
High Speed Rail (London-West Midlands)

Noise! «^a ¥«® ¥ £&¡ ¬«®

National Temperance Hospital

May 2017





Department for Transport

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Unattended Noise Monitoring Report

Period: 1 May to 31 May 2017

Project No EEMC/065/2016

Report No. EEMC-NTH-065.021 – NTH, HS2 Rev 00

Client: Keltbray Limited

Title: EEMC/065-021-NTH, HS2 - Unattended Noise Monitoring Report No.21

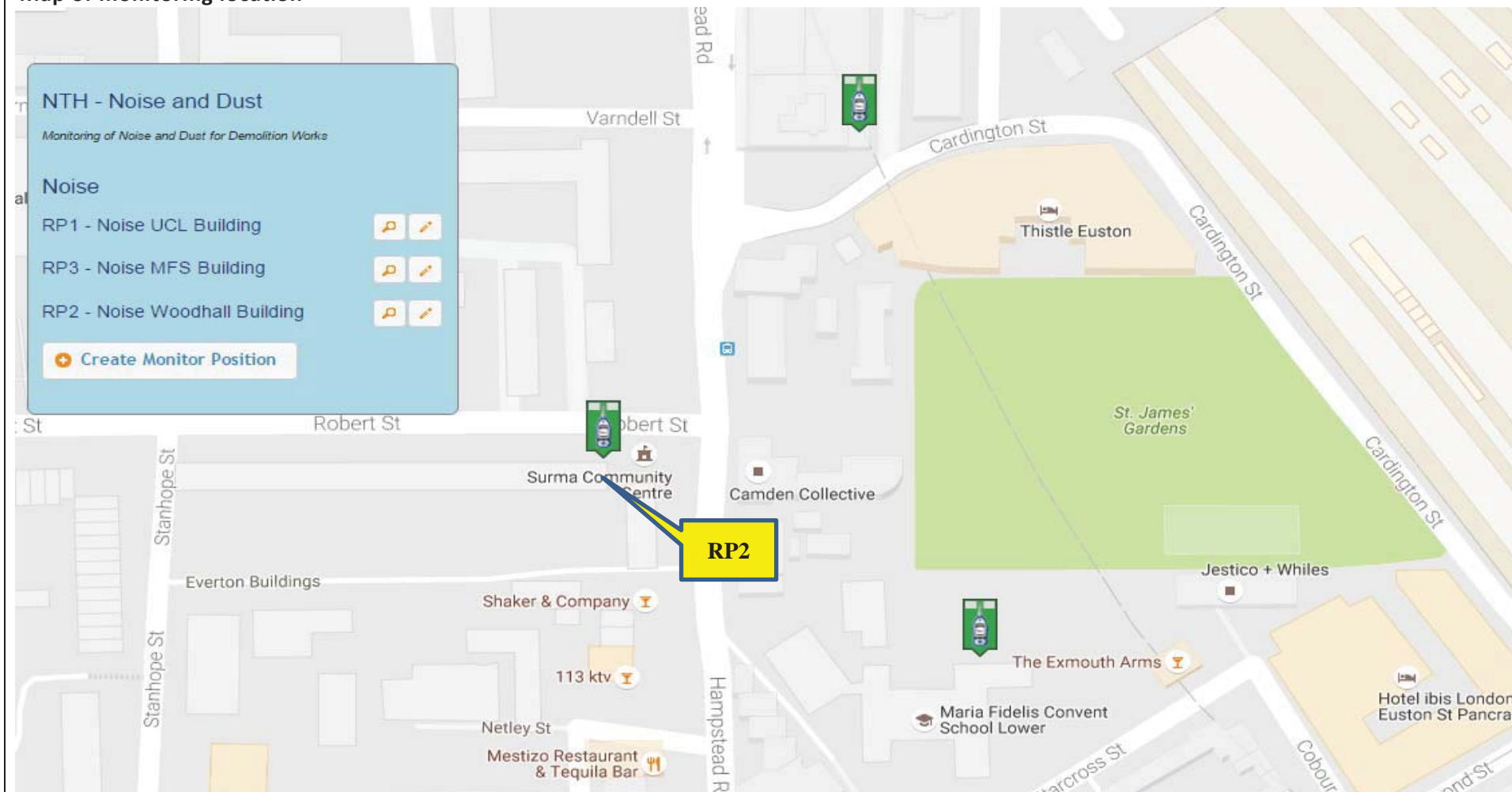
Period: 1 May - 31 May 2017

Details of Noise Monitor at Receptor Point (RP2)

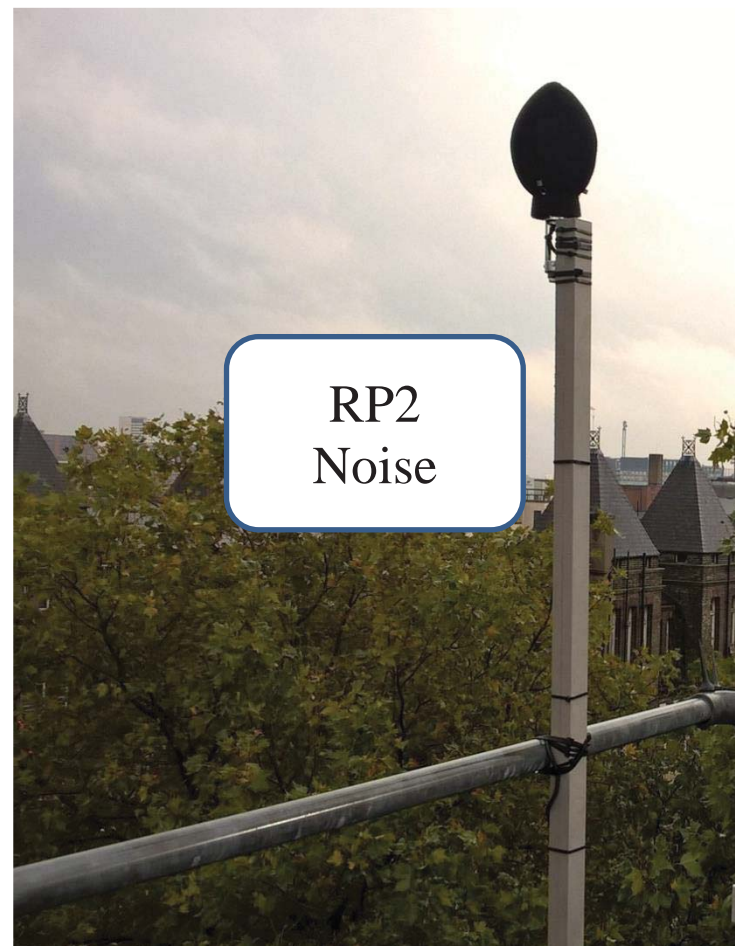
ID Reference	RP2
Location	Terrace of Woodhall residential block (Hampstead Road/Robert Street intersection)
Instrument:	Rion NL-52
Serial Number:	00654028
Installation Date:	13/10/2016
Laboratory Calibration: See attached certificate (Appendix 1)	03/10/2016 UCRT16/1296

NOTE: RP1 was removed from 132 Hampstead Road at the request of University College London with agreement from London Borough of Camden

Map of monitoring location



Photos of monitor



1.0 Introduction

European Environmental Monitoring and Consultancy (EEMC) Limited is appointed by Keltbray to undertake environmental monitoring for the demolition works phase at the National Temperance Hospital project located in the London Borough of Camden (LBC). Noise monitoring equipment has been installed at three locations and measured levels are to be recorded continuously.

This report details the unattended noise data measured and recorded in the period from 1 May to 31 May 2017 at RP2. This report should be read with the section 61 Application submitted to LBC for the National Temperance Hospital demolition works.

Site operations will be limited to 08:00-18:00 hours Monday to Friday and 08:00-13:00 hours on Saturday with no works on Sundays or public holidays.

This report presents the noise levels (LAeqT) measured and recorded at position RP2 during demolition associated activities on the site.

The potentially noisy works on site in this period were:

- External Scaffold dismantled on Cardington street and Hampstead road
- Basement backfill of main building North
- Party wall weather proofing complete
- Basement backfill of main building West
- Basement backfilling of main building East
- Concrete 200m³ of vaults under Cardington street
- Demolition of link bridge to the Insull wing
- Tunnel demolition and backfill
- Demobilizing the site

The site is in the London Borough of Camden (LBC). The surrounding area is populated by residential blocks, several types of businesses such as hotels, a community center and the Maria Fidelis School and UCL, all of which could be affected by demolition and associated activities.

2.0 Instrumentation

All noise monitoring units are Rion NL-52 Class 1 noise monitoring systems housed in a weather proof environmental hard case and an all-weather protected remote microphone (see photo). Calibration certificates for the noise monitoring system is attached as Annex 1.

3.0 Methodology

Keltbray requested (EEMC) Limited to undertake unattended noise monitoring at three agreed locations near the site. Noise trigger action levels were agreed with the Environmental Health Officer (EHO) of Camden. The unattended noise monitoring presented in this report was undertaken while early demolition activity was ongoing on site. All results are presented (LAeq1hour).

Noise levels have been recorded for the measurement periods of 08.00 to 18.00 Monday to Friday and 08.00 to 13.00 on Saturdays. These times have been agreed with LBC to be the core hours within which noisy demolition activities can proceed. The agreed action level at RP2 is 71dBLAeq10hour.

