

Holloway Park, London

Construction Monitoring Report

Client: London Square
Ref: CM76-22405-R0
Date: 20 March 2024
Note by: Anthony Coraci, MSc DipIOA MIOA, Senior Acoustics Consultant

1. INTRODUCTION

1.1 This Technical Note sets out results of the construction monitoring being carried out at the above site between Monday 11th & Saturday 16th March 2024. The monitoring is being carried out in accordance with the methodology set out in the Cass Allen response (reference LR03-22405-R0 dated 27 October 2023) to a S60 warning letter issued to Downwell Demolition Ltd.

2. WEEKLYC ACTIVITIES

2.1 The following activities have been carried out onsite this week, in addition to the usual use of the Haul Road with site vehicles:

OHOB

- Creating a new haul road

Horizon

- Demobilising on site from the recently completed crush works

Pure Logistic

- General site works
- Changing over fencing from walkways

Kesel

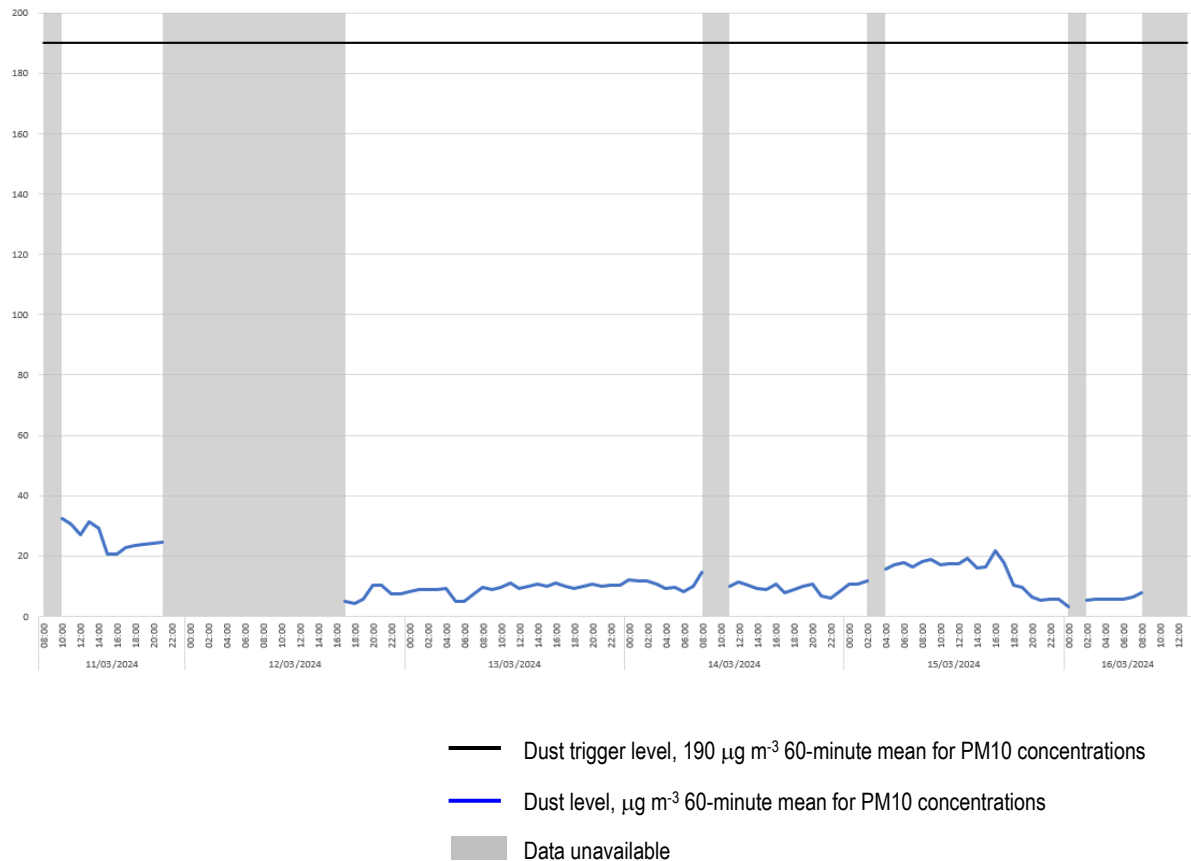
- Refurbishment of new welfare containers

3. MONITORING DATA

3.1 This section sets out a summary of the monitoring data that has been recorded onsite and provides a discussion of any exceedances and best practicable means incorporated by the site team if exceedances were believed to be construction related.

Dust Monitoring Results

Location 1



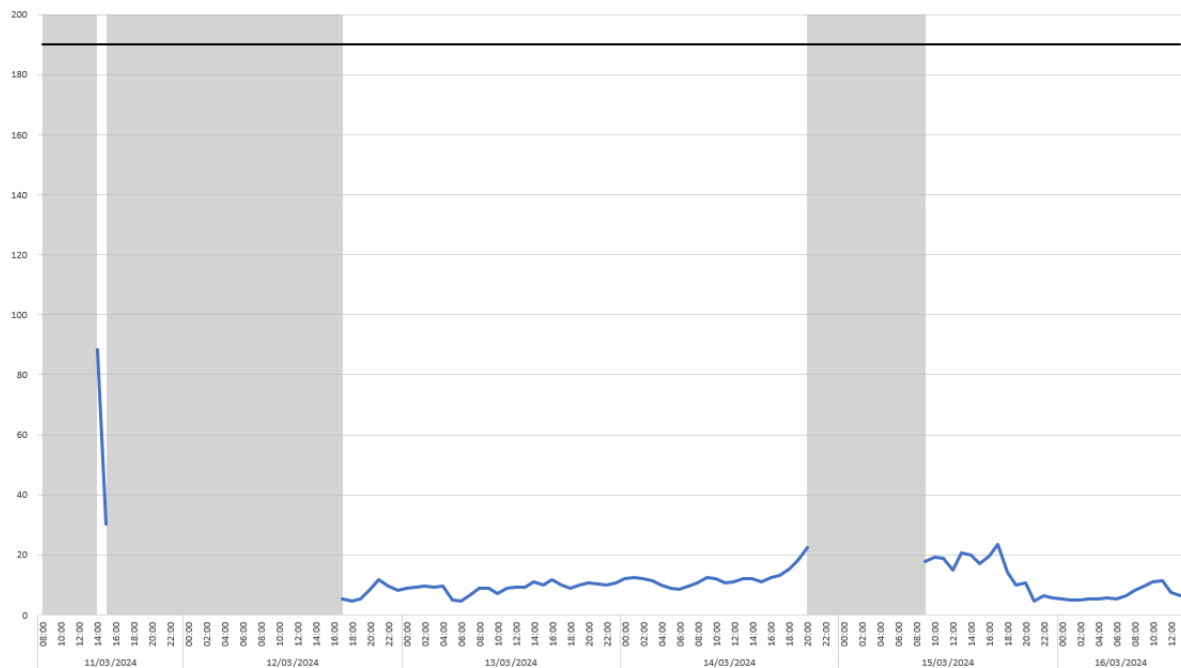
3.2 There was 72% data coverage at Location 1 for the monitoring period covered by this report. The monitor was offline between:

- 08:00 & 09:00 on Monday 11th March, due to drained battery;
- 08:00 & 16:00 on Tuesday 12th March, due to drained battery;
- 08:00 & 10:00 on Thursday 14th March, due to drained battery;

- 09:00 & 13:00 on Saturday 16th March, due to drained battery;

3.3 Cass Allen and London Square are intending to connect the monitors to site power as this becomes available at the monitoring locations. This will remove the reliance on battery power – it follows that there would consequently be far fewer interruptions in the data collection going forward. Cass Allen will provide further updates on this in due course. No exceedances of the project dust criteria of 190 micrograms per cubic meter were recorded during the monitoring period covered by this report.

Location 2



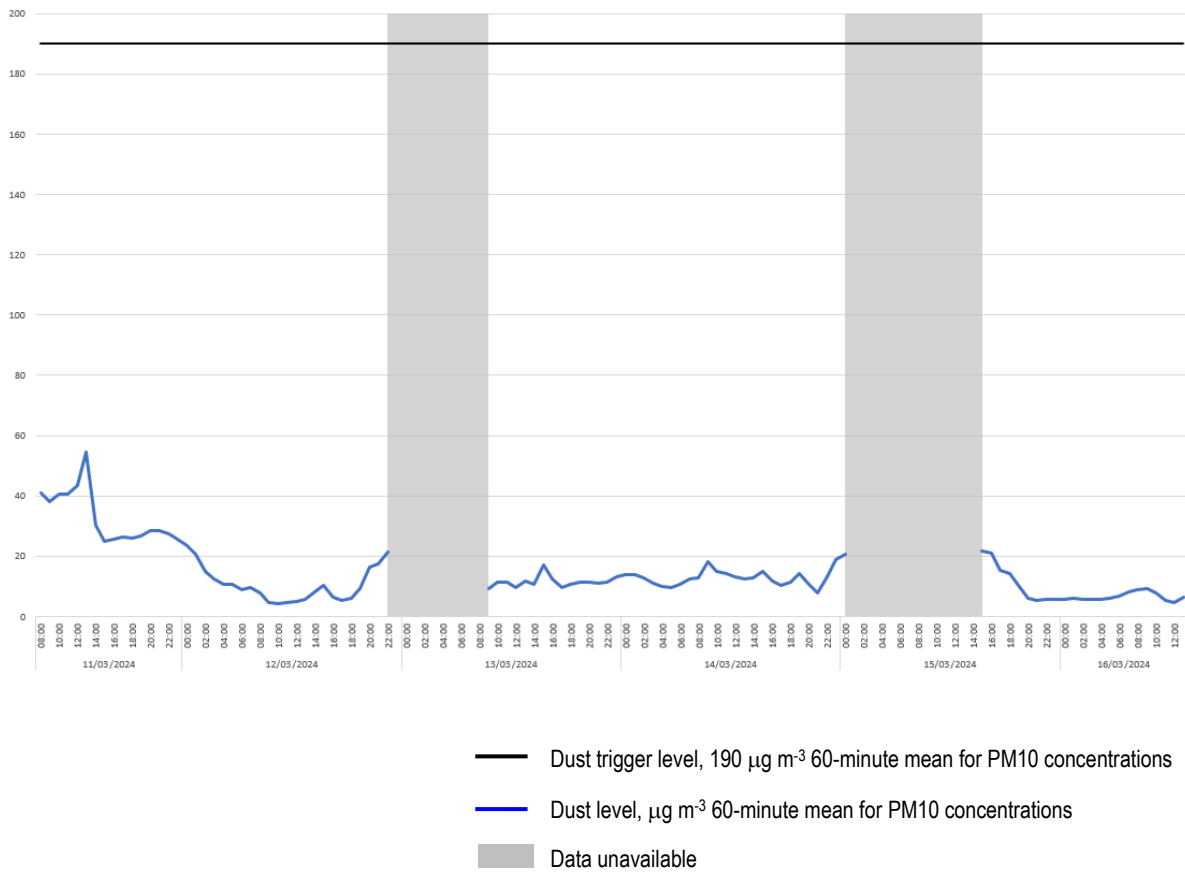
- Dust trigger level, 190 $\mu\text{g m}^{-3}$ 60-minute mean for PM10 concentrations
- Dust level, $\mu\text{g m}^{-3}$ 60-minute mean for PM10 concentrations
- Data unavailable

3.4 There was 69% data coverage at Location 2 for the monitoring period covered by this report. The monitor was offline between:

- 08:00 & 13:00 on Monday 11th March, due to drained battery;
- 16:00 on Monday 11th March & 17:00 on Tuesday 12th March, due to drained battery;
- 08:00 & 09:00 on Friday 15th March, due to drained battery.

3.5 No exceedances of the project dust criteria of 190 micrograms per cubic meter were recorded during the monitoring period covered by this report.

Location 3



3.6 There was 85% data coverage at Location 3 for the monitoring period covered by this report. The monitor was offline between:

- 08:00 & 09:00 on Wednesday 13th March, due to drained battery;
- 08:00 & 15:00 on Friday 15th March, due to drained battery.

3.7 No exceedances of the project dust criteria of 190 micrograms per cubic meter were recorded during the monitoring period covered by this report.

