

Holloway Park, London

Construction Monitoring Report

Client: London Square
Ref: CM87-22405-R0
Date: 6 August 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 22nd July & Saturday 3rd August 2024. The monitoring is being carried out in general agreement with the methodology in the current Section 61 Consent between the London Borough of Islington and OHOB.

2. WEEKLY ACTIVITIES

2.1 The following activities have been carried during the period covered by this report, in addition to the usual use of the Haul Road with site vehicles:

OHOB

- Working on drainage at Gates 2 and near welfare and further into the site
- Installation of drainage adjacent to Block D
- Excavation of pilecaps in Blocks C & D
- Excavation of the crane base between Blocks E1 & E2
- Muck away works (i.e. the process of removing waste material, debris, and soil)
- Mobile plant used around the site where required
- Temporary surface installation at the haulage road

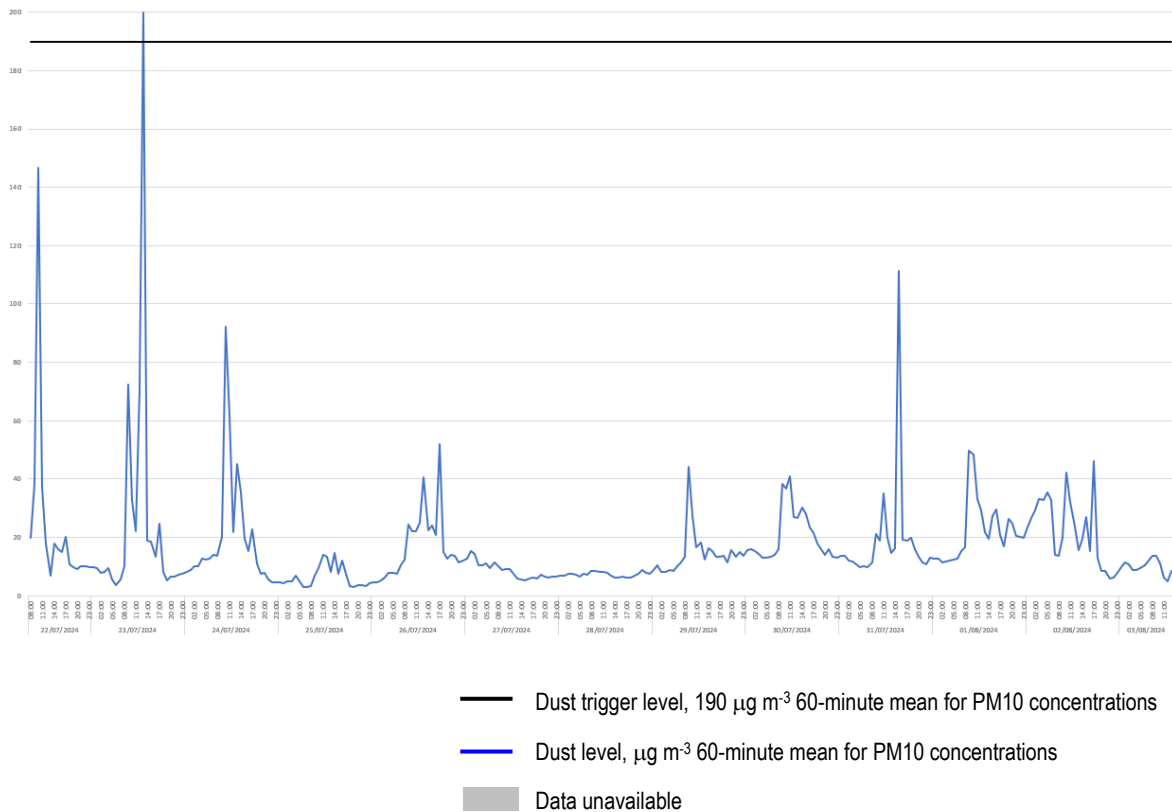
- Preparation of site road for tarmac to be installed. The tarmac was installed on 29th July.
- Installing the lower ground slab at Blocks C & D3.

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

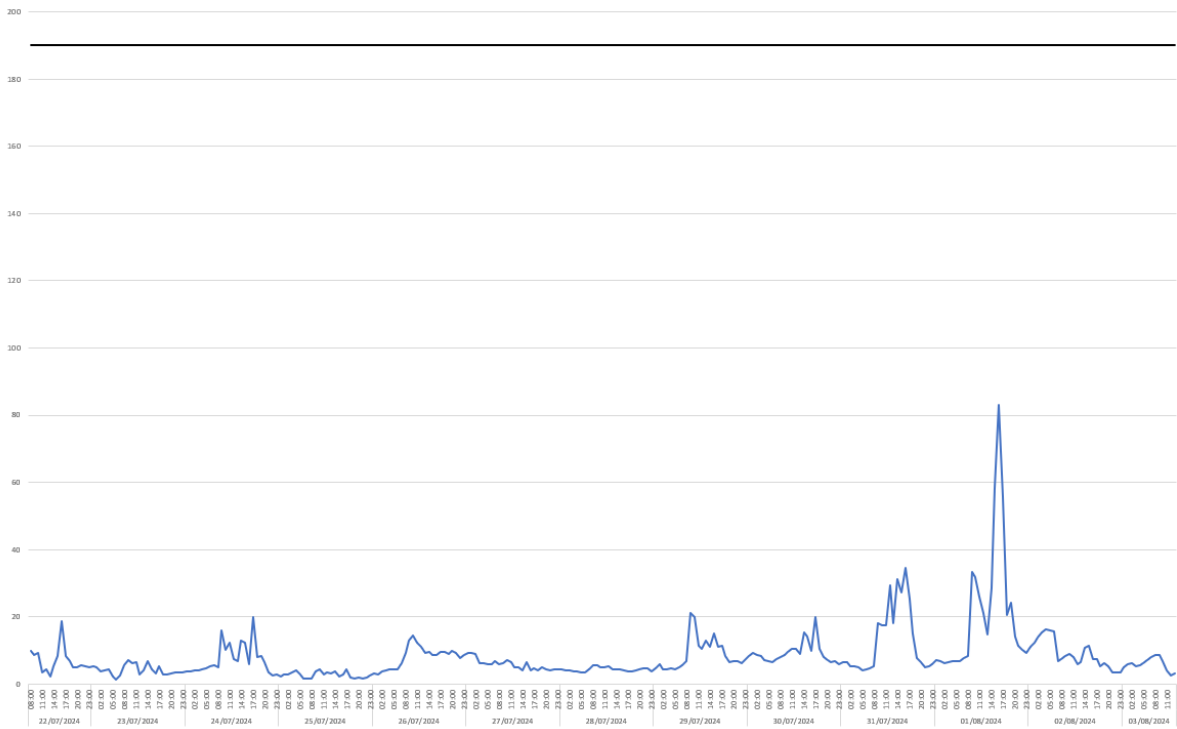
Location 1



3.2 There was 100% data coverage at Location 1 during construction hours for the monitoring period covered by this report.

