

# Holloway Park, London

## Construction Monitoring Report

Client: London Square  
Ref: CM54-22405-R0  
Date: 21 November 2023  
Note by: Adam Bamford, BSc MIOA DipIOA, Principal Acoustics Consultant

### 1. INTRODUCTION

1.1 This Technical Note sets out results of the construction monitoring being carried out at the above between Monday 13<sup>th</sup> November and Saturday 18<sup>th</sup> November 2023. 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:

#### **Downwell**

- Removing Block 2 piles down to 2m with muncher attachment.
- Exposing Block 1 piles.
- Engineer plotting Block 1 piles.
- Removing Block 1 foundations with bucket attachments
- Removing Block 1 foundations with bucket attachments.
- Removing Block 1 foundations with Breaker attachment within noisy periods.
- Removing Block 1 piles down to 2m with muncher attachment.

- Backfilling excavations.
- Loading skips.
- Processing concrete with hydraulic muncher.
- Crushing arisings to 6f2 with crusher.

#### **Horizon**

- Watch and brief attendance with Downwell.
- Ground remediation.
- Loading lorries
- Screening.

#### **Careys London**

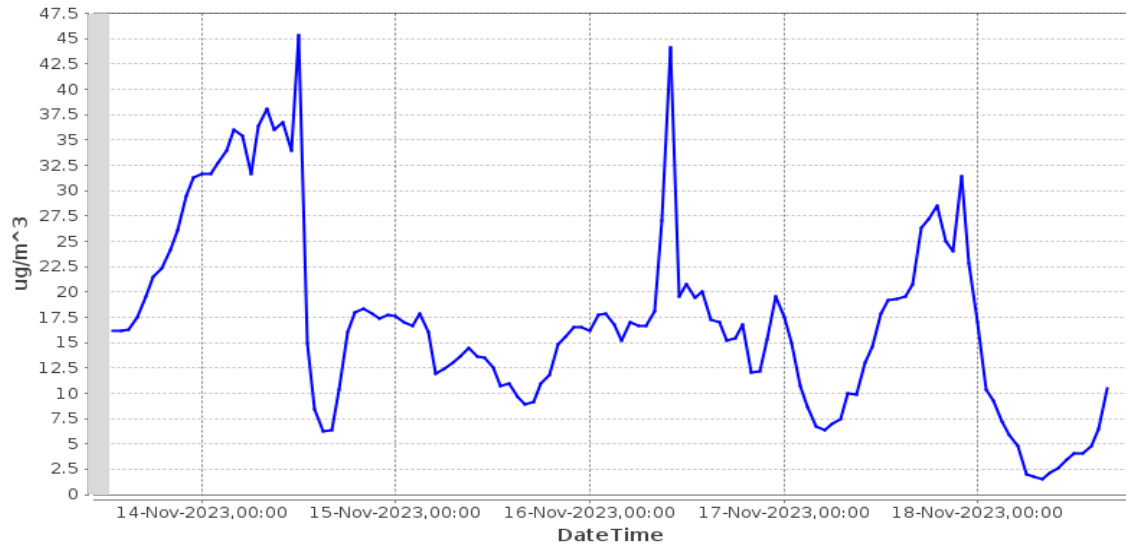
- Delivery of materials
- Attenuation tank installation

### **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



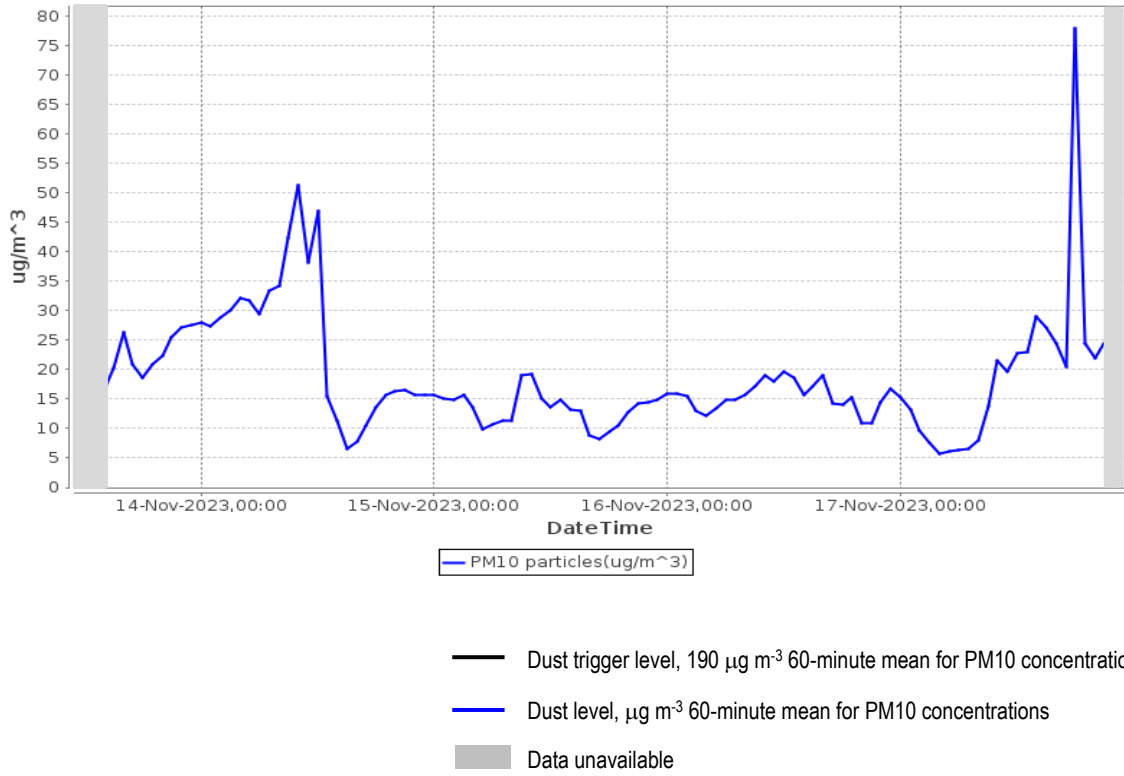
- Dust trigger level, 190  $\mu\text{g m}^{-3}$  60-minute mean for PM10 concentrations
- Dust level,  $\mu\text{g m}^{-3}$  60-minute mean for PM10 concentrations
- Data unavailable