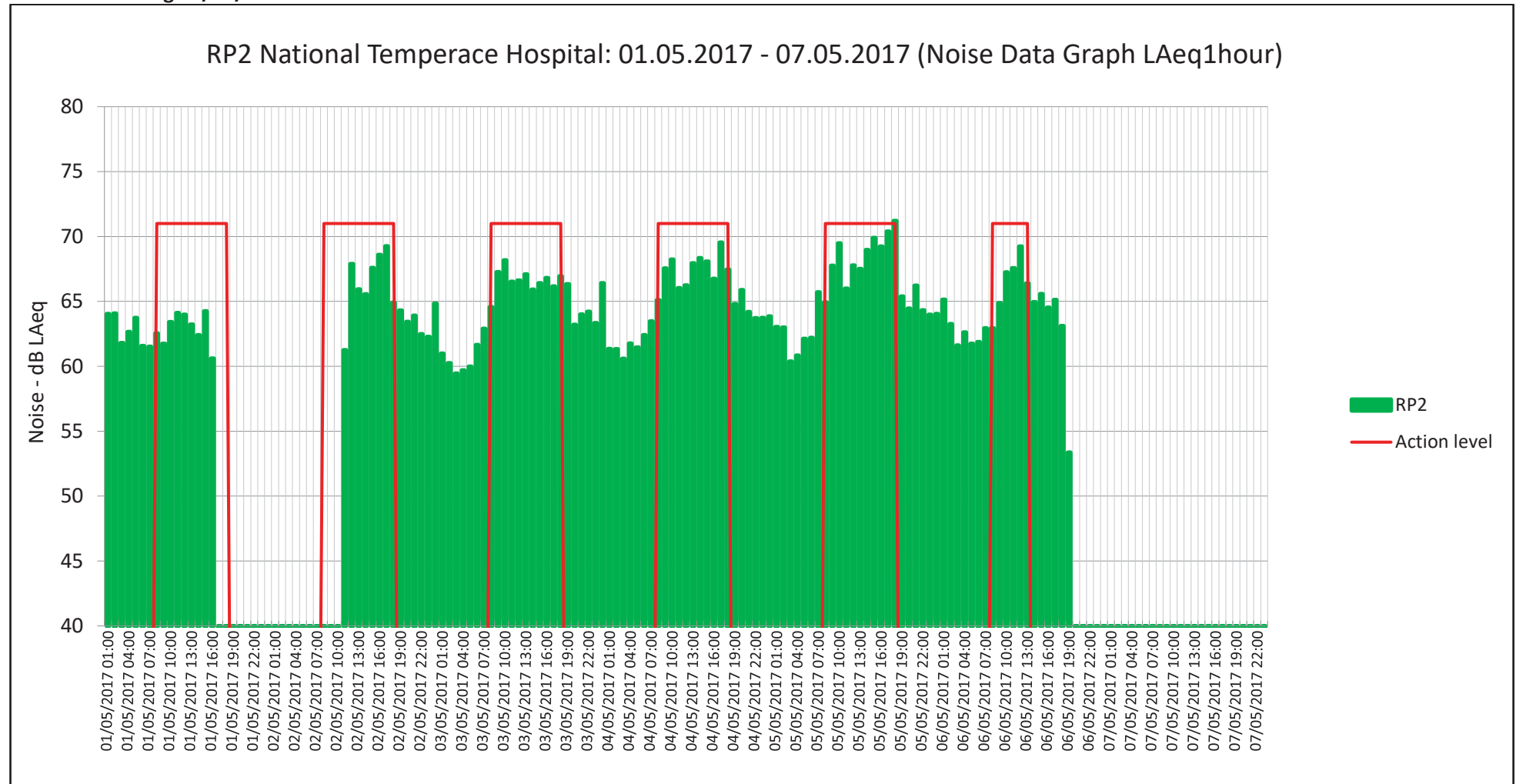
The measured unattended noise levels will be used to compare with the 71dBLAeq10hour agreed action level during the demolition activities.

4.0 Measurement Results

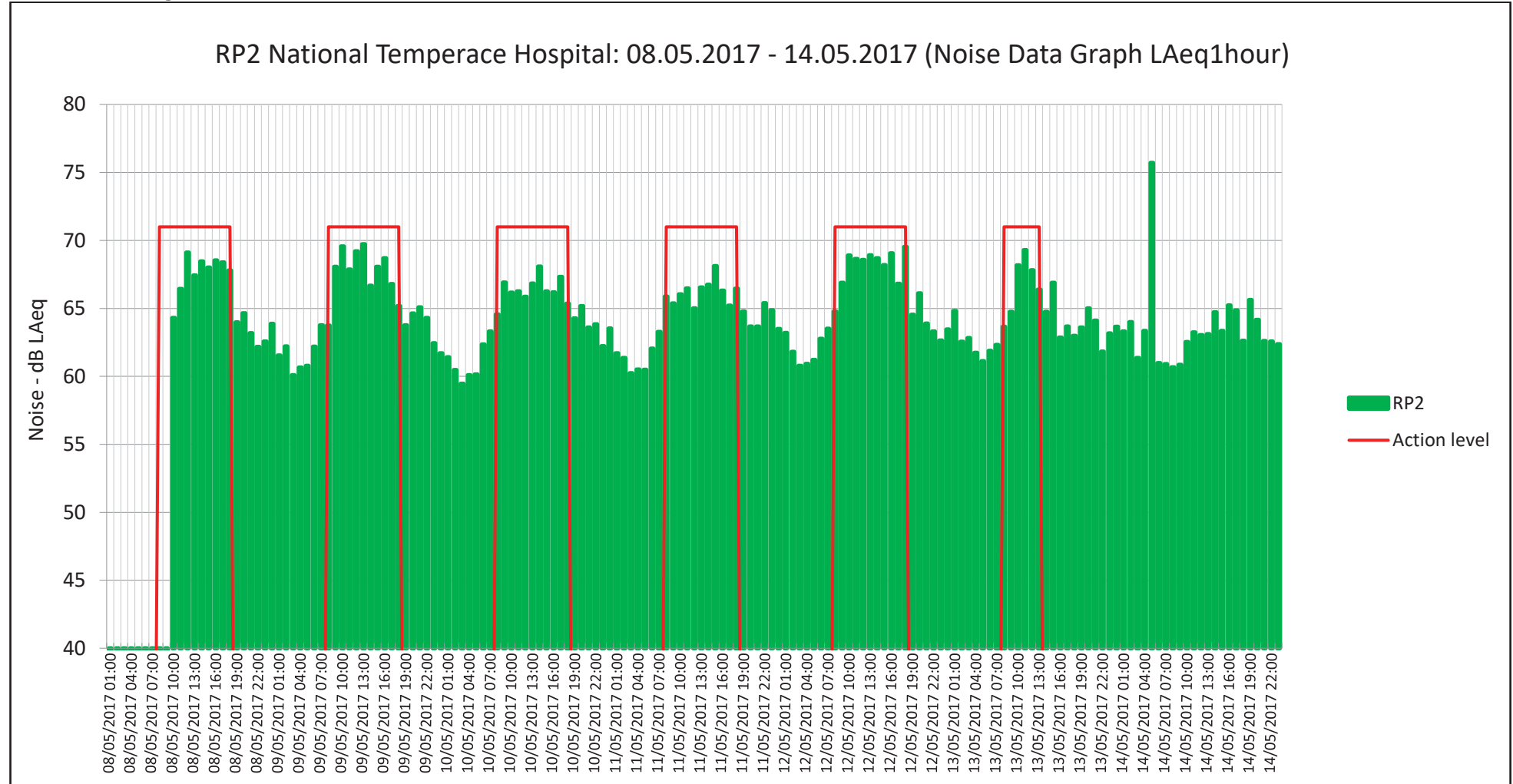
The recorded unattended noise measurements in this period are presented as graphs in section 5.0 of this report using LAeq1hour data points.