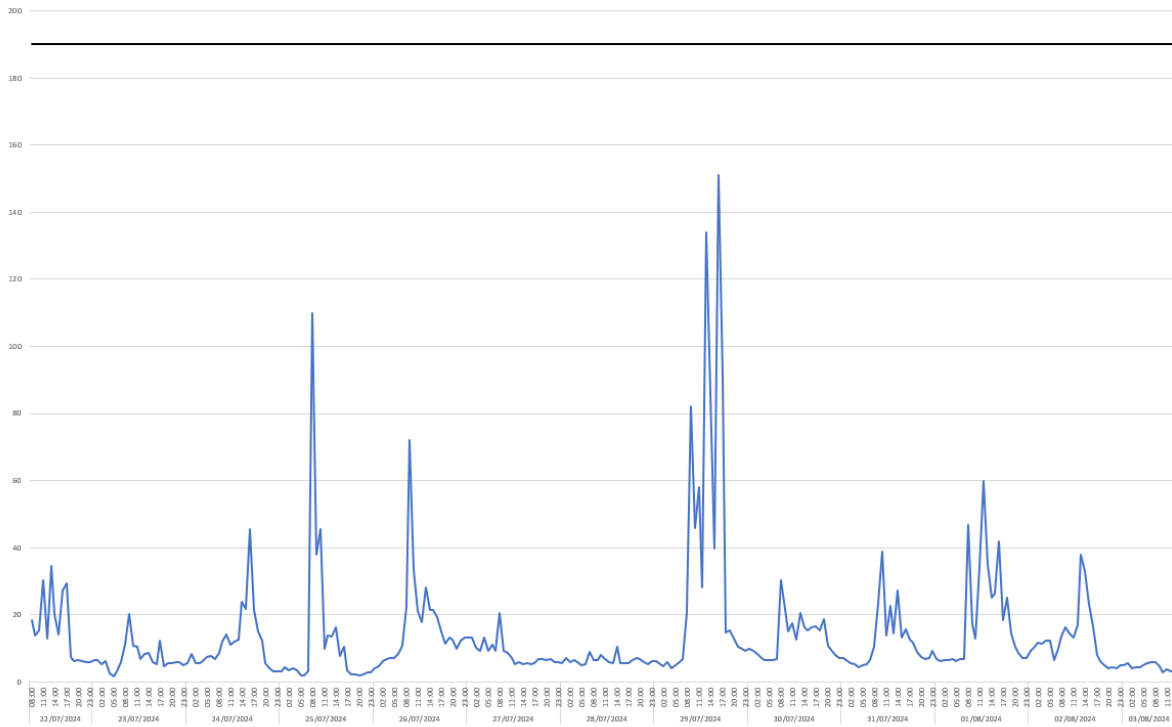
3.3 One exceedance of the project dust trigger level of 190 micrograms per cubic meter was recorded during the monitoring period covered by this report. This took place on Tuesday 23rd July, between 1PM and 2PM with a recorded level of 200 $\mu\text{g m}^{-3}$. Based on the activities taking place over the course of the monitoring period, it is likely this was caused by either the excavation of pilecaps at Block C, or the installation of the lower ground slab at Block C. This will continue to be monitored.




Location 2



- 3.4 There was 100% data coverage at Location 2 during construction hours for the monitoring period covered by this report.
- 3.5 No exceedances of the project dust trigger level of 190 micrograms per cubic meter were recorded during the monitoring period covered by this report.

Location 3



-  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

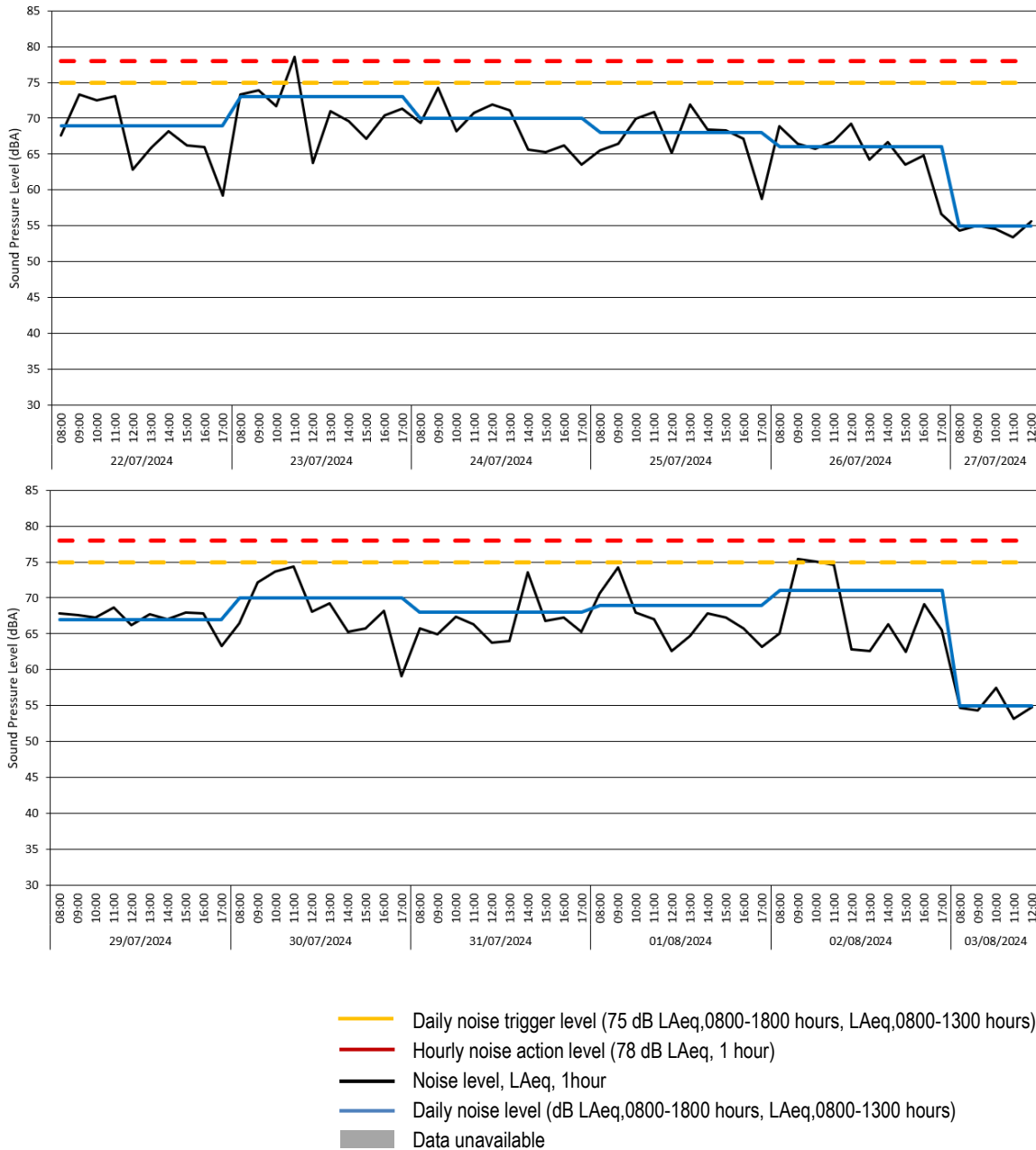
- 3.6 There was 100% data coverage at Location 3 during construction hours for the monitoring period covered by this report.
- 3.7 No exceedances of the project dust trigger level of 190 micrograms per cubic meter were recorded during the monitoring period covered by this report.