3.2 There was 91% data coverage at Location 1 for the monitoring period covered by this report. The only missing data occurred during Monday morning when the site team were swapping the depleted battery over from the weekend. No exceedances of the project dust limit of 190 micrograms per cubic meter were recorded during the period covered by this report.

### Location 2

3.3 There was 0% data coverage at Location 2 for the monitoring period covered by this report. The dust monitoring unit at Location 2 has been sent off for its biennial laboratory calibration and we have asked the manufacturer to investigate and repair/fit the local interface communication issue that was reported in the previous weekly report. The monitor is due back from calibration on 24<sup>th</sup> November and will be reinstalled onsite w/c 27<sup>th</sup> November.

Location 3



3.4 There was 82% data coverage at Location 3 for the monitoring period covered by this report. The only missing data occurred during Monday morning when the site team were swapping the depleted battery from the weekend and Saturday 18<sup>th</sup> as the battery depleted at 2300 hours on Friday night. No exceedances of the project dust criteria of 190 micrograms per cubic meter were recorded during the monitoring period covered by this report.

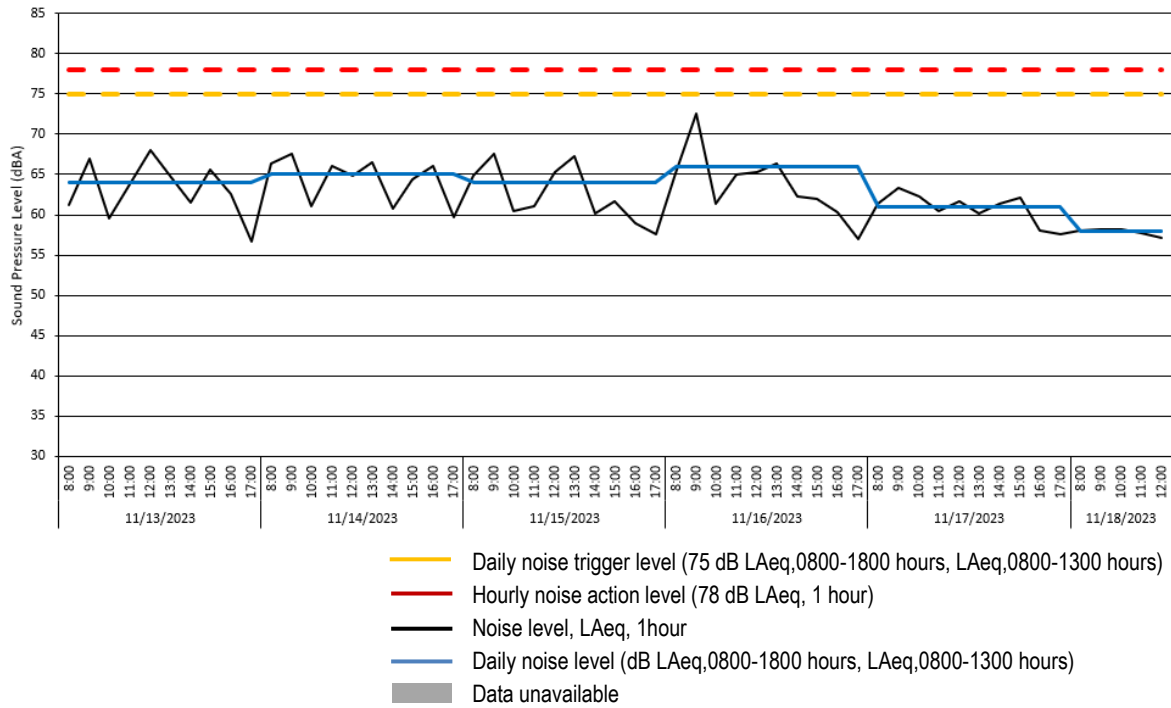
## Noise Monitoring Results

### 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]
2023-11-13	09:00:00	61.2	--	--	--
2023-11-13	10:00:00	66.9	--	--	--
2023-11-13	11:00:00	59.5	--	--	--
2023-11-13	12:00:00	63.8	--	--	--
2023-11-13	13:00:00	68.0	--	--	--
2023-11-13	14:00:00	64.9	--	--	--
2023-11-13	15:00:00	61.5	--	--	--
2023-11-13	16:00:00	65.6	--	--	--
2023-11-13	17:00:00	62.6	--	--	--
2023-11-13	18:00:00	56.7	--	64.2	--
2023-11-14	09:00:00	66.3	--	--	--
2023-11-14	10:00:00	67.5	--	--	--