5.0 Noise Monitoring Graphs

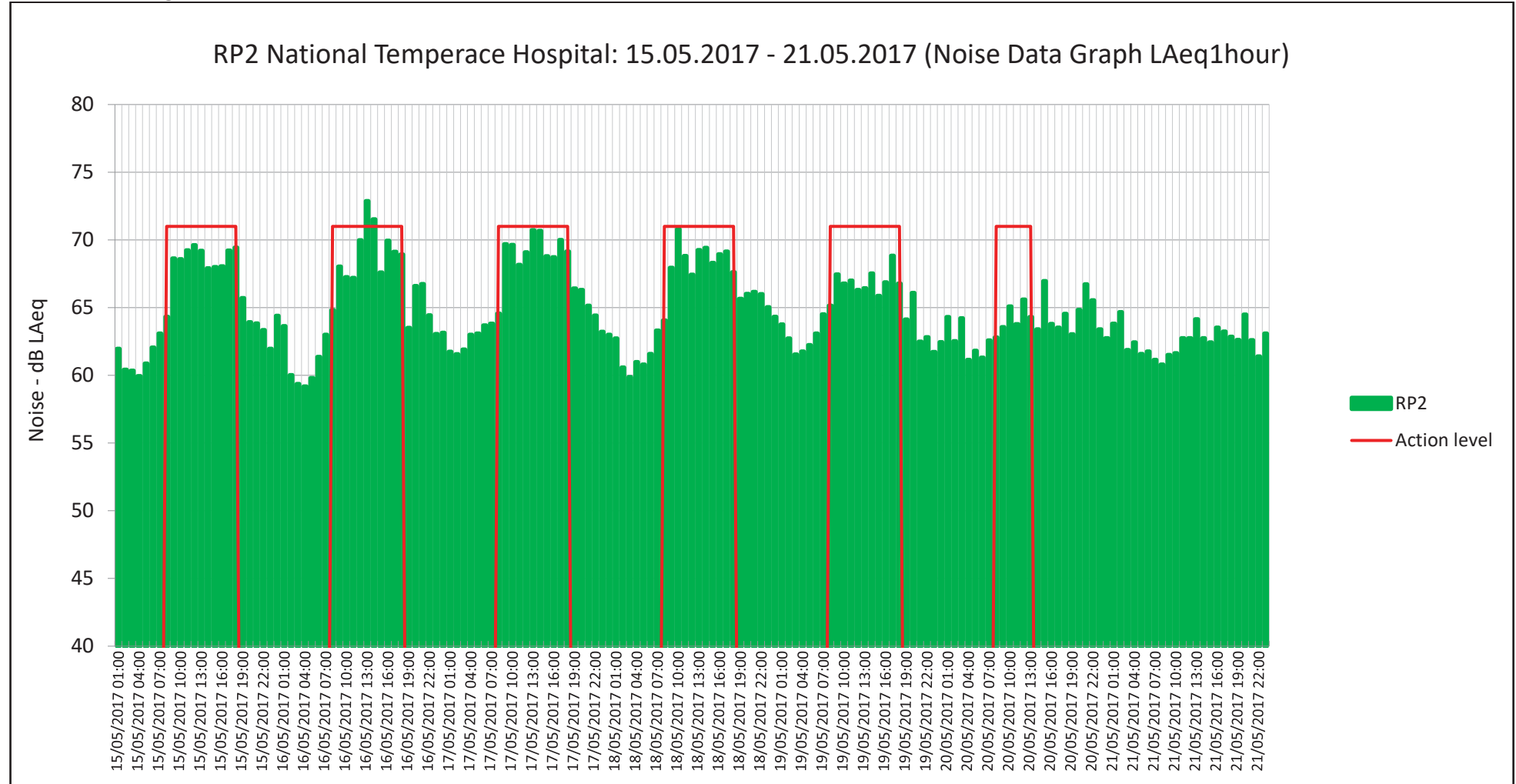
RP2 Week ending 07/05/17



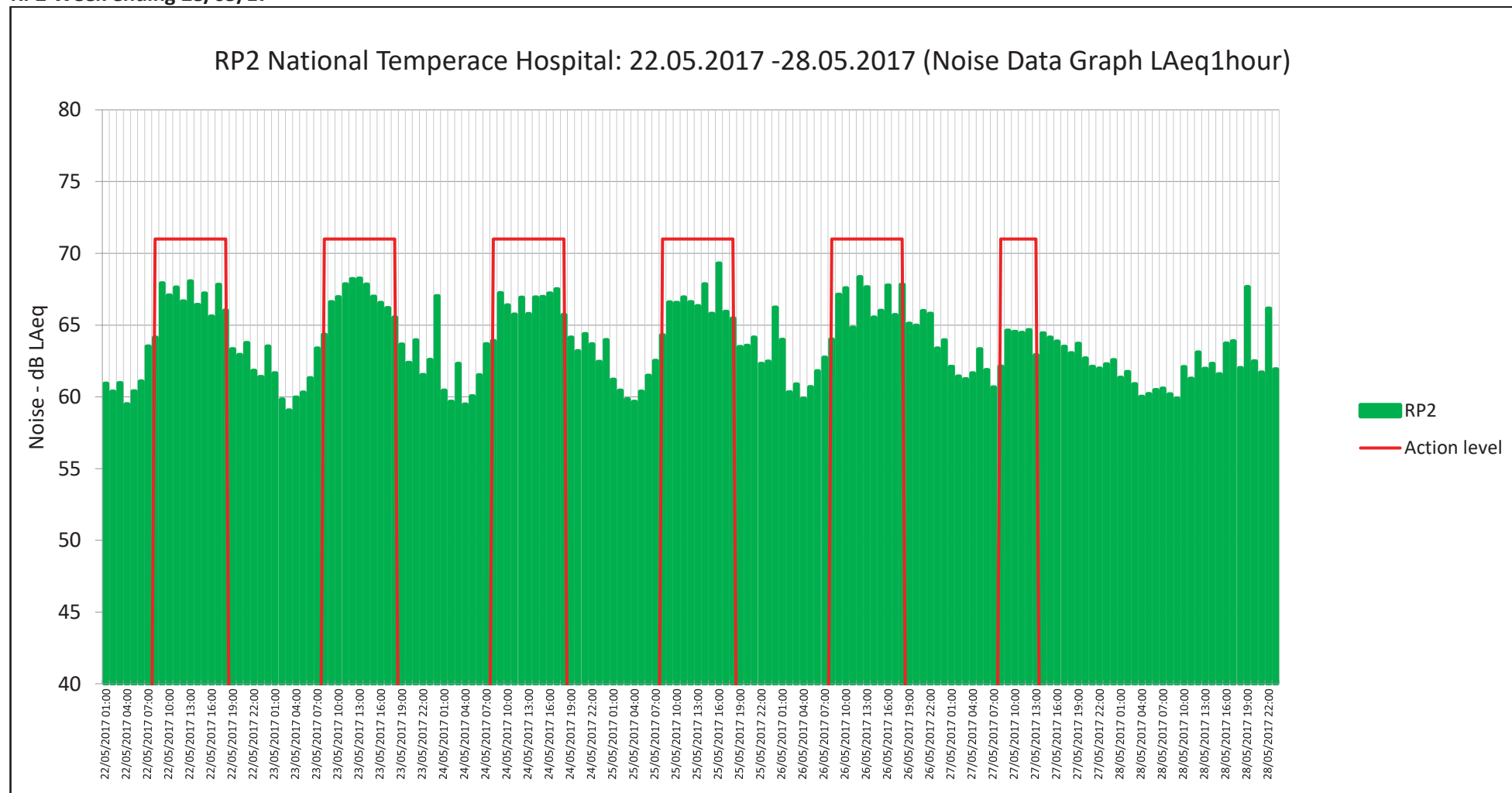
RP2 Week ending 14/05/17



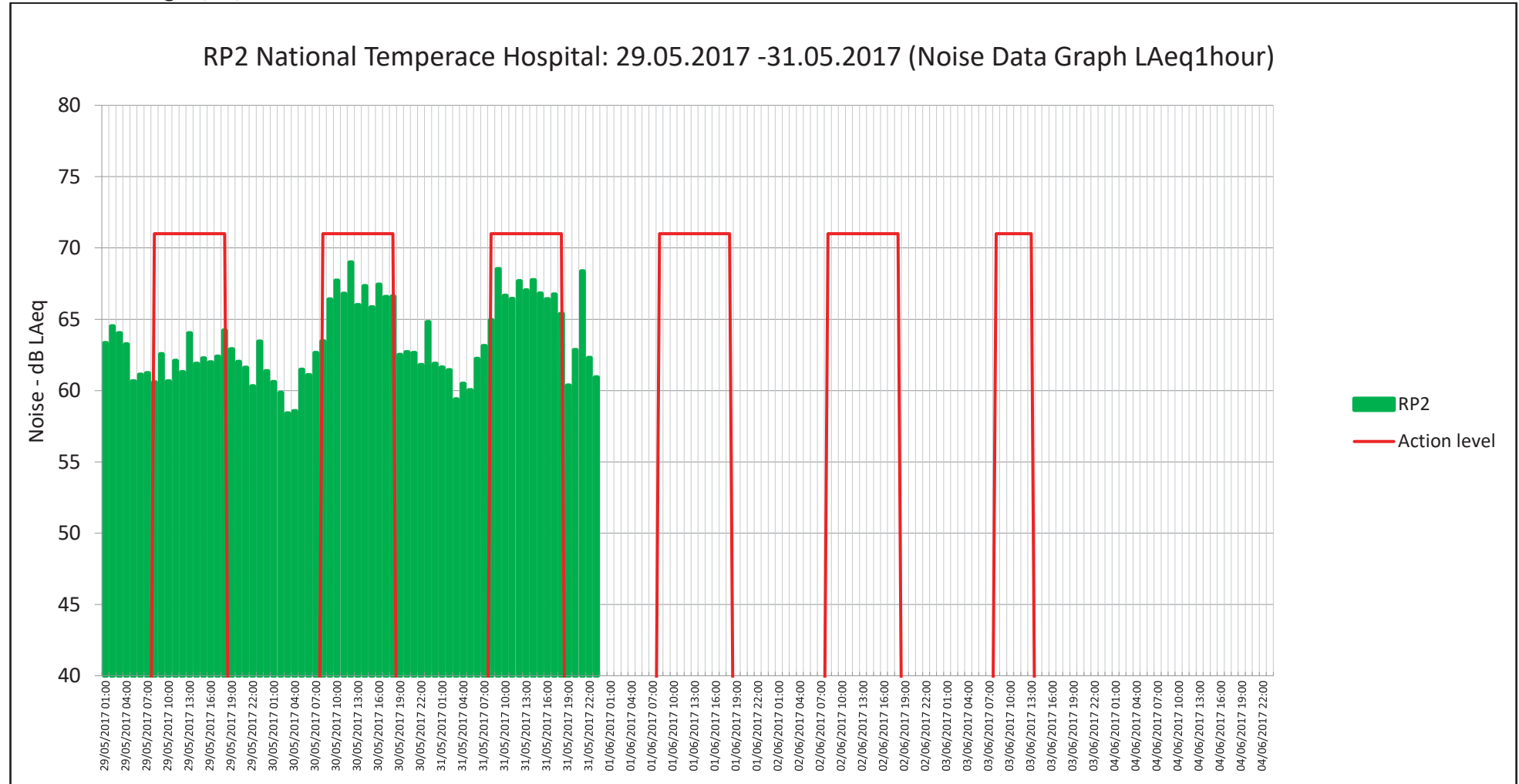
RP2 Week ending 21/05/17



RP2 Week ending 28/05/17



RP2 Week ending 31/05/17



6.0 Discussion

Unattended ambient noise monitoring has been undertaken for the demolition activities at the National Temperance Hospital at position RP2.

The activities in this period from 1 May to 31 May 2017 are given in section 1 of this report.

The unattended and recorded measured noise levels are presented graphically in this report.

The daily LAeq10hour from 08.00 to 18.00 Monday to Friday, the LAeq5hour from 08.00 to 13.00 on Saturday and the LAeq1hour shoulder hours were as Tables 6.1 to 6.5:

dBLAeq10hours						dBLAeq5hours
Date	01/05/2017	02/05/2017	03/05/2017	04/05/2017	05/05/2017	06/05/2017
RP2	62.15	65.96	66.83	67.73	69.07	67.29
Action Level	71	71	71	71	71	71
dBLAeq1hour						
7 - 8 AM	62.53	0.00	64.57	65.10	64.92	62.94
6 - 7 PM	0.00	64.31	66.34	64.80	65.38	64.95

Table 6.1

dBLAeq10hours						dBLAeq5hours
Date	08/05/2017	09/05/2017	10/05/2017	11/05/2017	12/05/2017	13/05/2017
RP2	67.34	68.18	66.59	66.32	68.50	67.55
Action Level	71	71	71	71	71	71
dBLAeq1hour						
7 - 8 AM	0.00	63.74	64.56	65.88	64.77	63.65
6 - 7 PM	63.98	63.76	64.27	64.77	64.55	64.77

Table 6.2

dBLAeq10hours						dBLAeq5hours
Date	15/05/2017	16/05/2017	17/05/2017	18/05/2017	19/05/2017	20/05/2017
RP2	68.83	69.64	69.54	68.88	67.07	64.54
Action Level	71	71	71	71	71	71
dBLAeq1hour						
7 - 8 AM	64.33	64.83	64.57	64.05	65.14	62.80
6 - 7 PM	65.71	63.51	66.41	65.66	64.14	63.40

Table 6.3

dBLAeq10hours						dBLAeq5hours
Date	22/05/2017	23/05/2017	24/05/2017	25/05/2017	26/05/2017	27/05/2017
RP2	67.11	67.18	66.68	66.87	66.97	64.28
Action Level	71	71	71	71	71	71
dBLAeq1hour						
7 - 8 AM	64.13	64.33	63.88	64.28	64.00	62.11
6 - 7 PM	63.32	63.64	64.12	63.47	65.09	64.43

Table 6.4

dBLAeq10hours						dBLAeq5hours
Date	29/05/2017	30/05/2017	31/05/2017			
RP2	62.46	67.06	67.02			
Action Level	71	71	71			
dBLAeq1hour						
7 - 8 AM	60.59	63.46	64.94			
6 - 7 PM	62.90	62.50	60.36			

Table 6.5

Due to power problems, no data was recorded between 1 May 17:00 and 2 May 10:00, and between 6 May 20:00 and 8 May 9:00.

