

Holloway Park, London

Construction Monitoring Report

Client: London Square
Ref: CM74-22405-R0
Date: 6 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 26th February & Saturday 2nd 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. WEEKLY 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:

Downwell

- Continue with PC role – Handing over to OHOB

Horizon

- Crushing crush to Type 1 (Phase 1 & Phase 2)
- Relocating crush from Phase 1 to Phase 2

Pure Logistic

- General site works
- Changing over fencing from walkways

Kesel

- Refurbishment of new welfare containers

Trident

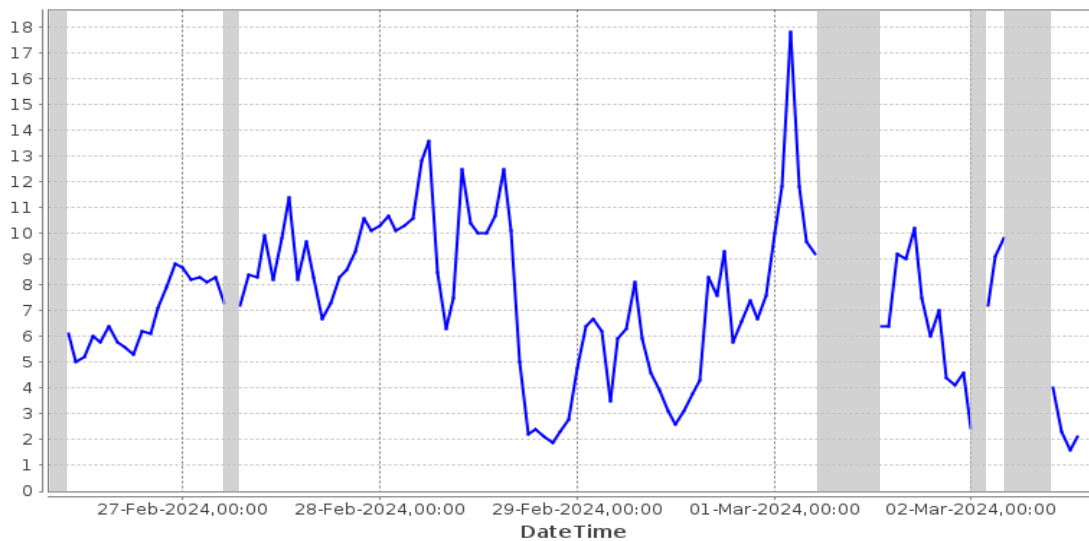
- Installing services

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



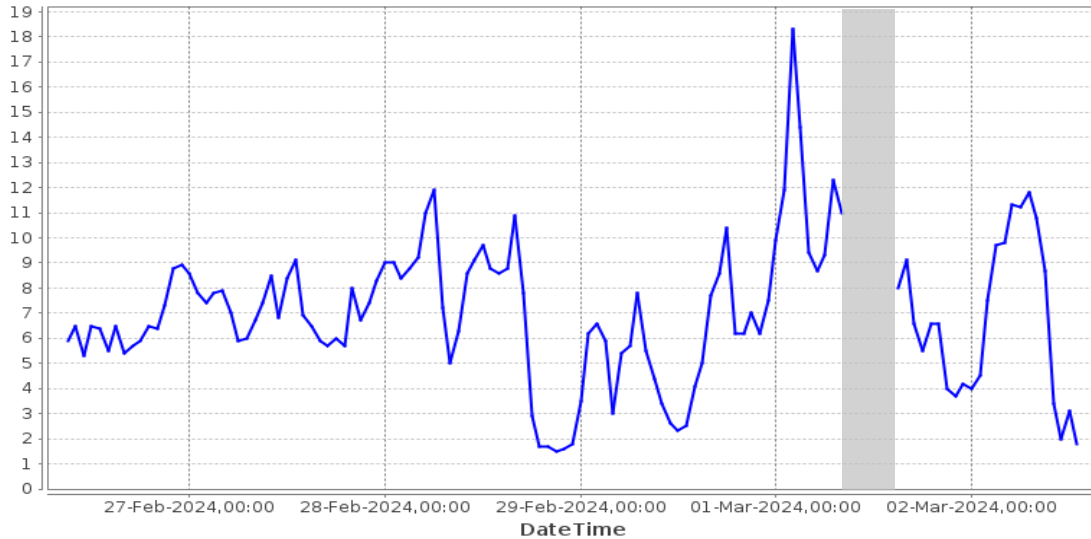
- Dust trigger level, 190 $\mu\text{g m}^{-3}$ 60-minute mean for PM10 concentrations
- Dust level, $\mu\text{g m}^{-3}$ 60-minute mean for PM10 concentrations
- Data unavailable

3.2 There was 84% data coverage at Location 1 for the monitoring period covered by this report. The monitor was offline between the following times, due to a drained battery:

- 08:00 & 10:00 on Monday 26th February;
- 08:00 & 13:00 on Friday 1st February;
- 08:00 & 10:00 on Saturday 2nd March.

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

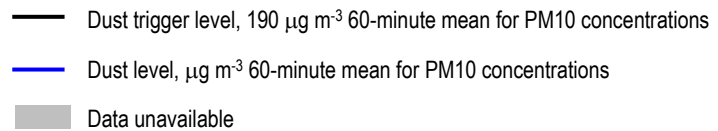
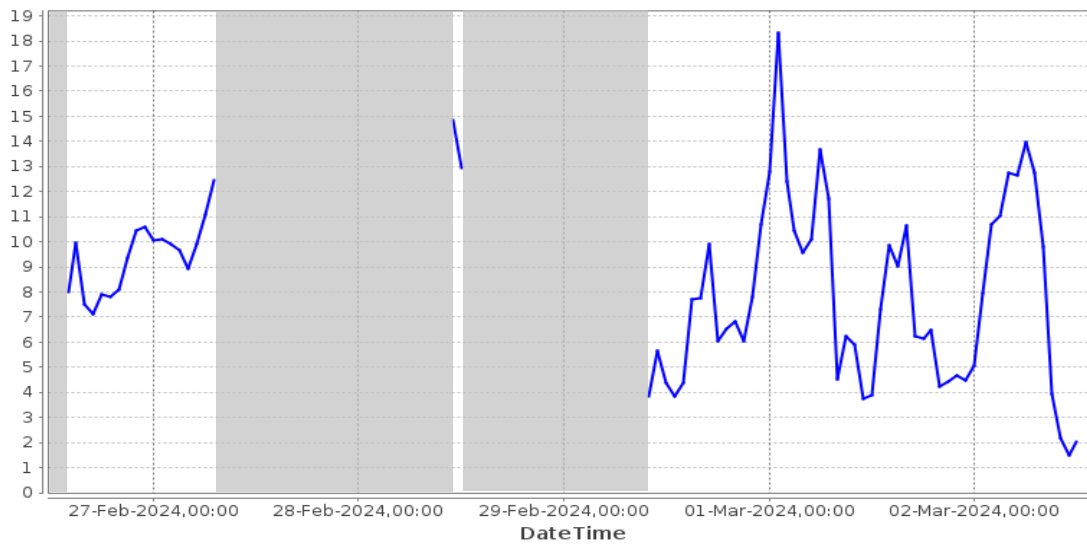
Location 2



