

Technical Appendix 8.3: Charlton Riverside PM₁₀ Monitoring Summary

Ramboll UK Limited (Ramboll Environ) undertook a monitoring survey for 3 months to measure particulate matter within the proposed development site at Charlton Riverside. The monitoring was undertaken to determine baseline PM₁₀ concentrations at the site, as proposals for the site include residential and public open space use.

Two monitoring locations were selected at and adjacent to the proposed development site and measurements were recorded from 26th July 2016 until 25th October 2016. The monitoring equipment used was two Turnkey Osiris Airborne Particulate monitors which were connected to an internet site AirQWeb where data was downloaded daily. The monitors measured Total Particles, PM₁₀, PM_{2.5} and PM₁ and well as wind speed and wind direction.

Monitor 1 was located at Access Solutions (Unit No. TNO2704) and monitor 2 was located at Unit 24 (Unit No. TNO2703) as shown in below:



In order to compare the monitoring data to the annual objective, the measurement data, has been annualised based on the methodology in LAQM TG16¹. The annualisation process has utilised London North Kensington Urban Background AURN Monitor and as there is not a full year of 2016 data, the monitoring period was compared and annualised using 2015 data. The annualisation calculations are shown below:

¹ DEFRA, 2016. Local Air Quality Management Technical Guidance (TG16), DEFRA.

Annualisation Process – PM10				
Monitoring Site	Annual Mean 2015	Period Mean 26/7/16 - 25/10/16	A _m /P _m Ratio	Annual Mean
AURN North Kensington Background	19.6µg/m ³	17.7µg/m ³	1.1	
Monitoring Location 1		16.2µg/m ³		18.1µg/m ³
Monitoring Location 2		18.2µg/m ³		21.0µg/m ³

The full daily mean monitoring data is summarised below.

Monitor 1: Access Solutions - Unit No. TNO2704				
Time	Total (µg/m ³)	PM ₁₀ (µg/m ³)	PM _{2.5} (µg/m ³)	PM ₁ (µg/m ³)
26/07/2016 00:00:00	24.05	14.58	3.94	0.76
27/07/2016 00:00:00	19.49	11.92	3.28	0.74
28/07/2016 00:00:00	21.44	13.01	3.35	0.73
29/07/2016 00:00:00	21.79	13.47	3.44	0.73
30/07/2016 00:00:00	14.89	9.41	2.89	0.60
31/07/2016 00:00:00	8.73	4.87	1.44	0.37
01/08/2016 00:00:00	18.29	10.73	2.72	0.58
02/08/2016 00:00:00	12.19	8.21	2.80	0.70
03/08/2016 00:00:00	24.85	15.49	4.74	0.86
04/08/2016 00:00:00	28.64	19.14	6.50	1.17
05/08/2016 00:00:00	27.04	17.65	5.91	1.10
06/08/2016 00:00:00	17.06	10.96	3.97	0.75
07/08/2016 00:00:00	16.62	11.48	4.63	0.89
08/08/2016 00:00:00	28.63	20.33	8.19	1.79
09/08/2016 00:00:00	30.50	21.17	7.70	1.35
10/08/2016 00:00:00	22.32	14.74	5.50	1.06
11/08/2016 00:00:00	32.87	21.16	6.46	1.23
12/08/2016 00:00:00	34.16	21.95	7.05	1.24
13/08/2016 00:00:00	14.45	8.40	2.40	0.43
14/08/2016 00:00:00	16.09	8.06	2.54	0.50
15/08/2016 00:00:00	31.32	17.08	3.82	0.77
16/08/2016 00:00:00	28.34	17.03	4.28	0.78
17/08/2016 00:00:00	35.78	20.75	5.05	1.13
18/08/2016 00:00:00	40.93	24.21	6.02	1.04
19/08/2016 00:00:00	25.44	19.54	7.11	1.58