No exceedances of the 71dBLAeq10h action level occurred during this measurement period.

7. Complaints

There have been no noise related complaints received from the beginning to the end of the demolition project directly by either Keltbray project delivery team at NTH or by (EEMC) Ltd.

Unattended Noise Monitoring Report

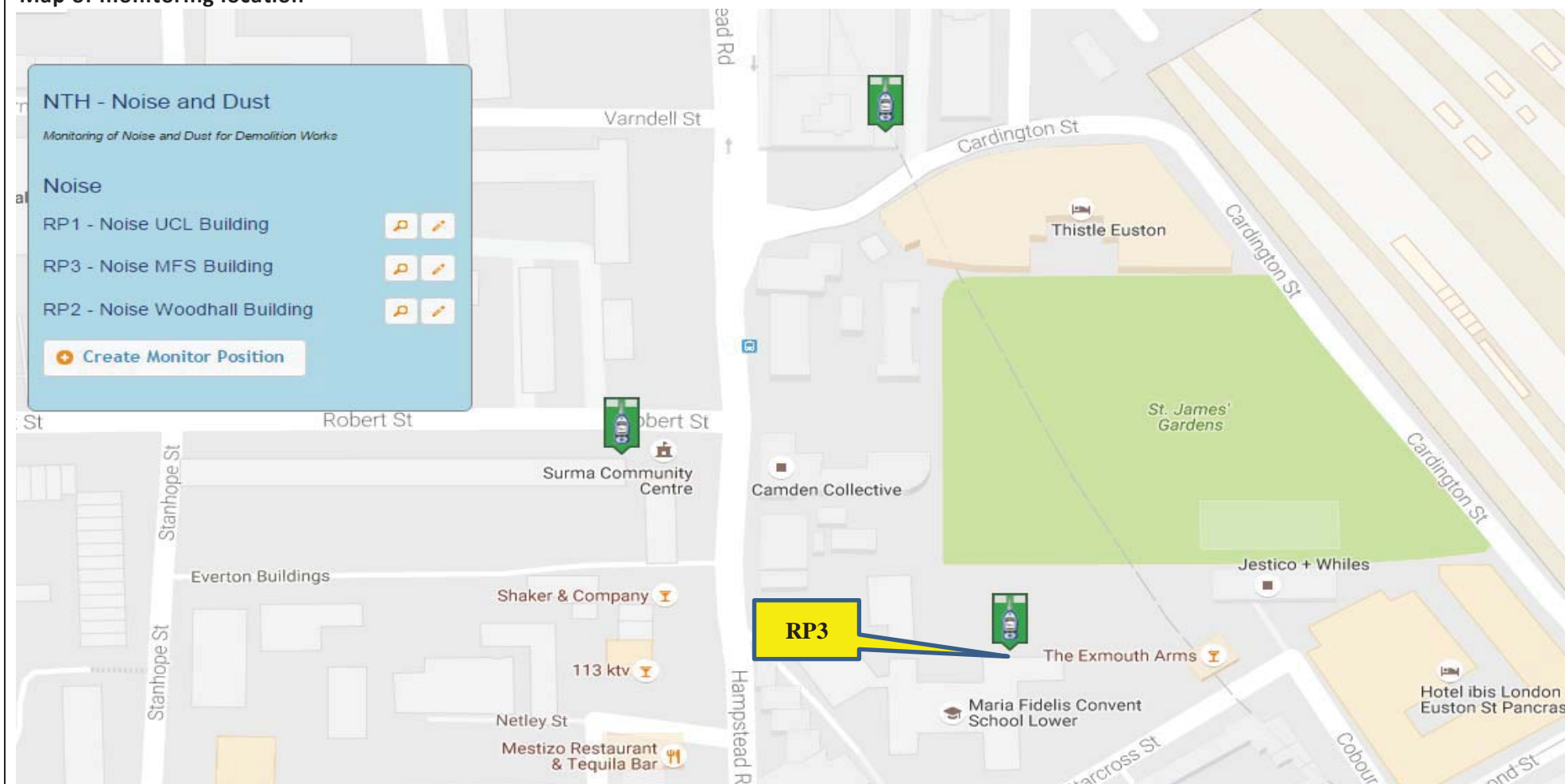
Period: 1 May to 31 May 2017

Project No. EEMC/065/2016
Report No. EEMC-NTH-065.022 – NTH, HS2 Rev 00
Client: Keltbray Limited
Title: EEMC/065-022-NTH, HS2 - Unattended Noise Monitoring Report No.22
Period: 1 May – 31 May 2017

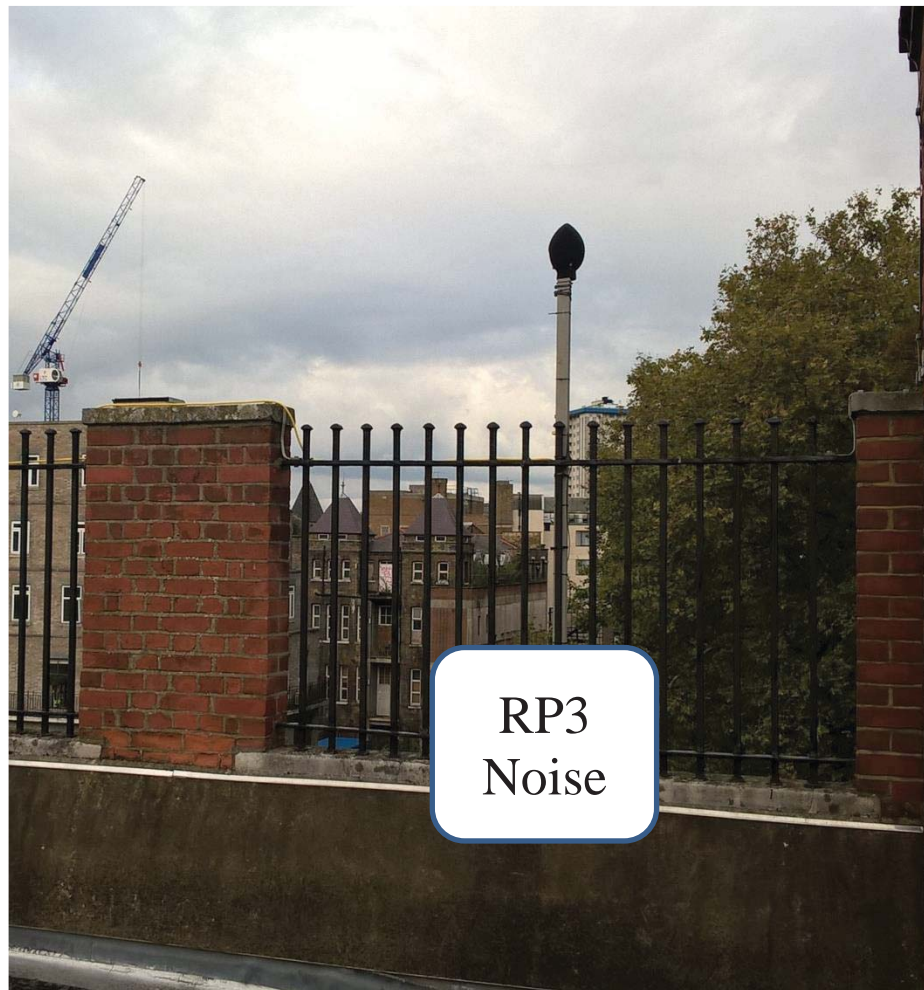
Details of Noise Monitor at Receptor Point (RP3)

ID Reference	RP3
Location	Maria Fidelis School (Terrace of Classroom 22)
Instrument:	Rion NL-52
Serial Number:	00553874
Installation Date:	12/10/2016
Laboratory Calibration: See attached certificate (Appendix 1)	03/10/2016 UCRT16/1300

Map of monitoring location



Photos of monitor



1.0 Introduction

European Environmental Monitoring and Consultancy (EEMC) Limited is appointed by Keltbray to undertake environmental monitoring for the demolition works phase at the National Temperance Hospital project located in London Borough of Camden (LBC). Noise monitoring equipment has been installed at three locations and measured noise levels are to be recorded continuously.

This report presents the unattended noise data measured and recorded in the period from 1 May to 31 May 2017. This report should be read in conjunction with the s61 Application submitted to LBC for the National Temperance Hospital demolition works and the Trigger Action Plan (TAP) for position RP3 at the Maria Fidelis School.

Site operations will be limited to 08:00-18:00 hours Monday to Friday and 08:00-13:00 hours on Saturday with no works on Sundays or public holidays.

This report presents the noise levels measured and recorded at position RP3 during demolition associated activities.

- External Scaffold dismantled on Cardington street and Hampstead road
- Basement backfill of main building North
- Party wall weather proofing complete
- Basement backfill of main building West
- Basement backfilling of main building East
- Concrete 200m³ in vaults under Cardington street
- Demolition of link bridge to the Insull wing
- Tunnel demolition and backfill
- Demobilizing the site

The site is in the London Borough of Camden (LBC). The surrounding area is populated by residential blocks, various types of businesses such as hotels, a community center and the Maria Fidelis School and UCL, all of which could be affected by demolition and associated activities.

2.0 Instrumentation

All noise monitoring units are Rion NL-52 Class 1 noise monitoring systems enclosed in a weather proof environmental hard case and with an all-weather protected remote microphone (see photo). Calibration certificates for the noise monitoring system is attached as Annex 1.

3.0 Methodology

Keltbray requested (EEMC) Limited to undertake unattended noise monitoring at three agreed locations near the works, including the unattended noise levels prior to demolition works. Prior to the start of demolition works the trigger action noise levels were agreed with the Environmental Health Officer (EHO) of Camden. The unattended noise monitoring presented in this report was undertaken during demolition and associated activity on site. All results are recorded (LAeqT) by data logging equipment within each unit.