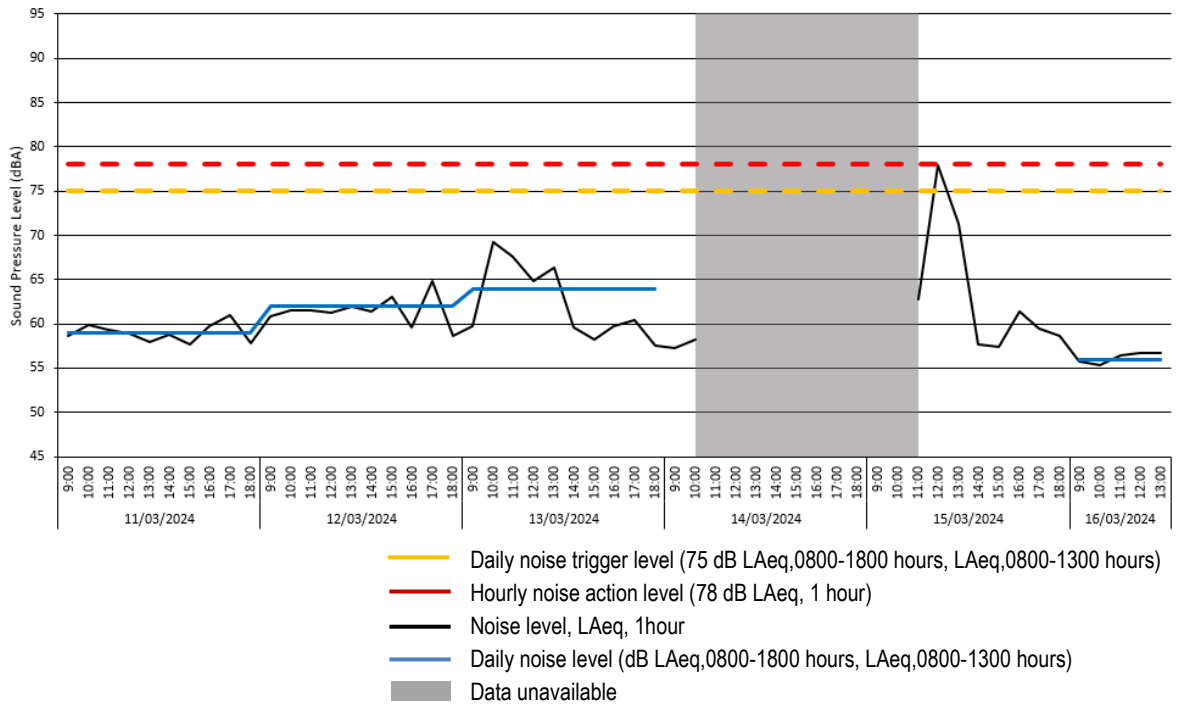
Noise Monitoring Results

Location 1 – Raw Data

Broadband Results

Date [YYYY-MM-DD]	Time [hh:mm:ss]	LAeq(60min) [dB]	LAeq(7hr) [dB]	LAeq(10hr) [dB]	LAeq(5hr) [dB]
2024-03-11	09:00:00	58.7	-.-	-.-	-.-
2024-03-11	10:00:00	59.9	-.-	-.-	-.-
2024-03-11	11:00:00	59.3	-.-	-.-	-.-
2024-03-11	12:00:00	58.9	-.-	-.-	-.-
2024-03-11	13:00:00	58.0	-.-	-.-	-.-
2024-03-11	14:00:00	58.8	-.-	-.-	-.-
2024-03-11	15:00:00	57.7	-.-	-.-	-.-
2024-03-11	16:00:00	59.7	-.-	-.-	-.-
2024-03-11	17:00:00	61.0	-.-	-.-	-.-
2024-03-11	18:00:00	57.8	-.-	59.1	-.-
2024-03-12	09:00:00	60.9	-.-	-.-	-.-
2024-03-12	10:00:00	61.5	-.-	-.-	-.-
2024-03-12	11:00:00	61.6	-.-	-.-	-.-
2024-03-12	12:00:00	61.3	-.-	-.-	-.-
2024-03-12	13:00:00	62.0	-.-	-.-	-.-
2024-03-12	14:00:00	61.4	-.-	-.-	-.-
2024-03-12	15:00:00	63.1	-.-	-.-	-.-
2024-03-12	16:00:00	59.6	-.-	-.-	-.-
2024-03-12	17:00:00	64.9	-.-	-.-	-.-
2024-03-12	18:00:00	58.6	-.-	61.8	-.-
2024-03-13	09:00:00	59.7	-.-	-.-	-.-
2024-03-13	10:00:00	69.3	-.-	-.-	-.-
2024-03-13	11:00:00	67.6	-.-	-.-	-.-
2024-03-13	12:00:00	64.9	-.-	-.-	-.-
2024-03-13	13:00:00	66.4	-.-	-.-	-.-
2024-03-13	14:00:00	59.6	-.-	-.-	-.-
2024-03-13	15:00:00	58.2	-.-	-.-	-.-
2024-03-13	16:00:00	59.8	-.-	-.-	-.-
2024-03-13	17:00:00	60.4	-.-	-.-	-.-
2024-03-13	18:00:00	57.5	-.-	64.3	-.-
2024-03-14	09:00:00	57.3	-.-	-.-	-.-
2024-03-14	10:00:00	58.2	-.-	-.-	-.-
2024-03-15	11:00:00	62.8	-.-	-.-	-.-
2024-03-15	12:00:00	77.9	-.-	-.-	-.-
2024-03-15	13:00:00	71.3	-.-	-.-	-.-
2024-03-15	14:00:00	57.7	-.-	-.-	-.-
2024-03-15	15:00:00	57.4	-.-	-.-	-.-
2024-03-15	16:00:00	61.4	-.-	-.-	-.-
2024-03-15	17:00:00	59.5	-.-	-.-	-.-
2024-03-15	18:00:00	58.6	-.-	-.-	-.-
2024-03-16	09:00:00	55.7	-.-	-.-	-.-
2024-03-16	10:00:00	55.3	-.-	-.-	-.-
2024-03-16	11:00:00	56.4	-.-	-.-	-.-
2024-03-16	12:00:00	56.7	-.-	-.-	-.-
2024-03-16	13:00:00	56.7	-.-	-.-	56.2