20/08/2016 00:00:00	32.91	26.69	13.4	2.64
21/08/2016 00:00:00	11.21	8.83	4.76	0.95
22/08/2016 00:00:00	30.00	20.74	7.61	1.33
23/08/2016 00:00:00	28.06	17.66	5.34	1.09
24/08/2016 00:00:00	56.22	31.6	7.44	1.68
25/08/2016 00:00:00	48.13	29.55	8.75	2.44
26/08/2016 00:00:00	26.55	16.08	4.72	1.59
27/08/2016 00:00:00	35.34	22.29	6.53	1.31
28/08/2016 00:00:00	15.20	11.24	5.00	1.14
29/08/2016 00:00:00	11.20	7.70	3.22	0.85
30/08/2016 00:00:00	25.26	14.86	4.12	1.06
31/08/2016 00:00:00	28.1	17.32	4.37	0.97
01/09/2016 00:00:00	35.09	23.5	8.58	1.55
02/09/2016 00:00:00	33.73	21.73	6.76	1.27
03/09/2016 00:00:00	21.78	15.85	6.91	1.37
04/09/2016 00:00:00	13.50	10.37	5.20	1.07
05/09/2016 00:00:00	19.04	12.22	3.49	0.79
06/09/2016 00:00:00	30.95	18.21	3.91	0.82
07/09/2016 00:00:00	26.6	15.83	4.23	1.05
08/09/2016 00:00:00	38.67	24.85	7.37	1.56
09/09/2016 00:00:00	29.86	21.01	7.65	1.35
10/09/2016 00:00:00	17.69	13.55	5.99	1.04
11/09/2016 00:00:00	18.62	14.72	7.44	1.52
12/09/2016 00:00:00	24.82	17.35	5.60	1.17
13/09/2016 00:00:00	45.67	27.26	6.60	1.64
14/09/2016 00:00:00	42.90	28.01	7.78	2.07
15/09/2016 00:00:00	45.23	28.82	7.46	1.85
16/09/2016 00:00:00	13.05	9.88	4.56	1.05
17/09/2016 00:00:00	13.41	11.25	6.43	1.32
18/09/2016 00:00:00	10.38	7.86	4.10	1.23
19/09/2016 00:00:00	31.23	21.32	7.36	1.55
20/09/2016 00:00:00	14.95	10.3	4.51	1.28
21/09/2016 00:00:00	25.66	16.41	5.18	1.74
22/09/2016 00:00:00	33.90	21.47	5.36	1.25

23/09/2016 00:00:00	28.96	19.00	5.31	1.05
24/09/2016 00:00:00	16.43	10.79	3.27	0.63
25/09/2016 00:00:00	14.57	11.05	5.31	1.09
26/09/2016 00:00:00	27.82	20.79	9.38	1.87
27/09/2016 00:00:00	24.94	17.27	6.34	1.34
28/09/2016 00:00:00	44.51	34.12	16.78	3.33
29/09/2016 00:00:00	24.93	17.5	6.45	1.31
30/09/2016 00:00:00	33.19	23.47	8.87	1.74
01/10/2016 00:00:00	11.79	9.26	4.52	1.04
02/10/2016 00:00:00	11.09	8.85	4.52	0.95
03/10/2016 00:00:00	28.49	19.88	7.76	2.00
04/10/2016 00:00:00	27.21	19.39	7.55	1.79
05/10/2016 00:00:00	23.13	15.86	5.86	0.92
06/10/2016 00:00:00	23.24	15.28	4.62	0.82
07/10/2016 00:00:00	23.51	15.16	4.51	0.91
08/10/2016 00:00:00	13.47	9.73	3.71	0.82
09/10/2016 00:00:00	7.74	5.84	2.67	0.54
10/10/2016 00:00:00	12.45	8.45	3.12	0.63
11/10/2016 00:00:00	21.04	12.87	3.49	0.92
12/10/2016 00:00:00	16.54	11.25	3.93	0.94
13/10/2016 00:00:00	16.96	11.66	4.54	1.23
14/10/2016 00:00:00	25.57	16.66	5.32	1.55
15/10/2016 00:00:00	17.72	13.28	5.21	1.65
16/10/2016 00:00:00	13.81	11.52	5.69	1.06
17/10/2016 00:00:00	24.70	18.17	6.91	1.37
18/10/2016 00:00:00	18.42	15.39	7.18	1.47
19/10/2016 00:00:00	18.25	13.04	5.08	1.07
20/10/2016 00:00:00	16.62	12.82	5.90	1.15
21/10/2016 00:00:00	16.93	12.8	5.26	1.05
22/10/2016 00:00:00	13.00	10.16	4.70	1.12
23/10/2016 00:00:00	11.98	8.91	4.16	1.5
24/10/2016 00:00:00	34.83	22.69	7.36	2.29
25/10/2016 00:00:00	44.57	29.11	9.40	2.95