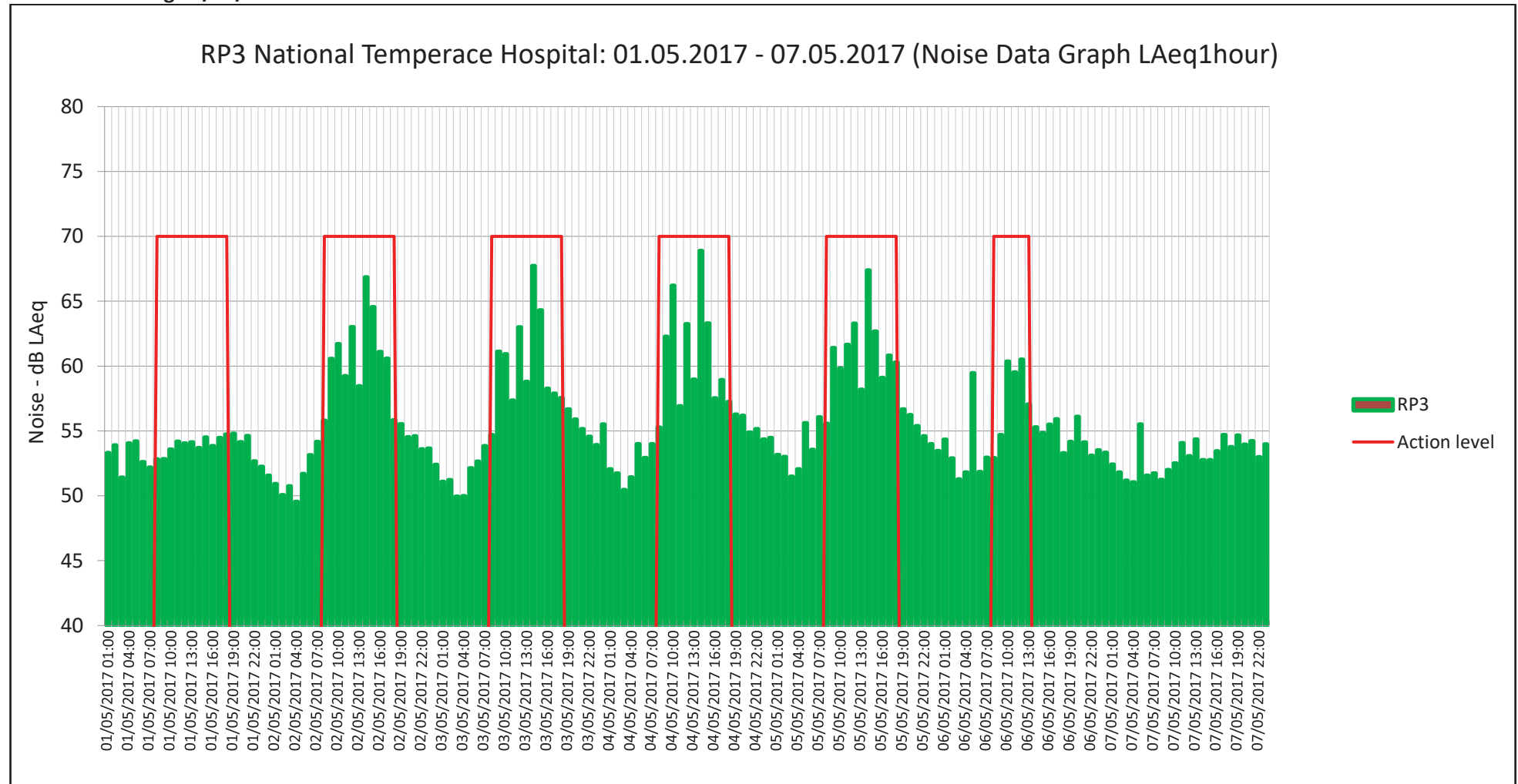
Noise levels have been recorded for the measurement periods of 08.00 to 18.00 Monday to Friday and 08.00 to 13.00 on Saturdays. These times have been agreed with LBC to be the core hours within which noisy demolition activities can proceed. The agreed action levels at RP3 are 63dBLAeq10hour and 73dBLAeq30min.

The measured and recorded unattended noise levels can be used to compare with the trigger action noise levels.

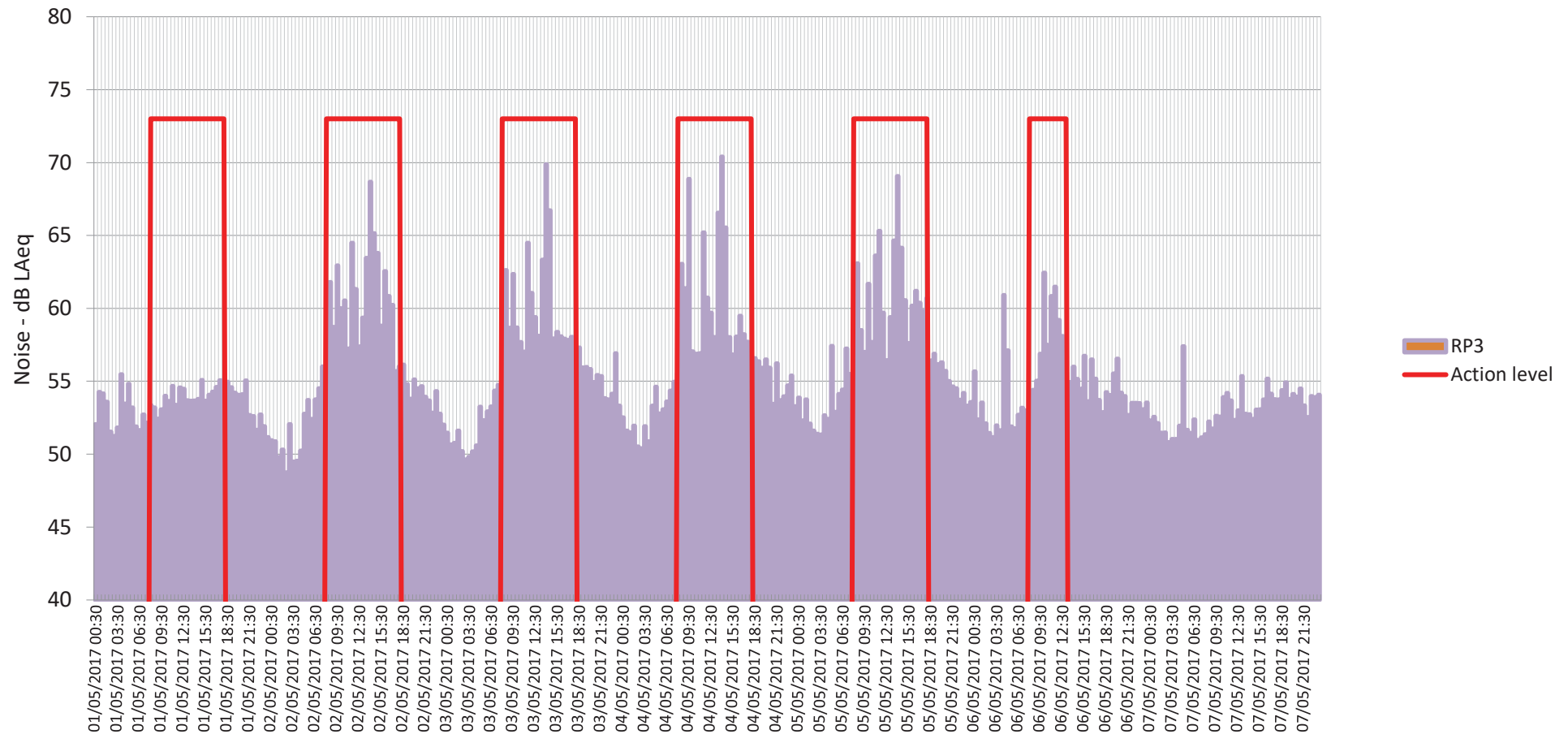
4.0 Measurement Results

The recorded unattended noise measurements in this period are presented as graphs in section 5.0 of this report using LAeq1h and LAeq30min data points.

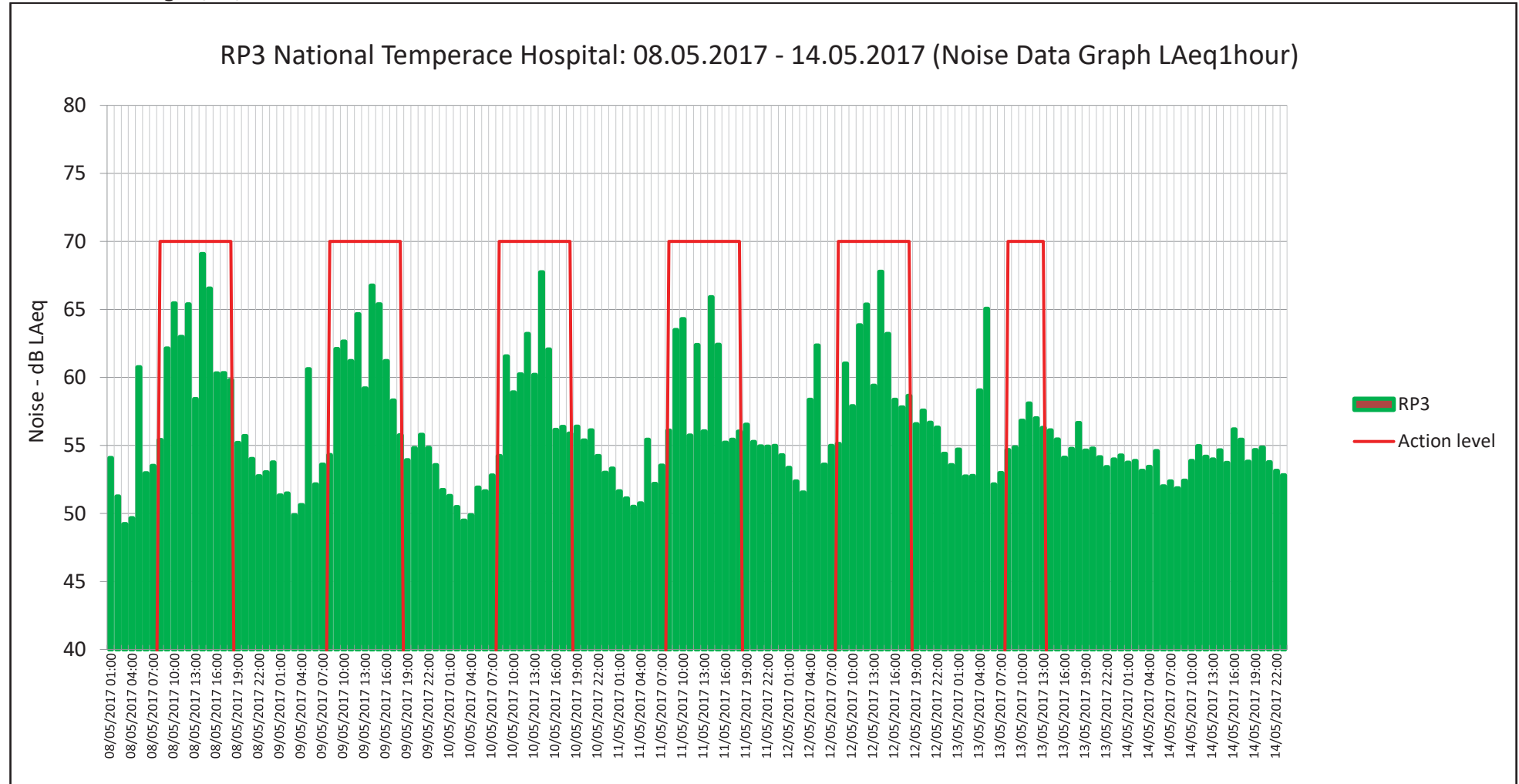
5.0 Noise Monitoring Graphs
RP3 Week ending 07/05/17