Location 1 – Time History Data



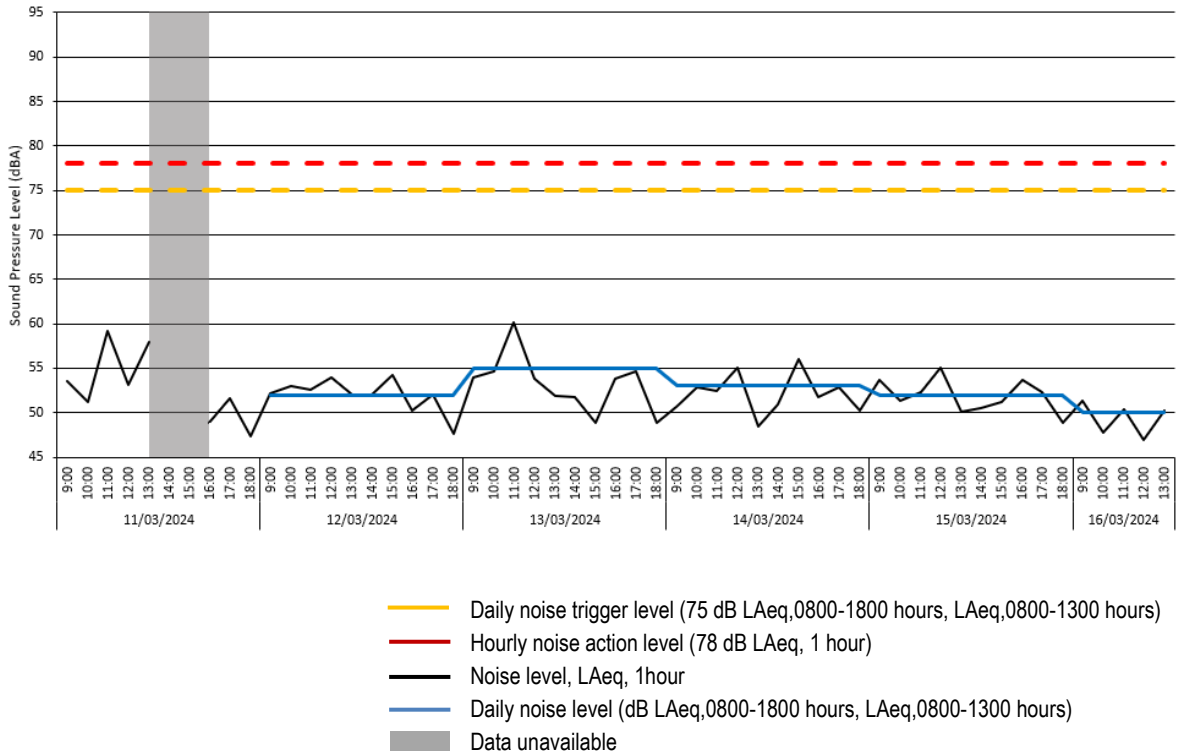
3.8 There was 82% data coverage at Location 1 for the monitoring period covered by this report. The monitor was offline between 10:00 on Thursday 14th March and 11:00 on Friday 15th March due to a drained battery. No exceedances of the project hourly noise criteria of 78 dB LAeq nor the daily project noise limit of 75 dB LAeq (0800-1800 hours) were recorded during the monitoring period covered by this report.

Location 2 – Raw Data

Broadband Results

Date [YYYY-MM-DD]	Time [hh:mm:ss]	LAeq(60min) [dB]	LAeq(10hr) [dB]	LAeq(5hr) [dB]
2024-03-11	09:00:00	53.6	--	--
2024-03-11	10:00:00	51.2	--	--
2024-03-11	11:00:00	59.2	--	--
2024-03-11	12:00:00	53.2	--	--
2024-03-11	13:00:00	57.9	--	--
2024-03-11	16:00:00	48.8	--	--
2024-03-11	17:00:00	51.6	--	--
2024-03-11	18:00:00	47.4	--	--
2024-03-12	09:00:00	52.2	--	--
2024-03-12	10:00:00	53.0	--	--
2024-03-12	11:00:00	52.6	--	--
2024-03-12	12:00:00	53.9	--	--
2024-03-12	13:00:00	52.1	--	--
2024-03-12	14:00:00	52.1	--	--
2024-03-12	15:00:00	54.2	--	--
2024-03-12	16:00:00	50.3	--	--
2024-03-12	17:00:00	52.0	--	--
2024-03-12	18:00:00	47.6	52.3	--
2024-03-13	09:00:00	53.9	--	--
2024-03-13	10:00:00	54.7	--	--
2024-03-13	11:00:00	60.2	--	--
2024-03-13	12:00:00	53.8	--	--
2024-03-13	13:00:00	51.9	--	--
2024-03-13	14:00:00	51.7	--	--
2024-03-13	15:00:00	48.9	--	--
2024-03-13	16:00:00	53.8	--	--
2024-03-13	17:00:00	54.6	--	--
2024-03-13	18:00:00	48.8	54.5	--
2024-03-14	09:00:00	50.6	--	--
2024-03-14	10:00:00	52.8	--	--
2024-03-14	11:00:00	52.4	--	--
2024-03-14	12:00:00	55.0	--	--
2024-03-14	13:00:00	48.4	--	--
2024-03-14	14:00:00	50.9	--	--
2024-03-14	15:00:00	56.0	--	--
2024-03-14	16:00:00	51.8	--	--
2024-03-14	17:00:00	52.8	--	--
2024-03-14	18:00:00	50.2	52.6	--
2024-03-15	09:00:00	53.7	--	--
2024-03-15	10:00:00	51.3	--	--
2024-03-15	11:00:00	52.3	--	--
2024-03-15	12:00:00	55.1	--	--
2024-03-15	13:00:00	50.1	--	--
2024-03-15	14:00:00	50.5	--	--
2024-03-15	15:00:00	51.2	--	--
2024-03-15	16:00:00	53.7	--	--
2024-03-15	17:00:00	52.3	--	--
2024-03-15	18:00:00	48.8	52.3	--
2024-03-16	09:00:00	51.4	--	--
2024-03-16	10:00:00	47.7	--	--
2024-03-16	11:00:00	50.4	--	--
2024-03-16	12:00:00	47.0	--	--
2024-03-16	13:00:00	50.2	--	49.7