2023-11-14	11:00:00	61.0	--	--	--
2023-11-14	12:00:00	66.0	--	--	--
2023-11-14	13:00:00	64.9	--	--	--
2023-11-14	14:00:00	66.5	--	--	--
2023-11-14	15:00:00	60.7	--	--	--
2023-11-14	16:00:00	64.4	--	--	--
2023-11-14	17:00:00	66.0	--	--	--
2023-11-14	18:00:00	59.7	--	65.0	--
2023-11-15	09:00:00	64.9	--	--	--
2023-11-15	10:00:00	67.6	--	--	--
2023-11-15	11:00:00	60.4	--	--	--
2023-11-15	12:00:00	61.0	--	--	--
2023-11-15	13:00:00	65.3	--	--	--
2023-11-15	14:00:00	67.3	--	--	--
2023-11-15	15:00:00	60.1	--	--	--
2023-11-15	16:00:00	61.7	--	--	--
2023-11-15	17:00:00	58.9	--	--	--
2023-11-15	18:00:00	57.6	--	63.8	--
2023-11-16	09:00:00	65.1	--	--	--
2023-11-16	10:00:00	72.6	--	--	--
2023-11-16	11:00:00	61.3	--	--	--
2023-11-16	12:00:00	65.0	--	--	--
2023-11-16	13:00:00	65.3	--	--	--
2023-11-16	14:00:00	66.4	--	--	--
2023-11-16	15:00:00	62.2	--	--	--
2023-11-16	16:00:00	62.0	--	--	--
2023-11-16	17:00:00	60.3	--	--	--
2023-11-16	18:00:00	56.9	--	65.9	--
2023-11-17	09:00:00	61.3	--	--	--
2023-11-17	10:00:00	63.3	--	--	--
2023-11-17	11:00:00	62.3	--	--	--
2023-11-17	12:00:00	60.4	--	--	--
2023-11-17	13:00:00	61.7	--	--	--
2023-11-17	14:00:00	60.1	--	--	--
2023-11-17	15:00:00	61.3	--	--	--
2023-11-17	16:00:00	62.1	--	--	--
2023-11-17	17:00:00	58.0	--	--	--
2023-11-17	18:00:00	57.6	--	61.1	--
2023-11-18	09:00:00	58.0	--	--	--
2023-11-18	10:00:00	58.2	--	--	--
2023-11-18	11:00:00	58.2	--	--	--
2023-11-18	12:00:00	57.7	--	--	--
2023-11-18	13:00:00	57.1	--	--	57.9

**Location 1 – Time History Data**



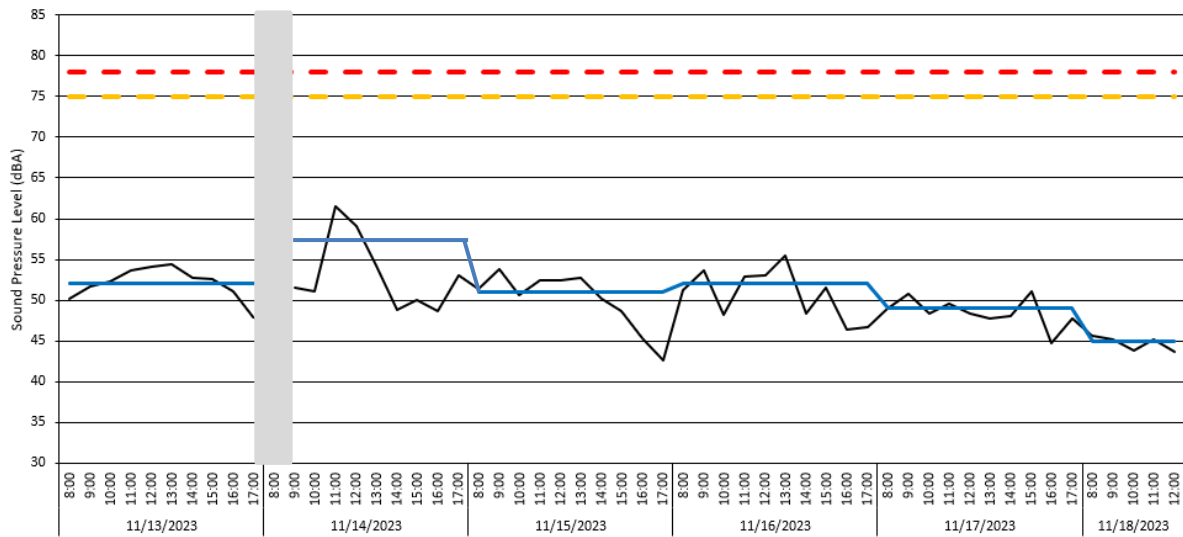
3.5 There was 100% data coverage at Location 1 for the monitoring period covered by this report. No exceedances of the project hourly noise criteria of 78 dB LAeq nor the daily project noise limit of 75 dB LAeq (0800-1800 hours) were recorded during the monitoring period covered by this report.