Noise Monitoring Results

Location 1 – Raw Data

Date [YYYY-MM-DD]	Time [hh:mm:ss]	LAeq(60min) [dB]	LAeq(7hr) [dB]	LAeq(10hr) [dB]	LAeq(5hr) [dB]
2024-07-22	09:00:00	67.6	--	--	--
2024-07-22	10:00:00	73.3	--	--	--
2024-07-22	11:00:00	72.5	--	--	--
2024-07-22	12:00:00	73.1	--	--	--
2024-07-22	13:00:00	62.8	--	--	--
2024-07-22	14:00:00	65.9	--	--	--
2024-07-22	15:00:00	68.2	--	--	--
2024-07-22	16:00:00	66.2	--	--	--
2024-07-22	17:00:00	66.0	--	--	--
2024-07-22	18:00:00	59.2	--	69.4	--
2024-07-23	09:00:00	73.3	--	--	--
2024-07-23	10:00:00	73.9	--	--	--
2024-07-23	11:00:00	71.7	--	--	--
2024-07-23	12:00:00	78.6	--	--	--
2024-07-23	13:00:00	63.8	--	--	--
2024-07-23	14:00:00	71.0	--	--	--
2024-07-23	15:00:00	69.6	--	--	--
2024-07-23	16:00:00	67.1	--	--	--
2024-07-23	17:00:00	70.4	--	--	--
2024-07-23	18:00:00	71.3	--	72.7	--
2024-07-24	09:00:00	69.3	--	--	--
2024-07-24	10:00:00	74.3	--	--	--
2024-07-24	11:00:00	68.2	--	--	--
2024-07-24	12:00:00	70.7	--	--	--
2024-07-24	13:00:00	71.9	--	--	--
2024-07-24	14:00:00	71.1	--	--	--
2024-07-24	15:00:00	65.6	--	--	--
2024-07-24	16:00:00	65.3	--	--	--
2024-07-24	17:00:00	66.2	--	--	--
2024-07-24	18:00:00	63.5	--	69.8	--
2024-07-25	09:00:00	65.5	--	--	--
2024-07-25	10:00:00	66.5	--	--	--
2024-07-25	11:00:00	69.9	--	--	--
2024-07-25	12:00:00	70.9	--	--	--
2024-07-25	13:00:00	65.2	--	--	--
2024-07-25	14:00:00	71.9	--	--	--
2024-07-25	15:00:00	68.4	--	--	--
2024-07-25	16:00:00	68.3	--	--	--
2024-07-25	17:00:00	67.1	--	--	--
2024-07-25	18:00:00	58.8	--	68.4	--
2024-07-26	09:00:00	68.9	--	--	--
2024-07-26	10:00:00	66.5	--	--	--
2024-07-26	11:00:00	65.8	--	--	--
2024-07-26	12:00:00	66.8	--	--	--
2024-07-26	13:00:00	69.2	--	--	--
2024-07-26	14:00:00	64.2	--	--	--
2024-07-26	15:00:00	66.7	--	--	--
2024-07-26	16:00:00	63.5	--	--	--
2024-07-26	17:00:00	64.8	--	--	--
2024-07-26	18:00:00	56.7	--	66.3	--
2024-07-27	09:00:00	54.3	--	--	--
2024-07-27	10:00:00	55.0	--	--	--
2024-07-27	11:00:00	54.6	--	--	--
2024-07-27	12:00:00	53.4	--	--	--
2024-07-27	13:00:00	55.6	--	--	54.7
2024-07-28	18:00:00	--	--	55.0	--
2024-07-29	09:00:00	67.9	--	--	--
2024-07-29	10:00:00	67.6	--	--	--
2024-07-29	11:00:00	67.3	--	--	--
2024-07-29	12:00:00	68.7	--	--	--
2024-07-29	13:00:00	66.2	--	--	--
2024-07-29	14:00:00	67.7	--	--	--
2024-07-29	15:00:00	67.0	--	--	--
2024-07-29	16:00:00	68.0	--	--	--
2024-07-29	17:00:00	67.8	--	--	--
2024-07-29	18:00:00	63.3	--	67.3	--
2024-07-30	09:00:00	65.5	--	--	--
2024-07-30	10:00:00	72.2	--	--	--
2024-07-30	11:00:00	73.7	--	--	--
2024-07-30	12:00:00	74.4	--	--	--
2024-07-30	13:00:00	68.1	--	--	--
2024-07-30	14:00:00	69.2	--	--	--
2024-07-30	15:00:00	65.3	--	--	--
2024-07-30	16:00:00	65.8	--	--	--
2024-07-30	17:00:00	68.2	--	--	--
2024-07-30	18:00:00	59.1	--	70.1	--
2024-07-31	09:00:00	65.7	--	--	--
2024-07-31	10:00:00	64.9	--	--	--
2024-07-31	11:00:00	67.4	--	--	--
2024-07-31	12:00:00	66.3	--	--	--
2024-07-31	13:00:00	63.8	--	--	--
2024-07-31	14:00:00	64.0	--	--	--
2024-07-31	15:00:00	73.6	--	--	--
2024-07-31	16:00:00	66.8	--	--	--
2024-07-31	17:00:00	67.3	--	--	--
2024-07-31	18:00:00	65.3	--	67.6	--
2024-08-01	09:00:00	70.6	--	--	--
2024-08-01	10:00:00	74.3	--	--	--
2024-08-01	11:00:00	68.0	--	--	--
2024-08-01	12:00:00	67.0	--	--	--
2024-08-01	13:00:00	62.6	--	--	--
2024-08-01	14:00:00	64.7	--	--	--
2024-08-01	15:00:00	67.9	--	--	--
2024-08-01	16:00:00	67.3	--	--	--
2024-08-01	17:00:00	65.7	--	--	--
2024-08-01	18:00:00	63.2	--	68.5	--
2024-08-02	09:00:00	65.1	--	--	--
2024-08-02	10:00:00	75.4	--	--	--
2024-08-02	11:00:00	75.1	--	--	--
2024-08-02	12:00:00	74.6	--	--	--
2024-08-02	13:00:00	62.8	--	--	--
2024-08-02	14:00:00	62.6	--	--	--
2024-08-02	15:00:00	66.3	--	--	--
2024-08-02	16:00:00	62.5	--	--	--
2024-08-02	17:00:00	69.1	--	--	--
2024-08-02	18:00:00	65.5	--	70.8	--
2024-08-03	09:00:00	54.7	--	--	--
2024-08-03	10:00:00	54.3	--	--	--
2024-08-03	11:00:00	57.5	--	--	--
2024-08-03	12:00:00	53.2	--	--	--
2024-08-03	13:00:00	54.8	--	--	55.1

Location 1 – Time History Data



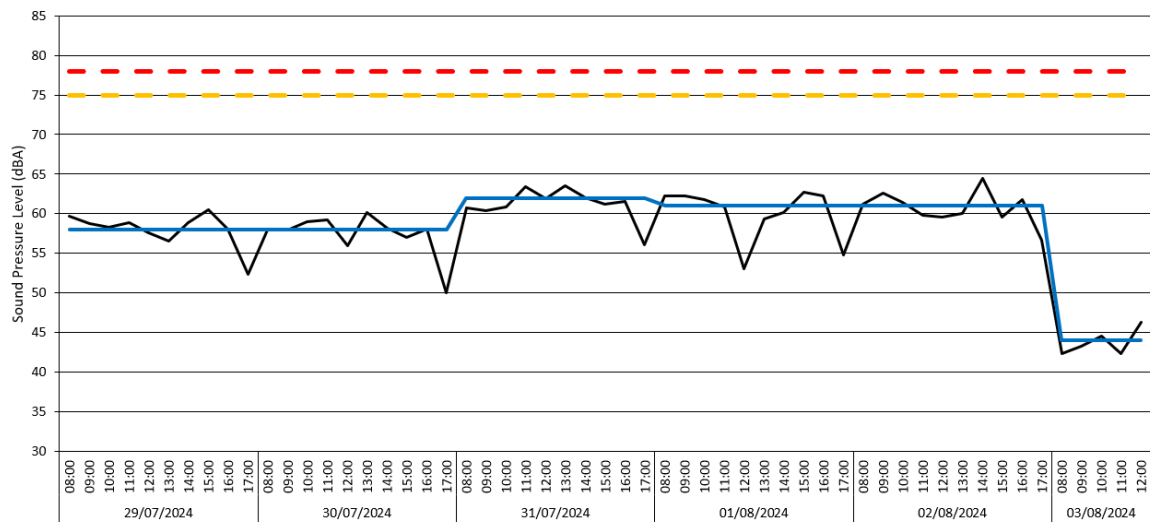
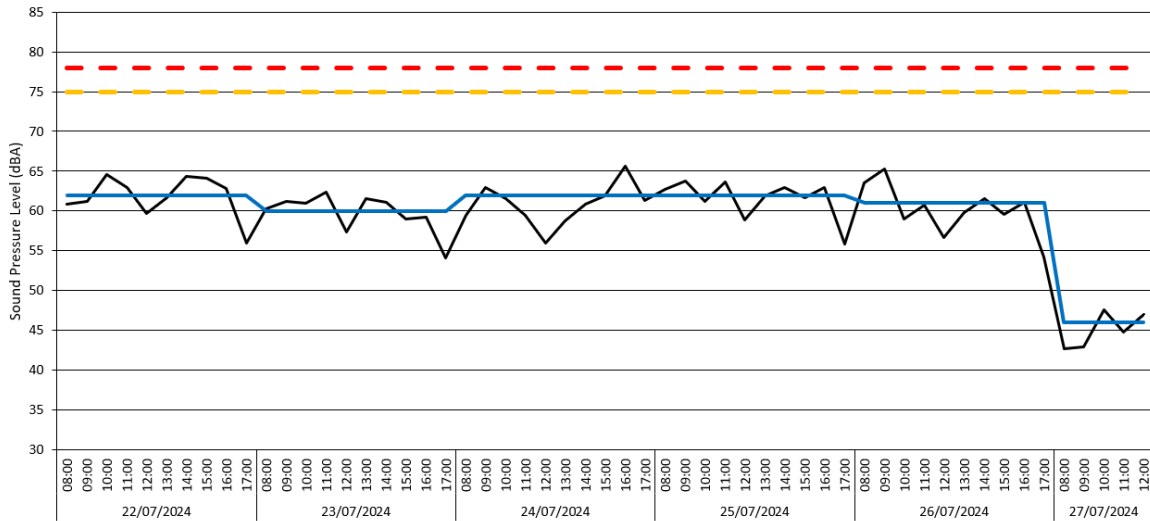
3.8 There was 100% data coverage at Location 1 during construction hours for the monitoring period covered by this report. One exceedance of the project hourly noise criteria of 78 dB LAeq as recorded during the monitoring period covered by this report. This occurred at 12:00 on Tuesday 23rd July, with a measured noise level of 79 dB LAeq,1hr. Based on the activities taking place over the course of the monitoring period, it is likely this was caused by either the excavation of pilecaps at Block C, or the installation of the lower ground slab at Block C. This will continue to be monitored.