Location 2 – Time History Data



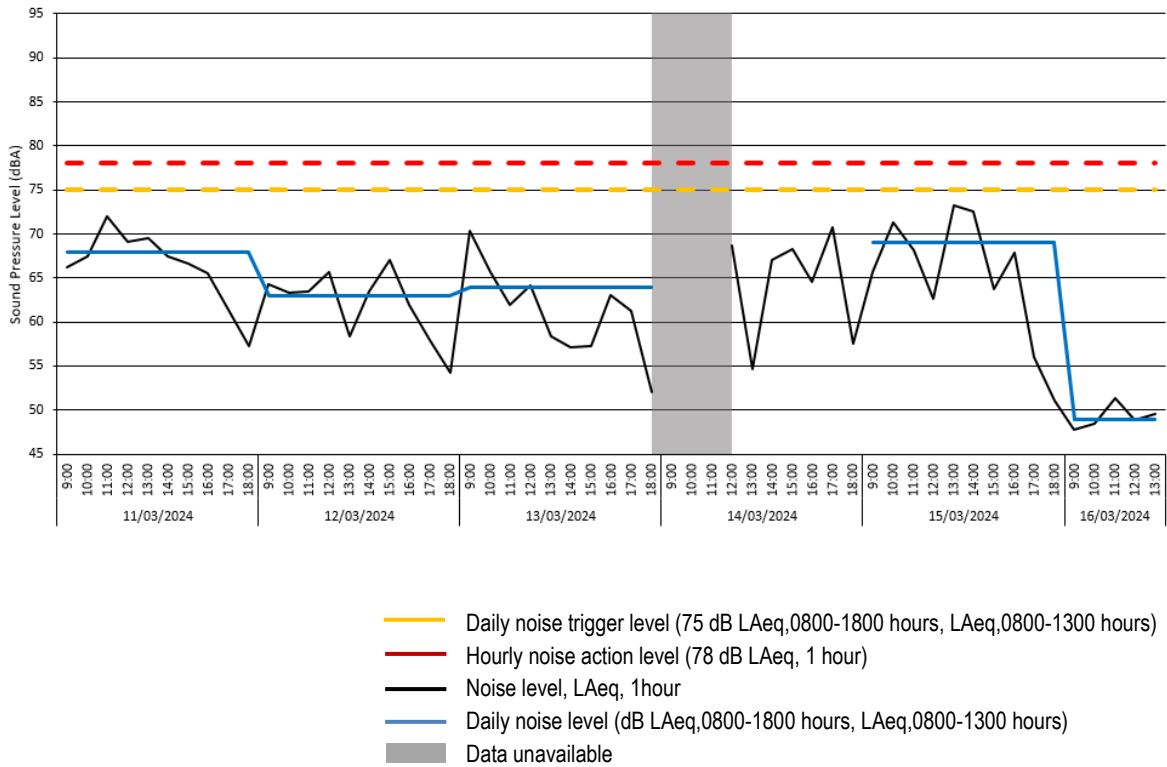
3.9 There was 95% data coverage at Location 2 for the monitoring period covered by this report. The monitor was offline between 13:00 & 16:00 on Monday 11th March, due to a drained battery. No exceedances of the project hourly noise criteria of 78 dB LAeq nor the daily project noise limit of 75 dB LAeq (0800-1800 hours) were recorded during the monitoring period covered by this report.

Location 3 – Raw Data

Broadband Results

Date [YYYY-MM-DD]	Time [hh:mm:ss]	LAeq(60min) [dB]	LAeq(10hr) [dB]	LAeq(5hr) [dB]
2024-03-11	09:00:00	66.2	--	--
2024-03-11	10:00:00	67.5	--	--
2024-03-11	11:00:00	72.0	--	--
2024-03-11	12:00:00	69.1	--	--
2024-03-11	13:00:00	69.5	--	--
2024-03-11	14:00:00	67.4	--	--
2024-03-11	15:00:00	66.6	--	--
2024-03-11	16:00:00	65.5	--	--
2024-03-11	17:00:00	61.4	--	--
2024-03-11	18:00:00	57.2	67.6	--
2024-03-12	09:00:00	64.3	--	--
2024-03-12	10:00:00	63.3	--	--
2024-03-12	11:00:00	63.4	--	--
2024-03-12	12:00:00	65.6	--	--
2024-03-12	13:00:00	58.4	--	--
2024-03-12	14:00:00	63.5	--	--
2024-03-12	15:00:00	67.0	--	--
2024-03-12	16:00:00	61.9	--	--
2024-03-12	17:00:00	57.9	--	--
2024-03-12	18:00:00	54.3	63.2	--
2024-03-13	09:00:00	70.4	--	--
2024-03-13	10:00:00	65.7	--	--
2024-03-13	11:00:00	62.0	--	--
2024-03-13	12:00:00	64.2	--	--
2024-03-13	13:00:00	58.3	--	--
2024-03-13	14:00:00	57.1	--	--
2024-03-13	15:00:00	57.3	--	--
2024-03-13	16:00:00	63.1	--	--
2024-03-13	17:00:00	61.3	--	--
2024-03-13	18:00:00	52.1	63.9	--
2024-03-14	12:00:00	68.7	--	--
2024-03-14	13:00:00	54.6	--	--
2024-03-14	14:00:00	67.1	--	--
2024-03-14	15:00:00	68.3	--	--
2024-03-14	16:00:00	64.5	--	--
2024-03-14	17:00:00	70.8	--	--
2024-03-14	18:00:00	57.5	--	--
2024-03-15	09:00:00	65.7	--	--
2024-03-15	10:00:00	71.3	--	--
2024-03-15	11:00:00	68.1	--	--
2024-03-15	12:00:00	62.6	--	--
2024-03-15	13:00:00	73.3	--	--
2024-03-15	14:00:00	72.5	--	--
2024-03-15	15:00:00	63.8	--	--
2024-03-15	16:00:00	67.9	--	--
2024-03-15	17:00:00	56.0	--	--
2024-03-15	18:00:00	51.1	68.7	--
2024-03-16	09:00:00	47.8	--	--
2024-03-16	10:00:00	48.4	--	--
2024-03-16	11:00:00	51.3	--	--
2024-03-16	12:00:00	48.9	--	--
2024-03-16	13:00:00	49.6	--	49.4