- Dust trigger level, 190 µg m⁻³ 60-minute mean for PM10 concentrations
- Dust level, µg m⁻³ 60-minute mean for PM10 concentrations
- Data unavailable

3.4 There was 89% data coverage at Location 2 during construction hours for the monitoring period covered by this report. The monitor was offline between 09:00 and 14:00 on Friday 1st March, before the battery change was completed. 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



3.5 There was 53% data coverage at Location 3 for the monitoring period covered by this report. The monitor was offline between:

- 08:00 & 14:00 on Monday 26th February, due to drained battery.
- 08:00 on Tuesday 27th February & 11:00 on Wednesday 28th February, due to drained battery. It is understood that a battery change was carried out sooner; however, due to a suspected issue with the newly installed battery, the monitor did not come back online straight away.
- 13:00 on Wednesday 28th February & 09:00 on Thursday 29th February, due to drained battery.

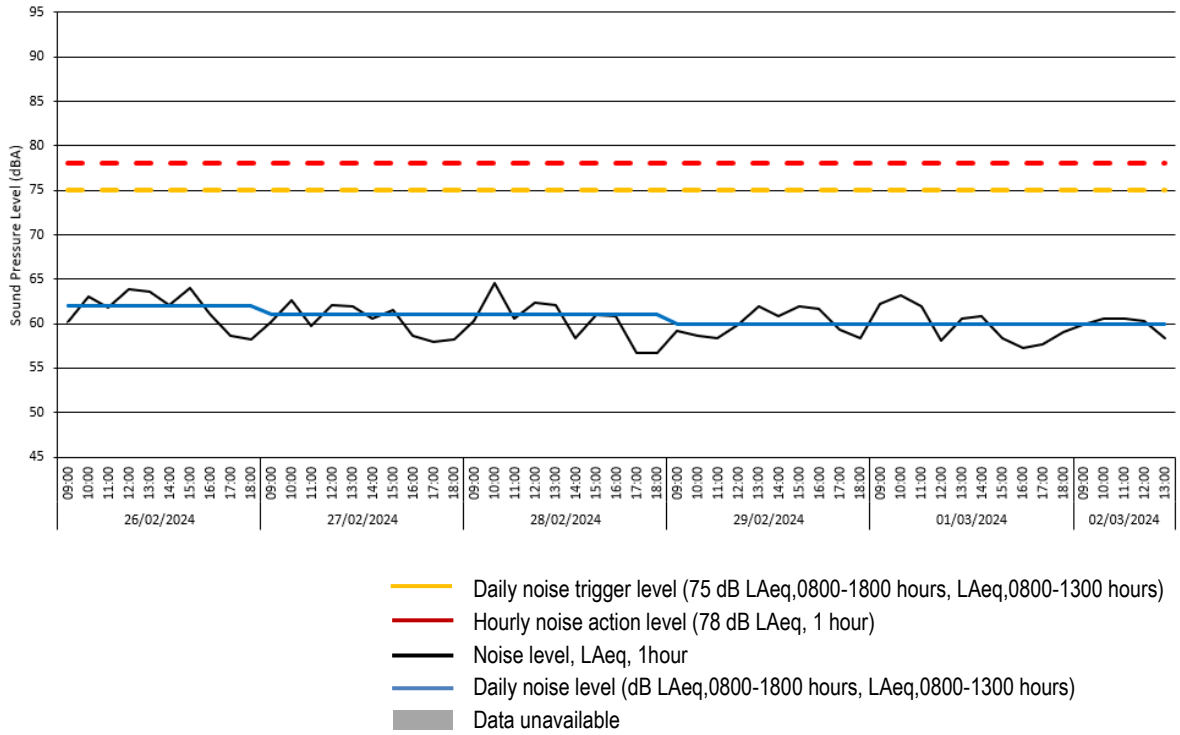
3.6 It is worth noting that the dust monitor at this location was offline for longer periods of time than usual, due to the suspected issue with the newly installed battery, as described above. Cass Allen and London Square are intending to connect the monitors to site power as this becomes available 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. It is understood that this should become possible in the coming weeks – 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.

