

Air Quality and Dust Monitoring Monthly Report – July 2018

London Borough of Camden



SKANSKA



Department for Transport

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Monthly Summary

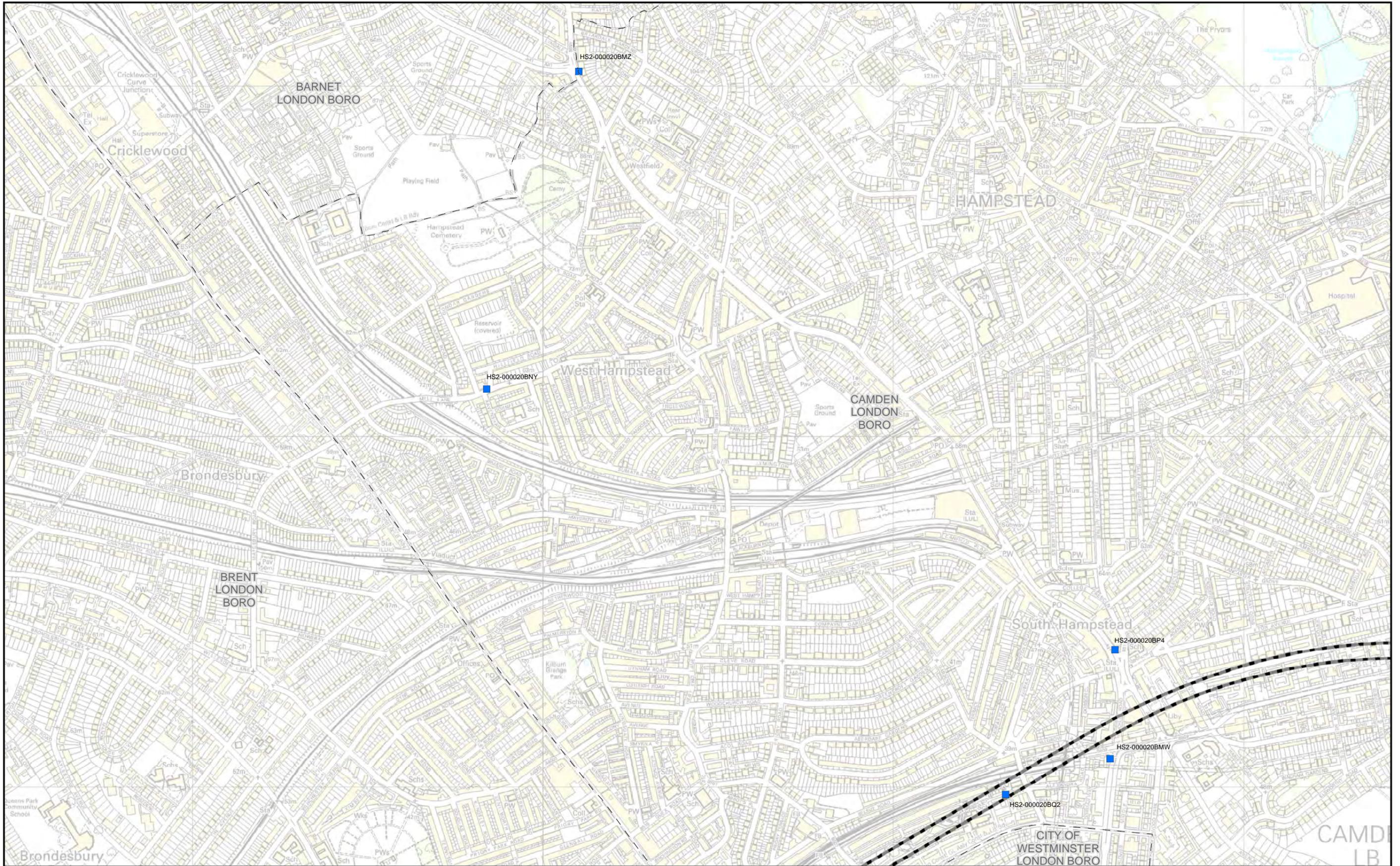
- 1.1.1 This Summary Report is published in fulfilment of commitments detailed in the High Speed Rail (London-West Midlands) Environmental Minimum Requirements, Annex 1: Code of Construction Practice, for the nominated undertaker to present the results of air quality and dust monitoring undertaken in the London Borough of Camden (LBC) during June and July 2018 respectively.
- 1.1.2 Figure 1 to Figure 3 in Appendix A indicate the current work sites 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 current phase of works commenced within the LBC during December 2017, and are expected to be completed by July 2019. The current worksites, as presented in Appendix A, Figure 2 and Figure 3, include:
- Demolition of former accommodation block and train maintenance shed, at the DB Cargo shed. Site office and welfare on the adjacent former Addison Lee compound on Granby Terrace, worksite ref. S001-WS01.
 - Archaeological surveys and digging of trial pits at St James' Gardens, worksite ref. S003-WS01.
 - Pre-demolition surveys at:
 - National Temperance Hospital, Insull Wing, worksite ref. S003-WS02;
 - Walkden House, 67-75 & 77-79 Euston Street, worksite ref. S003-WS03;
 - Thistle Hotel, Cardington Street, worksite ref. S003-WS04;
 - Ibis Hotel, 3 Cardington Street & 1-3 Cobourg Street, worksite ref. S003-WS05.
 - 132 – 140 Hampstead Road and Petrol Station, worksite ref: S001-WS02.
 - Euston Street, Melton Street, Drummond Street block, worksite ref: S003-WS07; and
 - 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 creation of a community garden, worksite ref. S003-WS06.
 - Groundworks in Euston Square Gardens, worksite ref: S003-WS08;
 - Thames Water Compound, worksite ref: S001-WS05.
 - Vehicle Holding Area, worksite ref: S001-WS04 (yet to be established).

- 1.1.5 Seventeen (17) dust monitors are installed around worksites, where demolition and pre-demolition 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.
- 1.1.7 Six (6) exceedances of the dust trigger level were recorded during the month of July 2018. Four (4) of these exceedances were associated with HS2 works. Exceedances are presented in Appendix B, Table 3. All other results were in line with the expected ranges.
- 1.1.8 Diffusion tube monitoring of Nitrogen Dioxide (NO₂) was undertaken at sixty-four (64) locations in June 2018, around highways within the LBC as part of the management of air quality where significant effects may occur as a result of the scheme.
- 1.1.9 Diffusion tube monitoring results were 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.
- 1.1.10 NO₂ monitoring locations and results are presented in Appendix C, Table 4, together with the 2018 running mean.
- 1.1.11 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 2018 in LBC