Location 3 – Time-history graph



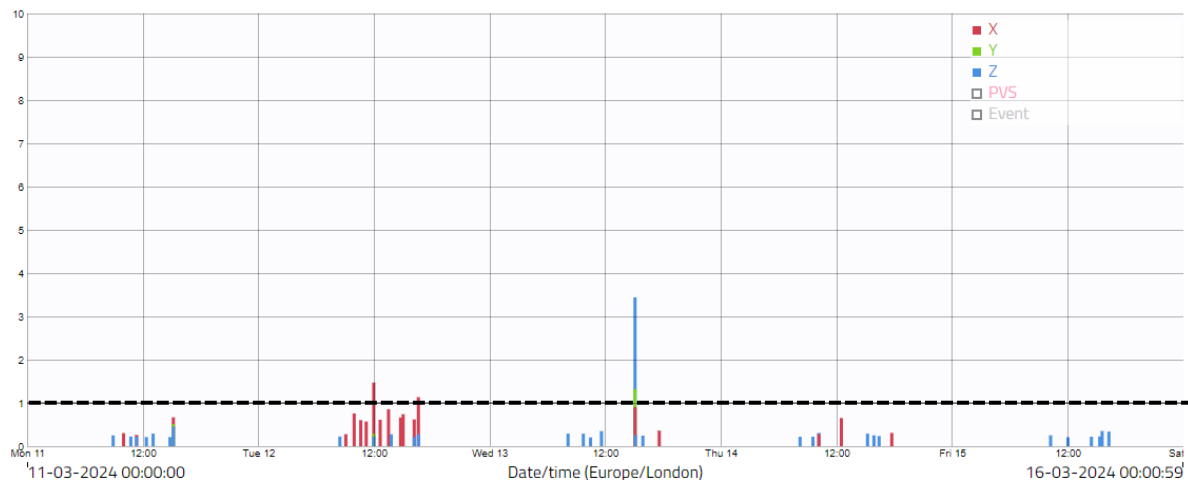
3.10 There was 93% data coverage at Location 3 for the monitoring period covered by this report. The monitor was offline between 09:00 & 12:00 on Thursday 14th March, due to a drained battery. No exceedances of the project hourly noise criteria of 78 dB LAeq nor the daily project noise limit of 75 dB LAeq (0800-1800 hours) were recorded during the monitoring period covered by this report.

Vibration Monitoring Results

Location 1 – Raw data

Measuring point:	Period:	Order	Value	Date	Time
Holloway - L1	11/03/2024 to 16/03/2024	1	3.52	13/03/2024	15:06
		2	2.06	13/03/2024	15:07
Criteria mm/s PVS	Exceedances	3	1.50	12/03/2024	11:59
1.0	5	4	1.15	12/03/2024	16:37
		5	1.04	16/03/2024	10:04
		6	0.88	12/03/2024	13:31
		7	0.82	16/03/2024	09:09
		8	0.77	12/03/2024	09:57
		9	0.75	12/03/2024	15:02
		10	0.74	11/03/2024	15:11

Location 1 – Time-history graph



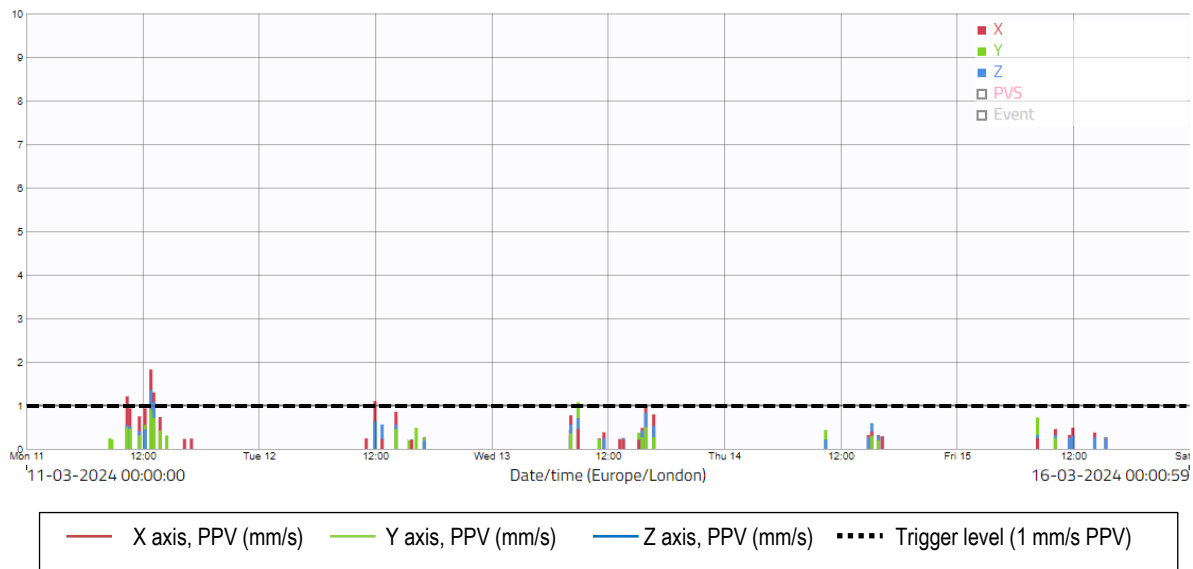
- 3.11 There was 100% data coverage at Location 1 for the monitoring period covered by this report. There were five exceedances of the project vibration trigger level of 1 mm/s PPV as shown in the raw data and graph above. The highest recorded vibration level was 3.52 mm/s, which occurred at 15:06 on Wednesday 13th March. It is worth noting from the raw data above that the exceedances are sporadic and are likely to have been caused by individual, short-lived events, rather than continuous activity at this location. This will continue to be monitored.
- 3.12 The majority of exceedances are believed to be due to non-construction related activities. In this location, it is likely that the residents opening and closing the main door to the residential building will cause occasional vibration spikes, given that the monitor is located on the same facade as the doors. In addition, the site team removed three trees from the Parkhurst Road boundary, within the

vicinity of the monitor, between Wednesday 13th & Friday 15th March (as previously agreed). It is possible that this may have caused the two exceedances recorded on Wednesday 13th March.

Location 2 – Raw data

Measuring point:	Period:	Order	Value	Date	Time
Holloway - L2	11/03/2024 to 16/03/2024	1	1.85	11/03/2024	12:52
		2	1.83	11/03/2024	12:32
Criteria mm/s PVS 1.0	Exceedances 11	3	1.61	11/03/2024	12:27
		4	1.41	11/03/2024	13:10
		5	1.32	11/03/2024	13:11
		6	1.29	13/03/2024	08:56
		7	1.26	11/03/2024	13:05
		8	1.23	11/03/2024	10:25
		9	1.13	12/03/2024	11:59
		10	1.10	13/03/2024	15:55

