
High Speed Rail
(London-West Midlands)
Noise! «^a ¥«® £&j ¬«®
National Temperance Hospital
March 2017





Department for Transport

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Unattended Noise Monitoring Report

Period: 27 February to 26 March 2017

Project No EEMC/065/2016
Report No. EEMC-NTH-065.016 – NTH, HS2 Rev 00
Client: Keltbray Limited
Title: EEMC/065-016-NTH, HS2 - Unattended Noise Monitoring Report No.16
Period: 27 February - 26 March 2017

Details of Noise Monitor at Receptor Point 1 (RP1)

ID Reference	RP1
Location	132 Hampstead Road (Second floor terrace)
Instrument:	Rion NL-52
Serial Number:	453872
Installation Date:	28/10/2016
Onsite Calibration:	28/10/2016
Laboratory Calibration: See attached certificate (Appendix 1)	03/10/2016 UCRT16/1301

Map of monitoring location



Photograph of monitor



1.0 Introduction

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

This report presents the unattended noise data measured and recorded in the period 27 February to 26 March 2017 at position RP1. This report should be read with the CoPA section 61 Prior Consent Application submitted to LBC for the National Temperance Hospital demolition phase.

Demolition works are 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 RP1.

The works in this period were mainly as follows:

- Dismantling of external scaffold, daily as the demolition progresses
- Post-asbestos soft strip - the last few rooms on the ground floor
- Demolition of main building North 2nd floor
- Demolition of main building Party Wall 2nd and 3rd floor
- Demolition of main building West 2nd and 1st floor
- Demolition of main building East 2nd and 1st floor
- Temporary weathering to party wall roof, 3rd and 2nd floors
- Roof strip the remaining parapets
- Core 5no holes in the basement to self-drain (over 1 day)
- Concrete 200m³ of vaults under Hampstead Rd
- Disconnection of UKPN service on Cardington St
- Scaffold works for link bridge to CTU – independent scaffold

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

2.0 Instrumentation

All noise monitoring units are Rion NL-52 Class 1 noise monitoring systems, housed in weather proof environmental protected cases with an all-weather protected remote microphone (see photo). Calibration certificates for the noise monitoring system is attached as Annex 1. The system was field calibrated at the time of installation on site.

3.0 Methodology

Keltbray requested (EEMC) Limited to undertake unattended noise monitoring at three agreed locations around the site. The monitoring locations were agreed with the Environmental Health Officer (EHO) of Camden. The unattended noise monitoring presented in this report was undertaken during demolition works 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 level at RP1 is 74dB LAeq10hour. This level is indicated by the red line on the graphs.

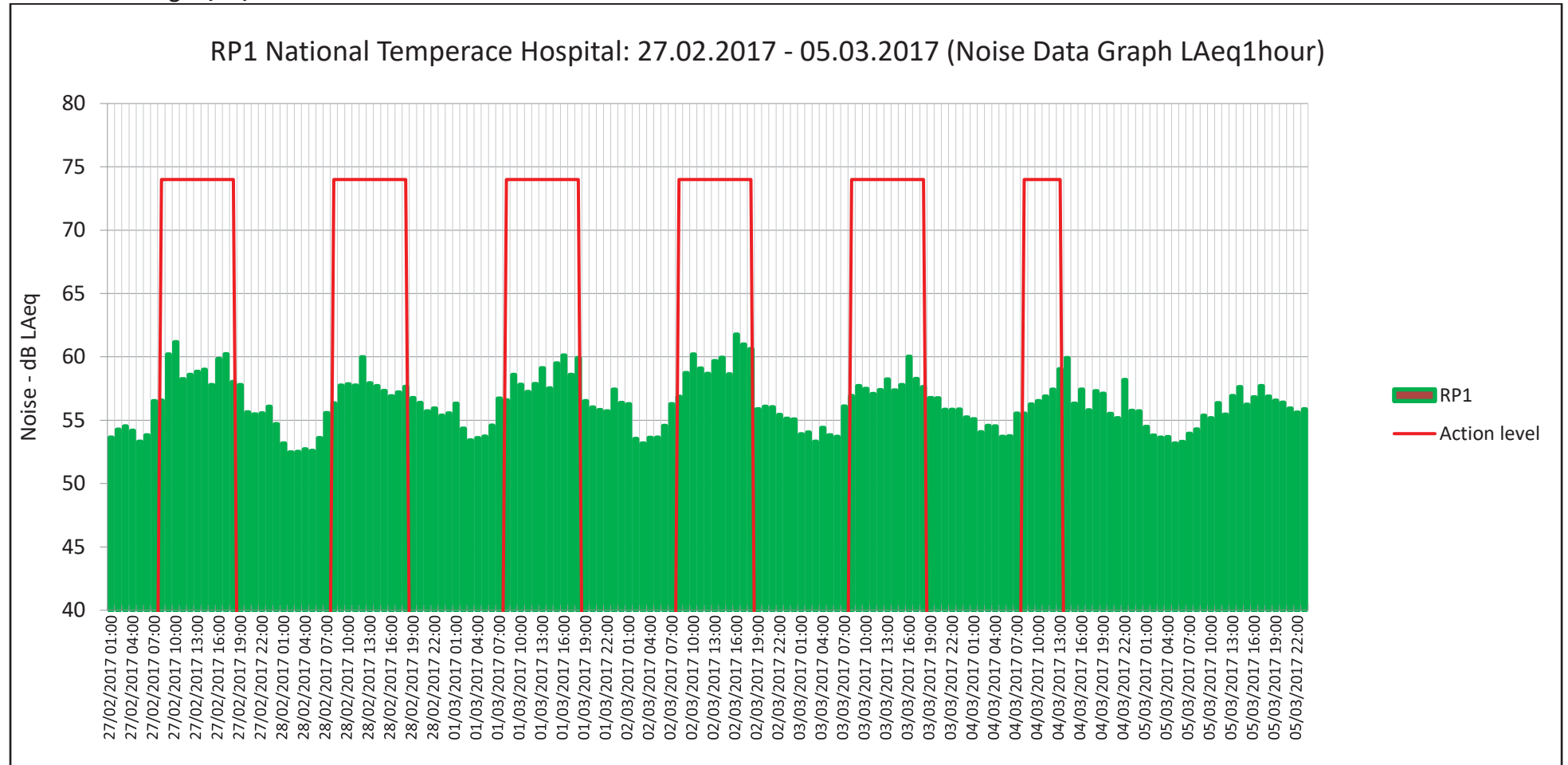
The measured unattended noise levels can be used to compare with measured and recorded noise levels during other demolition activities and periods.

4.0 Measurement Results

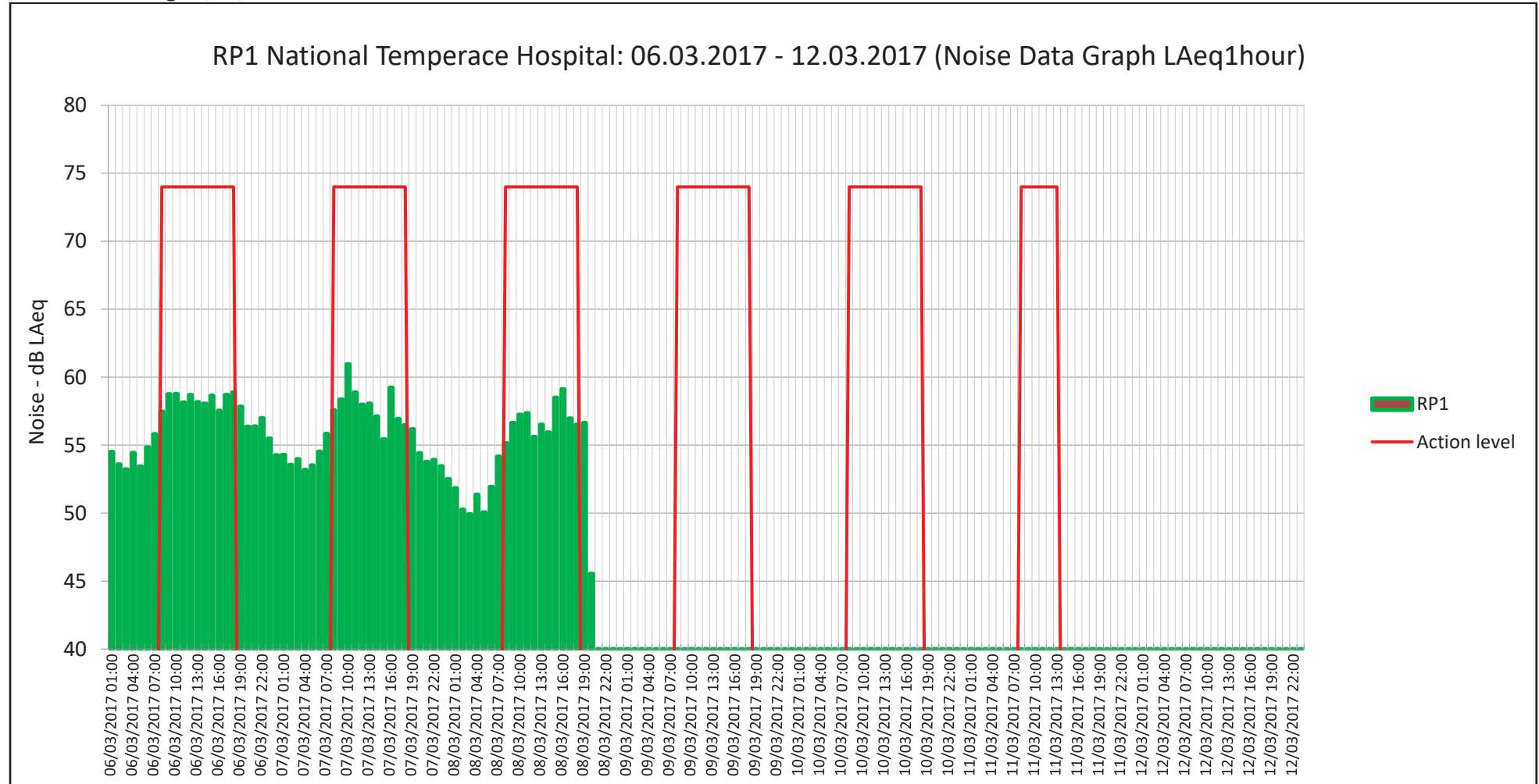
The recorded unattended noise measurements in this period are presented as graphs in section 5.0 of this report using LAeq1hour data points.