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]
	2024-02-26	09:00:00	60.2	--	--	--
	2024-02-26	10:00:00	63.0	--	--	--
	2024-02-26	11:00:00	61.8	--	--	--
	2024-02-26	12:00:00	63.9	--	--	--
	2024-02-26	13:00:00	63.6	--	--	--
	2024-02-26	14:00:00	62.1	--	--	--
	2024-02-26	15:00:00	64.0	--	--	--
	2024-02-26	16:00:00	61.1	--	--	--
	2024-02-26	17:00:00	58.7	--	--	--
	2024-02-26	18:00:00	58.2	--	62.1	--
	2024-02-27	09:00:00	60.2	--	--	--
	2024-02-27	10:00:00	62.6	--	--	--
	2024-02-27	11:00:00	59.7	--	--	--
	2024-02-27	12:00:00	62.1	--	--	--
	2024-02-27	13:00:00	62.0	--	--	--
	2024-02-27	14:00:00	60.5	--	--	--
	2024-02-27	15:00:00	61.5	--	--	--
	2024-02-27	16:00:00	58.7	--	--	--
	2024-02-27	17:00:00	57.9	--	--	--
	2024-02-27	18:00:00	58.2	--	60.6	--
	2024-02-28	09:00:00	60.3	--	--	--
	2024-02-28	10:00:00	64.6	--	--	--
	2024-02-28	11:00:00	60.5	--	--	--
	2024-02-28	12:00:00	62.3	--	--	--
	2024-02-28	13:00:00	62.1	--	--	--
	2024-02-28	14:00:00	58.4	--	--	--
	2024-02-28	15:00:00	61.0	--	--	--
	2024-02-28	16:00:00	60.8	--	--	--
	2024-02-28	17:00:00	56.7	--	--	--
	2024-02-28	18:00:00	56.7	--	60.9	--
	2024-02-29	09:00:00	59.2	--	--	--
	2024-02-29	10:00:00	58.6	--	--	--
	2024-02-29	11:00:00	58.3	--	--	--
	2024-02-29	12:00:00	59.9	--	--	--
	2024-02-29	13:00:00	61.9	--	--	--
	2024-02-29	14:00:00	60.9	--	--	--
	2024-02-29	15:00:00	62.0	--	--	--
	2024-02-29	16:00:00	61.7	--	--	--
	2024-02-29	17:00:00	59.3	--	--	--
	2024-02-29	18:00:00	58.3	--	60.2	--
	2024-03-01	09:00:00	62.2	--	--	--
	2024-03-01	10:00:00	63.2	--	--	--
	2024-03-01	11:00:00	62.0	--	--	--
	2024-03-01	12:00:00	58.1	--	--	--
	2024-03-01	13:00:00	60.6	--	--	--
	2024-03-01	14:00:00	60.8	--	--	--
	2024-03-01	15:00:00	58.4	--	--	--
	2024-03-01	16:00:00	57.2	--	--	--
	2024-03-01	17:00:00	57.7	--	--	--
	2024-03-01	18:00:00	59.0	--	60.4	--
	2024-03-02	09:00:00	59.9	--	--	--
	2024-03-02	10:00:00	60.6	--	--	--
	2024-03-02	11:00:00	60.5	--	--	--
	2024-03-02	12:00:00	60.3	--	--	--
	2024-03-02	13:00:00	58.3	--	--	60.0

Location 1 – Time History Data



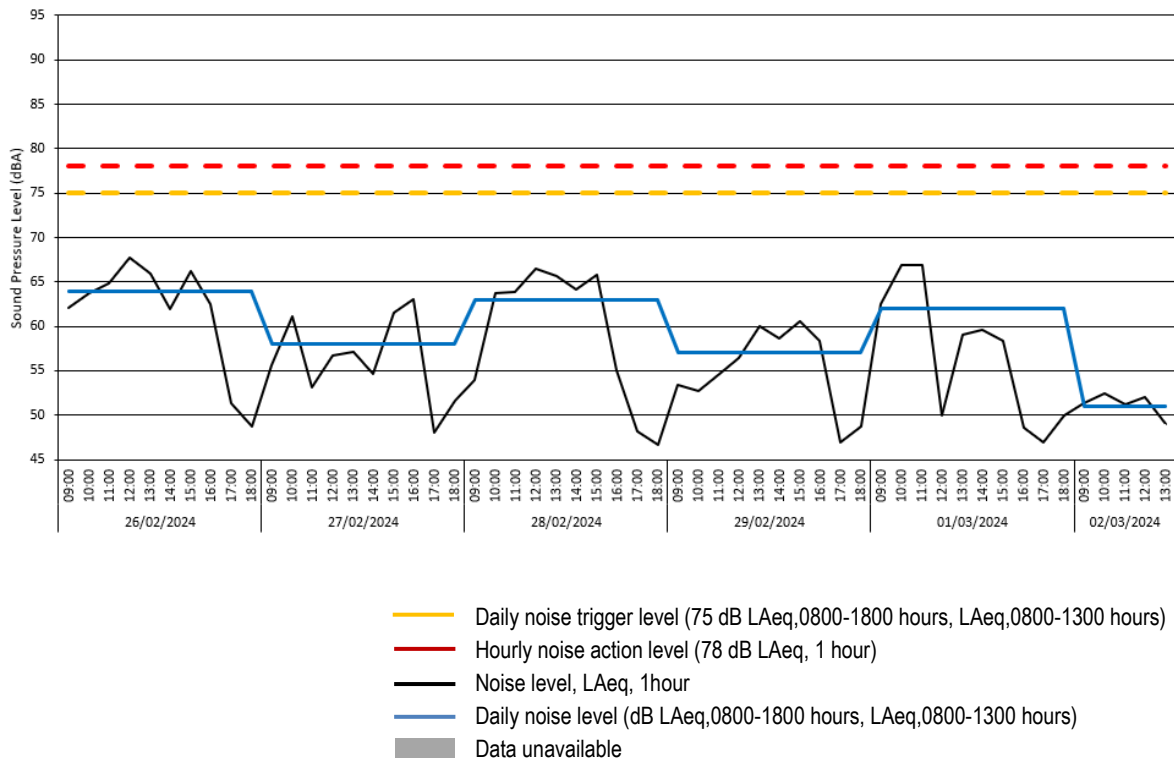
3.7 There was 100% data coverage at Location 1 for the monitoring period covered by this report. No exceedances of the project hourly noise criteria of 78 dB LAeq nor the daily project noise limit of 75 dB LAeq (0800-1800 hours) were recorded during the monitoring period covered by this report.