Complaint Reference No.	Worksite Reference	Description of complaint	Results of investigation
AQComp (NR)	S001-WS01	A number of complaints were received relating to dust over the weekend of the 1st July. The complaints all related to large amounts of dust being observed in the area (related to works taking pace in a railway cutting) without adequate mitigation measures in place.	<p>Following receipts of the complaints, investigations into the cause of the dust being released were undertaken. Network rail stopped all further ballast deliveries associated and linked with the on-network works programme, liaised with the material supplier to make them aware of the issues experienced, and implemented additional dust suppression measures, pending the outcome of investigations. Investigations found that the ballast material was transported from the depot, located in the north west of the country, to the worksite area by rail. Although the usual process of wetting the ballast prior to it being despatched from the depot was undertaken however due to the extreme heat and dry weather conditions, material became abnormally dry whilst in transit.</p> <p>In additional to this, physical space constrains to the worksite area at Euston prevented the usual method of unloading the ballast directly from the train. A hopper and conveyor system were therefore used, which caused further agitation of the already dry material resulting in additional dust being released.</p> <p>Although mitigation was in place, due to the extreme weather conditions being experienced, this was not effective.</p> <p>On recommending works specific and detailed instructions were issued to site operatives relating to environmental & community concerns via pre-work briefings.</p>

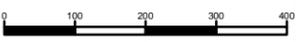
Appendix A – Worksites and Monitoring Locations

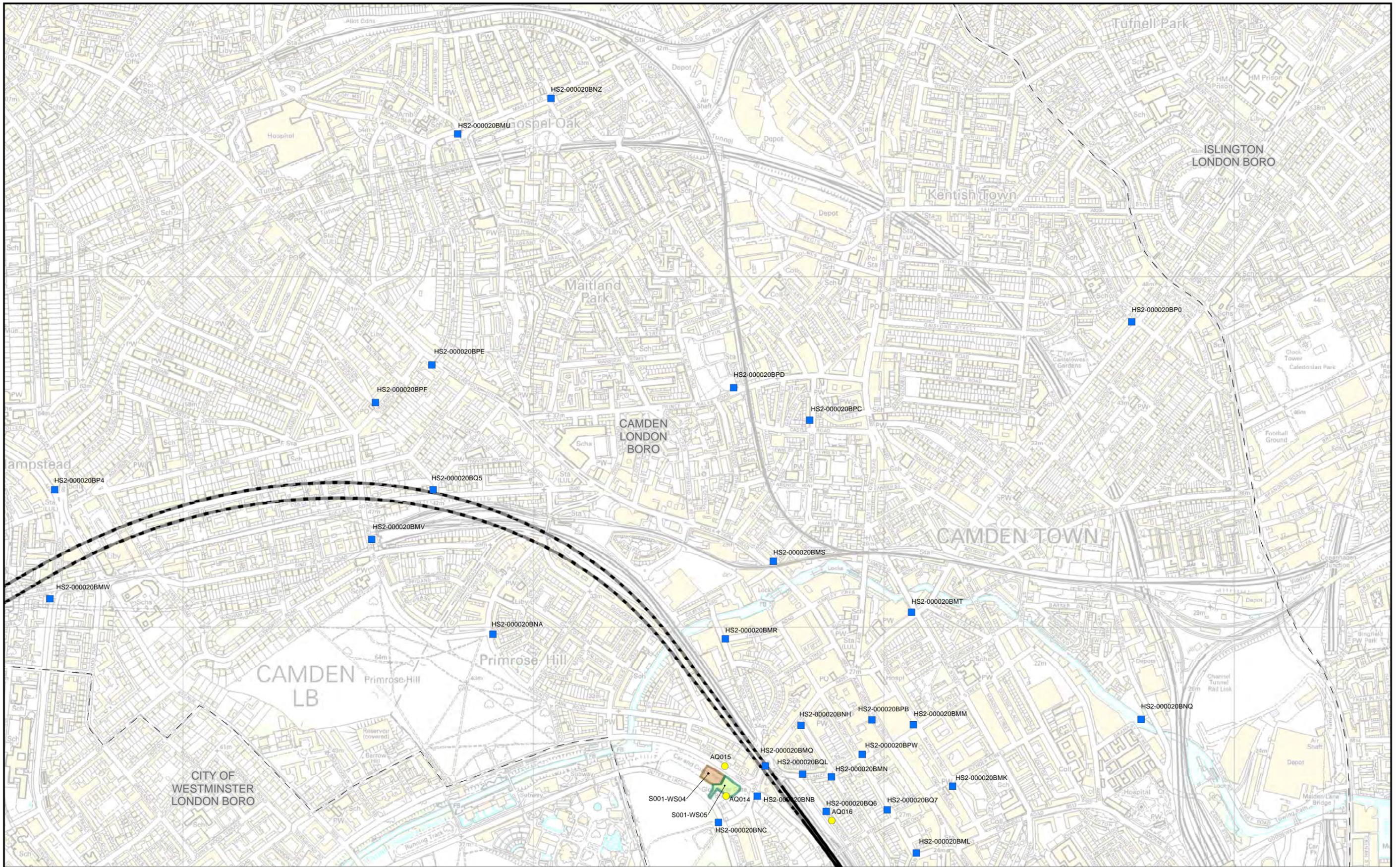


- Legend**
-  Route in tunnel
 -  Route on surface
 -  Diffusion tube monitoring location

Figure Number
Figure Name
Worksites and Monitoring locations in LBC
London Borough of Camden


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- Legend**
- Route in tunnel
 - Route on surface
 - Diffusion tube monitoring location
 - Dust monitoring location
 - Vehicle Holding Area
 - Thames Water Compound

Figure Number

Figure Name
Worksites and Monitoring locations in LBC
 (sheet 2)