Location 2 – Raw Data

# Broadband Results

Date [YYYY-MM-DD]	Time [hh:mm:ss]	LAeq(60min) [dB]	LAeq(10hr) [dB]	LAeq(5hr) [dB]
2023-11-13	09:00:00	50.2	-.-	-.-
2023-11-13	10:00:00	51.6	-.-	-.-
2023-11-13	11:00:00	52.2	-.-	-.-
2023-11-13	12:00:00	53.6	-.-	-.-
2023-11-13	13:00:00	54.1	-.-	-.-
2023-11-13	14:00:00	54.4	-.-	-.-
2023-11-13	15:00:00	52.7	-.-	-.-
2023-11-13	16:00:00	52.6	-.-	-.-
2023-11-13	17:00:00	51.1	-.-	-.-
2023-11-13	18:00:00	47.8	52.4	-.-
2023-11-14	10:00:00	51.5	-.-	-.-
2023-11-14	11:00:00	51.1	-.-	-.-
2023-11-14	12:00:00	61.5	-.-	-.-
2023-11-14	13:00:00	59.1	-.-	-.-
2023-11-14	14:00:00	54.3	-.-	-.-
2023-11-14	15:00:00	48.8	-.-	-.-
2023-11-14	16:00:00	50.0	-.-	-.-
2023-11-14	17:00:00	48.6	-.-	-.-
2023-11-14	18:00:00	53.0	-.-	-.-
2023-11-15	09:00:00	51.4	-.-	-.-
2023-11-15	10:00:00	53.8	-.-	-.-
2023-11-15	11:00:00	50.6	-.-	-.-
2023-11-15	12:00:00	52.5	-.-	-.-
2023-11-15	13:00:00	52.4	-.-	-.-
2023-11-15	14:00:00	52.7	-.-	-.-
2023-11-15	15:00:00	50.1	-.-	-.-
2023-11-15	16:00:00	48.6	-.-	-.-
2023-11-15	17:00:00	45.3	-.-	-.-
2023-11-15	18:00:00	42.6	51.0	-.-
2023-11-16	09:00:00	51.2	-.-	-.-
2023-11-16	10:00:00	53.7	-.-	-.-
2023-11-16	11:00:00	48.2	-.-	-.-
2023-11-16	12:00:00	52.9	-.-	-.-
2023-11-16	13:00:00	53.1	-.-	-.-
2023-11-16	14:00:00	55.5	-.-	-.-
2023-11-16	15:00:00	48.4	-.-	-.-
2023-11-16	16:00:00	51.5	-.-	-.-
2023-11-16	17:00:00	46.3	-.-	-.-
2023-11-16	18:00:00	46.6	51.7	-.-
2023-11-17	09:00:00	49.0	-.-	-.-
2023-11-17	10:00:00	50.8	-.-	-.-
2023-11-17	11:00:00	48.4	-.-	-.-
2023-11-17	12:00:00	49.5	-.-	-.-
2023-11-17	13:00:00	48.4	-.-	-.-
2023-11-17	14:00:00	47.8	-.-	-.-
2023-11-17	15:00:00	48.0	-.-	-.-
2023-11-17	16:00:00	51.1	-.-	-.-
2023-11-17	17:00:00	44.7	-.-	-.-
2023-11-17	18:00:00	47.8	48.9	-.-
2023-11-18	09:00:00	45.6	-.-	-.-
2023-11-18	10:00:00	45.2	-.-	-.-
2023-11-18	11:00:00	43.8	-.-	-.-
2023-11-18	12:00:00	45.2	-.-	-.-
2023-11-18	13:00:00	43.7	-.-	44.8

**Location 2 – Time History Data**



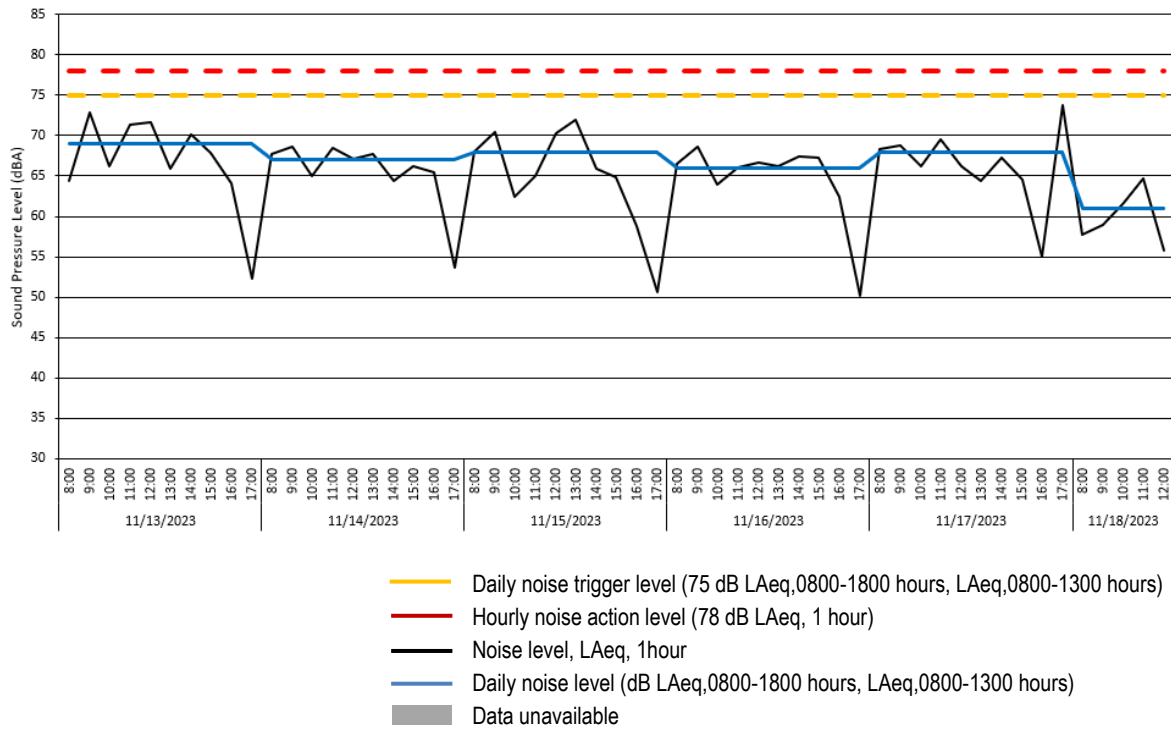
3.6 There was 98% data coverage at Location 2 for the monitoring period covered by this report. No exceedances of the project hourly noise criteria of 78 dB LAeq nor the daily project noise limit of 75 dB LAeq (0800-1800 hours) were recorded during the monitoring period covered by this report.