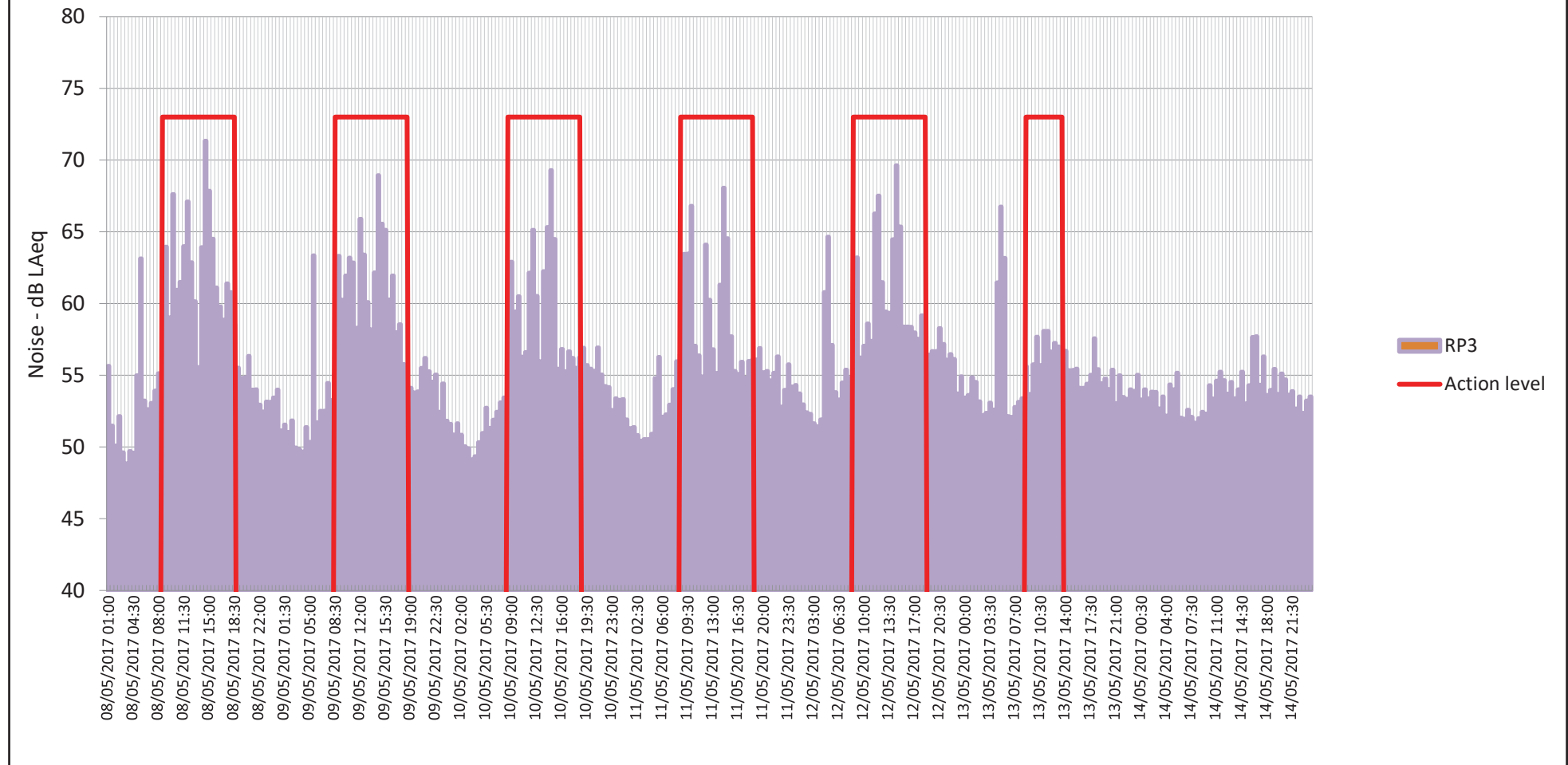
RP3 National Temperance Hospital: 01.05.2017 - 07.05.2017 (Noise data graph LAeq30minutes)