5.0 Noise Monitoring Graphs

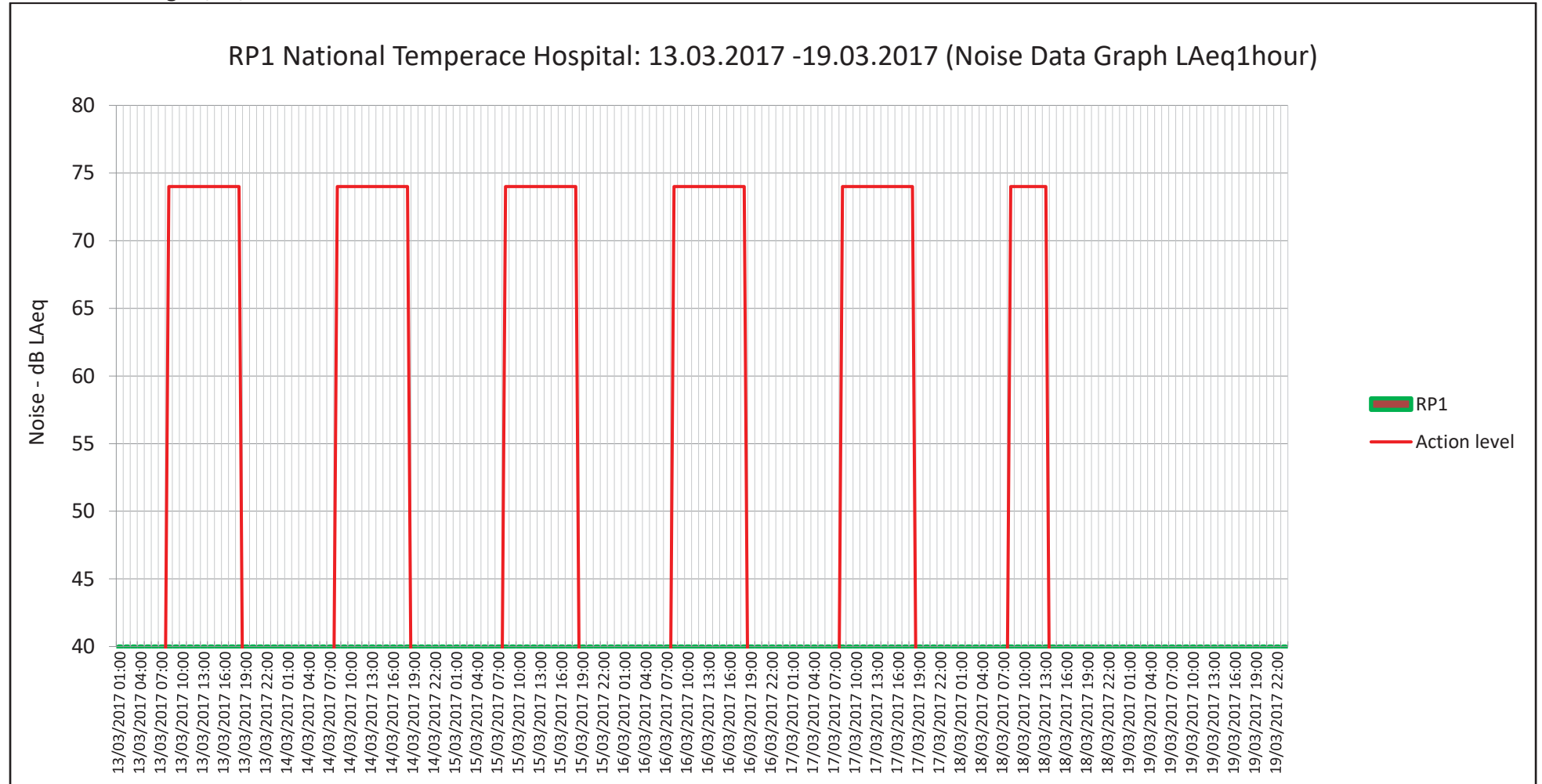
RP1 Week ending 05/03/17



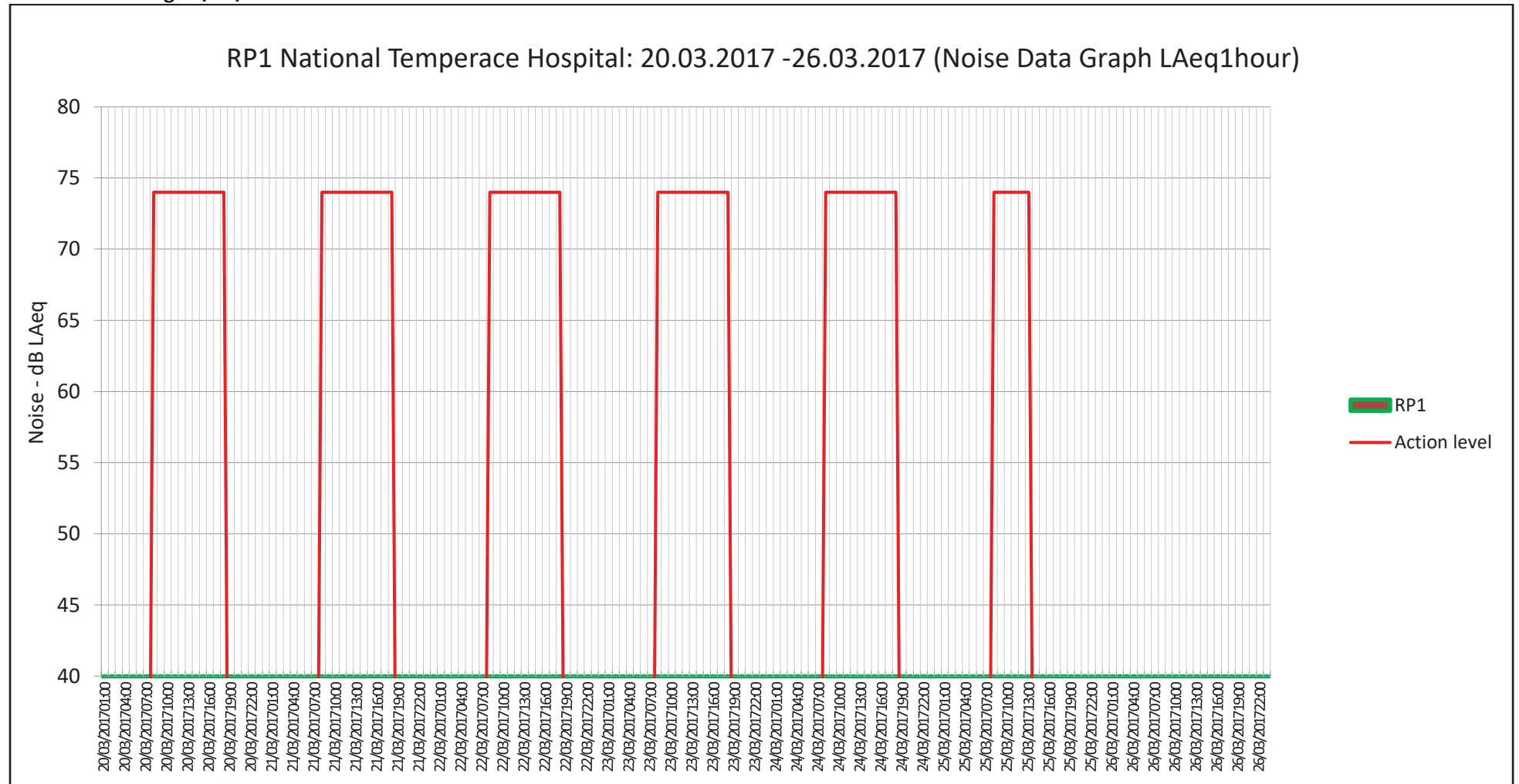
RP1 Week ending 12/03/17



RP1 Week ending 19/03/17



RP1 Week ending 26/03/17



6.0 Discussion

Unattended noise monitoring has been undertaken during works for phase 1 at the National Temperance Hospital demolition project at position RP1.

The activities in the period from 27 February to 26 March 2017 would include those listed on page 4 of this report.

The daily LAeq10hour from 08.00 to 18.00 Monday to Friday, LAeq10hour from 08.00 to 13.00 on Saturday and the LAeq1hour shoulder hours were as Tables 6.1 to 6.4.

dBLAeq10hours						dBLAeq5hours
Date	27/02/2017	28/02/2017	01/03/2017	02/03/2017	03/03/2017	04/03/2017
RP1	59.31	57.87	58.72	59.95	57.97	57.33
Action Level	74	74	74	74	74	74
dBLAeq1hour						
7 - 8 AM	56.55	56.33	56.57	56.85	56.91	55.52
6 - 7 PM	57.78	56.74	56.51	55.86	56.74	59.91

Table 6.1

dBLAeq10hours						dBLAeq5hours
Date	06/03/2017	07/03/2017	08/03/2017	09/03/2017	10/03/2017	11/03/2017
RP1	58.45	58.20	57.16	0.00	0.00	0.00
Action Level	74	74	74	74	74	74
dBLAeq1hour						
7 - 8 AM	57.45	57.58	55.15	0.00	0.00	0.00
6 - 7 PM	57.84	56.17	56.64	0.00	0.00	0.00

Table 6.2

dBLAeq10hours						dBLAeq5hours
Date	13/03/2017	14/03/2017	15/03/2017	16/03/2017	17/03/2017	18/03/2017
RP1	0.00	0.00	0.00	0.00	0.00	0.00
Action Level	74	74	74	74	74	74
dBLAeq1hour						
7 - 8 AM	0.00	0.00	0.00	0.00	0.00	0.00
6 - 7 PM	0.00	0.00	0.00	0.00	0.00	0.00

Table 6.3

dBLAeq10hours						dBLAeq5hours
Date	20/03/2017	21/03/2017	22/03/2017	23/03/2017	24/03/2017	25/03/2017
RP1	0.00	0.00	0.00	0.00	0.00	0.00
Action Level	74	74	74	74	74	74
dBLAeq1hour						
7 - 8 AM	0.00	0.00	0.00	0.00	0.00	0.00
6 - 7 PM	0.00	0.00	0.00	0.00	0.00	0.00

Table 6.4

Due to a system outage from 9 March to 26 March inclusive, no data was recorded in this period.

For the data that was recorded no exceedances of the 74dBLAeq10hour action level occurred in this period, the measured and recorded levels were also notably below 74dB action level. The data recorded from 27 February to 26 March for the shoulder hours LAeq1hour also did not exceed the action level 74dBLAeq10hour.