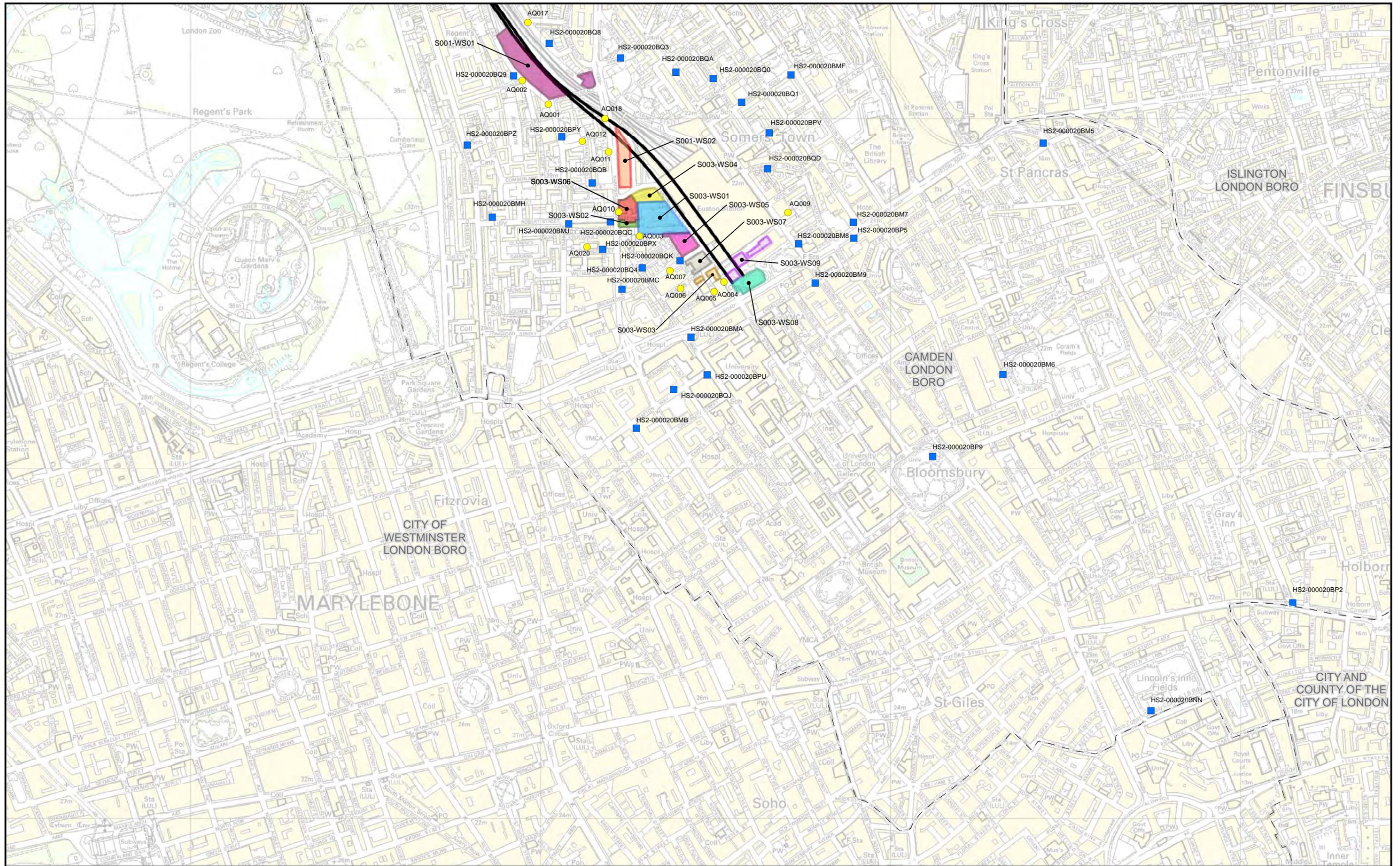
London Borough of Camden

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Legend			
	Route in tunnel		National Temperance Hospital worksite
	Route on surface		Ibis Hotel, 3 Cardington Street & 1-3 Cobourg Street
	Diffusion tube monitoring location		National Temperance Hospital, Insull Wing
	Dust monitoring location		Walkden House, 65-75 & 77-79 Euston Street
	DB Cargo Shed and Compound worksite		Thistle Hotel, Cardington Street
	St. James' Gardens worksite		Euston Street, Melton Street, Drummond Street block
			One Euston Square, 40 Melston Street and Gran Thortorn House, 22 Melston Street
			132 and 140 Hampstead Road and Petrol Station

Figure Number	
Figure Name	Worksites and Monitoring locations in LBC (sheet 3)
London Borough of Camden	

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Appendix B – Dust Monitoring Results

Table 2: Dust monitoring locations and July 2018 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 15-minute PM ₁₀ concentration (µg/m ³)	Minimum 15-minute PM ₁₀ concentration (µg/m ³)	Maximum 15-minute PM ₁₀ concentration (µg/m ³)	Number of 15-min periods exceeding trigger level of 250 µg/m ³	15-min data capture (%)
AQ001	529016, 183049	Junction of Park Village East, Stanhope Street and Granby Terrace	H	Yes	N	12.0	1.9	168.7	0	100.0
AQ002	528924, 183130	Park Village East	H	Yes	N	3.4*	0.1	18.2	0	100.0
AQ003	529282, 182663	St James Gardens	M	Yes	N	6.4	0.3	341.7	2	85.1
AQ004	529533, 182519	Melton Street	H	Yes	N	13.8	2.5	95.5	0	100.0
AQ005	529498, 182502	Stephenson Way	H	Yes	N	26.2	5.5	102.3	0	100.0
AQ006	529408, 182528	Euston Street	H	Yes	N	16.1	3.2	60.8	0	100.0
AQ007	529394, 182580	Drummond Street	H	Yes	N	3.6*	0.5	20.0	0	100.0
AQ009	529707, 182729	Lancing Street	H	Yes	N	10.0	2.2	28.2	0	100.0
AQ010	529209, 182735	Hampstead Road South	H	Yes	n/a	14.2	3.2	178.9	0	72.8
AQ011	529198, 182889	Hampstead Road	H	Yes	N	17.4	3.8	195.6	0	100.0
AQ012	529118, 182933	Mackworth Street	H	Yes	N	14.4	2.1	427.8	1	100.0
AQ014	528550, 183518	Thames Water Compound	L	Yes	N	10.8	1.8	726.8	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 15-minute PM ₁₀ concentration (µg/m ³)	Minimum 15-minute PM ₁₀ concentration (µg/m ³)	Maximum 15-minute PM ₁₀ concentration (µg/m ³)	Number of 15-min periods exceeding trigger level of 250 µg/m ³	15-min data capture (%)
AQ015	528550, 183602	Prince Albert Road	L	Yes	N	9.4	2.0	225.4	0	100.0
AQ016	528820, 183498	Mornington Terrace North	H	Yes	N	8.9	1.2	384.4	2	100.0
AQ017	528962, 183274	Mornington Terrace South	H	Yes	N	13.4	1.7	57.8	0	100.0
AQ018	529192, 182954	Hampstead Road North	H	Yes	N	19.8	4.3	204.6	0	100.0
AQ020	529132, 182633	Netley School	n/a	Yes	N	11.4	1.9	120.9	0	100.0