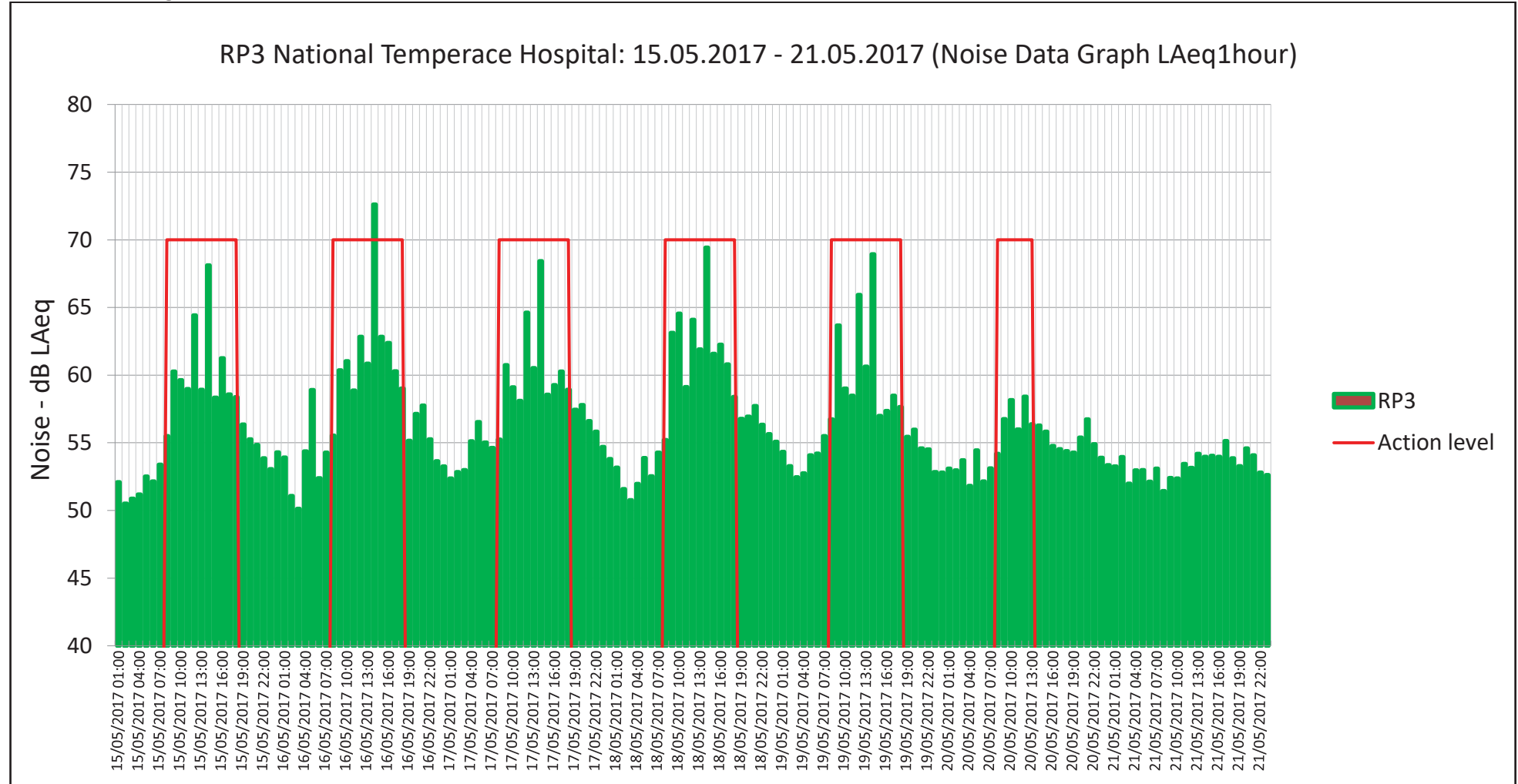
RP3 Week ending 14/05/17



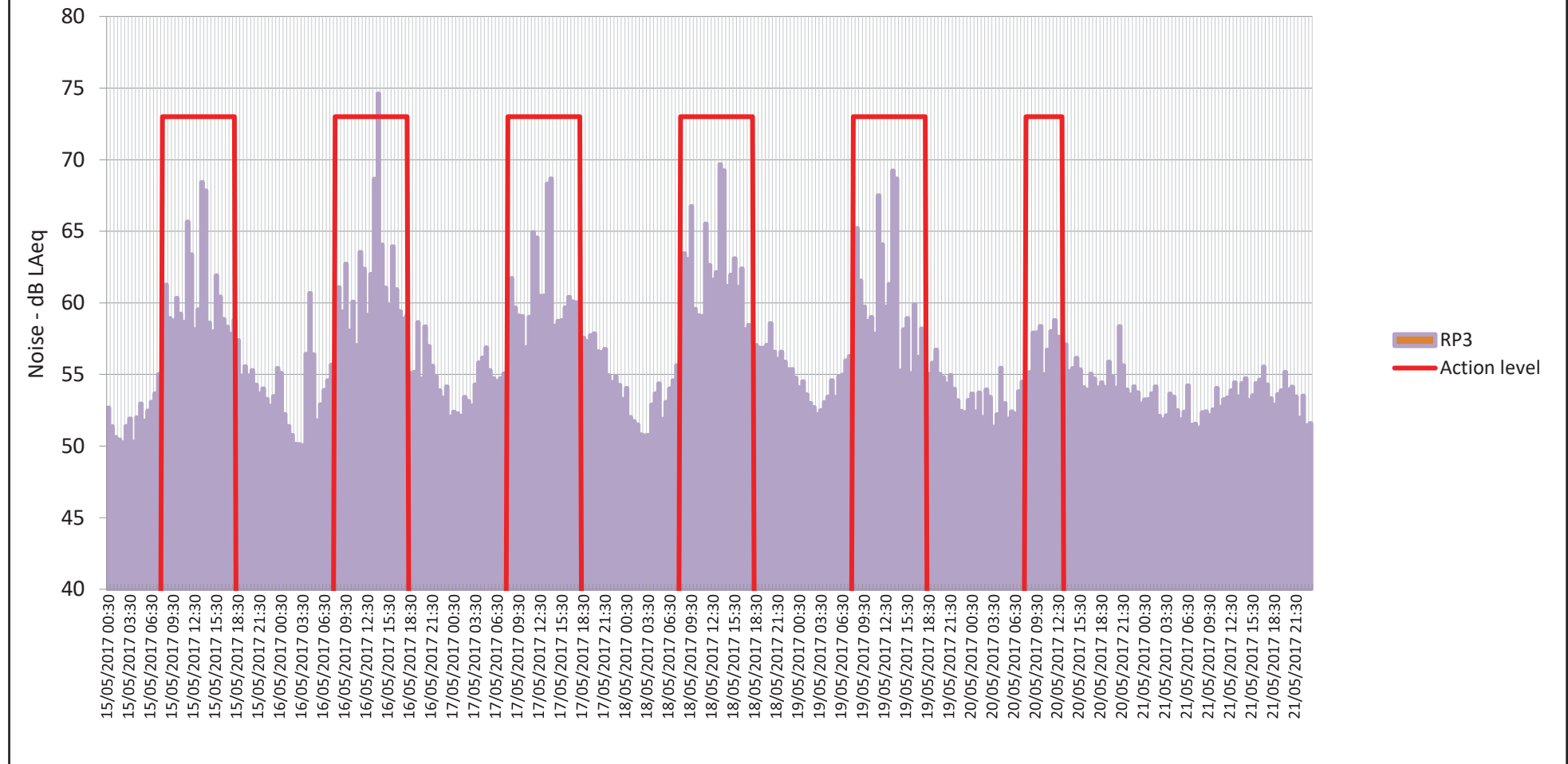
RP3 National Temperance Hospital: 08.05.2017 - 14.05.2017 (Noise data graph LAeq30minutes)



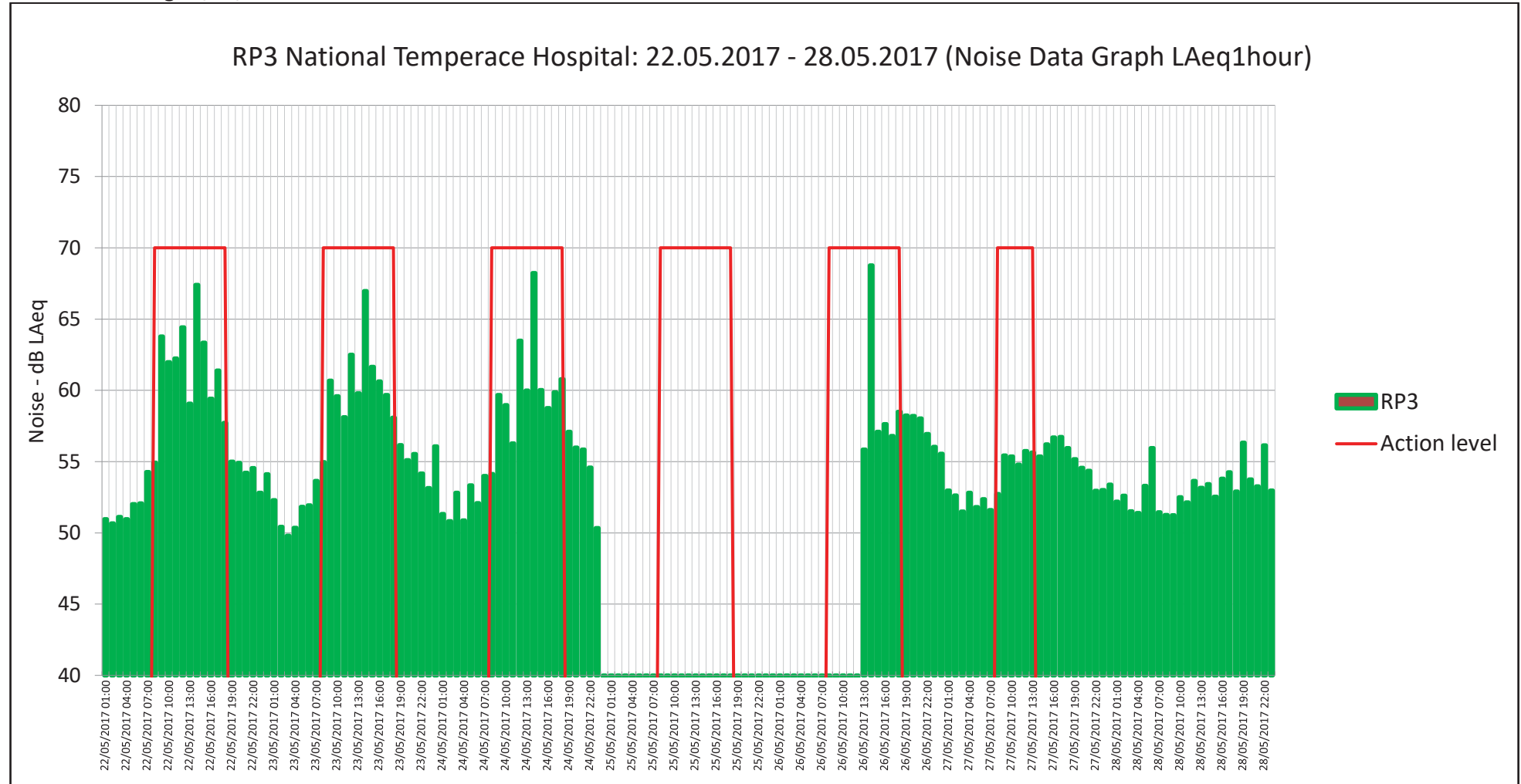
RP3 Week ending 21/05/17



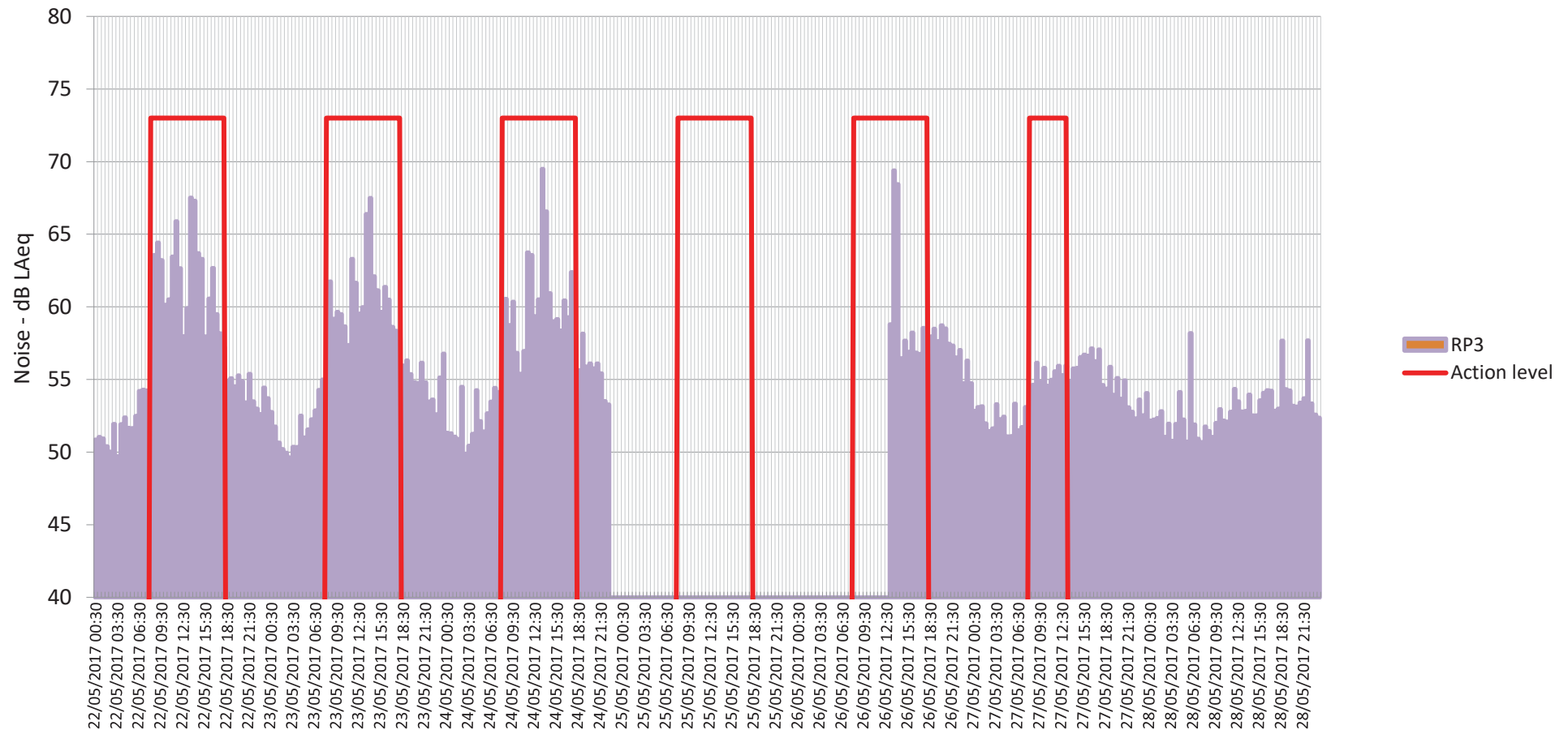
RP3 National Temperance Hospital: 15.05.2017 - 21.05.2017 (Noise data graph LAeq30minutes)