Unattended Noise Monitoring Report

Period: 27 February to 26 March 2017

Project No EEMC/065/2016

Report No. EEMC-NTH-065.017 – NTH, HS2 Rev 00

Client: Keltbray Limited

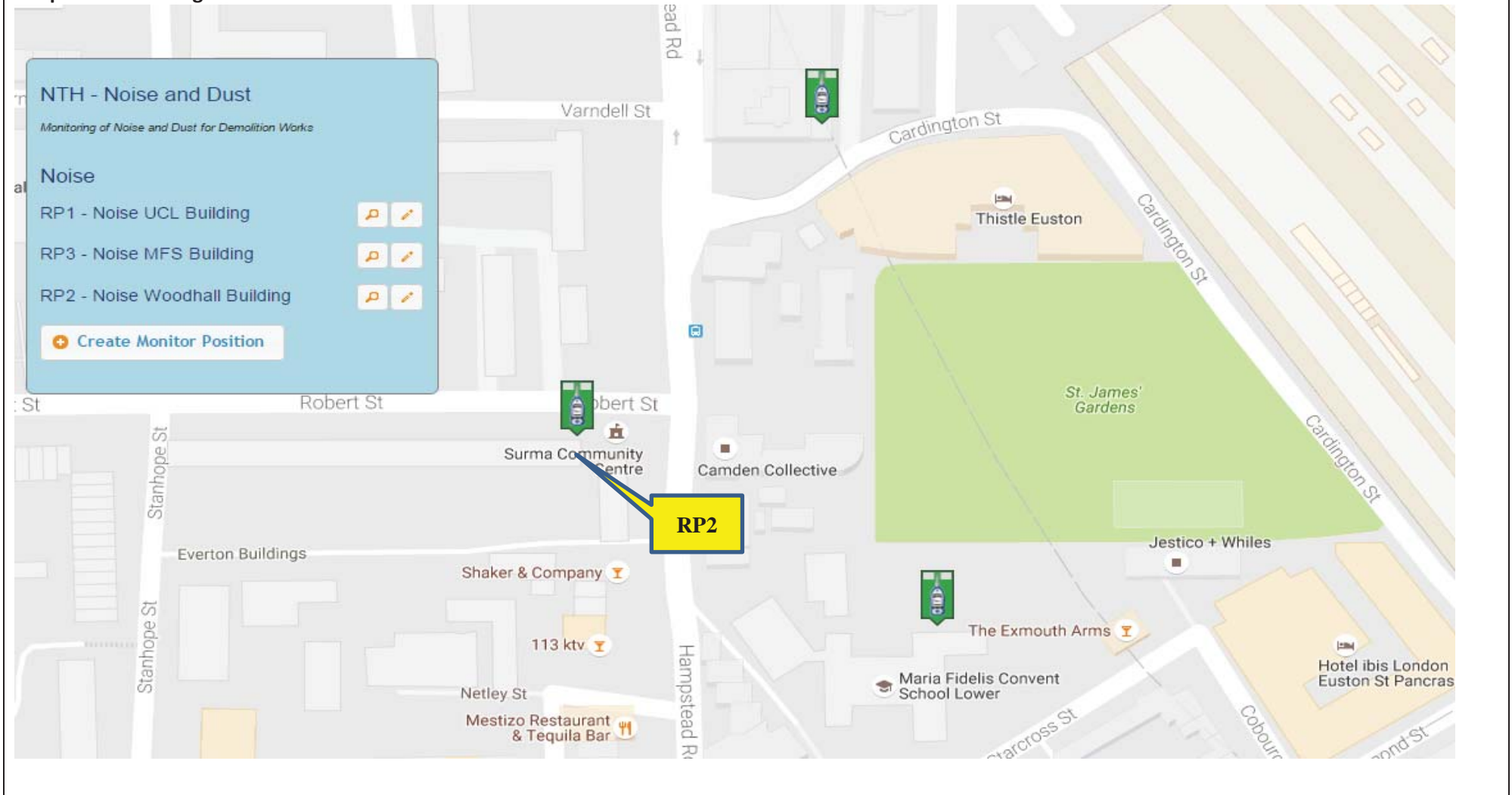
Title: EEMC/065-017-NTH, HS2 - Unattended Noise Monitoring Report No.17

Period: 27 February - 26 March 2017

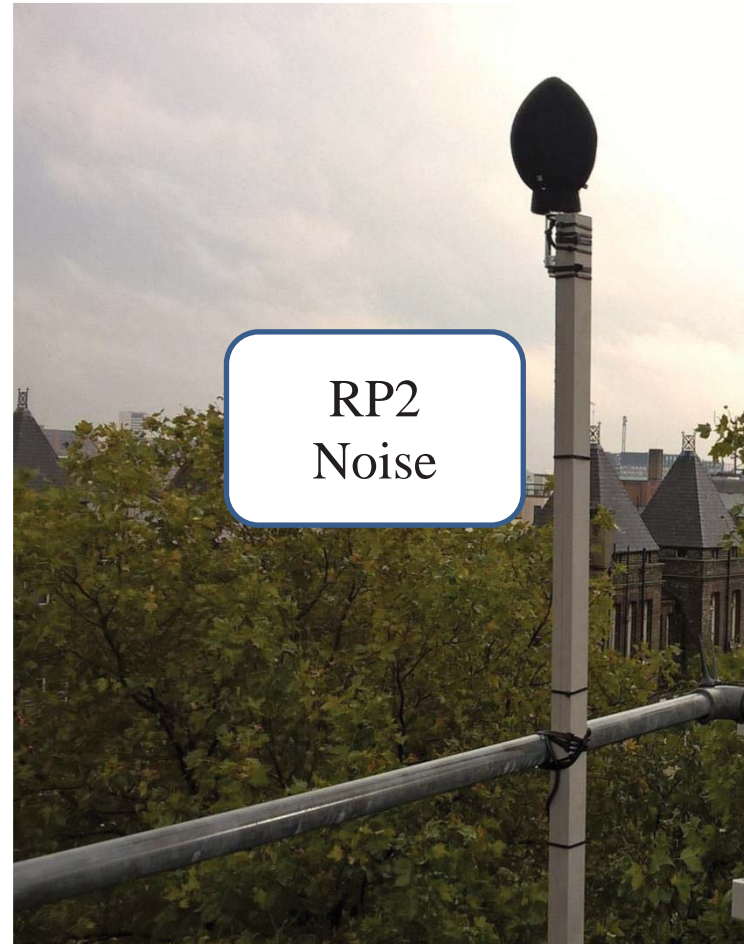
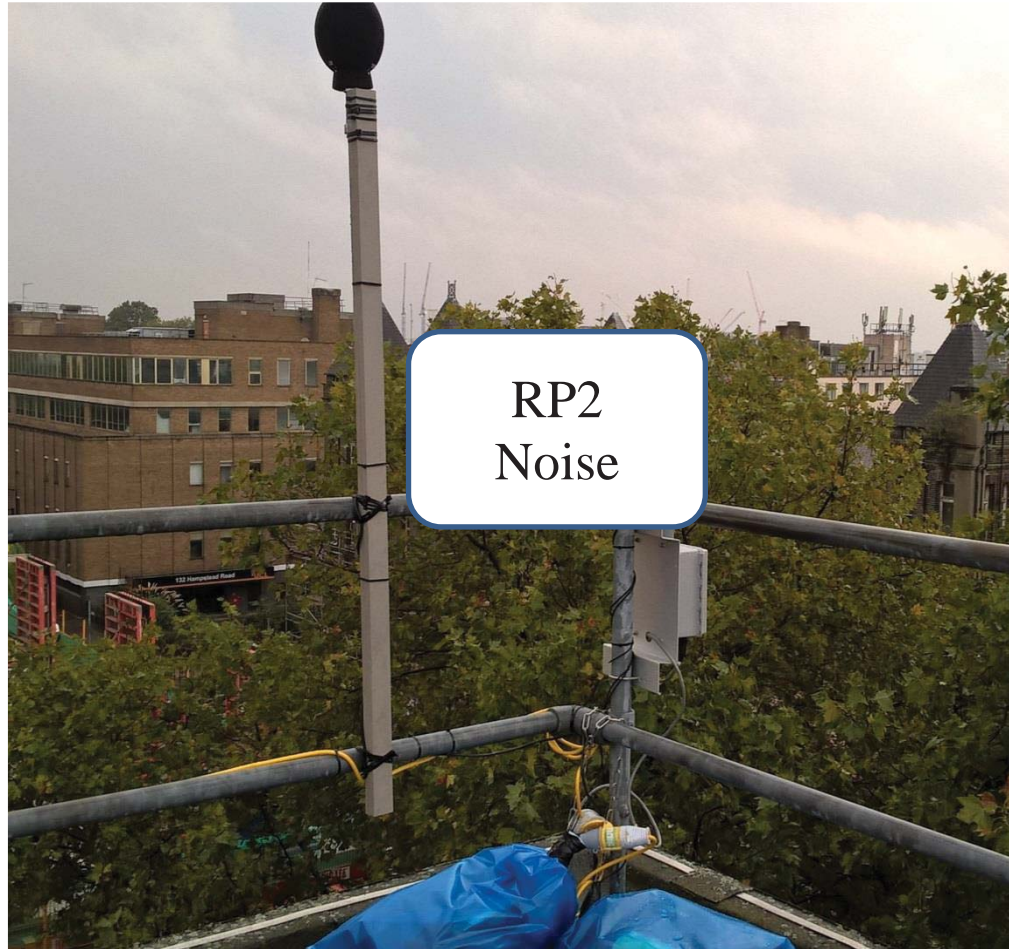
Details of Noise Monitor at Receptor Point RP2

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
Onsite Calibration:	13/10/2016
Laboratory Calibration:	03/10/2016
See attached certificate (Appendix 1)	UCRT16/1296

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 27 February to 26 March 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 being dismantled daily as the demolition progresses
- Post-asbestos soft strip of the last few rooms on the ground floor
- Demolition of main building North 2nd floor
- Demolition of main building Party Wall 2nd and 3rd floor
- Demolition of main building West 2nd and 1st floor
- Demolition of main building East 2nd and 1st floor
- Temporary weathering to party wall roof, 3rd and 2nd floors
- Roof strip the remaining parapets
- Core 5 number holes in the basement to self-drain (over 1 day)
- Concrete 200m³ of vaults under Hampstead Rd
- Disconnection of UKPN service on Cardington St
- Scaffold works for link bridge to CTU – independent scaffold

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 are housed in a weather proof environmental hard case and an all-weather protected remote microphone (see photo). Calibration certificates for the noise monitoring system attached as Annex 1. The system was field calibrated on installation on site.

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).

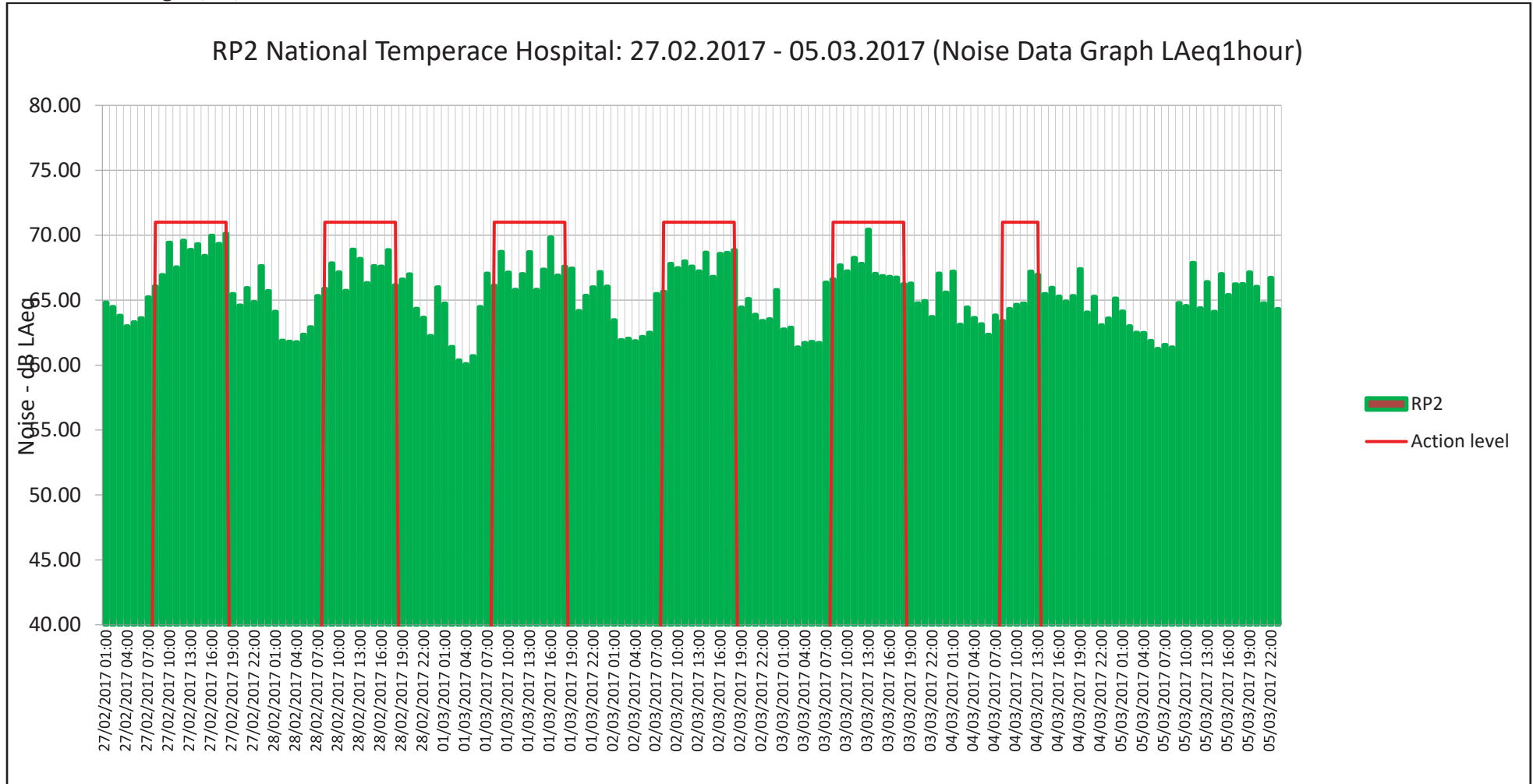
Noise levels have been recorded for the measurement periods of 08.00 to 18.00 Monday to Friday and 08.00 to 13.00 on Saturdays. These times have been agreed with LBC to be the core hours within which noisy demolition activities can proceed. The agreed action level at RP2 is 71dBLAeq10hour.