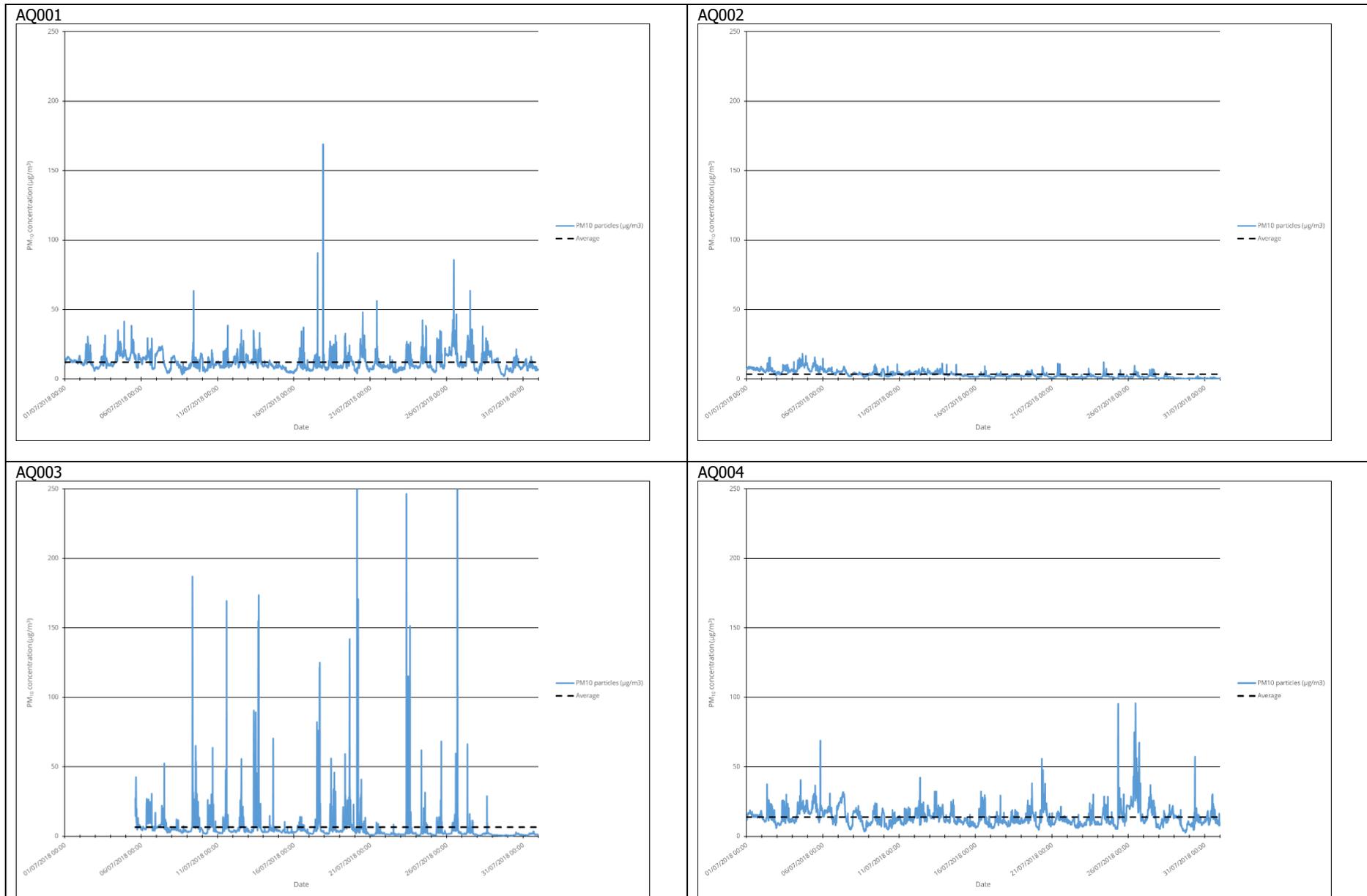
* Mean concentration very low – filter changes programmed at the beginning of August in line with quarterly maintenance schedule.

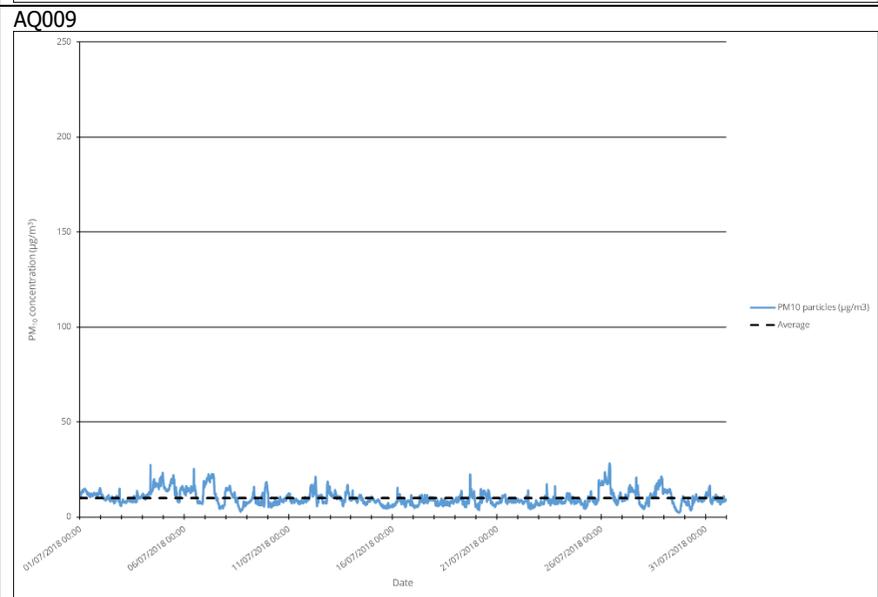
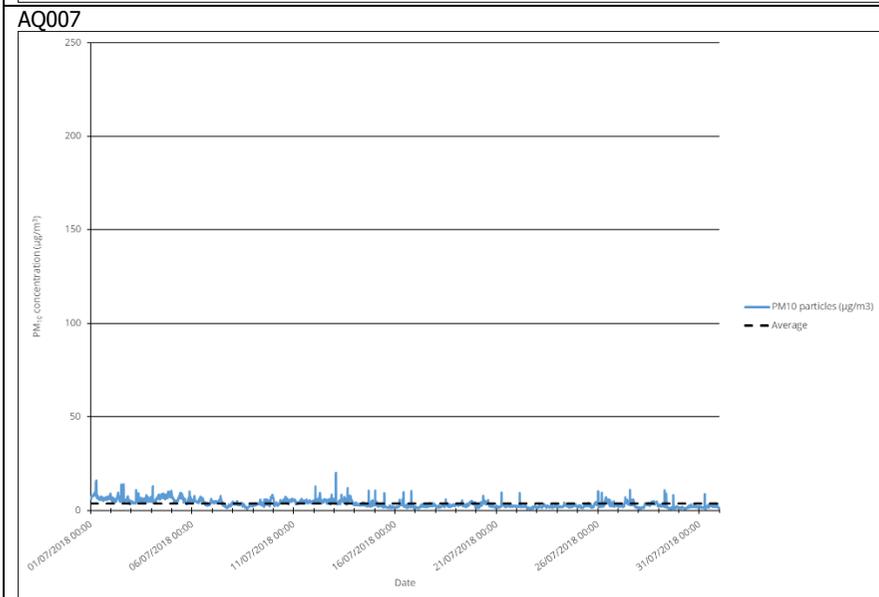
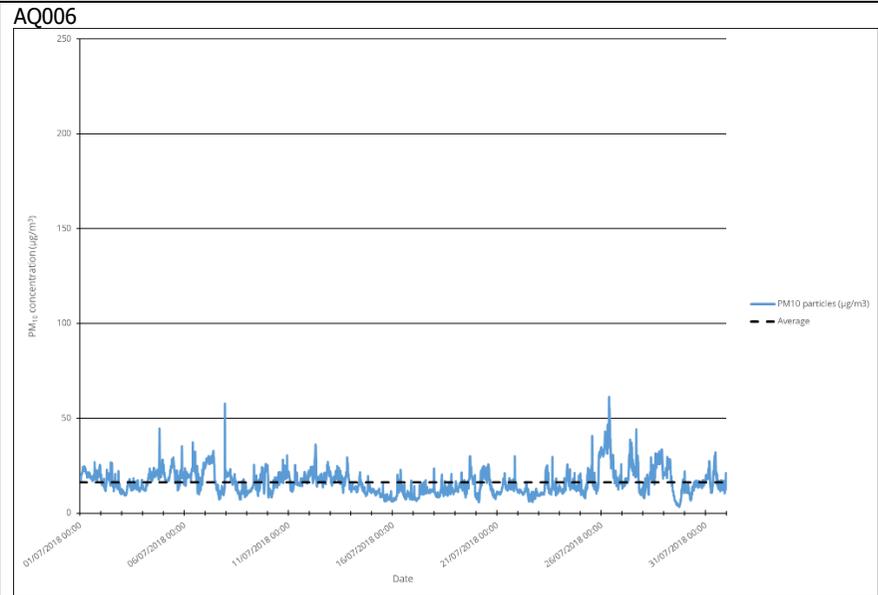
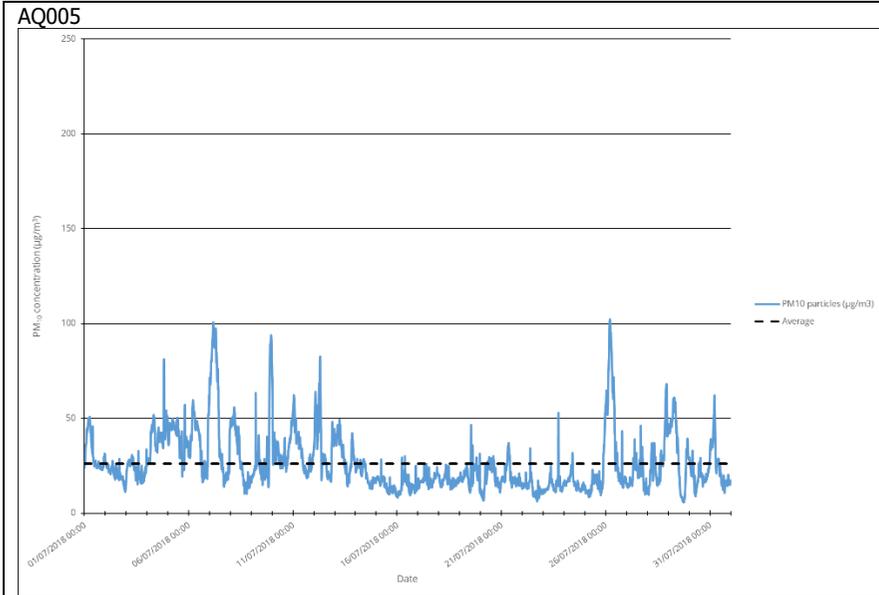
Table 3: Summary of exceedances of trigger level in July 2018