Monitor 2: Unit 24 - Unit No. TNO2703

Time	Total ($\mu\text{g}/\text{m}^3$)	PM ₁₀ ($\mu\text{g}/\text{m}^3$)	PM _{2.5} ($\mu\text{g}/\text{m}^3$)	PM ₁ ($\mu\text{g}/\text{m}^3$)
26/07/2016 00:00:00	33.3	18.3	4.3	0.9
27/07/2016 00:00:00	25.5	16.0	4.5	1.2
28/07/2016 00:00:00	26.4	14.2	3.3	0.8
29/07/2016 00:00:00	25.3	13.9	3.2	0.7
30/07/2016 00:00:00	45.8	31.1	3.8	0.8
31/07/2016 00:00:00	20.4	11.0	2.4	0.7
01/08/2016 00:00:00	27.4	16.3	3.1	0.7
02/08/2016 00:00:00	15.7	9.9	3.0	0.7
03/08/2016 00:00:00	22.7	14.0	4.6	0.8
04/08/2016 00:00:00	28.3	18.3	6.5	1.3
05/08/2016 00:00:00	31.3	21.6	8.3	1.8
06/08/2016 00:00:00	18.6	11.5	4.1	0.8
07/08/2016 00:00:00	23.1	14.2	5.1	1.0
08/08/2016 00:00:00	44.6	29.6	11.6	2.9
09/08/2016 00:00:00	48.4	35.6	12.5	2.8
10/08/2016 00:00:00	22.6	14.6	5.4	1.0
11/08/2016 00:00:00	38.1	22.3	6.5	1.2
12/08/2016 00:00:00	37.9	23.2	7.5	1.3
13/08/2016 00:00:00	18.0	9.9	2.7	0.6
14/08/2016 00:00:00	16.3	8.2	2.6	0.5
15/08/2016 00:00:00	49.1	26.0	5.1	1.2
16/08/2016 00:00:00	42.3	24.6	6.2	1.5
17/08/2016 00:00:00	55.7	32.5	8.4	2.0
18/08/2016 00:00:00	52.1	30.0	7.0	1.3
19/08/2016 00:00:00	28.0	20.3	7.5	1.7
20/08/2016 00:00:00	34.7	27.7	14.3	2.6
21/08/2016 00:00:00	12.1	9.1	5.0	1.0
22/08/2016 00:00:00	23.9	16.5	6.9	1.2
23/08/2016 00:00:00	30.2	18.1	5.5	1.2
24/08/2016 00:00:00	68.8	39.9	8.7	2.6
25/08/2016 00:00:00	60.0	35.5	10.7	3.3