The measured unattended noise levels can be used to compare with the measured and recorded noise levels during the demolition activities.

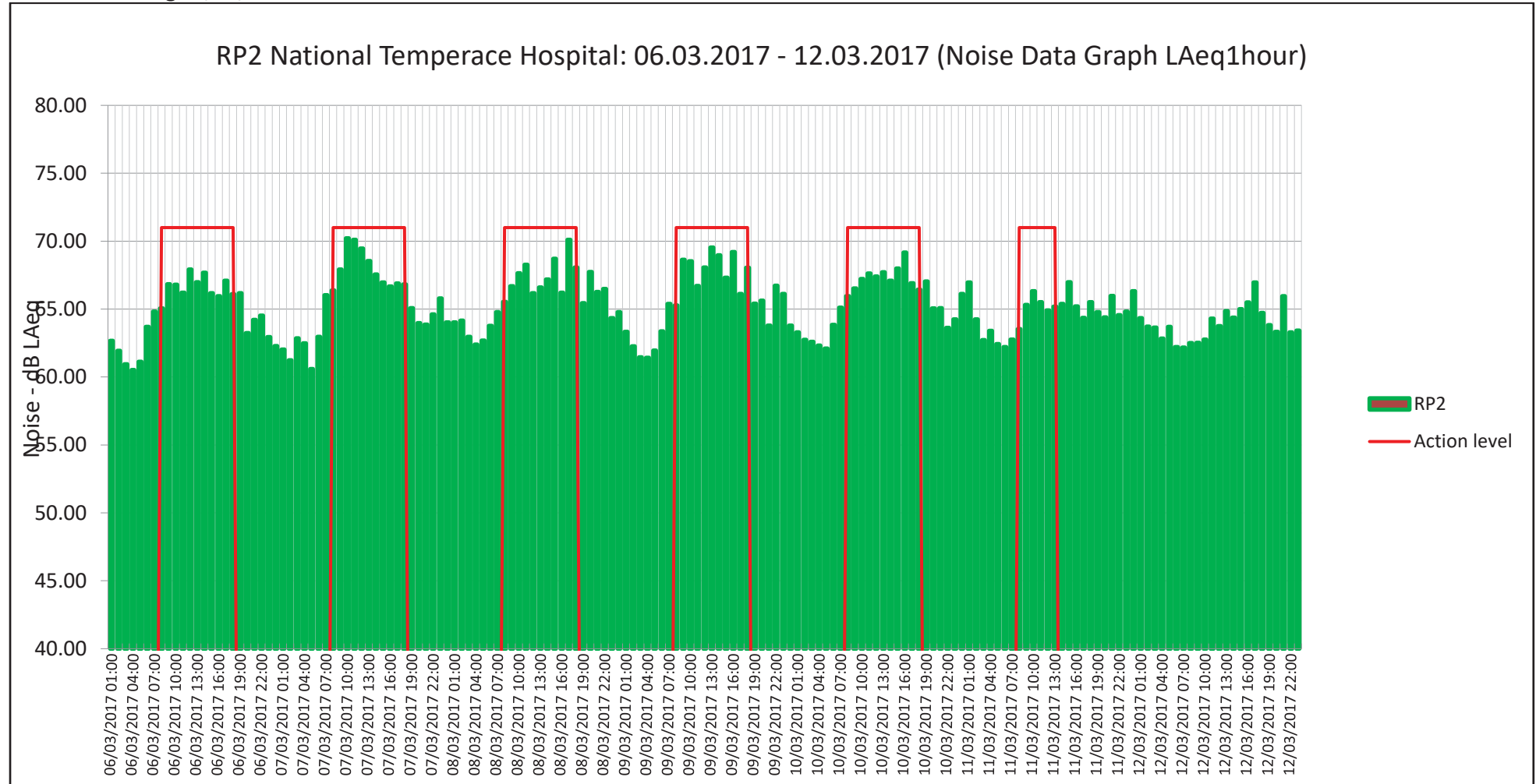
4.0 Measurement Results

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

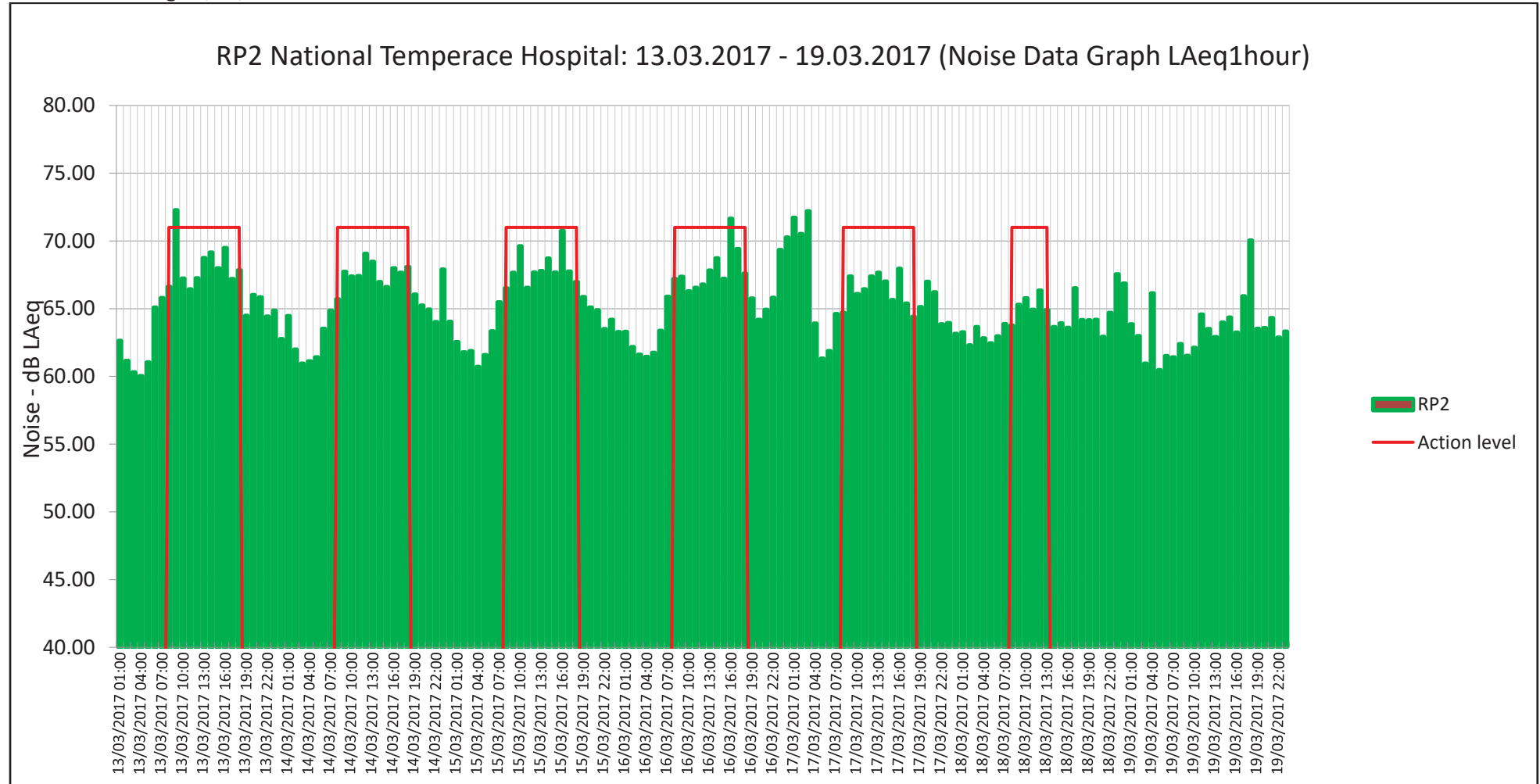
5.0 Noise Monitoring Graphs
 RP2 Week ending 05/03/17



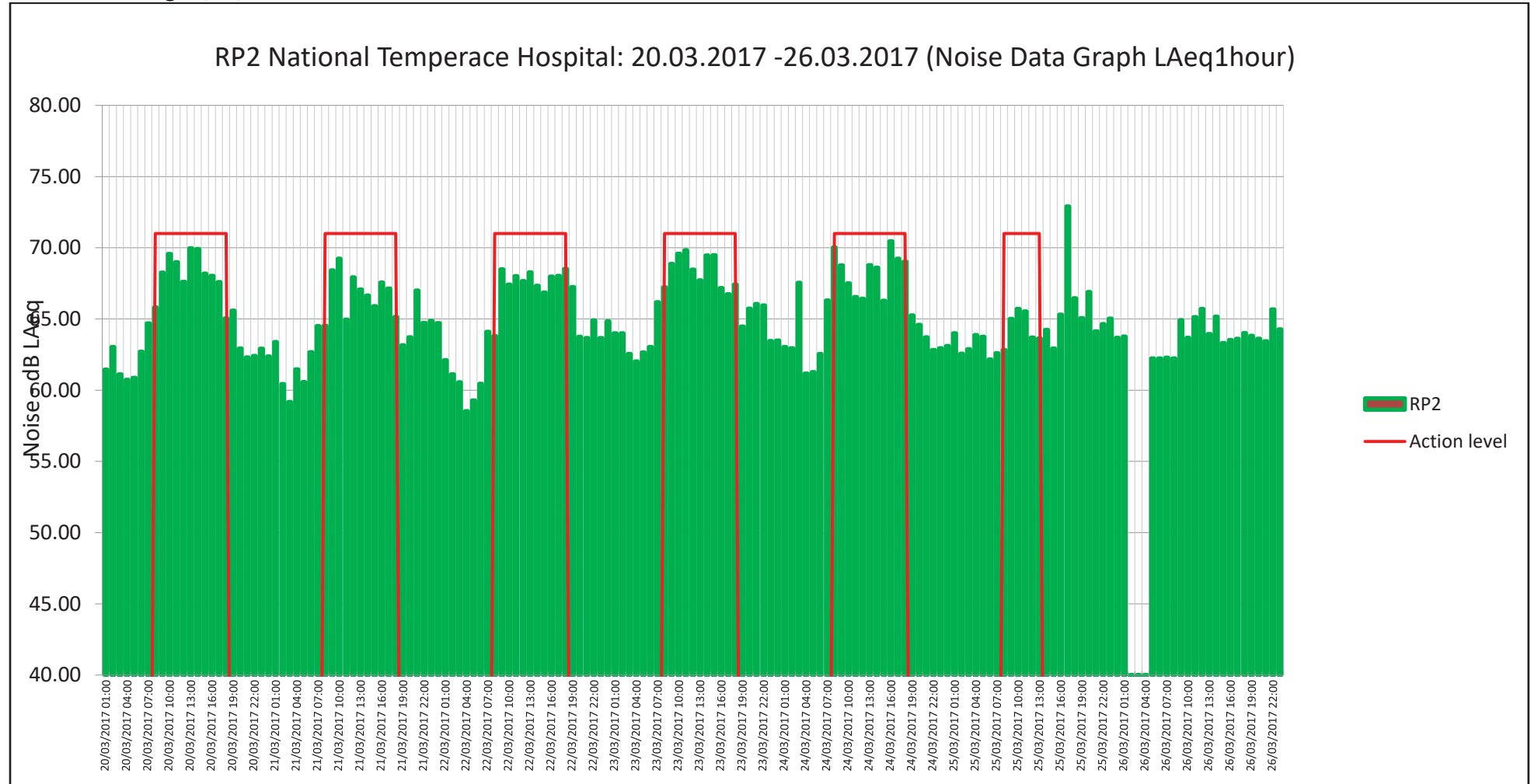
RP2 Week ending 12/03/17



RP2 Week ending 19/03/17



RP2 Week ending 26/03/17



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 27 February to 26 March 2017 would include:

- External scaffold being dismantled daily as the demolition progresses
- Post-asbestos soft strip of the last few rooms on the ground floor
- Demolition of main building North 2nd floor
- Demolition of main building Party Wall 2nd and 3rd floor
- Demolition of main building West 2nd and 1st floor
- Demolition of main building East 2nd and 1st floor
- Temporary weathering to party wall roof, 3rd and 2nd floors
- Roof strip the remaining parapets
- Core 5 number holes in the basement to self-drain (over 1 day)
- Concrete 200m³ of vaults under Hampstead Rd
- Disconnection of UKPN service on Cardington St
- Scaffold works for link bridge to CTU – independent scaffold

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 6.4:

dBLAeq10hours						dBLAeq5hours
Date	27/02/2017	28/02/2017	01/03/2017	02/03/2017	03/03/2017	04/03/2017
RP2	69.04	67.54	67.65	68.00	67.66	65.75
Action Level	71	71	71	71	71	71
dBLAeq1hour						
7 - 8 AM	66.05	65.87	66.11	65.63	66.60	63.40
6 - 7 PM	65.45	66.58	67.42	64.43	66.27	

Table 6.1

dBLAeq10hours						dBLAeq5hours
Date	06/03/2017	07/03/2017	08/03/2017	09/03/2017	10/03/2017	11/03/2017
RP2	66.82	68.32	67.74	68.24	67.48	65.48
Action Level	71	71	71	71	71	71
dBLAeq1hour						
7 - 8 AM	65.05	66.38	65.54	65.28	65.96	63.54
6 - 7 PM	66.17	65.07	65.45	65.41	67.03	

Table 6.2

dBLAeq10hours						dBLAeq5hours
Date	13/03/2017	14/03/2017	15/03/2017	16/03/2017	17/03/2017	18/03/2017
RP2	68.69	67.79	68.28	68.25	66.66	65.48
Action Level	71	71	71	71	71	71
dBLAeq1hour						
7 - 8 AM	66.61	65.69	66.50	67.19	64.70	63.76
6 - 7 PM	64.48	66.04	65.85	65.76	65.13	

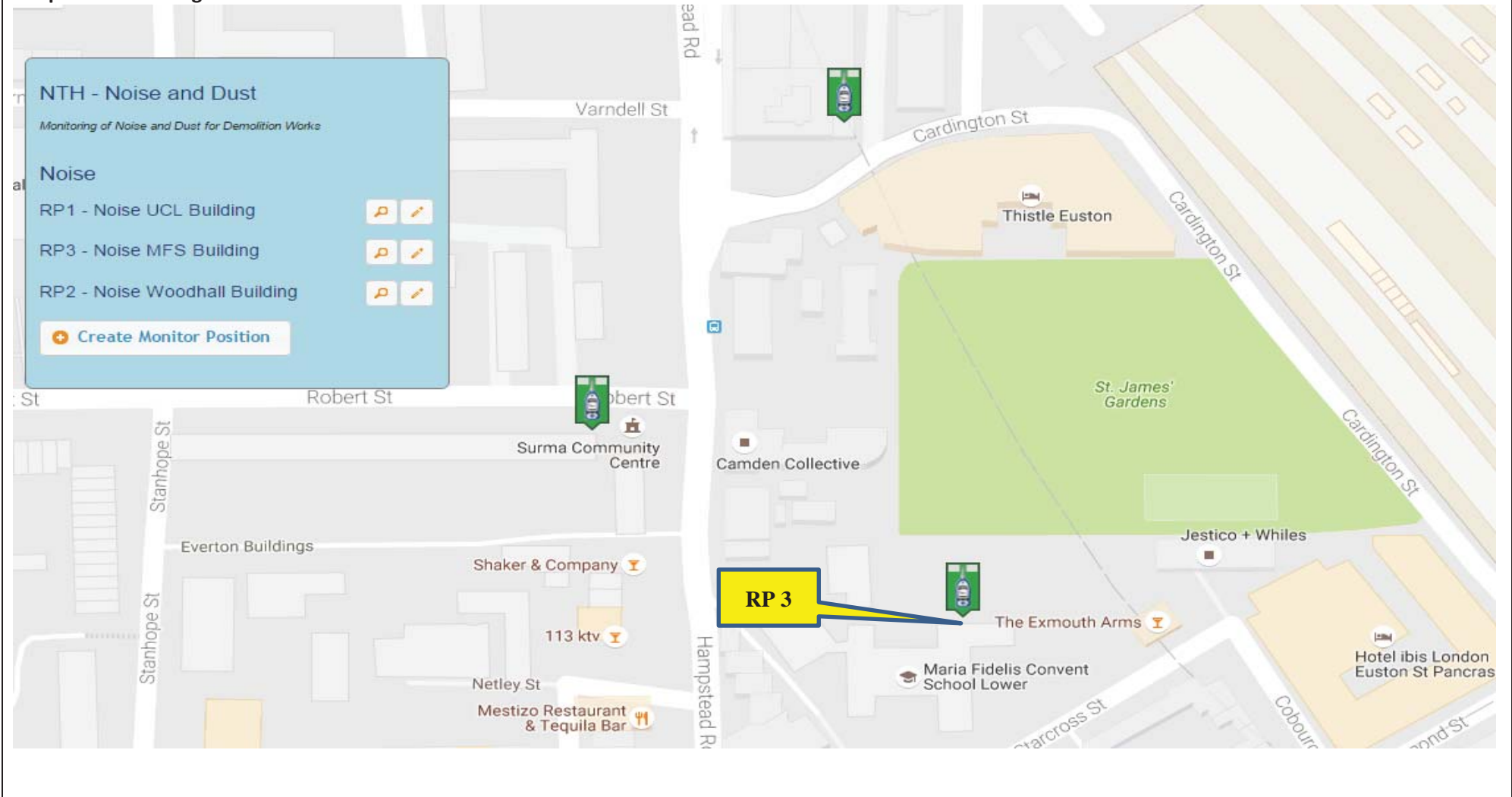
Table 6.3

dBLAeq10hours						dBLAeq5hours
Date	20/03/2017	21/03/2017	22/03/2017	23/03/2017	24/03/2017	25/03/2017
RP2	68.51	67.19	67.88	68.60	68.36	64.80
Action Level	71	71	71	71	71	71
dBLAeq1hour						
7 - 8 AM	65.80	64.53	63.80	67.23	70.01	62.82
6 - 7 PM	65.59	63.17	67.24	64.47	65.25	

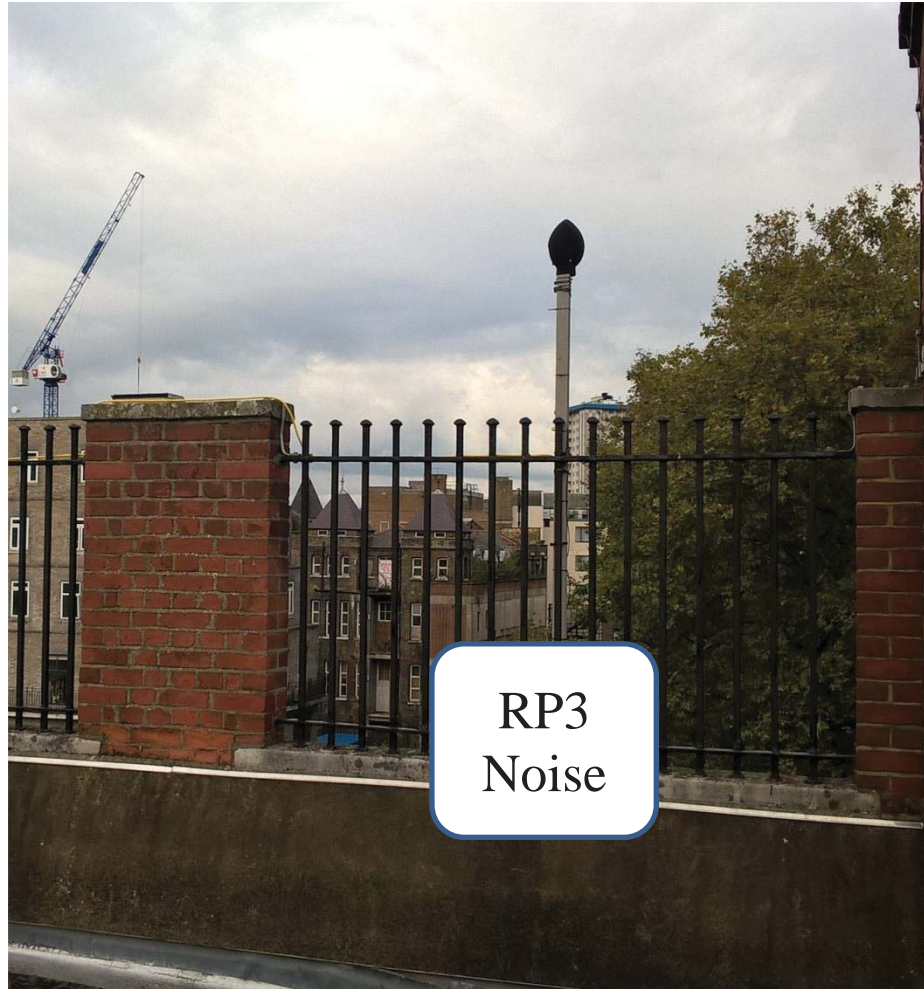
Table 6.4

There were no exceedances of the 71dBLAeq10hour action level in this measurement period and the noise levels for the recorded shoulder hours were also below the 71dBLAeq10h action limit.