Location 2 – Raw Data

Broadband Results

Date [YYYY-MM-DD]	Time [hh:mm:ss]	LAeq(60min) [dB]	LAeq(10hr) [dB]	LAeq(5hr) [dB]
2024-02-26	09:00:00	62.1	-.-	-.-
2024-02-26	10:00:00	63.8	-.-	-.-
2024-02-26	11:00:00	64.9	-.-	-.-
2024-02-26	12:00:00	67.7	-.-	-.-
2024-02-26	13:00:00	65.9	-.-	-.-
2024-02-26	14:00:00	62.0	-.-	-.-
2024-02-26	15:00:00	66.2	-.-	-.-
2024-02-26	16:00:00	62.5	-.-	-.-
2024-02-26	17:00:00	51.4	-.-	-.-
2024-02-26	18:00:00	48.7	63.9	-.-
2024-02-27	09:00:00	55.6	-.-	-.-
2024-02-27	10:00:00	61.1	-.-	-.-
2024-02-27	11:00:00	53.2	-.-	-.-
2024-02-27	12:00:00	56.7	-.-	-.-
2024-02-27	13:00:00	57.1	-.-	-.-
2024-02-27	14:00:00	54.7	-.-	-.-
2024-02-27	15:00:00	61.6	-.-	-.-
2024-02-27	16:00:00	63.0	-.-	-.-
2024-02-27	17:00:00	48.0	-.-	-.-
2024-02-27	18:00:00	51.6	58.3	-.-
2024-02-28	09:00:00	53.9	-.-	-.-
2024-02-28	10:00:00	63.7	-.-	-.-
2024-02-28	11:00:00	63.9	-.-	-.-
2024-02-28	12:00:00	66.5	-.-	-.-
2024-02-28	13:00:00	65.7	-.-	-.-
2024-02-28	14:00:00	64.2	-.-	-.-
2024-02-28	15:00:00	65.8	-.-	-.-
2024-02-28	16:00:00	55.0	-.-	-.-
2024-02-28	17:00:00	48.2	-.-	-.-
2024-02-28	18:00:00	46.7	63.0	-.-
2024-02-29	09:00:00	53.4	-.-	-.-
2024-02-29	10:00:00	52.7	-.-	-.-
2024-02-29	11:00:00	54.5	-.-	-.-
2024-02-29	12:00:00	56.4	-.-	-.-
2024-02-29	13:00:00	60.0	-.-	-.-
2024-02-29	14:00:00	58.6	-.-	-.-
2024-02-29	15:00:00	60.5	-.-	-.-
2024-02-29	16:00:00	58.4	-.-	-.-
2024-02-29	17:00:00	47.0	-.-	-.-
2024-02-29	18:00:00	48.7	56.8	-.-
2024-03-01	09:00:00	62.5	-.-	-.-
2024-03-01	10:00:00	66.9	-.-	-.-
2024-03-01	11:00:00	66.9	-.-	-.-
2024-03-01	12:00:00	50.0	-.-	-.-
2024-03-01	13:00:00	59.1	-.-	-.-
2024-03-01	14:00:00	59.6	-.-	-.-
2024-03-01	15:00:00	58.4	-.-	-.-
2024-03-01	16:00:00	48.6	-.-	-.-
2024-03-01	17:00:00	46.9	-.-	-.-
2024-03-01	18:00:00	50.0	61.6	-.-
2024-03-02	09:00:00	51.4	-.-	-.-
2024-03-02	10:00:00	52.5	-.-	-.-
2024-03-02	11:00:00	51.2	-.-	-.-
2024-03-02	12:00:00	52.1	-.-	-.-
2024-03-02	13:00:00	49.0	-.-	51.4

Location 2 – Time History Data



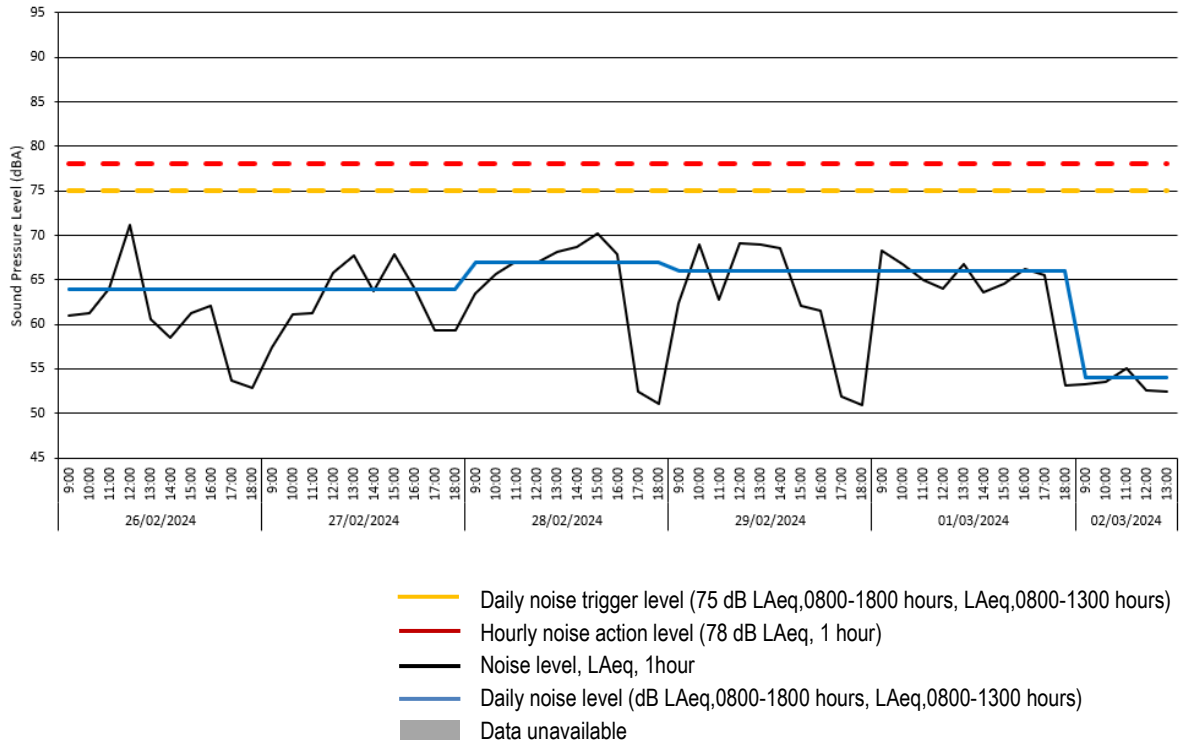
3.8 There was 100% data coverage at Location 2 for the monitoring period covered by this report. No exceedances of the project hourly noise criteria of 78 dB LAeq nor the daily project noise limit of 75 dB LAeq (0800-1800 hours) were recorded during the monitoring period covered by this report.