Location 2 – Time-history graph

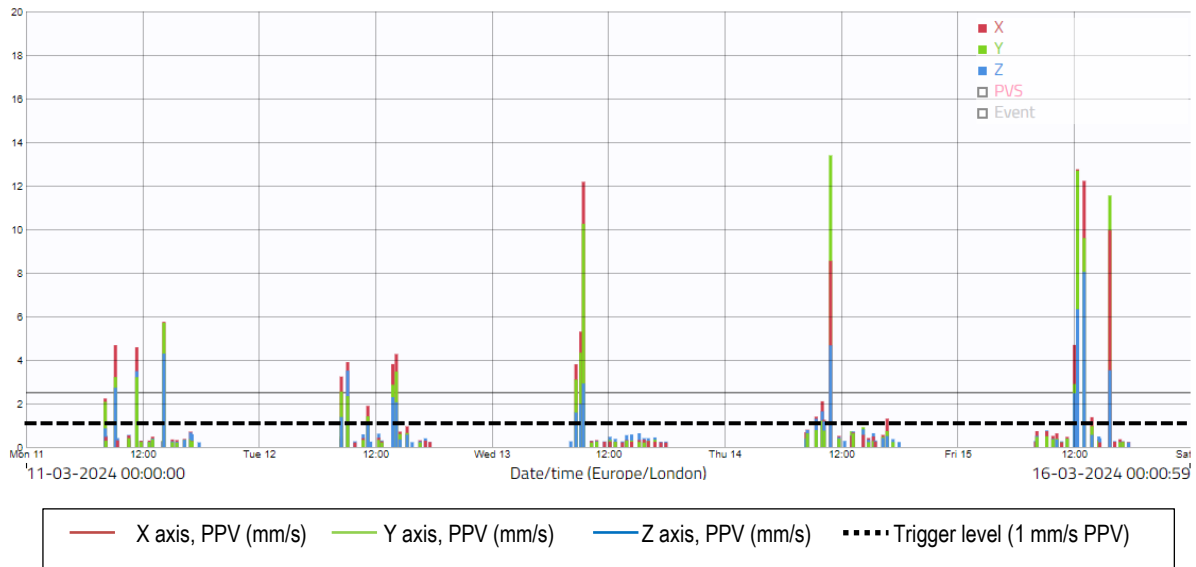


3.13 There was 100% data coverage at Location 2 for the monitoring period covered by this report. There were 11 exceedances of the project vibration trigger level of 1.0 mm/s PPV, which are shown in the raw data and graph above. The highest recorded vibration level was 1.85 mm/s, which occurred at 12:52 on Monday 11th March. It is understood that the majority of exceedances on Monday 11th March were likely to have been caused onsite vehicles moving material within the vicinity of the monitor. This was confirmed by the site team, via email to Cass Allen. In addition, it is our understanding that one of the residents behind the monitoring location has some form of workshop with power tools at the rear of their garden. Any operation of these tools could also generate vibration alerts.

Location 3 – Raw data

Measuring point:	Period:	Order	Value	Date	Time	Order	Value	Date	Time	Order	Value	Date	Time
Holloway - L3	11/03/2024 to 16/03/2024	1	16.18	15/03/2024	12:22	31	3.81	15/03/2024	12:09	61	1.64	11/03/2024	08:11
		2	15.98	13/03/2024	09:27	32	3.29	15/03/2024	15:44	62	1.64	13/03/2024	08:45
Criteria mm/s PVS	Exceedances	3	15.86	15/03/2024	13:03	33	3.24	15/03/2024	12:02	63	1.63	11/03/2024	11:23
1.0	104	4	13.49	14/03/2024	10:55	34	3.03	11/03/2024	11:22	64	1.61	12/03/2024	11:01
		5	11.75	15/03/2024	15:42	35	2.93	15/03/2024	13:10	65	1.59	14/03/2024	09:50
		6	10.00	15/03/2024	12:57	36	2.91	15/03/2024	12:19	66	1.59	14/03/2024	10:05
		7	8.18	11/03/2024	14:13	37	2.73	13/03/2024	09:12	67	1.58	14/03/2024	09:47
		8	8.16	15/03/2024	12:45	38	2.71	15/03/2024	12:18	68	1.57	14/03/2024	09:55
		9	7.96	15/03/2024	12:44	39	2.68	14/03/2024	10:04	69	1.56	15/03/2024	12:14
		10	6.86	15/03/2024	12:50	40	2.53	13/03/2024	08:37	70	1.55	14/03/2024	09:52
		11	6.79	13/03/2024	09:11	41	2.52	13/03/2024	09:26	71	1.50	14/03/2024	09:53
		12	6.32	15/03/2024	12:58	42	2.43	13/03/2024	08:44	72	1.50	14/03/2024	09:34
		13	6.20	15/03/2024	15:43	43	2.40	11/03/2024	09:22	73	1.48	14/03/2024	16:45
		14	6.14	13/03/2024	09:24	44	2.35	12/03/2024	11:14	74	1.47	11/03/2024	14:15
		15	5.96	13/03/2024	09:25	45	2.28	11/03/2024	08:10	75	1.46	14/03/2024	10:11
		16	5.66	11/03/2024	09:13	46	2.23	15/03/2024	13:09	76	1.46	14/03/2024	09:54
		17	5.58	15/03/2024	13:01	47	2.17	12/03/2024	11:12	77	1.45	14/03/2024	09:25
		18	5.49	15/03/2024	13:05	48	2.11	15/03/2024	12:08	78	1.44	14/03/2024	09:51
		19	5.47	15/03/2024	12:03	49	2.07	15/03/2024	13:00	79	1.40	14/03/2024	10:15
		20	5.33	11/03/2024	09:23	50	2.06	12/03/2024	11:02	80	1.37	15/03/2024	12:15
		21	5.19	14/03/2024	10:56	51	2.00	15/03/2024	11:59	81	1.36	14/03/2024	09:44
		22	5.12	12/03/2024	09:09	52	1.91	12/03/2024	11:05	82	1.36	15/03/2024	12:59
		23	4.88	11/03/2024	11:25	53	1.76	14/03/2024	09:26	83	1.34	14/03/2024	09:46
		24	4.87	15/03/2024	12:17	54	1.76	14/03/2024	10:03	84	1.34	15/03/2024	13:11
		25	4.77	13/03/2024	08:41	55	1.75	14/03/2024	10:09	85	1.33	14/03/2024	09:56
		26	4.68	12/03/2024	13:48	56	1.73	15/03/2024	11:57	86	1.33	15/03/2024	12:16
		27	4.59	12/03/2024	14:10	57	1.71	12/03/2024	11:08	87	1.31	15/03/2024	11:56
		28	4.29	15/03/2024	12:21	58	1.66	12/03/2024	11:00	88	1.31	14/03/2024	10:47
		29	4.25	15/03/2024	13:02	59	1.66	15/03/2024	13:51	89	1.28	14/03/2024	09:48
		30	4.12	12/03/2024	08:30	60	1.65	13/03/2024	08:47	90	1.27	14/03/2024	10:54

Location 3 – Time-history graph



3.14 There was 100% data coverage at Location 2 for the monitoring period covered by this report. There were 104 exceedances of the project vibration trigger level of 1.0 mm/s PPV, which are shown in the raw data and graph above. The highest recorded vibration level was 16.2 mm/s, which occurred at 12:22 on Friday 15th March. It is understood that the majority of exceedances were likely to have been caused onsite vehicles moving material within the vicinity of the monitor. This was confirmed by the site team, via emails to Cass Allen, over the course of the week. It is possible that the higher vibration levels recorded over this period were also caused by vehicle movements (i.e. when a lorry drives over an uneven part of ground near the monitor, a high vibration level can

be recorded). Additionally, the site team have also confirmed that high vibration levels were recorded at the same time as a battery change at the monitor location.