Map of monitoring location



Photos of monitor



RP3
Noise



RP3
Noise

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 27 February to 26 March 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 being dismantled daily as the demolition progresses
- Post-asbestos soft strip of the last few rooms on the ground floor
- Demolition of main building North 2nd floor
- Demolition of main building Party Wall 2nd and 3rd floor
- Demolition of main building West 2nd and 1st floor
- Demolition of main building East 2nd and 1st floor
- Temporary weathering to party wall roof, 3rd and 2nd floors
- Roof strip the remaining parapets
- Core 5 number holes in the basement to self-drain (over 1 day)
- Concrete 200m³ of vaults under Hampstead Rd
- Disconnection of UKPN service on Cardington St
- Scaffold works for link bridge to CTU – independent scaffold

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 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. The system was field calibrated on installation on site

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. For the start of demolition works noise trigger action levels were also agreed with the Environmental Health Officer (EHO) of Camden. The unattended noise monitoring presented in this report was undertaken during early demolition activity on site. All results are recorded (LAeqT) by data logging equipment within each unit.

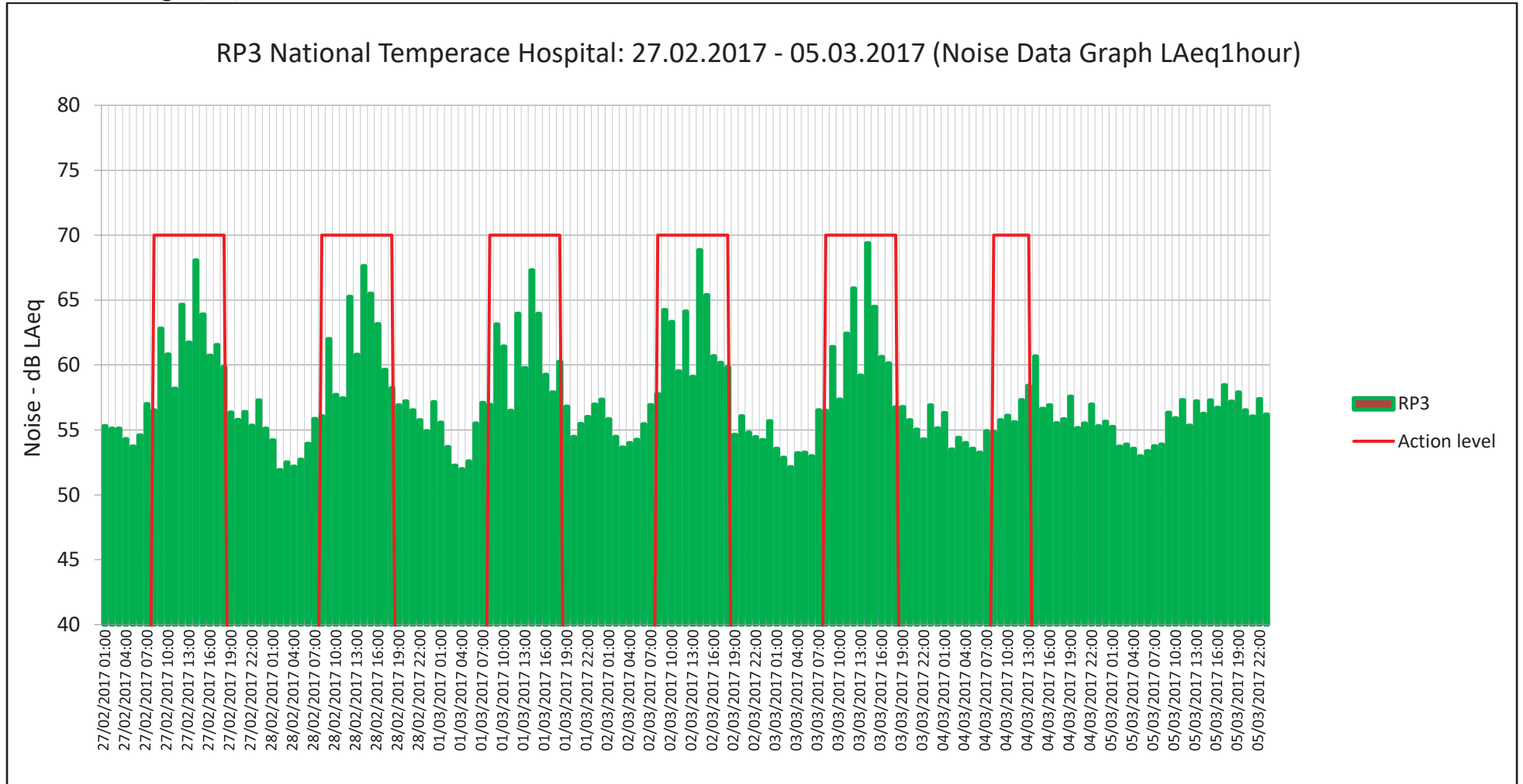
Noise levels have been recorded for the measurement periods of 08.00 to 18.00 Monday to Friday and 08.00 to 13.00 on Saturdays. These times have been agreed with LBC to be the core hours within which noisy demolition activities can proceed. The agreed action levels at RP3 are 63dBLAeq10hour and 73dBLAeq30min.

The measured unattended noise levels can be used to compare with the measured and recorded noise levels during the demolition activities.

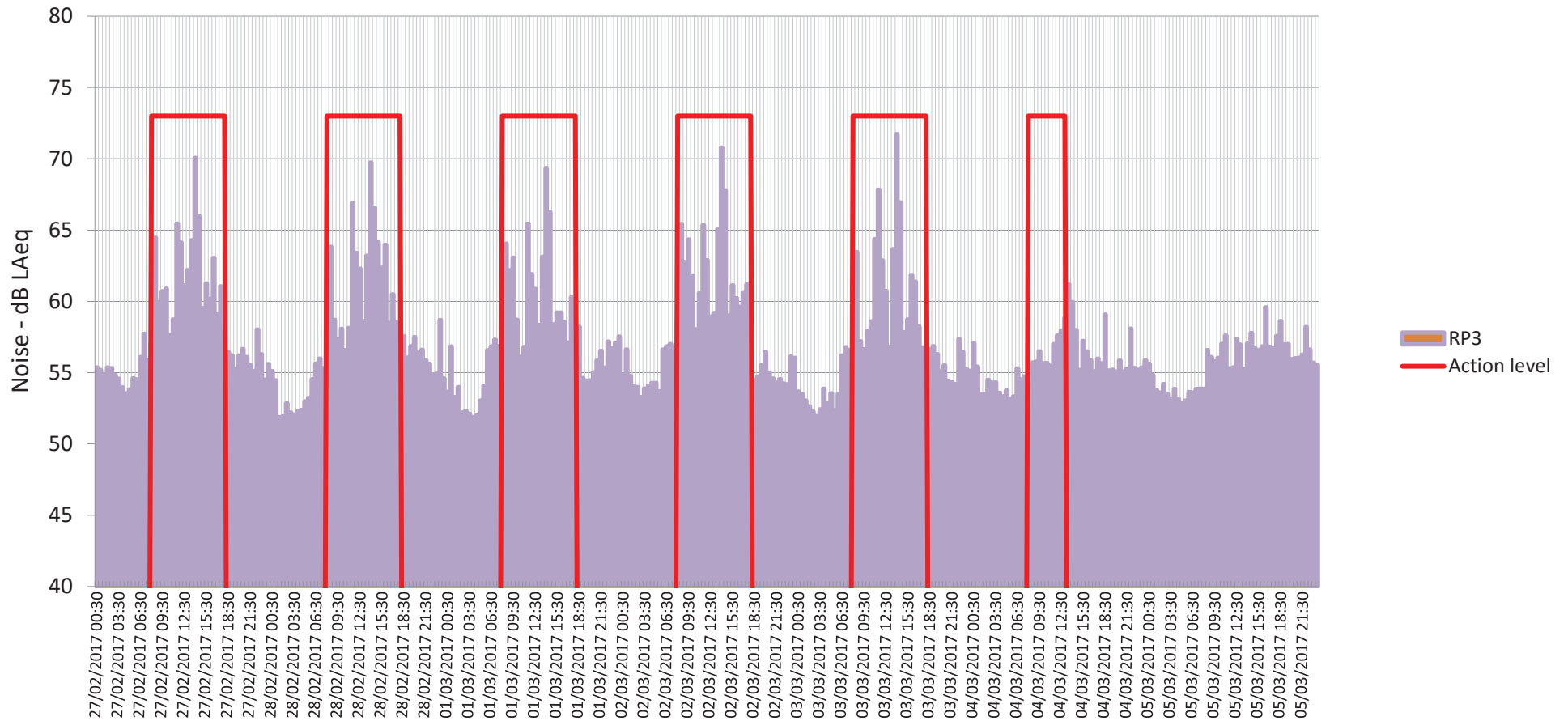
4.0 Measurement Results

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

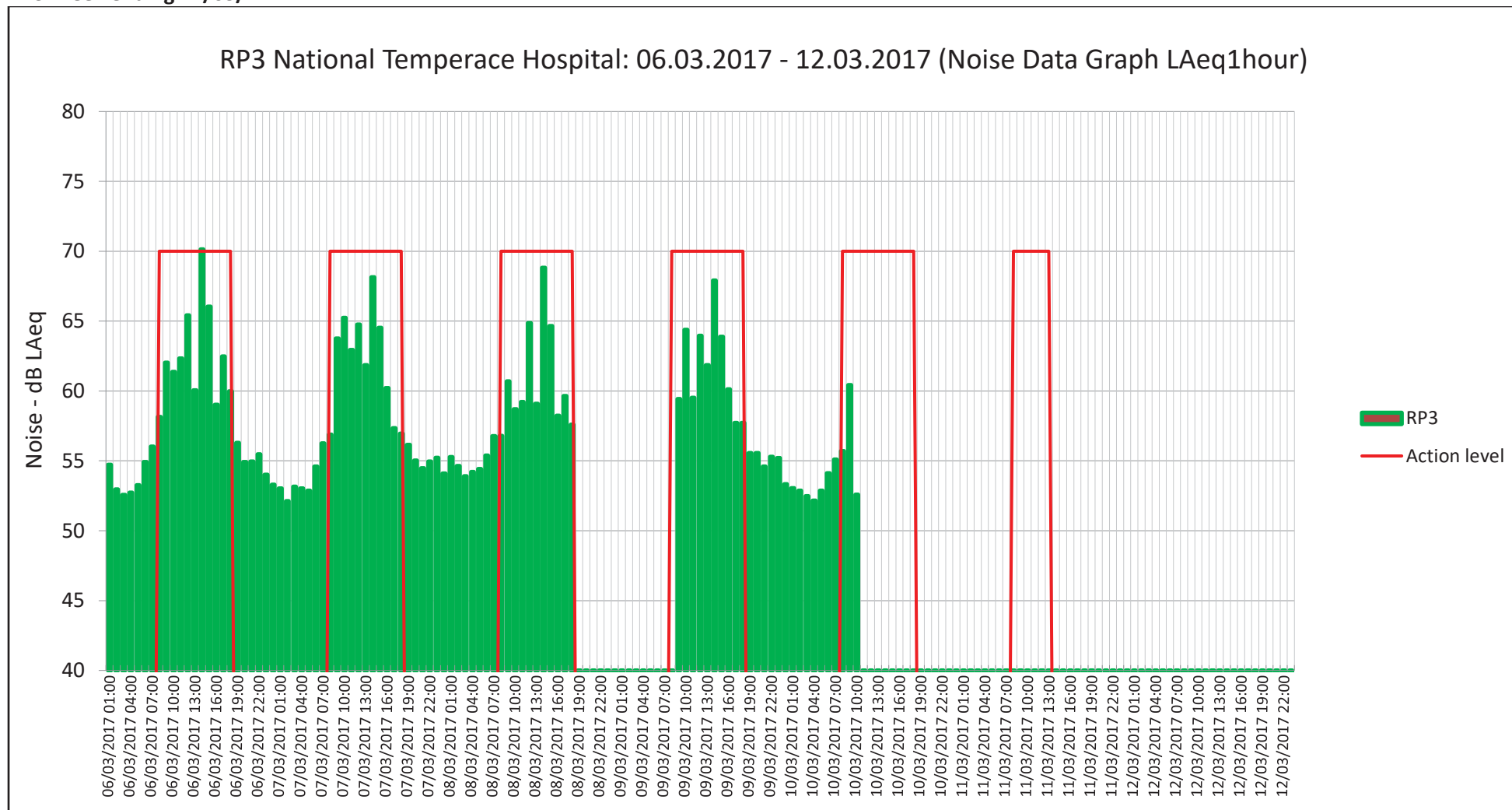
5.0 Noise Monitoring Graphs
RP3 Week ending 05/03/17