Location 3 – Raw Data

# Broadband Results					
Date	Time	LAeq(60min)	LAeq(10hr)	LAeq(5hr)	
[YYYY-MM-DD]	[hh:mm:ss]	[dB]	[dB]	[dB]	
2023-11-13	09:00:00	64.4	--	--	
2023-11-13	10:00:00	72.9	--	--	
2023-11-13	11:00:00	66.2	--	--	
2023-11-13	12:00:00	71.4	--	--	
2023-11-13	13:00:00	71.7	--	--	
2023-11-13	14:00:00	65.9	--	--	
2023-11-13	15:00:00	70.1	--	--	
2023-11-13	16:00:00	67.9	--	--	
2023-11-13	17:00:00	64.1	--	--	
2023-11-13	18:00:00	52.3	68.9	--	
2023-11-14	09:00:00	67.7	--	--	
2023-11-14	10:00:00	68.7	--	--	
2023-11-14	11:00:00	65.0	--	--	
2023-11-14	12:00:00	68.5	--	--	
2023-11-14	13:00:00	67.1	--	--	
2023-11-14	14:00:00	67.8	--	--	
2023-11-14	15:00:00	64.4	--	--	
2023-11-14	16:00:00	66.2	--	--	
2023-11-14	17:00:00	65.5	--	--	
2023-11-14	18:00:00	53.6	66.6	--	
2023-11-15	09:00:00	68.1	--	--	
2023-11-15	10:00:00	70.4	--	--	
2023-11-15	11:00:00	62.4	--	--	
2023-11-15	12:00:00	65.0	--	--	
2023-11-15	13:00:00	70.3	--	--	
2023-11-15	14:00:00	71.9	--	--	
2023-11-15	15:00:00	65.9	--	--	
2023-11-15	16:00:00	64.8	--	--	
2023-11-15	17:00:00	58.8	--	--	
2023-11-15	18:00:00	50.6	67.5	--	
2023-11-16	09:00:00	66.5	--	--	
2023-11-16	10:00:00	68.7	--	--	
2023-11-16	11:00:00	64.0	--	--	
2023-11-16	12:00:00	66.1	--	--	
2023-11-16	13:00:00	66.6	--	--	
2023-11-16	14:00:00	66.2	--	--	
2023-11-16	15:00:00	67.4	--	--	
2023-11-16	16:00:00	67.2	--	--	
2023-11-16	17:00:00	62.4	--	--	
2023-11-16	18:00:00	50.1	66.0	--	
2023-11-17	09:00:00	68.3	--	--	
2023-11-17	10:00:00	68.8	--	--	
2023-11-17	11:00:00	66.2	--	--	
2023-11-17	12:00:00	69.5	--	--	
2023-11-17	13:00:00	66.2	--	--	
2023-11-17	14:00:00	64.4	--	--	
2023-11-17	15:00:00	67.3	--	--	
2023-11-17	16:00:00	64.6	--	--	
2023-11-17	17:00:00	55.0	--	--	
2023-11-17	18:00:00	73.8	68.3	--	
2023-11-18	09:00:00	57.8	--	--	
2023-11-18	10:00:00	58.9	--	--	
2023-11-18	11:00:00	61.7	--	--	
2023-11-18	12:00:00	64.7	--	--	
2023-11-18	13:00:00	55.7	--	60.9	

**Location 3 – Time-history graph**



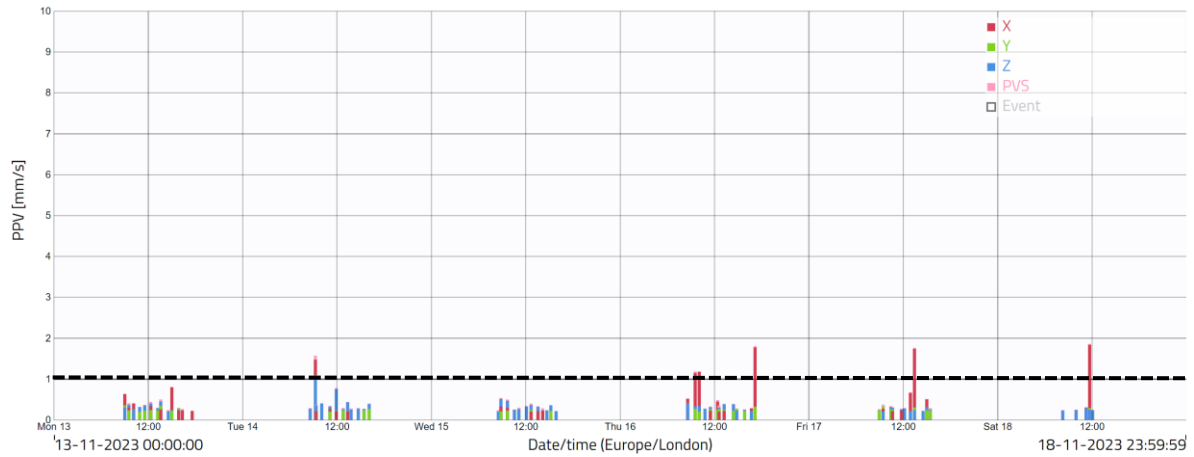
3.7 There was 100% data coverage at Location 3 for the monitoring period covered by this report. No exceedances of the project hourly noise criteria of 78 dB LAeq nor the daily project noise limit of 75 dB LAeq (0800-1800 hours) were recorded during the monitoring period covered by this report.