3.15 In addition, it is our understanding that one of the residents behind the monitoring location has some form of workshop with power tools at the rear of their garden. Any operation of these tools could also generate vibration alerts.

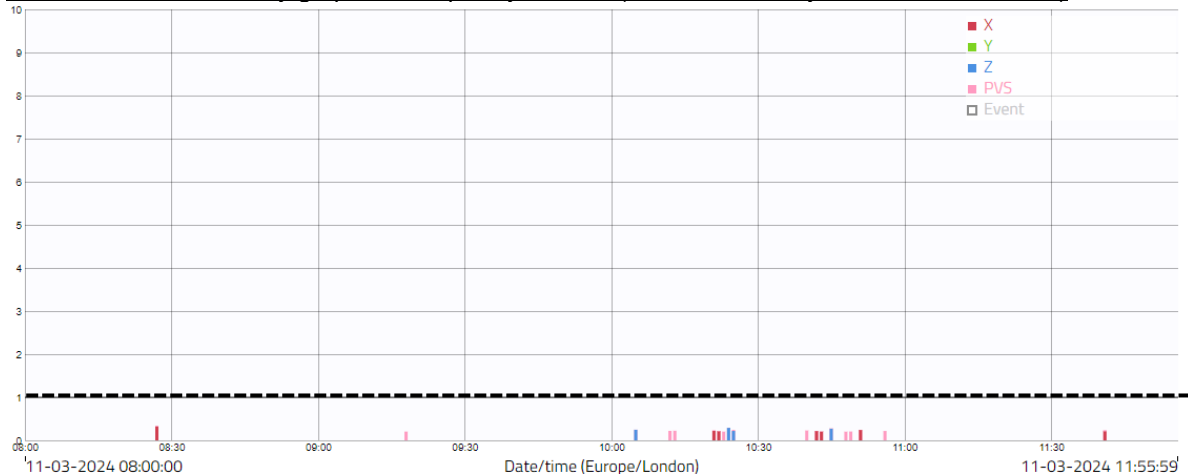
3.16 However, due to the proximity between the vibration sensor and the nearest sensitive receptor, it follows that the vibration levels at this position would have been lower than shown at the sensor location, but still likely above the 1.0 mm/s PPV action level at the NSR, at times.

3.17 Cass Allen will continue to review noise and vibration emissions and advise on any further practicable measures to minimise vibration.

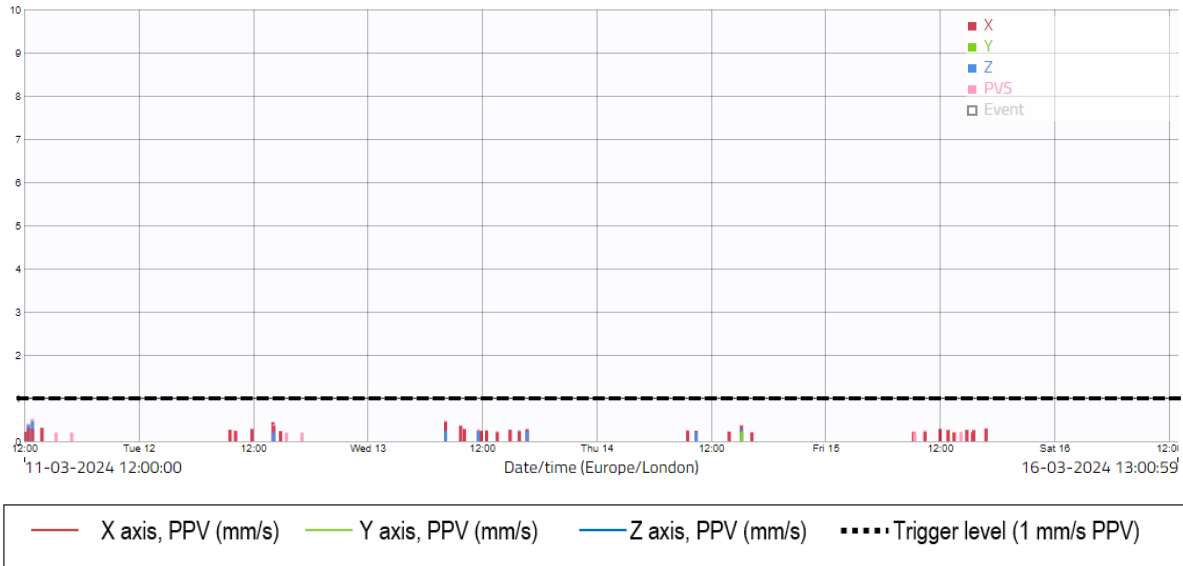
Location 4 – Raw data

Measuring point:	Period:	Order	Value	Date	Time
Holloway - L4	11/03/2024 to 16/03/2024	1	0.52	11/03/2024	12:52
		2	0.47	13/03/2024	08:11
Criteria mm/s PVS	Exceedances	3	0.45	12/03/2024	14:05
1.0	0	4	0.45	11/03/2024	13:10
		5	0.43	11/03/2024	13:05
		6	0.41	11/03/2024	12:27
		7	0.39	12/03/2024	14:10
		8	0.39	12/03/2024	14:04
		9	0.39	13/03/2024	08:09
		10	0.38	11/03/2024	13:11

Location 4 – Time-history graph for temporary monitor (between Monday 11th 08:00 and 12:00)



Location 4 – Time-history graph for permanent monitor (between Mon 11th 08:00 and Sat 16th 13:00)



3.18 There was 100% data coverage at Location 4 for the monitoring period covered by this report. The monitor went offline on Thursday 15th February due to a technical fault. The manufacturer of the monitor requested it to be removed from site for a fault investigation; however, a temporary replacement was installed at the same location at 11:40 on Friday 23rd February. The permanent monitor was then reinstalled at 12:00 on Monday 11th March. Therefore, two graphs are shown above – showing data for both monitors. During this week, there were no exceedances of the project vibration trigger level of 1.0 mm/s PPV, as shown in the raw data and graph above.