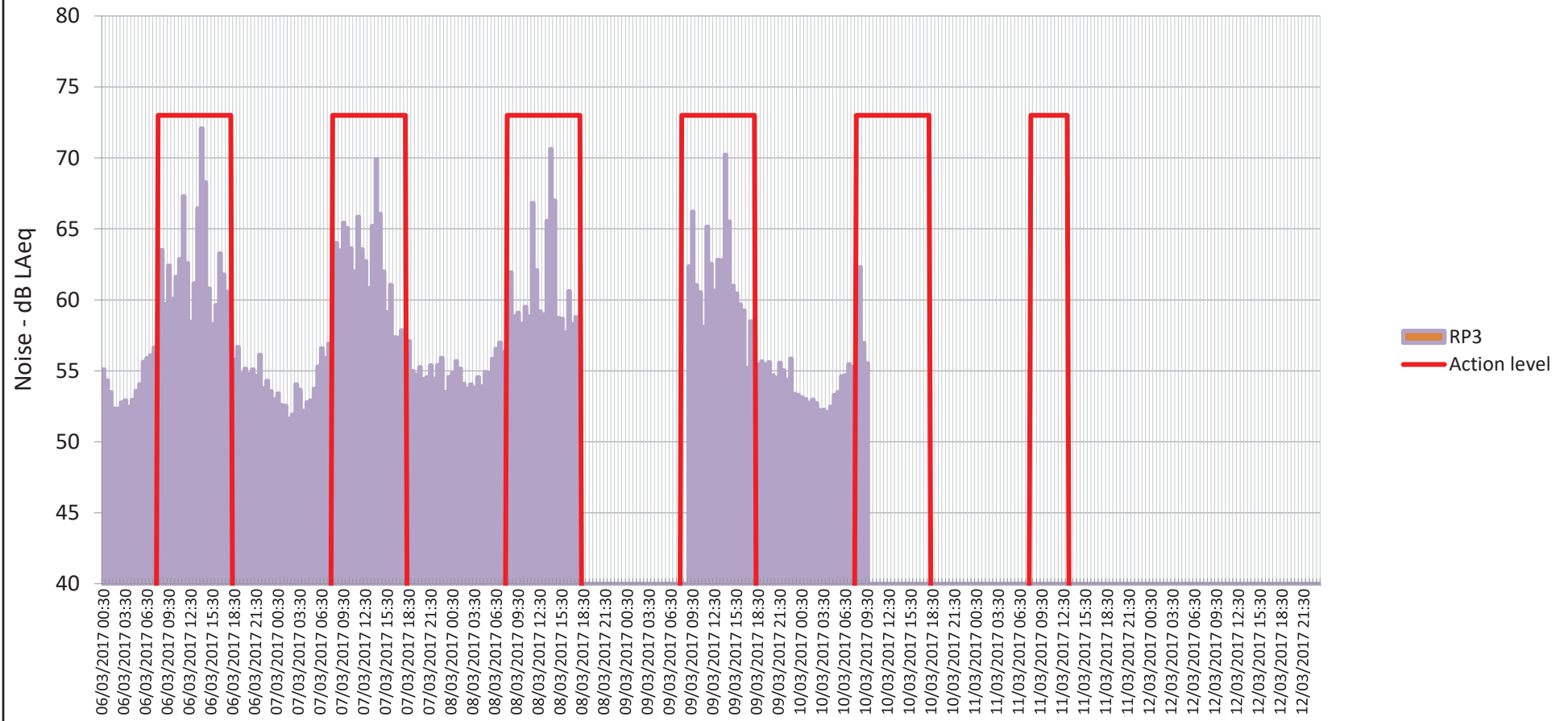
RP3 National Temperance Hospital: 27.02.2017 - 05.03.2017 (Noise data graph LAeq30minutes)



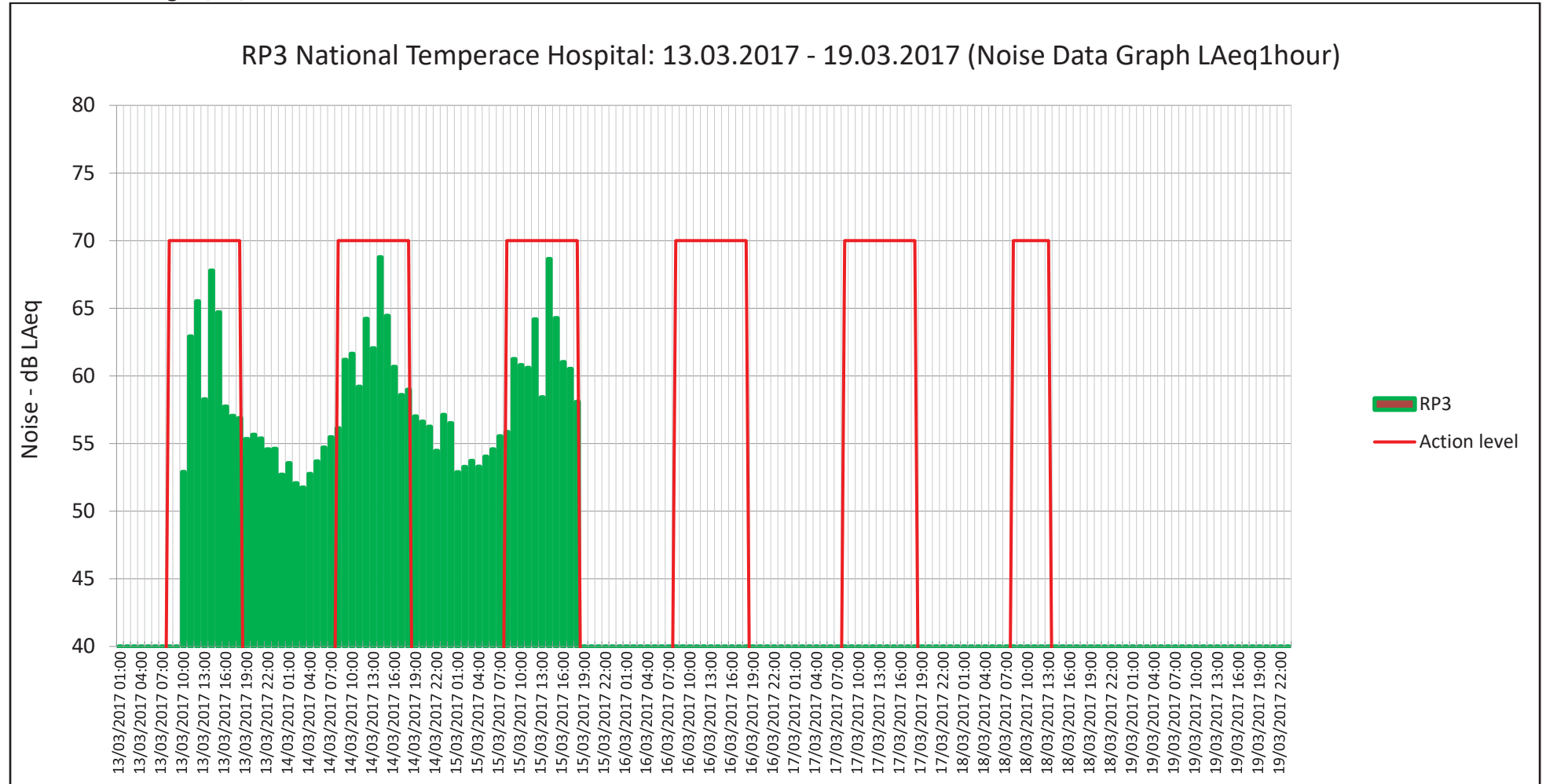
RP3 Week ending 12/03/17

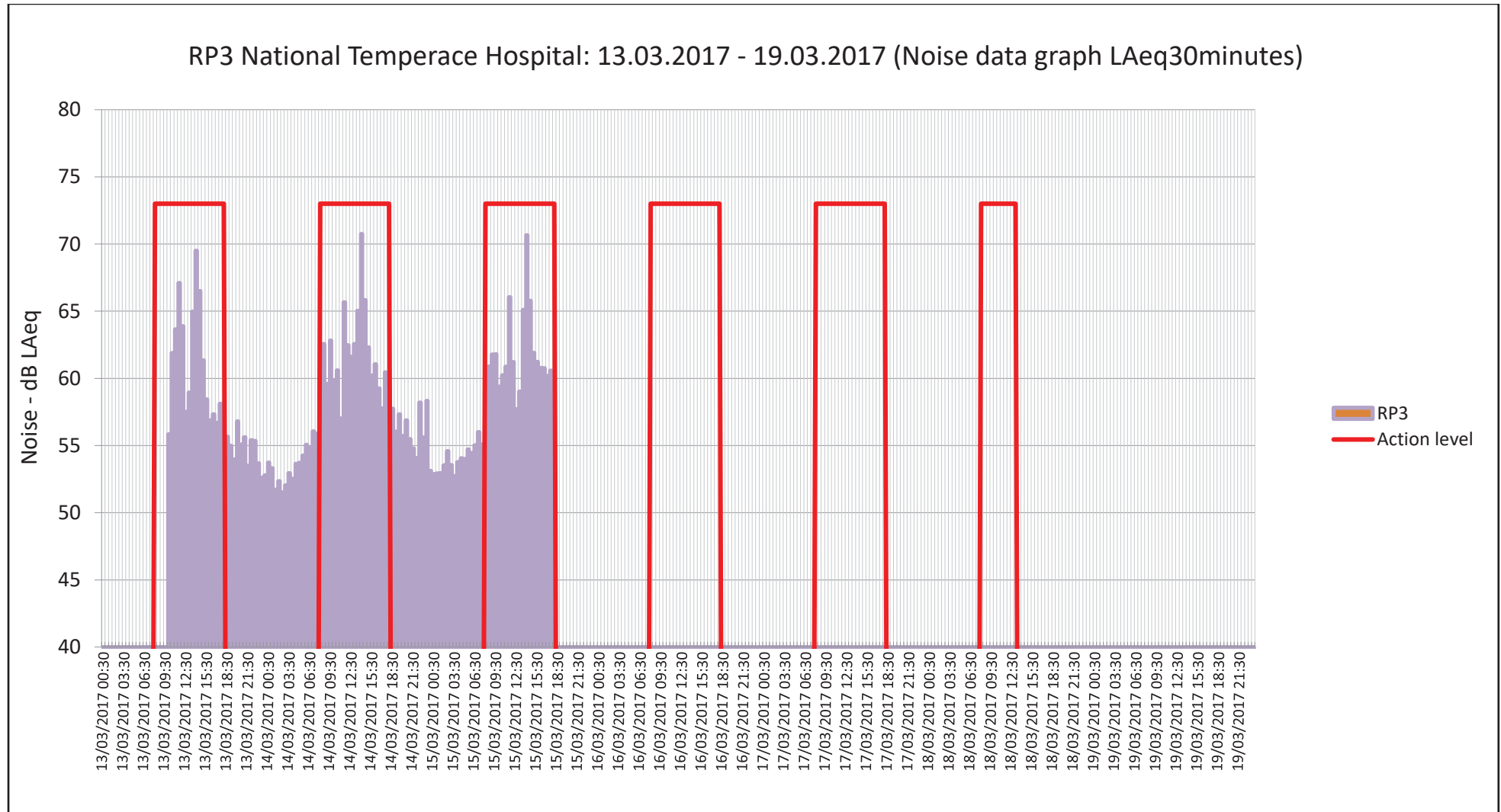


RP3 National Temperance Hospital: 06.03.2017 - 12.03.2017 (Noise data graph LAeq30minutes)