**Vibration Monitoring Results**

**Location 1 – Raw data**

Measuring point:	Period:	Order	Value	Date	Time
Holloway - L1	13/11/2023 to 18/11/2023	1	1.86	18/11/2023	11:31
		2	1.81	16/11/2023	17:08
Criteria mm/s PVS	Exceedances	3	1.77	17/11/2023	13:25
		4	1.57	14/11/2023	09:14
		5	1.40	17/11/2023	13:16
		6	1.19	16/11/2023	10:02
		7	1.19	16/11/2023	09:32
		8	1.14	16/11/2023	10:00
		9	1.01	16/11/2023	16:44

Location 1 – Time-history graph



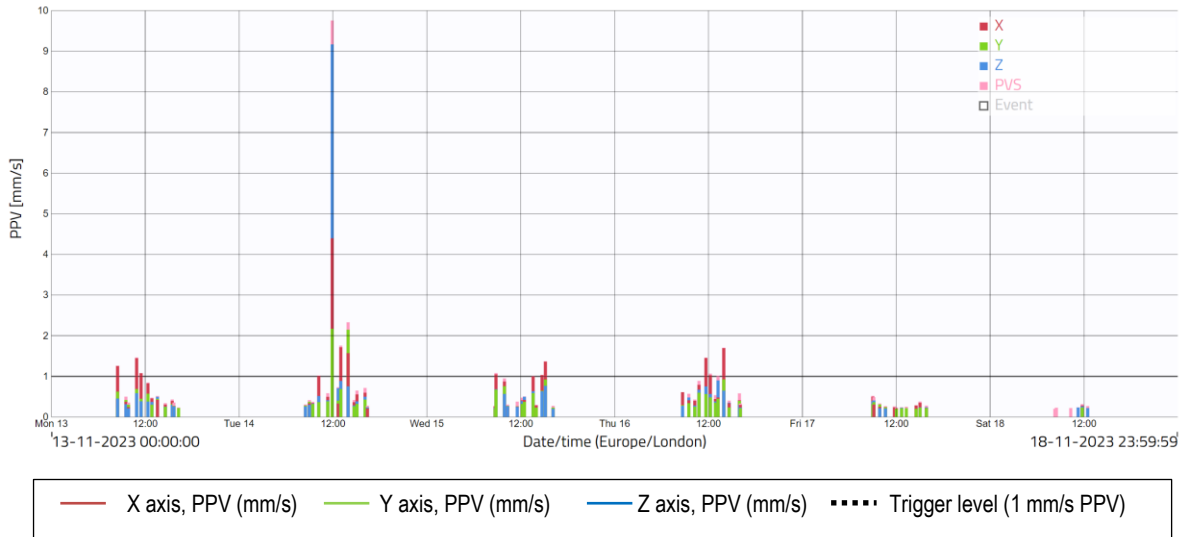
— X axis, PPV (mm/s) — Y axis, PPV (mm/s) — Z axis, PPV (mm/s) - - - - - Trigger level (1 mm/s PPV)

3.8 There was 100% data coverage at Location 1 for the monitoring period covered by this report. There were 9 exceedances of the project vibration trigger level of 1 mm/s PPV as shown in the raw data and graph above. The project team that confirmed that no active demolition works have taken place in this area of the site since 24<sup>th</sup> October and therefore 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
Holloway - L2	13/11/2023 to 18/11/2023	1	9.76	14/11/2023	11:53
		2	8.16	14/11/2023	11:53
Criteria mm/s PVS 1	Exceedances 23	3	2.33	14/11/2023	13:55
		4	1.76	14/11/2023	12:59
		5	1.71	16/11/2023	13:57
		6	1.68	14/11/2023	13:57
		7	1.47	13/11/2023	10:54
		8	1.46	16/11/2023	11:40
		9	1.44	14/11/2023	12:58
		10	1.37	15/11/2023	15:09
		11	1.35	16/11/2023	11:07
		12	1.34	16/11/2023	13:55
		13	1.26	13/11/2023	10:54
		14	1.26	13/11/2023	08:27
		15	1.08	15/11/2023	08:38
		16	1.08	13/11/2023	11:27
		17	1.07	16/11/2023	12:13
		18	1.03	15/11/2023	14:43
		19	1.02	14/11/2023	10:05
		20	1.02	16/11/2023	13:12
		21	1.02	13/11/2023	08:27
		22	1.02	15/11/2023	08:48
		23	1.01	15/11/2023	13:34