3.9 There were no exceedances of the daily project noise limit of 75 dB LAeq (0800-1800 hours) were recorded at this location during the monitoring period covered by this report.

Location 2 – Raw Data

Date [YYYY-MM-DD]	Time [hh:mm:ss]	LAeq(60min) [dB]	LAeq(10hr) [dB]	LAeq(5hr) [dB]
2024-07-22	09:00:00	60.8	--	--
2024-07-22	10:00:00	61.2	--	--
2024-07-22	11:00:00	64.6	--	--
2024-07-22	12:00:00	62.9	--	--
2024-07-22	13:00:00	59.7	--	--
2024-07-22	14:00:00	61.7	--	--
2024-07-22	15:00:00	64.3	--	--
2024-07-22	16:00:00	64.1	--	--
2024-07-22	17:00:00	62.8	--	--
2024-07-22	18:00:00	56.0	62.4	--
2024-07-23	09:00:00	60.3	--	--
2024-07-23	10:00:00	61.2	--	--
2024-07-23	11:00:00	61.0	--	--
2024-07-23	12:00:00	62.4	--	--
2024-07-23	13:00:00	57.3	--	--
2024-07-23	14:00:00	61.5	--	--
2024-07-23	15:00:00	61.1	--	--
2024-07-23	16:00:00	59.0	--	--
2024-07-23	17:00:00	59.2	--	--
2024-07-23	18:00:00	54.1	60.2	--
2024-07-24	09:00:00	59.5	--	--
2024-07-24	10:00:00	62.9	--	--
2024-07-24	11:00:00	61.6	--	--
2024-07-24	12:00:00	59.5	--	--
2024-07-24	13:00:00	56.0	--	--
2024-07-24	14:00:00	58.7	--	--
2024-07-24	15:00:00	60.9	--	--
2024-07-24	16:00:00	61.9	--	--
2024-07-24	17:00:00	65.6	--	--
2024-07-24	18:00:00	61.3	61.5	--
2024-07-25	09:00:00	62.7	--	--
2024-07-25	10:00:00	63.8	--	--
2024-07-25	11:00:00	61.2	--	--
2024-07-25	12:00:00	63.6	--	--
2024-07-25	13:00:00	58.9	--	--
2024-07-25	14:00:00	61.9	--	--
2024-07-25	15:00:00	63.0	--	--
2024-07-25	16:00:00	61.7	--	--
2024-07-25	17:00:00	63.0	--	--
2024-07-25	18:00:00	55.8	62.1	--
2024-07-26	09:00:00	63.5	--	--
2024-07-26	10:00:00	65.3	--	--
2024-07-26	11:00:00	59.0	--	--
2024-07-26	12:00:00	60.7	--	--
2024-07-26	13:00:00	56.6	--	--
2024-07-26	14:00:00	59.8	--	--
2024-07-26	15:00:00	61.6	--	--
2024-07-26	16:00:00	59.6	--	--
2024-07-26	17:00:00	61.1	--	--
2024-07-26	18:00:00	54.2	61.1	--
2024-07-27	09:00:00	42.7	--	--
2024-07-27	10:00:00	42.9	--	--
2024-07-27	11:00:00	47.6	--	--
2024-07-27	12:00:00	44.8	--	--
2024-07-27	13:00:00	47.0	--	45.5
2024-07-28	18:00:00	--	47.3	--
2024-07-29	09:00:00	59.7	--	--
2024-07-29	10:00:00	58.8	--	--
2024-07-29	11:00:00	58.3	--	--
2024-07-29	12:00:00	58.9	--	--
2024-07-29	13:00:00	57.6	--	--
2024-07-29	14:00:00	56.5	--	--
2024-07-29	15:00:00	58.9	--	--
2024-07-29	16:00:00	60.5	--	--
2024-07-29	17:00:00	58.0	--	--
2024-07-29	18:00:00	52.3	58.4	--
2024-07-30	09:00:00	57.9	--	--
2024-07-30	10:00:00	57.9	--	--
2024-07-30	11:00:00	59.0	--	--
2024-07-30	12:00:00	59.2	--	--
2024-07-30	13:00:00	55.9	--	--
2024-07-30	14:00:00	60.2	--	--
2024-07-30	15:00:00	58.2	--	--
2024-07-30	16:00:00	57.0	--	--
2024-07-30	17:00:00	58.1	--	--
2024-07-30	18:00:00	50.0	57.9	--
2024-07-31	09:00:00	60.7	--	--
2024-07-31	10:00:00	60.4	--	--
2024-07-31	11:00:00	60.9	--	--
2024-07-31	12:00:00	63.4	--	--
2024-07-31	13:00:00	61.9	--	--
2024-07-31	14:00:00	63.5	--	--
2024-07-31	15:00:00	62.0	--	--
2024-07-31	16:00:00	61.2	--	--
2024-07-31	17:00:00	61.6	--	--
2024-07-31	18:00:00	56.1	61.5	--
2024-08-01	09:00:00	62.3	--	--
2024-08-01	10:00:00	62.2	--	--
2024-08-01	11:00:00	61.8	--	--
2024-08-01	12:00:00	60.9	--	--
2024-08-01	13:00:00	53.1	--	--
2024-08-01	14:00:00	59.3	--	--
2024-08-01	15:00:00	60.2	--	--
2024-08-01	16:00:00	62.7	--	--
2024-08-01	17:00:00	62.3	--	--
2024-08-01	18:00:00	54.8	60.8	--
2024-08-02	09:00:00	61.2	--	--
2024-08-02	10:00:00	62.6	--	--
2024-08-02	11:00:00	61.4	--	--
2024-08-02	12:00:00	59.8	--	--
2024-08-02	13:00:00	59.6	--	--
2024-08-02	14:00:00	60.0	--	--
2024-08-02	15:00:00	64.5	--	--
2024-08-02	16:00:00	59.6	--	--
2024-08-02	17:00:00	61.8	--	--
2024-08-02	18:00:00	56.6	61.2	--
2024-08-03	09:00:00	42.3	--	--
2024-08-03	10:00:00	43.3	--	--
2024-08-03	11:00:00	44.5	--	--
2024-08-03	12:00:00	42.3	--	--
2024-08-03	13:00:00	46.3	--	44.0