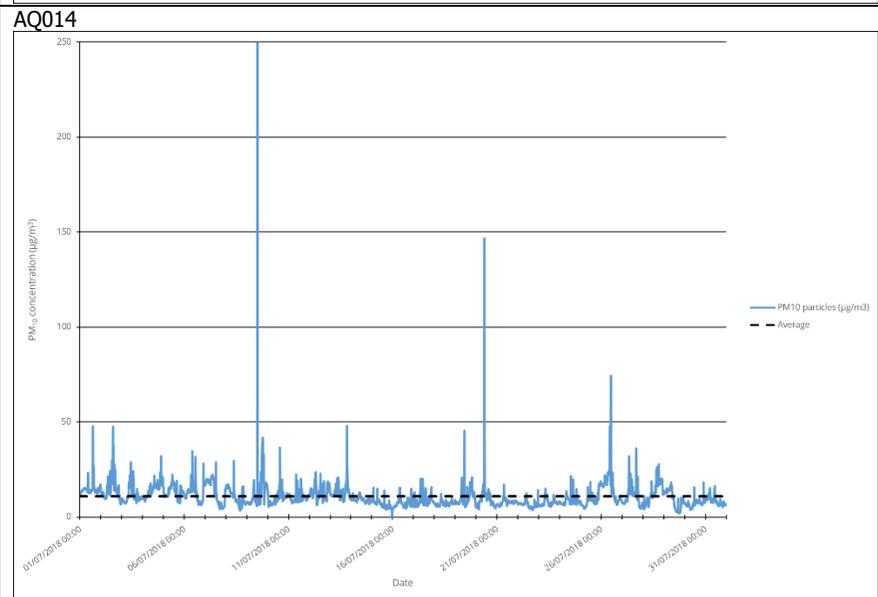
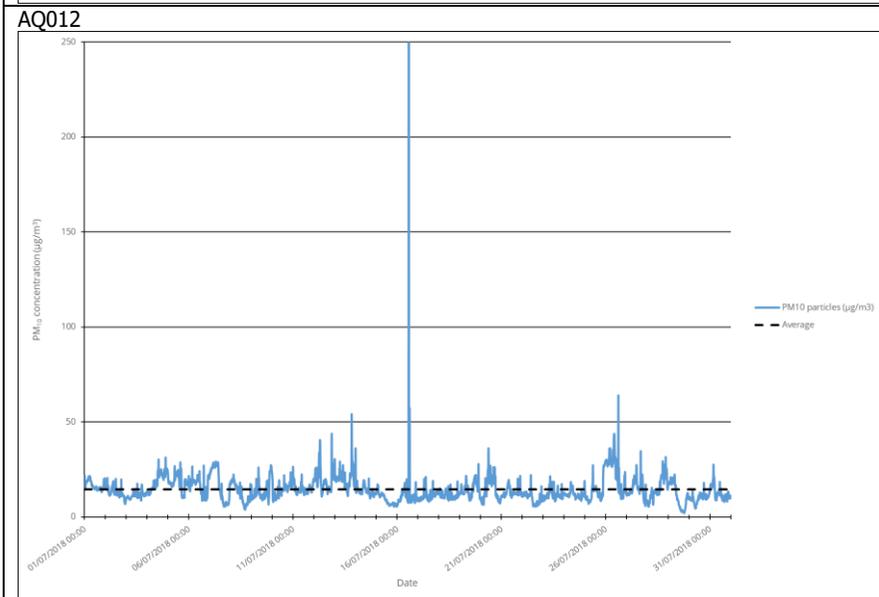
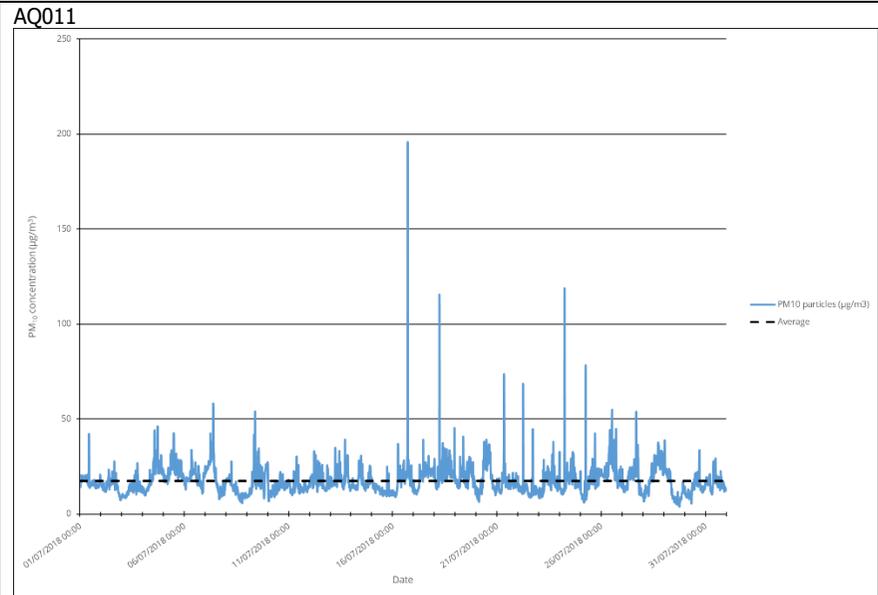
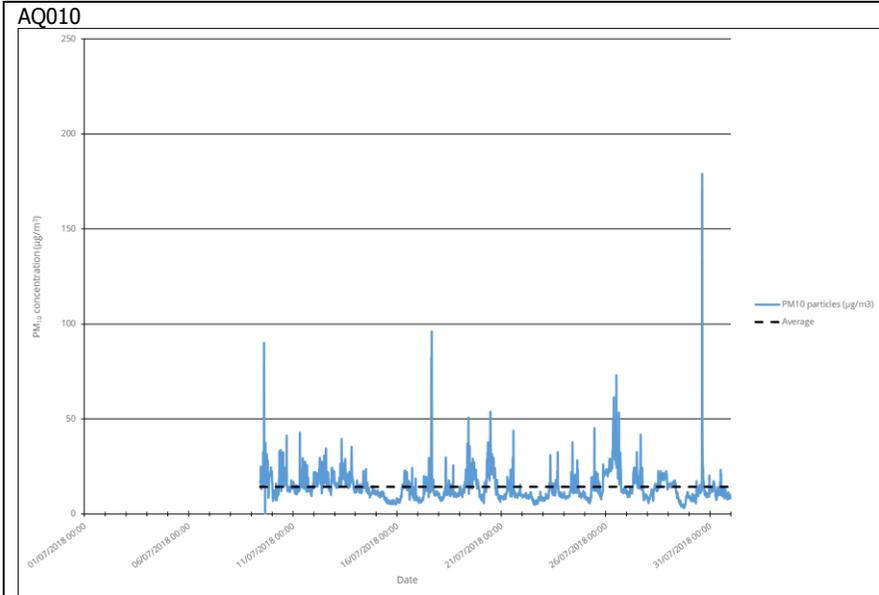
Period exceeding trigger level	Worksite reference	Monitoring site ID	Complaint reference number (if applicable)	Reason	Resolution
20/07/2018 03:01 – 20/07/2018 03:15	S003-WS01	AQ003	n/a	No site activities were being undertaken during this trigger. It is assumed to have resulted from a short episode of wind-blown dust from the site or moisture in the air during the early hours.	Active dust suppression and damping down is implemented on site every day, throughout the day. Areas of site around perimeter of the site are double-checked in the morning to determine if they are dry. Damping down carried at the end of the day to reduce the risk of windblown dust during hours when the site is closed.
26/07/2018 16:46 – 26/07/2018 17:00	S003-WS01	AQ003	n/a	Trigger attributed to the lifting / movement of a monument in the corner of the gardens in close proximity to the monitor.	Given the deep excavation in the south-east area of the site it is not possible to get a vehicle pulled mobile bowser to dampen down the area. Therefore a