Location 2 – Time-history graph

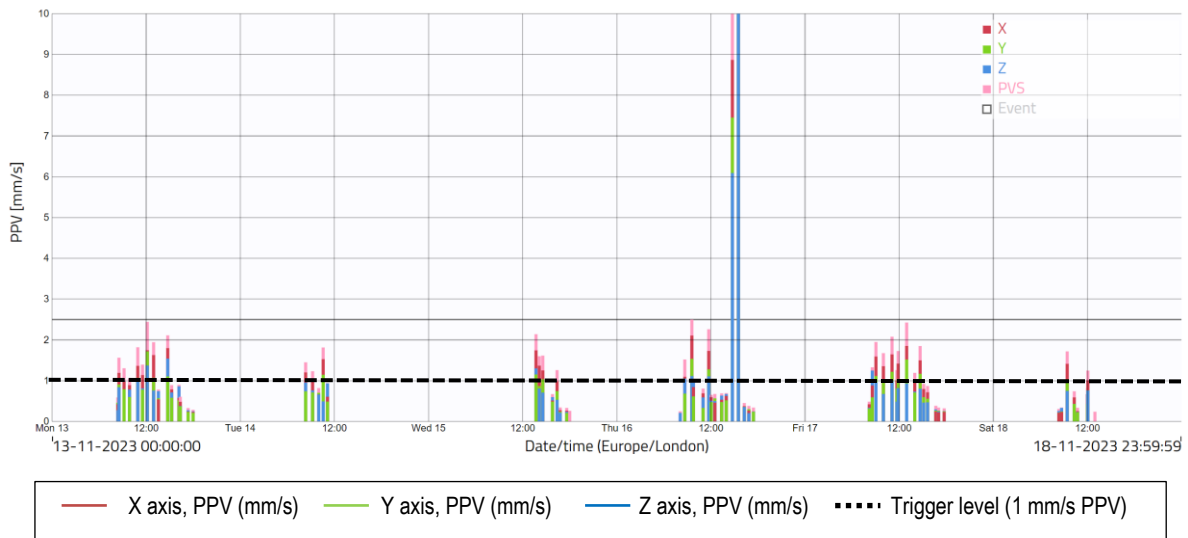


3.9 There was 100% data coverage at Location 2 for the monitoring period covered by this report. There were 23 exceedances of the project vibration trigger level of 1 mm/s PPV as shown in the raw data and graph above. The project team that confirmed that no active demolition works have taken place in this area of the site since 24<sup>th</sup> October and therefore the exceedances are believed to be due to non-construction related activities. In this location, it is likely that a combination of site operatives changing batteries and weather-related events (i.e. rainfall) are responsible for the recorded exceedances. 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	13/11/2023 to 18/11/2023	1	29.62	16/11/2023	15:29	47	1.47	13/11/20	12:17	93	1.13	15/11/20	13:34
		2	11.39	16/11/2023	14:43	48	1.46	18/11/20	09:23	94	1.13	13/11/20	14:20
Criteria mm/s PVS	Exceedances	3	11.15	16/11/2023	15:55	49	1.45	17/11/20	11:56	95	1.13	13/11/20	09:32
		4	4.54	16/11/2023	14:44	50	1.45	13/11/20	12:29	96	1.13	16/11/20	09:22
1	123	5	4.22	16/11/2023	15:32	51	1.45	14/11/20	08:20	97	1.12	13/11/20	12:03
		6	3.59	16/11/2023	15:14	52	1.43	16/11/20	15:32	98	1.12	13/11/20	12:14
		7	2.65	16/11/2023	15:29	53	1.42	13/11/20	14:37	99	1.12	16/11/20	14:50
		8	2.52	16/11/2023	14:48	54	1.39	13/11/20	11:31	100	1.10	13/11/20	09:03
		9	2.50	16/11/2023	09:33	55	1.37	13/11/20	12:58	101	1.09	15/11/20	13:29
		10	2.50	16/11/2023	14:47	56	1.36	15/11/20	14:10	102	1.09	14/11/20	08:34
		11	2.44	13/11/2023	12:09	57	1.33	13/11/20	12:23	103	1.07	16/11/20	15:12
		12	2.43	16/11/2023	15:19	58	1.33	16/11/20	09:32	104	1.07	15/11/20	13:31
		13	2.43	17/11/2023	12:56	59	1.33	17/11/20	08:33	105	1.06	16/11/20	15:19
		14	2.26	16/11/2023	11:43	60	1.31	17/11/20	09:50	106	1.06	13/11/20	14:37
		15	2.19	16/11/2023	15:22	61	1.30	13/11/20	09:10	107	1.06	13/11/20	09:13
		16	2.17	16/11/2023	15:33	62	1.30	17/11/20	10:57	108	1.06	17/11/20	08:24
		17	2.14	16/11/2023	15:17	63	1.29	17/11/20	09:58	109	1.06	13/11/20	09:50
		18	2.14	15/11/2023	13:41	64	1.29	13/11/20	12:19	110	1.04	13/11/20	09:50
		19	2.11	13/11/2023	14:44	65	1.29	13/11/20	09:29	111	1.04	13/11/20	09:45
		20	2.09	16/11/2023	14:46	66	1.28	13/11/20	11:07	112	1.04	16/11/20	11:01
		21	2.08	17/11/2023	11:02	67	1.28	13/11/20	08:53	113	1.04	13/11/20	12:22
		22	1.95	17/11/2023	09:01	68	1.28	16/11/20	15:16	114	1.04	17/11/20	10:36
		23	1.95	16/11/2023	14:38	69	1.28	16/11/20	14:43	115	1.03	16/11/20	09:45
		24	1.94	13/11/2023	12:56	70	1.28	13/11/20	12:20	116	1.03	16/11/20	15:10
		25	1.86	16/11/2023	14:46	71	1.26	15/11/20	16:22	117	1.03	16/11/20	09:20
		26	1.85	17/11/2023	14:40	72	1.26	17/11/20	11:41	118	1.03	16/11/20	08:17
		27	1.82	13/11/2023	10:48	73	1.26	17/11/20	12:14	119	1.02	13/11/20	12:24
		28	1.82	16/11/2023	15:36	74	1.25	17/11/20	13:09	120	1.01	17/11/20	10:08
		29	1.81	14/11/2023	10:34	75	1.25	17/11/20	09:03	121	1.01	13/11/20	12:29
		30	1.78	16/11/2023	15:35	76	1.25	18/11/20	12:03	122	1.00	17/11/20	12:06
		31	1.75	17/11/2023	14:10	77	1.25	13/11/20	14:46	123	1.00	13/11/20	12:30
		32	1.73	17/11/2023	11:51	78	1.24	13/11/20	12:33				
		33	1.72	18/11/2023	09:24	79	1.24	17/11/20	13:06				
		34	1.70	17/11/2023	12:55	80	1.23	14/11/20	09:13				
		35	1.69	17/11/2023	13:12	81	1.22	18/11/20	12:29				
		36	1.68	17/11/2023	09:58	82	1.22	13/11/20	11:34				
		37	1.67	15/11/2023	13:41	83	1.21	14/11/20	08:27				
		38	1.65	17/11/2023	13:08	84	1.20	15/11/20	13:28				
		39	1.63	17/11/2023	13:05	85	1.19	17/11/20	13:58				
		40	1.61	15/11/2023	14:33	86	1.18	16/11/20	08:47				
		41	1.60	15/11/2023	14:07	87	1.18	15/11/20	13:31				
		42	1.58	17/11/2023	10:05	88	1.17	16/11/20	15:22				
		43	1.56	13/11/2023	08:24	89	1.17	17/11/20	12:01				
		44	1.56	16/11/2023	15:07	90	1.16	17/11/20	14:15				
		45	1.52	16/11/2023	08:40	91	1.15	17/11/20	12:53				
		46	1.47	17/11/2023	14:38	92	1.14	17/11/20	09:52				