26/08/2016 00:00:00	43.1	27.6	6.5	2.2
27/08/2016 00:00:00	42.6	26.1	7.1	1.4
28/08/2016 00:00:00	17.6	12.6	5.3	1.2
29/08/2016 00:00:00	11.8	8.1	3.5	1.0
30/08/2016 00:00:00	25.9	15.8	4.5	1.1
31/08/2016 00:00:00	31.4	18.4	4.5	1.0
01/09/2016 00:00:00	40.2	26.8	9.8	2.1
02/09/2016 00:00:00	28.4	19.1	6.5	1.2
03/09/2016 00:00:00	20.6	15.2	7.0	1.4
04/09/2016 00:00:00	14.2	10.7	5.4	1.1
05/09/2016 00:00:00	12.4	8.3	3.1	0.7
06/09/2016 00:00:00	34.5	23.0	4.2	0.9
07/09/2016 00:00:00	25.4	16.5	5.7	1.7
08/09/2016 00:00:00	45.7	27.6	7.7	1.6
09/09/2016 00:00:00	29.7	21.5	7.8	1.4
10/09/2016 00:00:00	17.8	13.7	6.1	1.1
11/09/2016 00:00:00	19.6	15.4	7.7	1.5
12/09/2016 00:00:00	21.9	14.6	5.3	1.1
13/09/2016 00:00:00	56.8	32.9	7.5	1.9
14/09/2016 00:00:00	49.7	31.2	8.5	2.4
15/09/2016 00:00:00	53.6	32.8	7.8	2.0
16/09/2016 00:00:00	14.2	10.3	4.6	1.0
17/09/2016 00:00:00	14.5	11.9	6.6	1.3
18/09/2016 00:00:00	10.1	7.7	4.1	1.3
19/09/2016 00:00:00	34.0	23.5	8.3	1.7
20/09/2016 00:00:00	16.5	11.7	5.6	1.7
21/09/2016 00:00:00	35.0	22.9	6.8	2.1
22/09/2016 00:00:00	22.9	14.9	4.5	1.1
23/09/2016 00:00:00	22.4	15.4	5.2	1.1
24/09/2016 00:00:00	27.6	15.2	4.2	0.9
25/09/2016 00:00:00	14.9	11.2	5.3	1.1
26/09/2016 00:00:00	27.5	20.9	9.7	2.0
27/09/2016 00:00:00	21.1	15.2	6.3	1.3
28/09/2016 00:00:00	37.0	29.5	16.8	3.2

29/09/2016 00:00:00	20.1	14.2	6.0	1.2
30/09/2016 00:00:00	24.3	18.2	8.1	1.5
01/10/2016 00:00:00	11.6	8.1	4.2	0.9
02/10/2016 00:00:00	11.1	8.8	4.6	1.0
03/10/2016 00:00:00	30.3	20.5	8.0	2.2
04/10/2016 00:00:00	44.7	27.8	9.1	2.1
05/10/2016 00:00:00	34.4	22.2	7.0	1.2
06/10/2016 00:00:00	28.9	18.8	5.3	1.1
07/10/2016 00:00:00	24.0	15.7	5.0	1.1
08/10/2016 00:00:00	16.5	10.8	3.8	0.8
09/10/2016 00:00:00	7.1	5.6	2.8	0.6
10/10/2016 00:00:00	22.3	14.5	5.2	1.4
11/10/2016 00:00:00	22.4	13.1	3.5	1.0
12/10/2016 00:00:00	22.3	16.8	7.7	2.0
13/10/2016 00:00:00	21.6	16.8	7.6	2.0
14/10/2016 00:00:00	25.3	16.7	5.6	1.7
15/10/2016 00:00:00	14.9	11.3	5.0	1.6
16/10/2016 00:00:00	12.8	10.8	5.7	1.1
17/10/2016 00:00:00	18.8	14.7	6.9	1.4
18/10/2016 00:00:00	14.7	12.8	7.2	1.5
19/10/2016 00:00:00	80.2	67.5	14.79	7.3
20/10/2016 00:00:00	18.03	14.05	7.07	1.54
21/10/2016 00:00:00	15.49	12.32	6.22	1.39
22/10/2016 00:00:00	14.37	10.49	4.86	1.19
23/10/2016 00:00:00	12.21	9.24	4.52	1.76
24/10/2016 00:00:00	40.18	31.91	10.44	3.73
25/10/2016 00:00:00	39.65	27.83	9.56	3.11