Location 2 – Time History Data



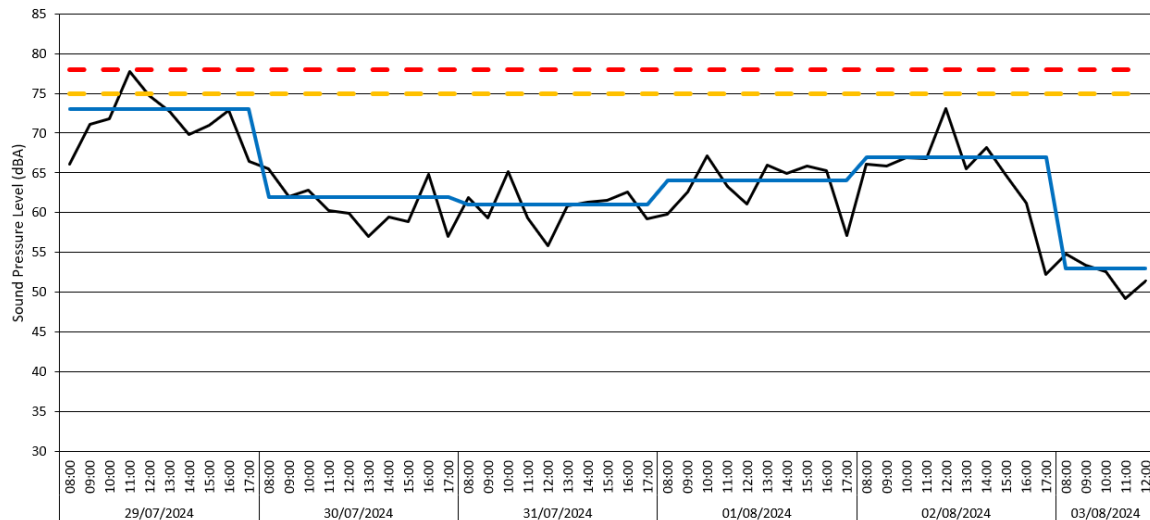
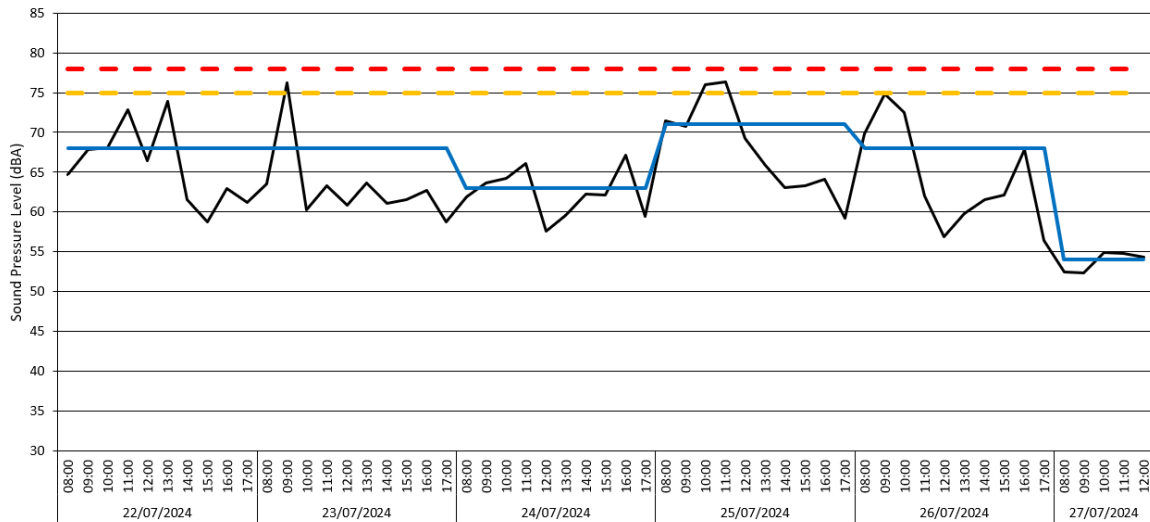
- Daily noise trigger level (75 dB LAeq,0800-1800 hours, LAeq,0800-1300 hours)
- - - Hourly noise action level (78 dB LAeq, 1 hour)
- Noise level, LAeq, 1hour
- Daily noise level (dB LAeq,0800-1800 hours, LAeq,0800-1300 hours)
- Data unavailable

- 3.10 There was 100% data coverage at Location 2 during construction hours for the monitoring period covered by this report.
- 3.11 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 at this location during the monitoring period covered by this report.

Location 3 – Raw Data

Date [YYYY-MM-DD]	Time [hh:mm:ss]	LAeq(60min) [dB]	LAeq(10hr) [dB]	LAeq(5hr) [dB]
2024-07-22	09:00:00	64.7	--	--
2024-07-22	10:00:00	67.8	--	--
2024-07-22	11:00:00	68.1	--	--
2024-07-22	12:00:00	72.8	--	--
2024-07-22	13:00:00	66.5	--	--
2024-07-22	14:00:00	73.9	--	--
2024-07-22	15:00:00	61.6	--	--
2024-07-22	16:00:00	58.8	--	--
2024-07-22	17:00:00	63.0	--	--
2024-07-22	18:00:00	61.2	68.4	--
2024-07-23	09:00:00	63.5	--	--
2024-07-23	10:00:00	76.2	--	--
2024-07-23	11:00:00	60.3	--	--
2024-07-23	12:00:00	63.3	--	--
2024-07-23	13:00:00	60.8	--	--
2024-07-23	14:00:00	63.7	--	--
2024-07-23	15:00:00	61.1	--	--
2024-07-23	16:00:00	61.6	--	--
2024-07-23	17:00:00	62.7	--	--
2024-07-23	18:00:00	58.7	67.5	--
2024-07-24	09:00:00	61.9	--	--
2024-07-24	10:00:00	63.7	--	--
2024-07-24	11:00:00	64.2	--	--
2024-07-24	12:00:00	66.1	--	--
2024-07-24	13:00:00	57.6	--	--
2024-07-24	14:00:00	59.6	--	--
2024-07-24	15:00:00	62.2	--	--
2024-07-24	16:00:00	62.1	--	--
2024-07-24	17:00:00	67.1	--	--
2024-07-24	18:00:00	59.5	63.3	--
2024-07-25	09:00:00	71.4	--	--
2024-07-25	10:00:00	70.8	--	--
2024-07-25	11:00:00	76.0	--	--
2024-07-25	12:00:00	76.4	--	--
2024-07-25	13:00:00	69.2	--	--
2024-07-25	14:00:00	65.9	--	--
2024-07-25	15:00:00	63.1	--	--
2024-07-25	16:00:00	63.3	--	--
2024-07-25	17:00:00	64.1	--	--
2024-07-25	18:00:00	59.2	71.1	--
2024-07-26	09:00:00	69.8	--	--
2024-07-26	10:00:00	74.8	--	--
2024-07-26	11:00:00	72.5	--	--
2024-07-26	12:00:00	62.0	--	--
2024-07-26	13:00:00	56.9	--	--
2024-07-26	14:00:00	59.8	--	--
2024-07-26	15:00:00	61.6	--	--
2024-07-26	16:00:00	62.1	--	--
2024-07-26	17:00:00	67.8	--	--
2024-07-26	18:00:00	56.4	68.4	--
2024-07-27	09:00:00	52.5	--	--
2024-07-27	10:00:00	52.4	--	--
2024-07-27	11:00:00	54.9	--	--
2024-07-27	12:00:00	54.8	--	--
2024-07-27	13:00:00	54.3	--	53.9
2024-07-28	18:00:00	--	52.9	--
2024-07-29	09:00:00	66.1	--	--
2024-07-29	10:00:00	71.1	--	--
2024-07-29	11:00:00	71.8	--	--
2024-07-29	12:00:00	77.8	--	--
2024-07-29	13:00:00	74.7	--	--
2024-07-29	14:00:00	72.7	--	--
2024-07-29	15:00:00	69.8	--	--
2024-07-29	16:00:00	71.0	--	--
2024-07-29	17:00:00	72.9	--	--
2024-07-29	18:00:00	66.5	72.7	--
2024-07-30	09:00:00	65.5	--	--
2024-07-30	10:00:00	62.0	--	--
2024-07-30	11:00:00	62.8	--	--
2024-07-30	12:00:00	60.3	--	--
2024-07-30	13:00:00	59.9	--	--
2024-07-30	14:00:00	57.0	--	--
2024-07-30	15:00:00	59.4	--	--
2024-07-30	16:00:00	58.9	--	--
2024-07-30	17:00:00	64.8	--	--
2024-07-30	18:00:00	57.0	61.7	--
2024-07-31	09:00:00	61.9	--	--
2024-07-31	10:00:00	59.3	--	--
2024-07-31	11:00:00	65.2	--	--
2024-07-31	12:00:00	59.3	--	--
2024-07-31	13:00:00	55.8	--	--
2024-07-31	14:00:00	60.8	--	--
2024-07-31	15:00:00	61.3	--	--
2024-07-31	16:00:00	61.5	--	--
2024-07-31	17:00:00	62.6	--	--
2024-07-31	18:00:00	59.2	61.3	--
2024-08-01	09:00:00	59.8	--	--
2024-08-01	10:00:00	62.6	--	--
2024-08-01	11:00:00	67.1	--	--
2024-08-01	12:00:00	63.3	--	--
2024-08-01	13:00:00	61.1	--	--
2024-08-01	14:00:00	66.0	--	--
2024-08-01	15:00:00	64.9	--	--
2024-08-01	16:00:00	65.9	--	--
2024-08-01	17:00:00	65.3	--	--
2024-08-01	18:00:00	57.1	64.2	--
2024-08-02	09:00:00	66.1	--	--
2024-08-02	10:00:00	65.9	--	--
2024-08-02	11:00:00	66.9	--	--
2024-08-02	12:00:00	66.8	--	--
2024-08-02	13:00:00	73.1	--	--
2024-08-02	14:00:00	65.5	--	--
2024-08-02	15:00:00	68.2	--	--
2024-08-02	16:00:00	64.7	--	--
2024-08-02	17:00:00	61.2	--	--
2024-08-02	18:00:00	52.2	67.2	--
2024-08-03	09:00:00	54.8	--	--
2024-08-03	10:00:00	53.4	--	--
2024-08-03	11:00:00	52.6	--	--
2024-08-03	12:00:00	49.2	--	--
2024-08-03	13:00:00	51.4	--	52.7