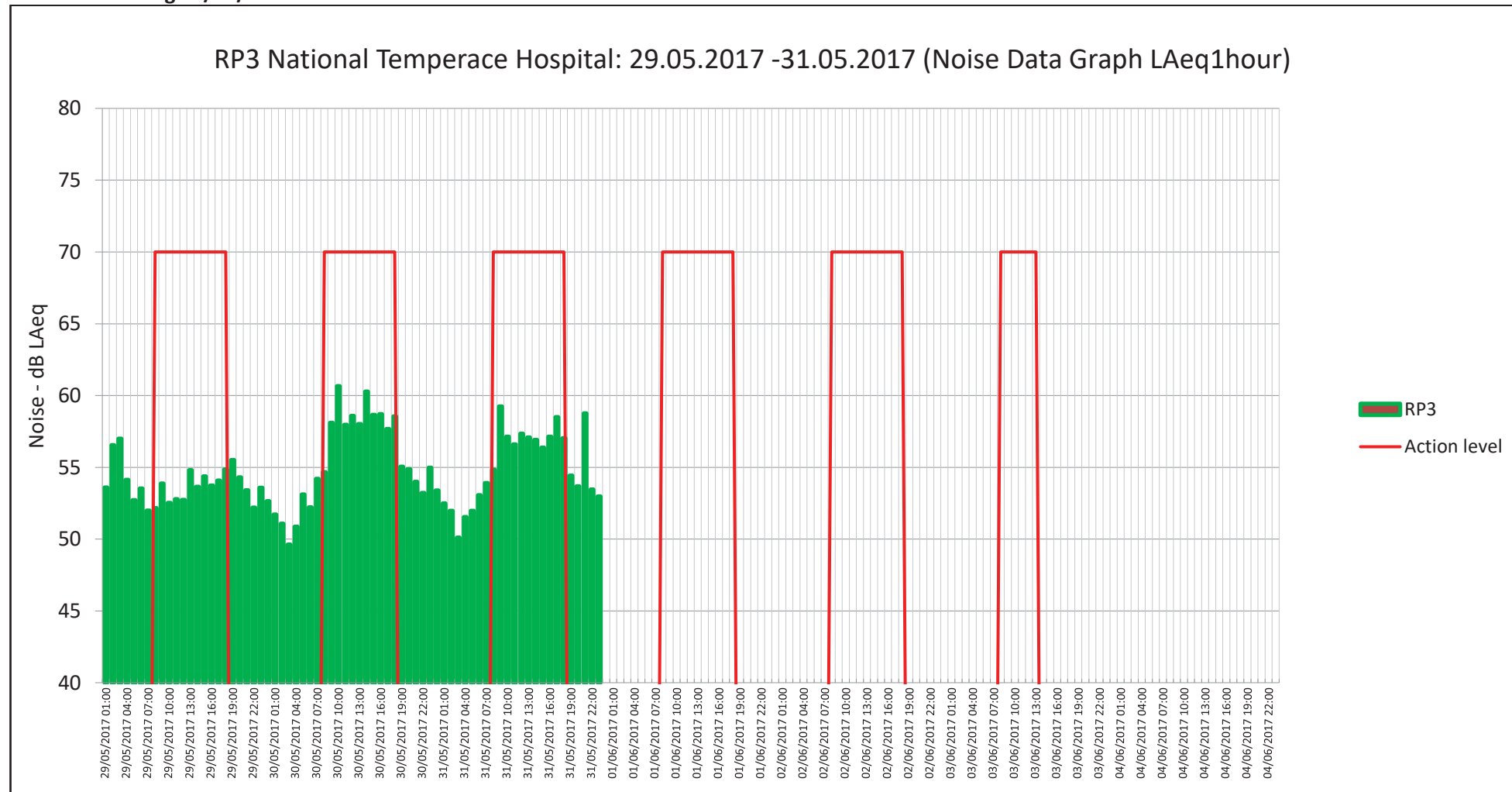
RP3 Week ending 28/05/17



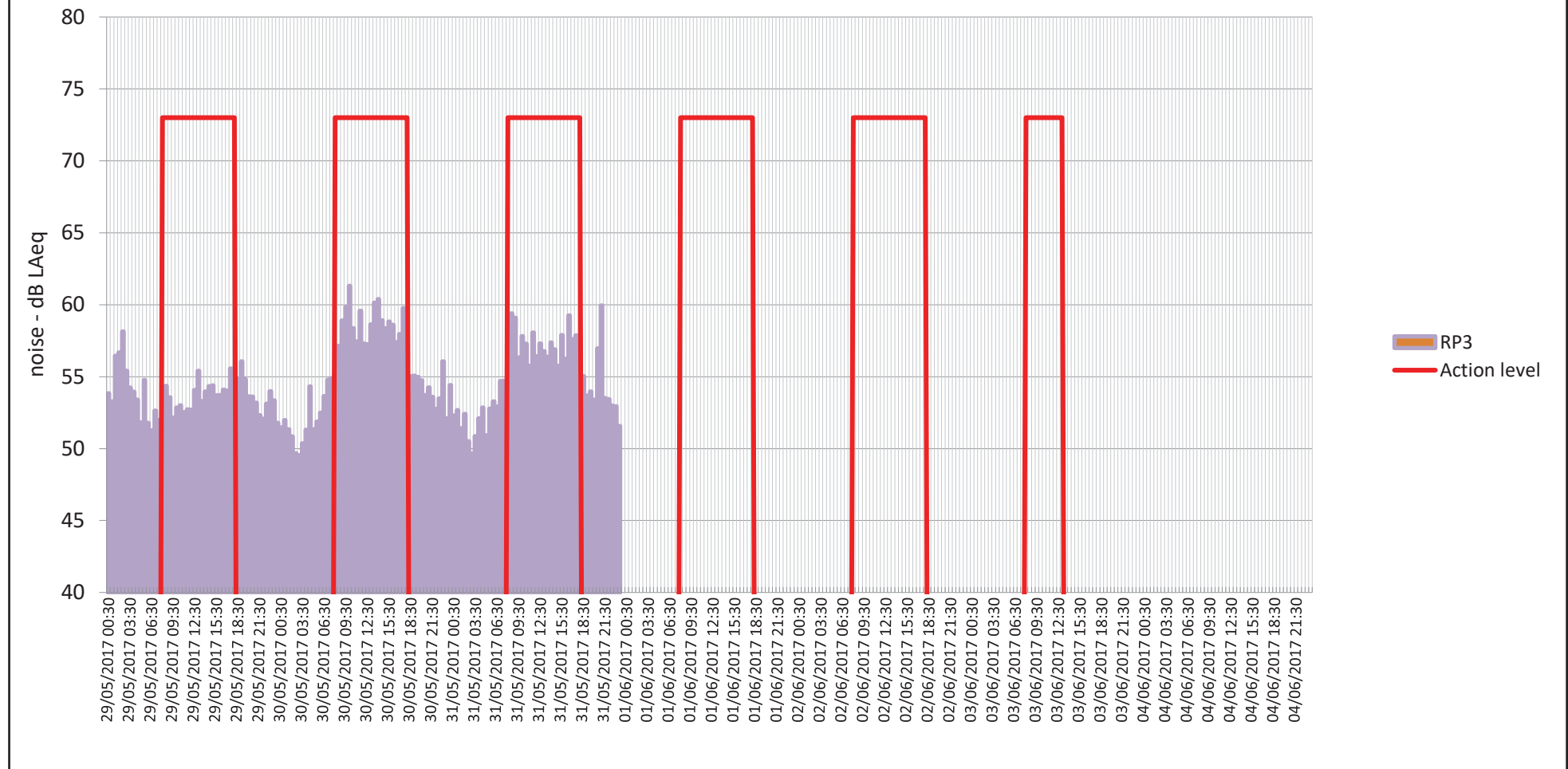
RP3 National Temperance Hospital: 22.05.2017 - 28.05.2017 (Noise data graph LAeq30minutes)



RP3 Week ending 31/05/17



RP3 National Temperance Hospital: 29.05.2017 - 31.05.2017 (Noise data graph LAeq30minutes)



6.0 Discussion

Unattended ambient noise monitoring has been undertaken during demolition and associated activities at the National Temperance Hospital site at location RP3. The details of these site activities are included in section 1 of this report.

The unattended measured and recorded noise levels are presented graphically in section 5.

The daily LAeq10hour from 08.00 to 18.00 Monday to Friday, and 08.00 to 13.00 on Saturday were as Tables 6.1 to 6.5:

dBLAeq10hours						dBLAeq5hours
Date	01/05/2017	02/05/2017	03/05/2017	04/05/2017	05/05/2017	06/05/2017
RP3	54.03	62.22	62.12	63.22	62.31	58.93
Action Level	63	63	63	63	63	63
dBLAeq1hour						
7 - 8 AM	52.82	55.79	54.70	55.26	55.57	52.90
6 - 7 PM	54.79	55.53	56.66	56.28	56.67	55.28

Table 6.1

dBLAeq10hours						dBLAeq5hours
Date	08/05/2017	09/05/2017	10/05/2017	11/05/2017	12/05/2017	13/05/2017
RP3	64.30	62.81	61.81	61.51	62.72	56.73
Action Level	63	63	63	63	63	63
dBLAeq1hour						
7 - 8 AM	55.41	54.29	54.22	56.09	55.12	54.66
6 - 7 PM	55.19	53.92	56.37	56.53	56.56	56.11

Table 6.2

dBLAeq10hours						dBLAeq5hours
Date	15/05/2017	16/05/2017	17/05/2017	18/05/2017	19/05/2017	20/05/2017
RP3	62.10	64.78	62.32	63.73	62.80	57.25
Action Level	63	63	63	63	63	63
dBLAeq1hour						
7 - 8 AM	55.50	55.54	55.25	55.21	56.74	54.19
6 - 7 PM	56.35	55.15	57.45	56.77	55.44	56.29

Table 6.3

dBLAeq10hours						dBLAeq5hours
Date	22/05/2017	23/05/2017	24/05/2017	25/05/2017	26/05/2017	27/05/2017
RP3	62.95	61.65	62.03	0.00	60.09	55.40
Action Level	63	63	63	63	63	63
dBLAeq1hour						
7 - 8 AM	54.94	54.96	54.13	0.00	0.00	52.73
6 - 7 PM	55.00	56.15	57.09	0.00	58.23	55.35

Table 6.4

dBLAeq10hours						dBLAeq5hours
Date	29/05/2017	30/05/2017	31/05/2017			
RP3	53.81	58.83	57.42			
Action Level	63	63	63	63	63	63
dBLAeq1hour						
7 - 8 AM	52.17	54.66	54.85			
6 - 7 PM	55.51	55.05	54.42			

Table 6.5

Due to power problems, no data was recorded from 25 May 00:00 to 26 May 12:00.

Many exceedances of the 63dBLAeq10hour action level can be seen highlighted on tables 6.1 to 6.5, but overall, noise levels remain below the limit. Noise at RP3 is impacted by noise from the children at the Maria Fidellis School during break times, from approximately 10.30 to 11.00 and again during lunch from 13.00 to 14.00. When this noise is removed, noise levels reduce below the 63dBLAeq10hour action level.

The noise levels recorded for the shoulder hours LAeq1hour were below the LAeq30min action level.

7. Complaints

There have been no noise related complaints received from the start to the completion of the project directly by either Keltbray project delivery team or by (EEMC) Ltd.

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