Location 3 – Raw Data

Broadband Results

Date [YYYY-MM-DD]	Time [hh:mm:ss]	LAeq(60min) [dB]	LAeq(7hr) [dB]	LAeq(10hr) [dB]	LAeq(5hr) [dB]
2024-02-26	09:00:00	60.2	-.-	-.-	-.-
2024-02-26	10:00:00	63.0	-.-	-.-	-.-
2024-02-26	11:00:00	61.8	-.-	-.-	-.-
2024-02-26	12:00:00	63.9	-.-	-.-	-.-
2024-02-26	13:00:00	63.6	-.-	-.-	-.-
2024-02-26	14:00:00	62.1	-.-	-.-	-.-
2024-02-26	15:00:00	64.0	-.-	-.-	-.-
2024-02-26	16:00:00	61.1	-.-	-.-	-.-
2024-02-26	17:00:00	58.7	-.-	-.-	-.-
2024-02-26	18:00:00	58.2	-.-	62.1	-.-
2024-02-27	09:00:00	60.2	-.-	-.-	-.-
2024-02-27	10:00:00	62.6	-.-	-.-	-.-
2024-02-27	11:00:00	59.7	-.-	-.-	-.-
2024-02-27	12:00:00	62.1	-.-	-.-	-.-
2024-02-27	13:00:00	62.0	-.-	-.-	-.-
2024-02-27	14:00:00	60.5	-.-	-.-	-.-
2024-02-27	15:00:00	61.5	-.-	-.-	-.-
2024-02-27	16:00:00	58.7	-.-	-.-	-.-
2024-02-27	17:00:00	57.9	-.-	-.-	-.-
2024-02-27	18:00:00	58.2	-.-	60.6	-.-
2024-02-28	09:00:00	60.3	-.-	-.-	-.-
2024-02-28	10:00:00	64.6	-.-	-.-	-.-
2024-02-28	11:00:00	60.5	-.-	-.-	-.-
2024-02-28	12:00:00	62.3	-.-	-.-	-.-
2024-02-28	13:00:00	62.1	-.-	-.-	-.-
2024-02-28	14:00:00	58.4	-.-	-.-	-.-
2024-02-28	15:00:00	61.0	-.-	-.-	-.-
2024-02-28	16:00:00	60.8	-.-	-.-	-.-
2024-02-28	17:00:00	56.7	-.-	-.-	-.-
2024-02-28	18:00:00	56.7	-.-	60.9	-.-
2024-02-29	09:00:00	59.2	-.-	-.-	-.-
2024-02-29	10:00:00	58.6	-.-	-.-	-.-
2024-02-29	11:00:00	58.3	-.-	-.-	-.-
2024-02-29	12:00:00	59.9	-.-	-.-	-.-
2024-02-29	13:00:00	61.9	-.-	-.-	-.-
2024-02-29	14:00:00	60.9	-.-	-.-	-.-
2024-02-29	15:00:00	62.0	-.-	-.-	-.-
2024-02-29	16:00:00	61.7	-.-	-.-	-.-
2024-02-29	17:00:00	59.3	-.-	-.-	-.-
2024-02-29	18:00:00	58.3	-.-	60.2	-.-
2024-03-01	09:00:00	62.2	-.-	-.-	-.-
2024-03-01	10:00:00	63.2	-.-	-.-	-.-
2024-03-01	11:00:00	62.0	-.-	-.-	-.-
2024-03-01	12:00:00	58.1	-.-	-.-	-.-
2024-03-01	13:00:00	60.6	-.-	-.-	-.-
2024-03-01	14:00:00	60.8	-.-	-.-	-.-
2024-03-01	15:00:00	58.4	-.-	-.-	-.-
2024-03-01	16:00:00	57.2	-.-	-.-	-.-
2024-03-01	17:00:00	57.7	-.-	-.-	-.-
2024-03-01	18:00:00	59.0	-.-	60.4	-.-
2024-03-02	09:00:00	59.9	-.-	-.-	-.-
2024-03-02	10:00:00	60.6	-.-	-.-	-.-
2024-03-02	11:00:00	60.5	-.-	-.-	-.-
2024-03-02	12:00:00	60.3	-.-	-.-	-.-
2024-03-02	13:00:00	58.3	-.-	-.-	60.0

Location 3 – Time-history graph



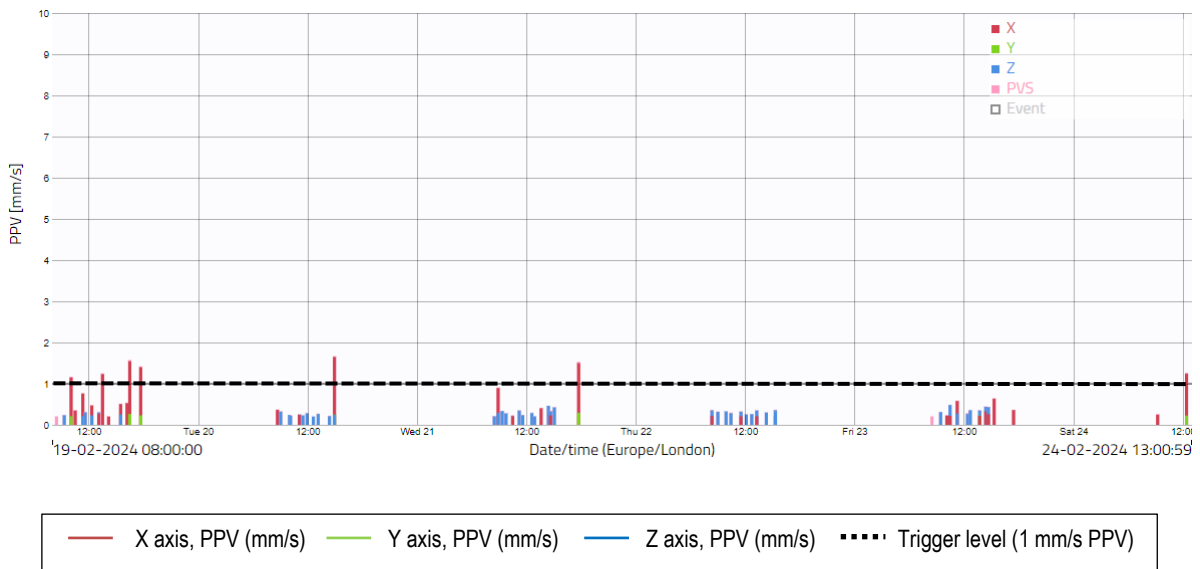
3.9 There was 100% data coverage at Location 3 for the monitoring period covered by this report. No exceedances of the project hourly noise criteria of 78 dB LAeq nor the daily project noise limit of 75 dB LAeq (0800-1800 hours) were recorded during the monitoring period covered by this report.