Location 3 – Time-history graph



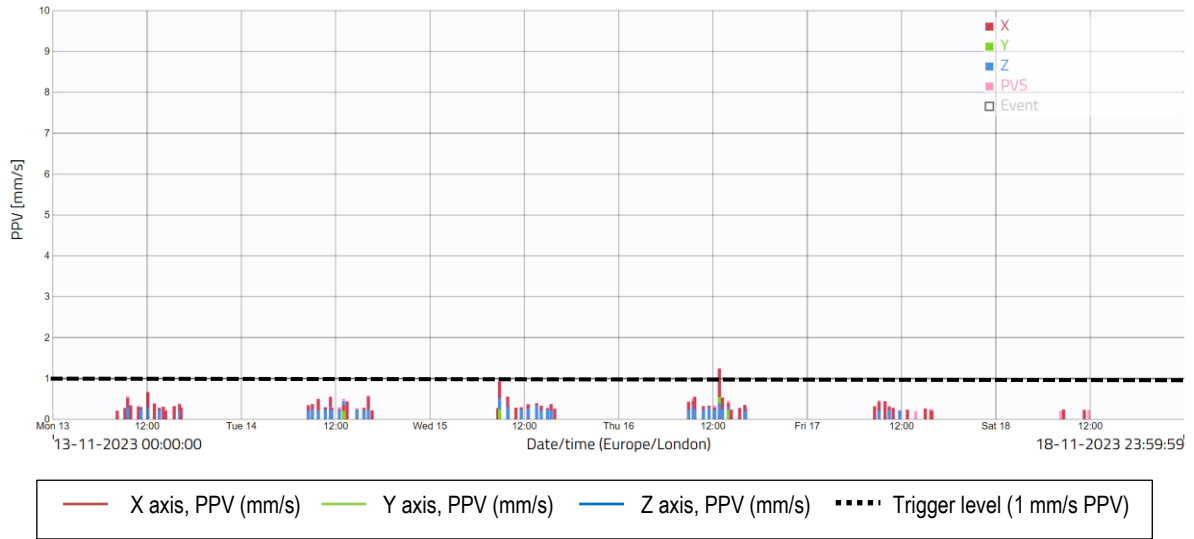
3.10 There was 100% data coverage at Location 3 for the monitoring period covered by this report. There were 123 exceedances of the project vibration trigger level of 1 mm/s PPV as shown in the raw data and graph above. The majority of these exceedances are being caused by plant vehicles travelling along 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.

3.11 The large peaks that occurred at 15:17 and 15:19 on the 6<sup>th</sup> November cannot be explained by the site team. The last delivery at the gate left at 3pm so the only explanation for these events is that a site operator or something may have accidentally knocked the sensor, but the team are adamant that it was not a construction related event that caused the exceedance.

Location 4 – Raw data

Measuring point:	Period:	Order	Value	Date
Holloway - L4	13/11/2023 to 18/11/2023	1	1.26	16/11/2023
		2	0.97	15/11/2023
Criteria mm/s PVS	Exceedances	3	0.76	15/11/2023
1	1	4	0.68	13/11/2023
		5	0.63	15/11/2023
		6	0.59	14/11/2023

Location 4 – Time-history graph



3.12 There was 100% data coverage at Location 4 for the monitoring period covered by this report. There was one exceedance of the project vibration trigger level of 1 mm/s PPV as shown in the raw data and graph above. The project team have confirmed that there are no active works in this areas of the site currently so this exceedance was likely due to non-construction related activities (i.e. weather related).