Location 3 – Time-history graph



- Daily noise trigger level (75 dB LAeq,0800-1800 hours, LAeq,0800-1300 hours)
- - - Hourly noise action level (78 dB LAeq, 1 hour)
- Noise level, LAeq, 1hour
- Daily noise level (dB LAeq,0800-1800 hours, LAeq,0800-1300 hours)
- Data unavailable

3.12 There was 100% data coverage at Location 3 during construction hours for the monitoring period covered by this report.

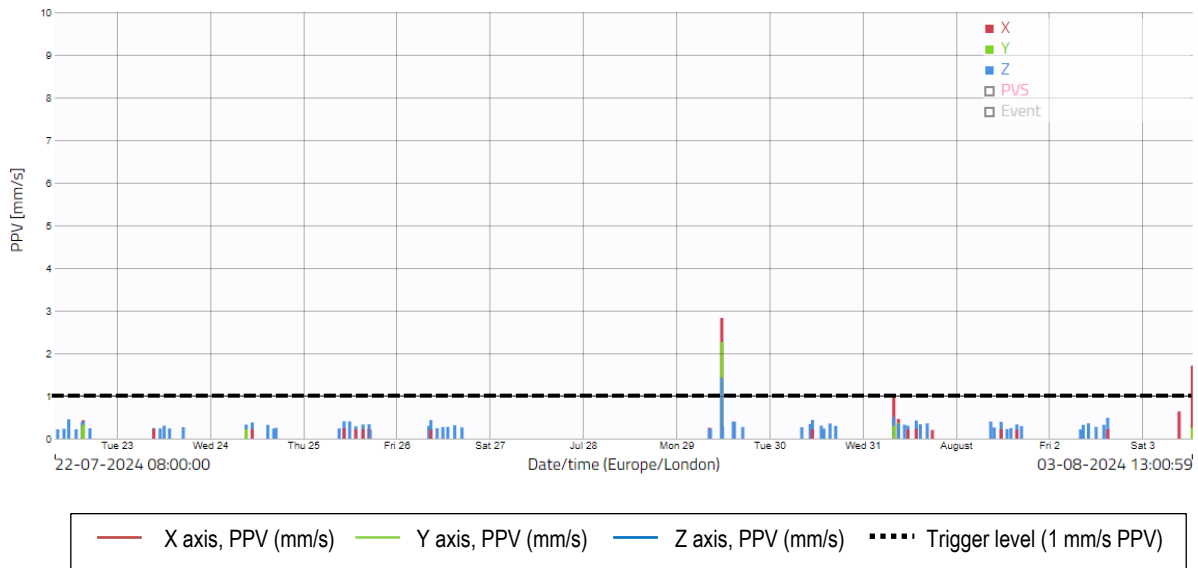
3.13 No exceedances of the project hourly noise criteria of 78 dB LAeq nor the daily project noise limit of 75 dB LAeq (0800-1800 hours) were recorded at this location during the monitoring period covered by this report.

Vibration Monitoring Results

Location 1 – Raw data

Measuring point:	Period:	Order	Value	Date	Time
Holloway - L1	22/07/2024 to 03/08/2024	1	2.83	29/07/2024	11:52
		2	1.71	03/08/2024	12:53
Criteria mm/s PVS	Exceedances	3	1.02	31/07/2024	08:03
1.0	3	4	0.64	03/08/2024	10:14
		5	0.49	02/08/2024	15:10
		6	0.46	31/07/2024	09:15
		7	0.45	22/07/2024	11:48
		8	0.44	30/07/2024	11:07
		9	0.43	26/07/2024	08:54
		10	0.43	22/07/2024	15:40

Location 1 – Time-history graph



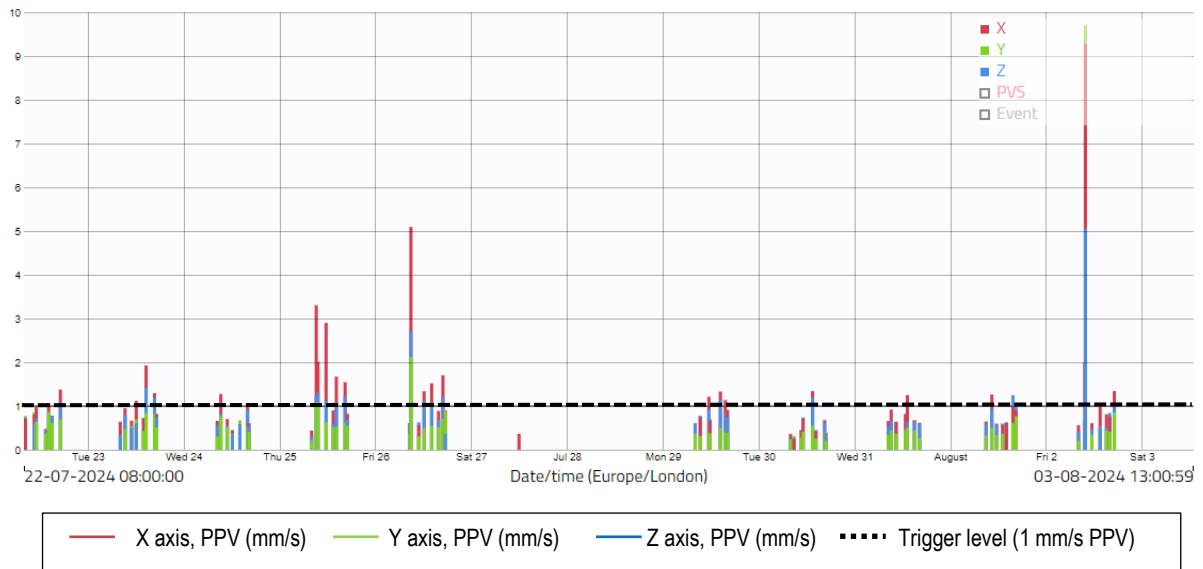
3.14 There was 100% data coverage at Location 1 during construction hours for the monitoring period covered by this report. There were three exceedances of the project vibration trigger level of 1 mm/s PPV as shown in the raw data and graph above. The highest recorded vibration level occurred on Monday 29th July at 11:52, with a recorded level of 2.83 mm/s PPV. It is worth noting from the raw data above that the exceedances were caused by individual, short-lived events, rather than continuous activity at this location. This will continue to be monitored.