Vibration Monitoring Results

Location 1 – Raw data

Measuring point:	Period:	Order	Value	Date	Time
Holloway - L1	26/02/2024 to 02/03/2024	1	3.23	26/02/2024	10:11
		2	2.31	26/02/2024	15:27
Criteria mm/s PVS	Exceedances	3	2.02	02/03/2024	08:59
1.0	7	4	1.83	26/02/2024	11:07
		5	1.38	02/03/2024	11:45
		6	1.14	26/02/2024	14:45
		7	1.06	02/03/2024	08:08
		8	0.99	02/03/2024	08:44
		9	0.94	26/02/2024	09:34
		10	0.89	28/02/2024	17:44

Location 1 – Time-history graph



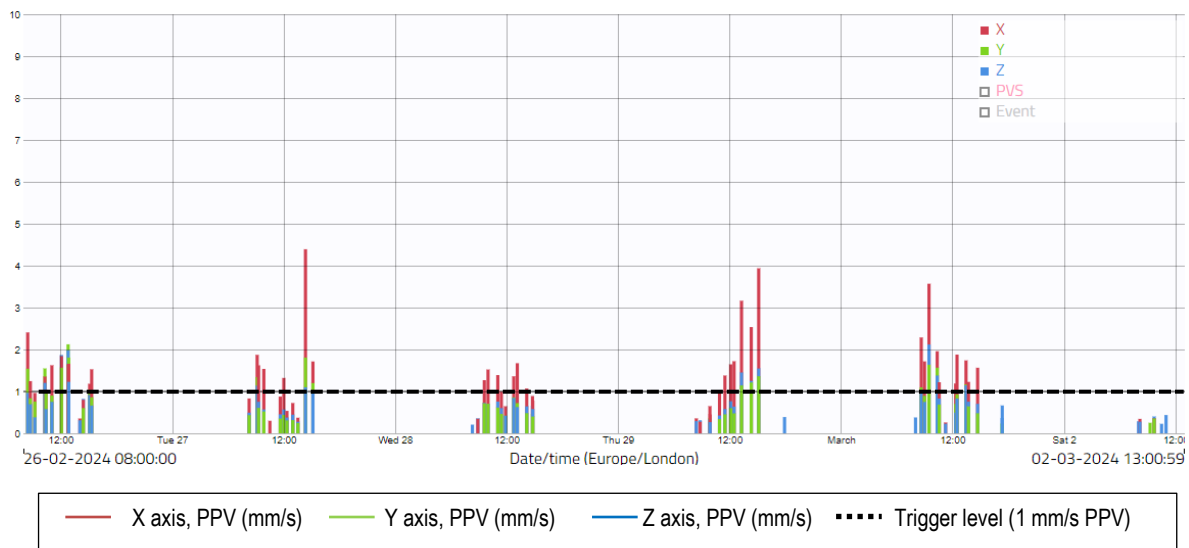
3.10 There was 100% data coverage at Location 1 for the monitoring period covered by this report. There were seven exceedances of the project vibration trigger level of 1 mm/s PPV as shown in the raw data and graph above. The highest recorded vibration level was 3.2 mm/s, which occurred at 10:11 on Monday 26th February. An email from the site team confirmed that this particular exceedance was caused by a site operative carrying out a battery change at the dust monitor at the same location.

3.11 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. The exceedances are believed to be due to non-construction related activities. In this location, it is likely that the residents opened 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.

Location 2 – Raw data

Measuring point:	Period:	Order	Value	Date	Time	Order	Value	Date	Time	Order	Value	Date	Time
Holloway - L2	26/02/2024 to 02/03/2024	1	4.60	27/02/2024	14:22	31	2.10	01/03/2024	09:39	61	1.70	29/02/2024	12:08
		2	4.05	29/02/2024	15:09	32	2.10	01/03/2024	12:30	62	1.69	26/02/2024	08:22
		3	3.75	01/03/2024	09:29	33	2.05	29/02/2024	14:30	63	1.69	28/02/2024	10:01
		4	3.22	29/02/2024	13:18	34	2.04	29/02/2024	13:19	64	1.68	01/03/2024	09:57
		5	3.09	29/02/2024	13:04	35	2.03	01/03/2024	10:06	65	1.66	29/02/2024	14:48
		6	2.94	29/02/2024	13:06	36	2.02	29/02/2024	15:05	66	1.66	01/03/2024	09:30
		7	2.92	29/02/2024	15:13	37	2.01	29/02/2024	14:23	67	1.64	29/02/2024	12:10
		8	2.77	29/02/2024	13:15	38	1.97	01/03/2024	08:40	68	1.64	26/02/2024	12:54
		9	2.65	26/02/2024	12:49	39	1.96	26/02/2024	08:27	69	1.62	27/02/2024	09:19
		10	2.64	01/03/2024	09:42	40	1.92	26/02/2024	10:19	70	1.61	27/02/2024	15:09
		11	2.64	01/03/2024	09:34	41	1.91	27/02/2024	09:10	71	1.60	01/03/2024	14:43
		12	2.57	27/02/2024	14:23	42	1.89	26/02/2024	08:26	72	1.59	29/02/2024	15:07
		13	2.57	29/02/2024	14:21	43	1.86	29/02/2024	14:33	73	1.59	01/03/2024	09:32
		14	2.54	26/02/2024	08:28	44	1.84	01/03/2024	09:36	74	1.59	29/02/2024	14:53
		15	2.52	29/02/2024	14:55	45	1.81	01/03/2024	13:28	75	1.58	27/02/2024	09:53
		16	2.46	26/02/2024	12:06	46	1.79	26/02/2024	11:04	76	1.58	28/02/2024	10:19
		17	2.43	29/02/2024	15:08	47	1.79	29/02/2024	14:54	77	1.57	29/02/2024	12:11
		18	2.38	26/02/2024	12:53	48	1.77	26/02/2024	12:50	78	1.55	26/02/2024	15:21
		19	2.30	01/03/2024	08:39	49	1.76	26/02/2024	12:41	79	1.52	29/02/2024	15:11
		20	2.27	29/02/2024	13:05	50	1.76	27/02/2024	15:10	80	1.52	01/03/2024	08:19
		21	2.26	29/02/2024	14:29	51	1.75	29/02/2024	12:30	81	1.52	01/03/2024	09:26
		22	2.25	26/02/2024	08:24	52	1.74	01/03/2024	09:00	82	1.50	01/03/2024	09:40
		23	2.24	29/02/2024	14:24	53	1.74	26/02/2024	12:52	83	1.49	26/02/2024	12:55
		24	2.23	29/02/2024	15:00	54	1.73	01/03/2024	13:29	84	1.49	29/02/2024	15:12
		25	2.18	29/02/2024	15:06	55	1.72	29/02/2024	13:00	85	1.48	26/02/2024	08:23
		26	2.18	29/02/2024	14:52	56	1.72	29/02/2024	15:01	86	1.47	29/02/2024	14:15
		27	2.16	29/02/2024	14:32	57	1.72	26/02/2024	08:25	87	1.47	27/02/2024	14:57
		28	2.15	29/02/2024	15:03	58	1.72	27/02/2024	09:09	88	1.45	28/02/2024	11:04
		29	2.14	29/02/2024	14:36	59	1.71	28/02/2024	13:10	89	1.44	01/03/2024	09:41
		30	2.11	01/03/2024	10:22	60	1.70	26/02/2024	10:17	90	1.44	29/02/2024	12:09

