	23	33							41
HS2-000020BQ5	Adelaide Road	527713, 184392	50	54	43	41	32	30							42
HS2-000020BQ6	Mornington Terrace	528836, 183474	45	46	35	34	28	27							36
HS2-000020BQ7	Arlington Road	529009, 183479	43	40	37	33	28	24							34
HS2-000020BQ8	Clarkson Row	529024, 183213	42	45	34	36	26	27							35
HS2-000020BQ9	Park Village East	528923, 183121	40	44	Tube missin g	Tube missi ng	24	24							33
HS2-000020BQA	Eversholt Street	529386, 183132	57	67	56	49	46	Tube missi ng							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>
HS2-000020BQB	Junction of Harrington Street and Varndell Street	529147, 182816	42	43	32	40	26	26							35
HS2-000020BQC	Junction of Robert Street and Hampstead Road	529199, 182704	49	48	42	56	33	37							44
HS2-000020BQD	Drummond Crescent	529648, 182856	50	51	45	44	33	34							43
HS2-000020BQJ	Grafton Way	529380, 182225	64	70	59	56	51	62							60
HS2-000020BQL	Delancey Street	528768, 183581	58	57	47	51	45	39							50
HS2-000020BQR	Lamp post on Park Village East	528682, 183505	46	42	36	34	26	Tube missi ng							37
HS2-000020BQS	Opposite Maria fidelis school on Pheonix Road	529670, 182982	43	43	37	41	Tube missin	34							39
HS2-000020BQT	Drummond Street	529385, 182581	52	51	43	47	31	37							44
HS2-000020BP4	Triplicate site on Finchley Road next to Swiss Cottage kerbside automatic monitoring station	526633, 184392	64	Tube miss	ing		46	53							54
HS2-000020BP5	Triplicate site next to the Euston Road roadside automatic monitoring stations	529895, 182657	Tubes missin g	81	69	78	63	77							73
HS2-000020BP9	Triplicate site in Russell Square next to Bloomsbury urban background automatic monitoring station	530120, 182034	55	47	38	38	36	32							41