3.15 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.

Location 2 – Raw data

Measuring point:	Period:	Order	Value	Date	Time	Order	Value	Date	Time	Order	Value	Date	Time
Holloway - L2	22/07/2024 to 03/08/2024	1	9.70	02/08/2024	09:54	31	1.37	22/07/2024	17:09	61	1.05	25/07/2024	09:21
		2	7.21	02/08/2024	10:29	32	1.36	25/07/2024	08:14	62	1.04	26/07/2024	16:34
Criteria mm/s PVS	Exceedances	3	5.09	26/07/2024	08:57	33	1.36	23/07/2024	14:53	63	1.04	01/08/2024	16:32
1.0	68	4	4.36	26/07/2024	08:55	34	1.34	02/08/2024	17:09	64	1.02	26/07/2024	17:02
		5	3.30	25/07/2024	09:14	35	1.34	30/07/2024	13:31	65	1.01	25/07/2024	09:24
		6	2.90	25/07/2024	11:42	36	1.34	26/07/2024	12:15	66	1.01	02/08/2024	13:36
		7	2.67	25/07/2024	09:15	37	1.33	29/07/2024	14:28	67	1.01	26/07/2024	09:44
		8	2.39	25/07/2024	11:40	38	1.31	02/08/2024	17:06	68	1.00	01/08/2024	16:17
		9	2.10	25/07/2024	09:13	39	1.30	23/07/2024	16:44	69	0.99	23/07/2024	14:44
		10	2.01	25/07/2024	09:41	40	1.30	30/07/2024	13:33	70	0.99	24/07/2024	16:02
		11	1.99	02/08/2024	09:44	41	1.27	24/07/2024	09:20	71	0.99	23/07/2024	16:02
		12	1.93	23/07/2024	14:37	42	1.26	01/08/2024	10:28	72	0.98	22/07/2024	11:07
		13	1.82	25/07/2024	09:18	43	1.25	31/07/2024	13:18	73	0.98	26/07/2024	09:49
		14	1.73	25/07/2024	11:41	44	1.25	01/08/2024	15:45	74	0.98	25/07/2024	14:28
		15	1.70	26/07/2024	16:58	45	1.24	23/07/2024	16:05	75	0.98	25/07/2024	09:20
		16	1.67	26/07/2024	09:52	46	1.21	25/07/2024	14:27	76	0.97	01/08/2024	15:44
		17	1.67	25/07/2024	14:17	47	1.21	29/07/2024	11:35	77	0.97	25/07/2024	11:43
		18	1.62	25/07/2024	09:23	48	1.21	01/08/2024	09:56	78	0.97	22/07/2024	16:43
		19	1.61	26/07/2024	08:58	49	1.21	02/08/2024	09:41	79	0.97	01/08/2024	10:31
		20	1.58	02/08/2024	09:43	50	1.21	30/07/2024	13:34	80	0.95	23/07/2024	14:31
		21	1.55	25/07/2024	08:54	51	1.17	25/07/2024	11:27	81	0.95	23/07/2024	09:21
		22	1.54	25/07/2024	16:28	52	1.14	25/07/2024	09:22	82	0.95	26/07/2024	08:56
		23	1.53	25/07/2024	09:11	53	1.14	29/07/2024	15:42	83	0.95	23/07/2024	17:01
		24	1.52	26/07/2024	14:09	54	1.12	23/07/2024	12:09	84	0.94	01/08/2024	09:55
		25	1.48	23/07/2024	14:36	55	1.10	25/07/2024	11:21	85	0.94	01/08/2024	15:58
		26	1.47	23/07/2024	14:58	56	1.10	29/07/2024	11:34	86	0.93	25/07/2024	11:29
		27	1.47	23/07/2024	14:49	57	1.09	25/07/2024	09:19	87	0.93	26/07/2024	08:59
		28	1.44	26/07/2024	13:38	58	1.09	02/08/2024	09:04	88	0.93	25/07/2024	09:12
		29	1.43	02/08/2024	09:47	59	1.07	23/07/2024	14:32	89	0.92	31/07/2024	09:15
		30	1.37	02/08/2024	09:46	60	1.06	22/07/2024	14:13	90	0.92	22/07/2024	11:39

Location 2 – Time-history graph



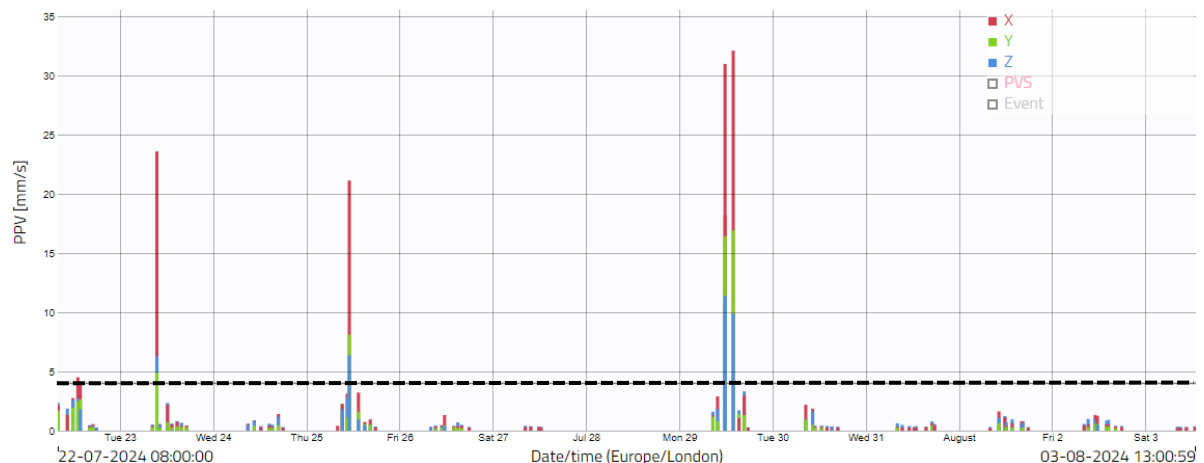
3.16 There was 100% data coverage at Location 2 during construction hours for the monitoring period covered by this report. There were 68 exceedances of the project vibration trigger level of 1 mm/s PPV as shown in the raw data and graph above. The highest recorded vibration level occurred on Friday 2nd August at 09:54, with a recorded level of 9.7 mm/s PPV.