Location 2 – Time-history graph

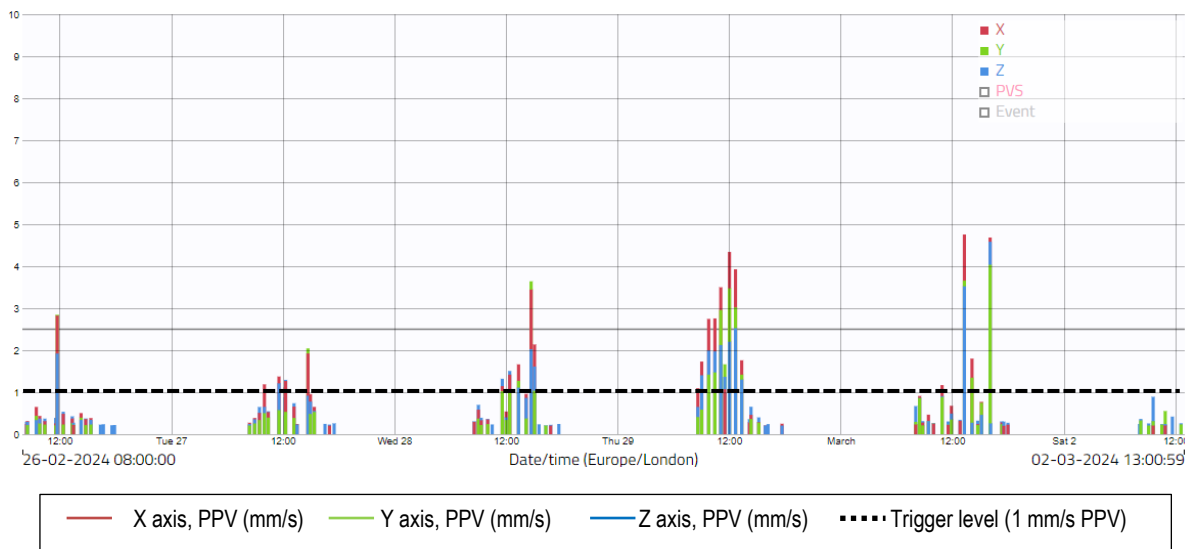


3.12 There was 100% data coverage at Location 2 for the monitoring period covered by this report. There were 209 exceedances of the project vibration trigger level of 1.0 mm/s PPV, which are shown in the raw data and graph above. The highest recorded vibration level was 4.6 mm/s, which occurred at 14:22 on Tuesday 27th February. It is understood that the majority of exceedances were caused by a machine tracking from crush heap to another, within the proximity of the monitor. Furthermore, 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	26/02/2024 to 02/03/2024	1	5.90	01/03/2024	16:05	31	2.44	27/02/2024	14:42	61	1.82	29/02/2024	13:20
		2	5.84	01/03/2024	16:02	32	2.36	29/02/2024	11:54	62	1.81	26/02/2024	11:47
		3	5.71	01/03/2024	13:19	33	2.34	28/02/2024	14:25	63	1.80	01/03/2024	14:08
		4	5.29	29/02/2024	12:03	34	2.23	29/02/2024	11:33	64	1.79	28/02/2024	15:08
		5	5.20	01/03/2024	16:06	35	2.22	28/02/2024	12:25	65	1.78	29/02/2024	11:06
		6	5.17	29/02/2024	12:06	36	2.22	29/02/2024	13:22	66	1.76	28/02/2024	13:21
		7	5.05	01/03/2024	16:04	37	2.21	28/02/2024	15:07	67	1.74	28/02/2024	12:22
		8	5.04	01/03/2024	15:49	38	2.18	29/02/2024	11:32	68	1.74	29/02/2024	12:58
		9	4.94	29/02/2024	12:42	39	2.15	28/02/2024	14:39	69	1.71	29/02/2024	12:44
		10	4.84	29/02/2024	11:07	40	2.13	29/02/2024	12:07	70	1.69	28/02/2024	14:36
		11	4.72	01/03/2024	16:07	41	2.11	26/02/2024	11:43	71	1.69	29/02/2024	12:57
		12	4.10	29/02/2024	11:55	42	2.08	29/02/2024	09:51	72	1.68	29/02/2024	13:01
		13	3.98	28/02/2024	14:43	43	2.07	01/03/2024	13:20	73	1.67	28/02/2024	14:44
		14	3.84	29/02/2024	11:58	44	2.06	29/02/2024	11:53	74	1.66	29/02/2024	12:00
		15	3.76	26/02/2024	11:45	45	2.00	29/02/2024	09:04	75	1.66	27/02/2024	12:19
		16	3.47	29/02/2024	12:56	46	1.98	28/02/2024	11:37	76	1.58	29/02/2024	11:29
		17	3.46	26/02/2024	11:44	47	1.98	29/02/2024	12:43	77	1.58	28/02/2024	14:45
		18	3.36	01/03/2024	15:56	48	1.97	29/02/2024	11:31	78	1.55	29/02/2024	12:41
		19	3.34	29/02/2024	09:49	49	1.95	28/02/2024	13:22	79	1.55	29/02/2024	12:59
		20	3.31	29/02/2024	10:29	50	1.93	29/02/2024	09:53	80	1.54	28/02/2024	14:38
		21	3.24	29/02/2024	11:56	51	1.93	28/02/2024	13:18	81	1.52	29/02/2024	11:47
		22	3.21	26/02/2024	11:46	52	1.93	29/02/2024	11:05	82	1.50	28/02/2024	13:19
		23	3.17	28/02/2024	14:41	53	1.90	29/02/2024	13:21	83	1.50	29/02/2024	13:00
		24	2.89	29/02/2024	09:50	54	1.89	28/02/2024	14:15	84	1.49	27/02/2024	12:21
		25	2.86	27/02/2024	14:43	55	1.88	27/02/2024	14:41	85	1.49	29/02/2024	13:18
		26	2.76	29/02/2024	11:03	56	1.87	28/02/2024	14:42	86	1.48	29/02/2024	12:02
		27	2.61	28/02/2024	14:40	57	1.87	29/02/2024	11:34	87	1.45	28/02/2024	14:35
		28	2.57	28/02/2024	15:05	58	1.83	29/02/2024	09:38	88	1.44	29/02/2024	09:55
		29	2.57	29/02/2024	11:04	59	1.82	01/03/2024	15:55	89	1.42	29/02/2024	09:57
		30	2.48	28/02/2024	14:37	60	1.82	29/02/2024	09:31	90	1.42	01/03/2024	10:55