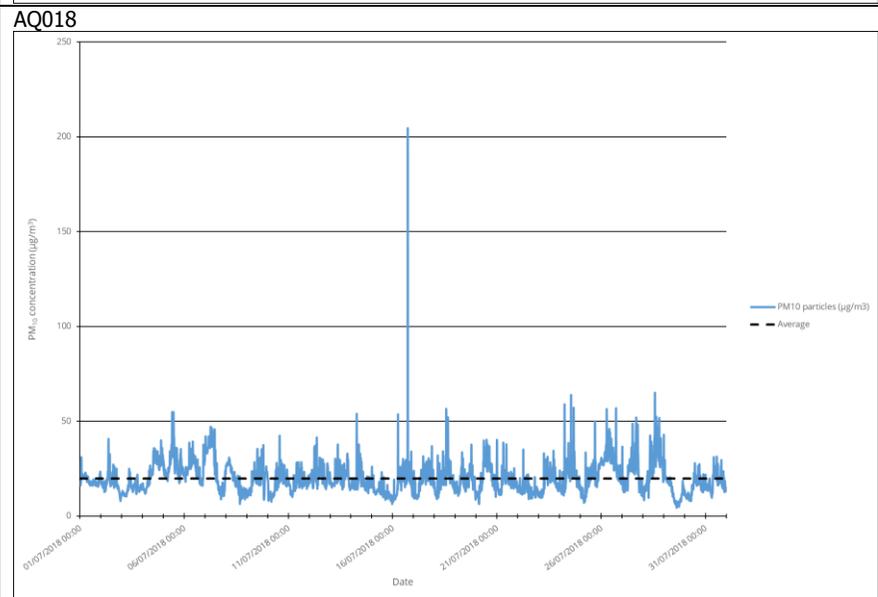
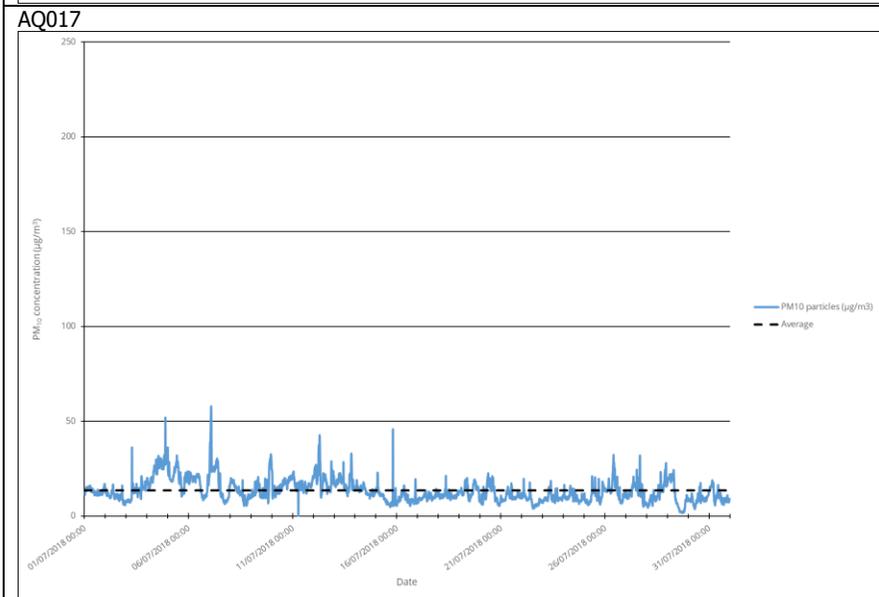
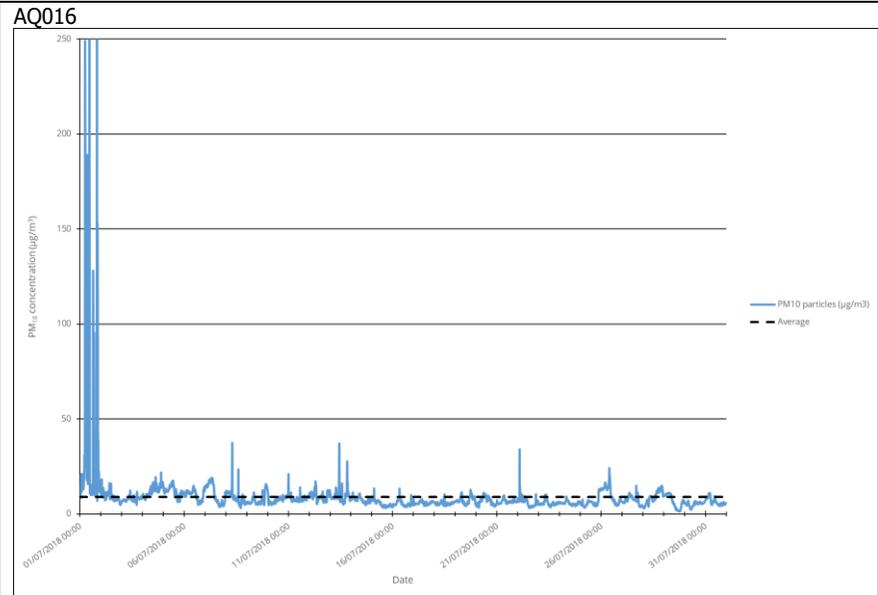
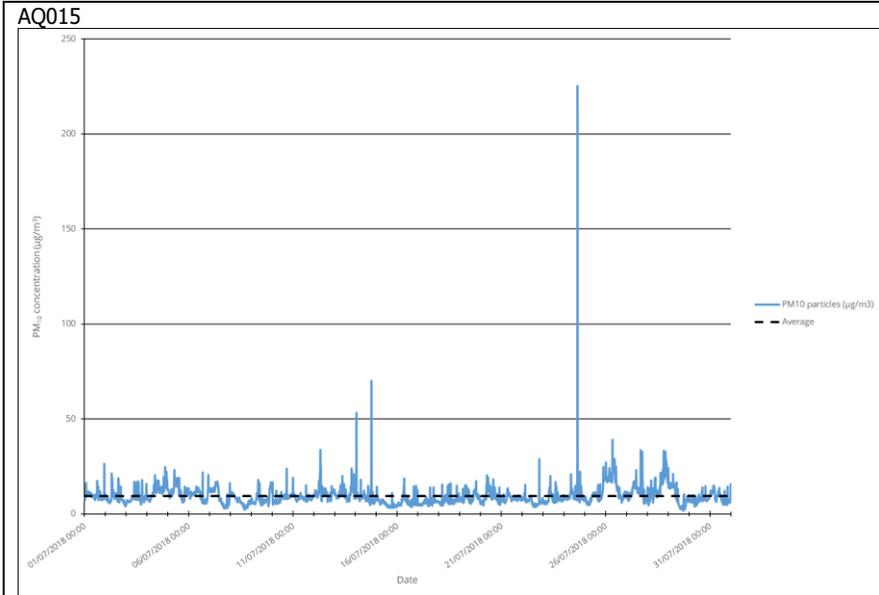
					handheld powered dust suppression means was used as required during the activity. Potentially some loose dry soil was disturbed when moving the monument, causing the trigger. Active dust suppression and damping down is implemented on site every day, throughout the day
16/07/2018 13:16 – 16/07/2018 13:30	S001-WS02	AQ012	n/a	No HS2 works were being undertaken in the area at the time of the exceedance and no likely dust sources from nearby HS2 sites were noted.	n/a
09/07/2018 12:16 – 09/07/2018 12:30	S001-WS05	AQ014	n/a	No HS2 works were being undertaken at the time of the exceedance.	n/a
01/07/2018 10:46 – 01/07/2018 11:00	n/a	AQ016	n/a	Attributable to ballast unloading in the railway cutting	All further ballast deliveries were stopped whilst an incident review was undertaken, and risk assessments reviewed. Liaison with the supplier of the ballast to make them aware of the issues experienced and ensure they were taking all reasonably practicable measures to minimise dust, at source. Dust and air quality monitoring equipment and processes were enhanced at the worksite. On recommencing works specific and detailed instructions were issued to site operatives relating to environmental & community concerns via pre-work briefings. Visual checks were undertaken, at both track and street levels, for any releases of dust into the environment from the worksite.
01/07/2018 19:31 – 01/07/2018 19:45	n/a	AQ016	n/a	Attributable to ballast unloading in the railway cutting.	