- 3.17 Based on the activity taking place in the vicinity of the monitor during this monitoring period, it is likely that these alerts may have been caused by the excavation of the crane base between Blocks E1 & E2, as well as the movement of site vehicles within the vicinity of this monitor. It is understood that no complaints have been received in relation to vibration at this location – this will continue to be monitored.
- 3.18 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	22/07/2024 to 03/08/2024	1	32.13	29/07/2024	13:55	31	4.92	23/07/2024	09:11	61	3.06	29/07/2024	11:43
		2	31.00	29/07/2024	11:48	32	4.84	23/07/2024	09:07	62	2.96	29/07/2024	17:09
Criteria mm/s PVS	Exceedances	3	23.61	23/07/2024	09:32	33	4.57	23/07/2024	09:13	63	2.90	29/07/2024	09:53
4.0	43	4	21.14	25/07/2024	11:05	34	4.54	25/07/2024	11:20	64	2.86	25/07/2024	10:40
		5	18.22	29/07/2024	11:49	35	4.51	25/07/2024	11:04	65	2.86	25/07/2024	10:29
		6	17.93	29/07/2024	12:13	36	4.51	22/07/2024	13:12	66	2.86	25/07/2024	10:39
		7	17.18	29/07/2024	13:54	37	4.48	23/07/2024	09:30	67	2.85	25/07/2024	13:25
		8	15.96	29/07/2024	13:53	38	4.32	29/07/2024	11:42	68	2.85	23/07/2024	09:26
		9	14.75	29/07/2024	13:56	39	4.15	29/07/2024	12:02	69	2.84	29/07/2024	11:27
		10	13.46	29/07/2024	11:50	40	4.13	22/07/2024	13:52	70	2.81	29/07/2024	11:11
		11	11.92	25/07/2024	11:59	41	4.10	22/07/2024	13:33	71	2.80	29/07/2024	12:36
		12	11.84	29/07/2024	12:06	42	4.07	23/07/2024	09:10	72	2.75	22/07/2024	11:56
		13	11.51	29/07/2024	12:09	43	4.04	23/07/2024	09:28	73	2.66	29/07/2024	11:26
		14	10.52	29/07/2024	12:12	44	3.95	25/07/2024	11:54	74	2.57	23/07/2024	09:24
		15	10.28	23/07/2024	09:31	45	3.91	23/07/2024	09:27	75	2.55	29/07/2024	12:18
		16	9.86	29/07/2024	12:10	46	3.88	25/07/2024	11:12	76	2.51	29/07/2024	16:38
		17	9.41	29/07/2024	12:11	47	3.73	22/07/2024	13:25	77	2.47	25/07/2024	13:24
		18	9.22	25/07/2024	11:07	48	3.71	23/07/2024	09:14	78	2.41	22/07/2024	12:25
		19	9.07	29/07/2024	11:58	49	3.59	29/07/2024	12:34	79	2.34	23/07/2024	12:17
		20	7.95	25/07/2024	11:53	50	3.57	29/07/2024	11:12	80	2.34	22/07/2024	08:11
		21	7.38	25/07/2024	11:56	51	3.54	23/07/2024	09:17	81	2.27	25/07/2024	09:15
		22	7.11	25/07/2024	11:06	52	3.44	23/07/2024	09:21	82	2.26	22/07/2024	12:14
		23	6.78	25/07/2024	11:57	53	3.34	23/07/2024	09:12	83	2.25	25/07/2024	12:02
		24	6.28	29/07/2024	10:34	54	3.32	29/07/2024	16:45	84	2.24	23/07/2024	09:18
		25	6.15	25/07/2024	12:00	55	3.28	29/07/2024	12:14	85	2.24	22/07/2024	13:34
		26	5.47	23/07/2024	09:29	56	3.23	29/07/2024	12:03	86	2.21	29/07/2024	17:11
		27	5.42	25/07/2024	11:21	57	3.21	25/07/2024	13:28	87	2.20	25/07/2024	10:41
		28	5.41	23/07/2024	09:09	58	3.14	25/07/2024	10:35	88	2.19	30/07/2024	08:35
		29	5.18	23/07/2024	09:20	59	3.11	25/07/2024	10:34	89	2.16	29/07/2024	10:47
		30	5.16	25/07/2024	11:51	60	3.10	29/07/2024	16:44	90	2.15	29/07/2024	11:59

Location 3 – Time-history graph



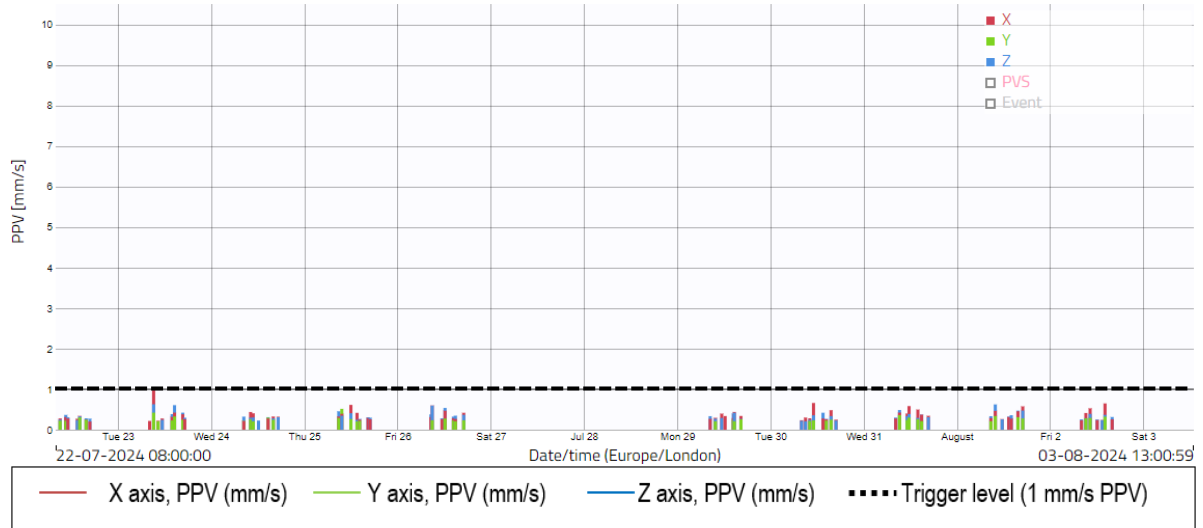
— X axis, PPV (mm/s) — Y axis, PPV (mm/s) — Z axis, PPV (mm/s) - - - - Trigger level (4 mm/s PPV)

- 3.19 There was 100% data coverage at Location 3 during construction hours for the monitoring period covered by this report. There were 43 exceedances of the project vibration trigger level of 4.0 mm/s PPV, which are shown in the raw data and graph above. The highest recorded vibration level occurred on Monday 29th July at 13:55, with a recorded level of 32.1 mm/s PPV. Site management have confirmed that the tarmac was installed on the site road over the course of this day. It is possible that this may have caused the exceedance.
- 3.20 It is understood several of the recorded exceedances were likely to have been caused onsite vehicles moving material within the vicinity of the monitor. It is possible that any of 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). Furthermore, the temporary surface installation at the haulage road is also likely to have contributed to the recorded alerts.
- 3.21 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.
- 3.22 It is understood that no complaints have been received in relation to vibration emissions within the vicinity of this location. This will continue to be monitored. 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	22/07/2024 to 03/08/2024	1	0.98	23/07/2024	09:14
		2	0.66	30/07/2024	11:09
Criteria mm/s PVS	Exceedances	3	0.65	02/08/2024	14:10
1.0	0	4	0.62	01/08/2024	09:55
		5	0.61	25/07/2024	12:01
		6	0.61	23/07/2024	14:37
		7	0.60	26/07/2024	08:53
		8	0.59	30/07/2024	11:11
		9	0.59	26/07/2024	08:57
		10	0.58	31/07/2024	11:43

Location 4 – Time-history graph



3.23 There was 100% data coverage at Location 4 during construction hours for the monitoring period covered by this report. There were no 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 occurred on Tuesday 23rd July at 09:14, with a recorded level of 0.98 mm/s PPV.