Location 3 – Time-history graph

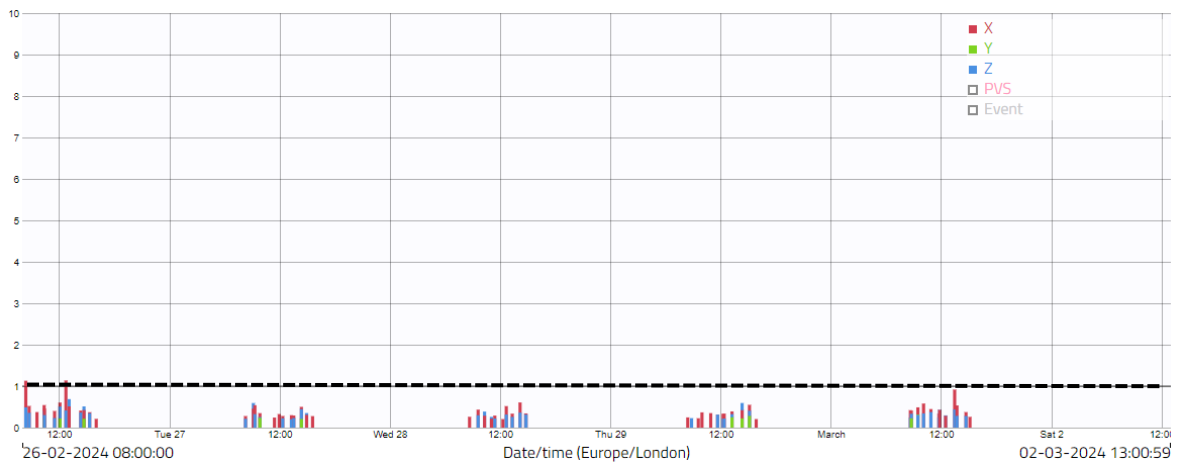


- 3.13 There was 100% data coverage at Location 3 for the monitoring period covered by this report. There were 156 exceedances of the project vibration trigger level of 1.0 mm/s PPV as shown in the raw data and graph above. The vast majority of the exceedances at this location are generally being caused by plant vehicles travelling along the haulage road which is directly in front of where the vibration monitor is currently located. These movements are unavoidable and there are no reasonably practicable measures that the site team can implement to reduce these emissions at this time.
- 3.14 In addition, the site team confirmed that a temporary car park was being installed within close proximity to monitor (i.e. just behind the haulage road). The site team have confirmed that this included the use of an excavator and a roller. As set out in the BPM document for the works, the following control measures were in place:
- Haul road to be kept clean and free from debris at all times
 - All vehicles to be booked into site within 48hrs notice
 - Single vehicles on the haul road at all times
 - 5MPH speed limit in place
 - Traffic Marshall to bank lorries on and off the site
 - All vehicles to switch off the engine whilst idle
 - No sharp turning, vehicles to reverse into position and drive out
 - All plant used during the procedure to be suitable for the works.
 - All operatives to be suitably trained and competent.
 - Machine to be sat at the furthest point from the boundary whilst loading.
 - No unnecessary use of the horn.
 - Suppression to be used when required.
 - No loud music in the plant cab.
- 3.15 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.
- 3.16 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 Temp	26/02/2024 to 02/03/2024	1	1.17	26/02/2024	12:45
		2	1.14	26/02/2024	08:23
Criteria mm/s PVS	Exceedances	3	0.97	26/02/2024	08:22
1.0	2	4	0.94	01/03/2024	13:29
		5	0.86	01/03/2024	13:28
		6	0.76	26/02/2024	12:06
		7	0.75	26/02/2024	13:06
		8	0.66	28/02/2024	14:11
		9	0.65	27/02/2024	09:09
		10	0.65	26/02/2024	12:49

Location 4 – Time-history graph



3.17 There was 100% data coverage at Location 4 for the monitoring period covered by this report. It is worth noting that the vibration monitor at this location is a temporary replacement to the usual monitor, installed Friday 23rd February. The usual monitor at this location is currently with the manufacturer for a fault investigation – during the week commencing 19th February, the online connection to the monitor became unavailable. Another site visit is due to be carried out in due course, to reinstall the usual vibration monitor once the fault investigation has completed. There were two exceedances of the project vibration trigger level of 1.0 mm/s PPV, as shown in the raw data and graph above. Both occurred on Monday 26th February, at 08:23 & 12:45, with measured vibration levels of 1.14 & 1.17 mm/s PPV respectively. Vibration levels will continue to be monitored as required.