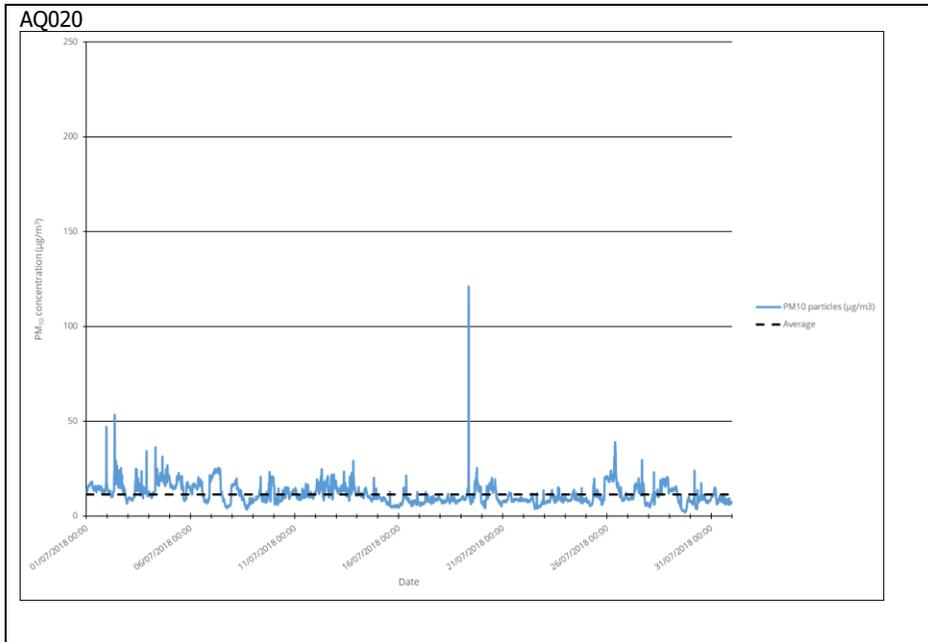
Figure 4: Construction dust 15-minute mean indicative PM₁₀ concentration for dust monitors











Appendix C – Air Quality Monitoring Results

Table 4: NO₂ monitoring locations around highways, NO₂ concentrations and monthly monitoring results with running mean for 2018 (µg/m³)

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	Mean ¹
HS2-000020BM5	Junction of St Chad's Street and Grays Inn Road	530436, 182929	52	58	53	51	61	51							54
HS2-000020BM6	Brunswick Square	530321, 182268	60	41	53	41	43	31							45
HS2-000020BM7	Chalton Street	529894, 182702	62	65	55	53	59	53							58
HS2-000020BM8	Junction of Euston Square and Grafton Place	529737, 182641	66	64	63	Tube missing	65	60							64
HS2-000020BM9	Junction of Endsleigh Gardens and Upper Woburn Place	529785, 182529	74	80	59	57	68	65							67
HS2-000020BMA	Junction of Euston Road and Gower Street	529429, 182375	71	69	59	57	66	52							62
HS2-000020BMB	Whitfield Street	529273, 182114	56	52	50	42	43	38							47
HS2-000020BMC	Hampstead Road	529232, 182511	59	59	61	61	73	61							63
HS2-000020BMF	Junction of Polygon Road and Ossulston Street	529715, 183123	37	42	38	28	36	29							35
HS2-000020BMH	Nash Street	528861, 182717	42	42	42	37	38	Tube missing							40
HS2-000020BMJ	Junction on Robert Street and Stanhope Street	529080, 182698	48	45	42	39	40	35							42

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.