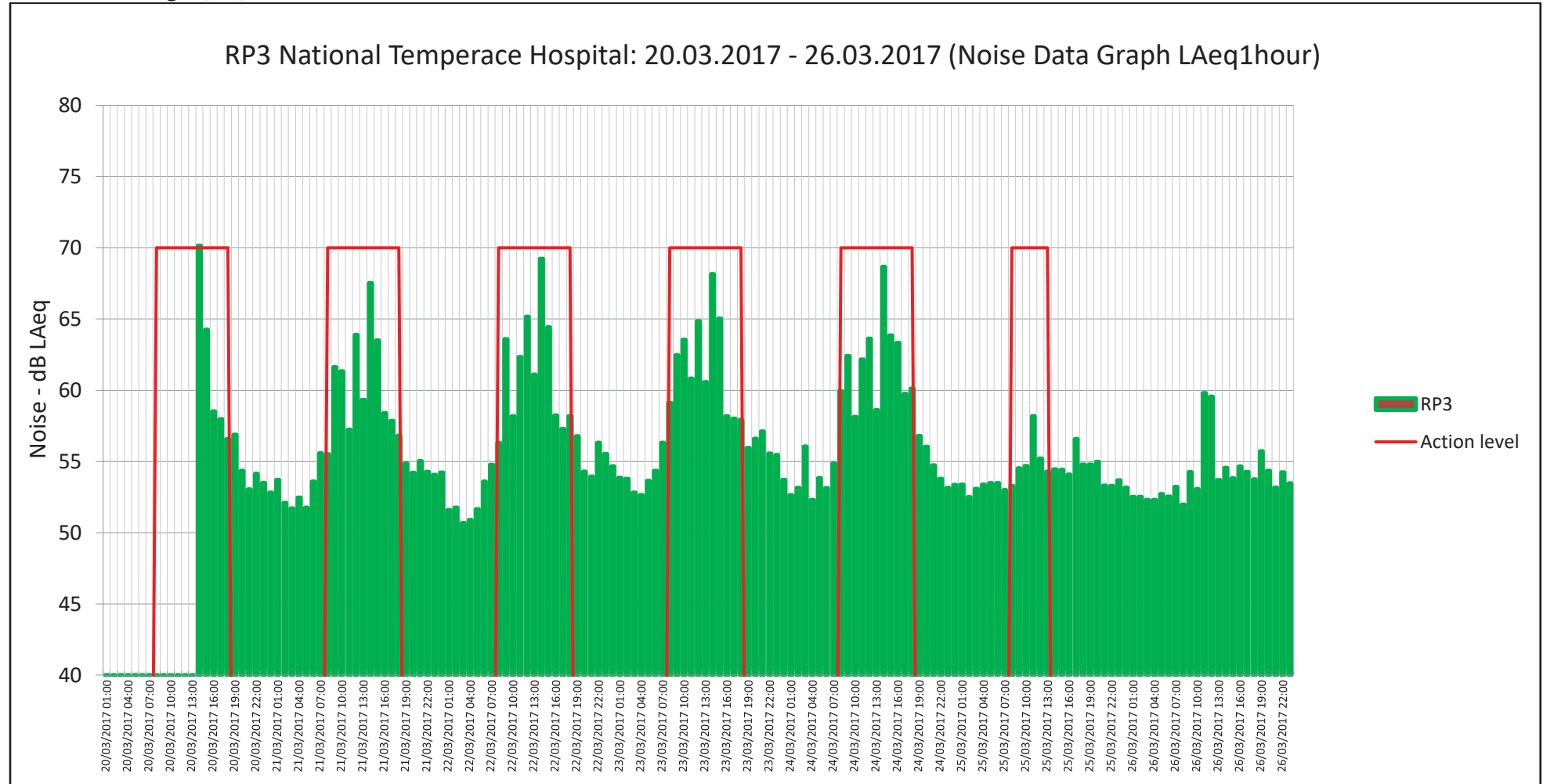


RP3 Week ending 19/03/17

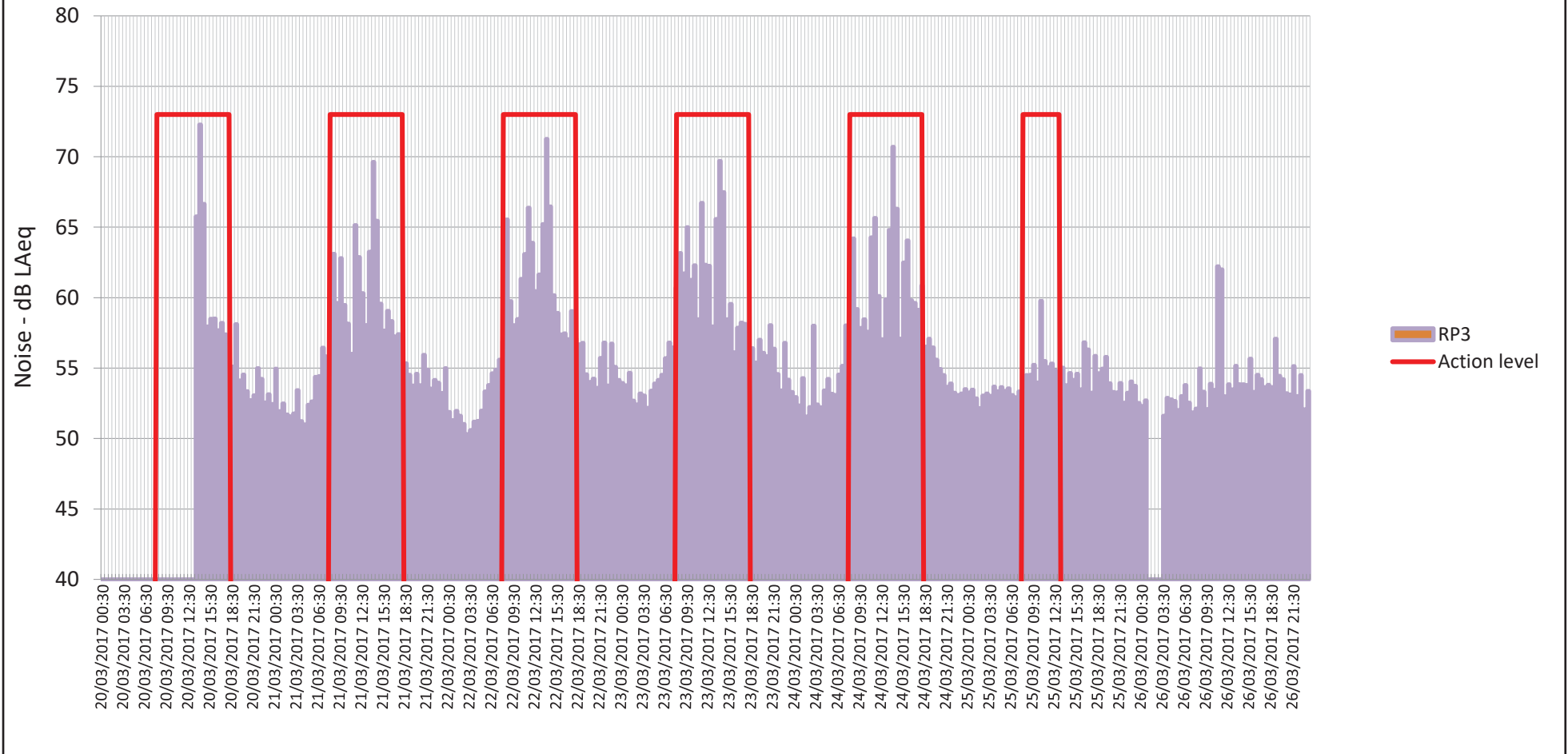




RP3 Week ending 26/03/17



RP3 National Temperance Hospital: 20.03.2017 - 26.03.2017 (Noise data graph LAeq30minutes)



6.0 Discussion

Unattended ambient noise monitoring has been undertaken during demolition associated activities at the National Temperance Hospital site at location RP3.

The activities in this period from 27 February to 26 March 2017 were as page 4 of this report:

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

The graphs in section 5.0 show that no exceedances of the 73dBLAeq30min action level occurred in this period.

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 6.4:

dBLAeq10hours						dBLAeq5hours
Date	27/02/2017	28/02/2017	01/03/2017	02/03/2017	03/03/2017	04/03/2017
RP3	63.13	63.06	62.47	63.69	63.52	56.77
Action Level	63	63	63	63	63	63
dBLAeq1hour						
7 - 8 AM	56.51	56.05	56.93	57.76	56.47	54.85
6 - 7 PM	56.33	56.89	56.80	54.61	56.76	60.66

Table 6.1

dBLAeq10hours						dBLAeq5hours
Date	06/03/2017	07/03/2017	08/03/2017	09/03/2017	10/03/2017	11/03/2017
RP3	64.33	63.74	62.86	62.87	51.09	0.00
Action Level	63	63	63	63	63	63
dBLAeq1hour						
7 - 8 AM	58.15	56.88	56.78	0.00	55.70	
6 - 7 PM	56.28	56.14	0.00	55.56	0.00	0.00

Table 6.2

dBLAeq10hours						dBLAeq5hours
Date	13/03/2017	14/03/2017	15/03/2017	16/03/2017	17/03/2017	18/03/2017
RP3	62.28	63.19	63.01	0.00	0.00	0.00
Action Level	63	63	63	63	63	63
dBLAeq1hour						
7 - 8 AM	0.00	56.14	55.85	0.00	0.00	0.00
6 - 7 PM	55.34	57.00	0.00	0.00	0.00	0.00

Table 6.3

dBLAeq10hours						dBLAeq5hours
Date	20/03/2017	21/03/2017	22/03/2017	23/03/2017	24/03/2017	25/03/2017
RP3	61.70	62.12	63.47	63.23	63.21	55.64
Action Level	63	63	63	63	63	63
dBLAeq1hour						
7 - 8 AM	0.00	55.50	56.31	59.11	59.94	53.30
6 - 7 PM	56.87	54.88	56.77	55.94	56.79	54.45

Table 6.4

Due to a system outage, no data was recorded during the periods shown on the graphs above.

There were several marginal exceedances of the 63dBLAeq10hour action level as can be seen highlighted in tables 6.1 to 6.4.

As was demonstrated in previous reports noise at RP3 is impacted by noise from the children at the Maria Fidelis School during play time breaks, approximately from 10.30 to 11.00 and again during lunch from 13.00 to 14.00. When this increase in noise is removed from the ambient level, then these small exceedances are removed to below the 63dBLAeq10hour action level.

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

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