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	Mean ¹
HS2-000020BMK	Junction of Plender Street and Bayham Street	529196, 183546	61	56	54	47	57	43							53
HS2-000020BML	Junction of Arlington Road and Mornington Crescent	529093, 183356	47	43	45	40	39	30							41
HS2-000020BMM	Junction of Bayham Street and Pratt Street	529084, 183722	85	64	57	65	61	45							63
HS2-000020BMN	Junction of Delancey Street and Albert Street	528850, 183573	50	44	47	40	43	36							43
HS2-000020BMQ	Junction of Parkway and Delancey Street	528662, 183604	Tube missing	61	58	53	63	56							58
HS2-000020BMR	Junction of Oval Road and Jamestown Road	528548, 183967	47	43	49	38	39	35							42
HS2-000020BMS	Junction of Chalk Farm Road and Castlehaven Road	528685, 184188	57	61	58	58	66	54							59
HS2-000020BMT	Junction of Camden Road and Camden Street	529079, 184043	63	62	58	58	68	51							60
HS2-000020BMU	Junction of Southampton Road and Fleet Road	527783, 185407	51	50	47	44	48	42							47
HS2-000020BMV	Primrose Hill Road	527538, 184250	49	46	43	Tube missing	34	38							42
HS2-000020BMW	Junction of Finchley Road and Hilgrove Road	526619, 184081	55	70	53	55	65	57							59
HS2-000020BMZ	Junction of Finchley Road and Hendon Way	525102, 186042	99	88	84	79	93	84							88

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	Mean ¹
HS2-000020BNA	Junction of Regent's Park Road and Rothwell Street	527884, 183980	50	44	39	39	32	26							38
HS2-000020BNB	Junction of Gloucester Gate Bridge and Park Village East	528639, 183518	56	46	51	44	47	38							47
HS2-000020BNC	Junction of Outer Circle and Gloucester Gate	528528, 183443	36	37	42	31	40	36							37
HS2-000020BNH	Junction of Parkway and Albert Street	528763, 183720	56	51	Tube missing	43	52	42							49
HS2-000020BNN	Lincoln's Inn Fields	530744, 181308	Tube missing	Tube missing	Tube missing	50	42	24							39
HS2-000020BNQ	Camley Street	529735, 183737	Tube missing	51	49	Tube missing	41	Tube missing							47
HS2-000020BNY	Junction of Mill Lane and Hillfield Road	524839, 185136	52	49	50	35	47	37							45
HS2-000020BNZ	Mansfield Road	528050, 185508	46	44	46	39	32	27							39
HS2-000020BP0	Junction of Camden Road and Torriano Avenue	529708, 184871	68	74	68	66	70	61							68
HS2-000020BP2	Junction of Grays Inn Road and Holborn	531149, 181616	Tube missing	57	55	53	54	Tube missing							55
HS2-000020BPB	Camden High Street	528966, 183735	87	64	60	73	76	65							71
HS2-000020BPC	Castlehaven Road	528788, 184591	41	43	36	36	33	26							36
HS2-000020BPD	Prince of Wales Road	528571, 184683	40	40	41	37	34	29							37
HS2-000020BPE	Haverstock Hill	527710, 184749	49	46	46	48	39	39							44

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	Mean ¹
HS2-000020BPF	Junction of Primrose Gardens and England's Lane	527549, 184640	42	40	36	35	33	32							36
HS2-000020BPU	Junction of Gower Street and Grafton Way	529476, 182267	53	48	51	52	60	44							51
HS2-000020BPV	Phoenix Road	529653, 182958	45	23	40	41	37	28							36
HS2-000020BPW	Junction of Delancey Street and Arlington Road	528939, 183637	48	51	51	38	60	44							48
HS2-000020BPX	Netley Street	529177, 182625	43	46	45	39	48	34							43
HS2-000020BPY	Stanhope Street	529060, 182947	50	43	41	36	39	29							40
HS2-000020BPZ	Albany Street	528790, 182923	49	46	51	43	38	31							43
HS2-000020BQ0	Werrington Street	529493, 183113	42	46	40	37	34	26							38
HS2-000020BQ1	Polygon Road	529574, 183045	42	50	44	36	36	28							39
HS2-000020BQ2	Alexandra Place	526320, 183980	37	37	37	33	34	25							34
HS2-000020BQ3	Harrington Square	529228, 183172	59	53	53	55	58	49							55
HS2-000020BQ4	Junction of North Gower Street and Starcross Street	529290, 182572	50	55	44	44	44	33							45
HS2-000020BQ5	Adelaide Road	527713, 184392	53	45	44	42	41	34							43
HS2-000020BQ6	Mornington Terrace	528836, 183474	47	41	45	37	37	33							40
HS2-000020BQ7	Arlington Road	529009, 183479	42	46	41	39	36	27							38
HS2-000020BQ8	Clarkson Row	529024, 183213	50	46	39	30	35	28							38

Monitoring Site ID	Location description	Coordinates (X, Y)	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sep	Oct	Nov	Dec	Mean ¹
HS2-000020BQ9	Park Village East	528923, 183121	44	48	32	37	34	26							37
HS2-000020BQA	Eversholt Street	529386, 183132	63	69	61	65	60	43							60
HS2-000020BQB	Junction of Harrington Street and Vardell Street	529147, 182816	51	48	47	39	36	Tube missing							44
HS2-000020BQC	Junction of Robert Street and Hampstead Road	529199, 182704	53	55	55	52	54	45							52
HS2-000020BQD	Drummond Crescent	529648, 182856	53	55	49	Tube missing	40	38							47
HS2-000020BQJ	Grafton Way	529380, 182225	72	75	56	49	61	55							62
HS2-000020BQK	Junction of Drummond Street and Cobourg Street	529398, 182593	49	54	47	36	42	35							44
HS2-000020BQL	Delancey Street	528768, 183581	60	55	53	45	64	59							56
HS2-000020BP4	Triplicate site on Finchley Road next to Swiss Cottage kerbside automatic monitoring station	526633, 184392	Tubes missing	Tubes missing	Tubes missing	60	77	68							68
HS2-000020BP5	Triplicate site next to the Euston Road roadside automatic monitoring stations	529895, 182657	95	82	73	70	102	96							87
HS2-000020BP9	Triplicate site in Russell Square next to Bloomsbury urban background automatic monitoring station	530120, 182034	47	46	43	41	41	39							43