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





Department for Transport

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Unattended Noise Monitoring Report

Period: 26 December 2016 to 29 January 2017

Project No EEMC/065/2016
Report No. EEMC-NTH-065.010 – NTH, HS2 Rev 01
Client: Keltbray Limited
Title: EEMC/065-010-NTH, HS2 - Unattended Noise Monitoring Report No.10
Period: 26 December 2016 - 29 January 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 located 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 26 December 2016 to 29 January 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:

- General housekeeping
- Maintenance of scaffolds and hoarding installations
- Office and site facilities servicing deliveries

The site is in the London Borough of Camden and the surrounding area is populated by residential blocks, various 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 an 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 while early demolition works were ongoing 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 74dBLAeq10hour. This level is indicated by the red line on the graphs.

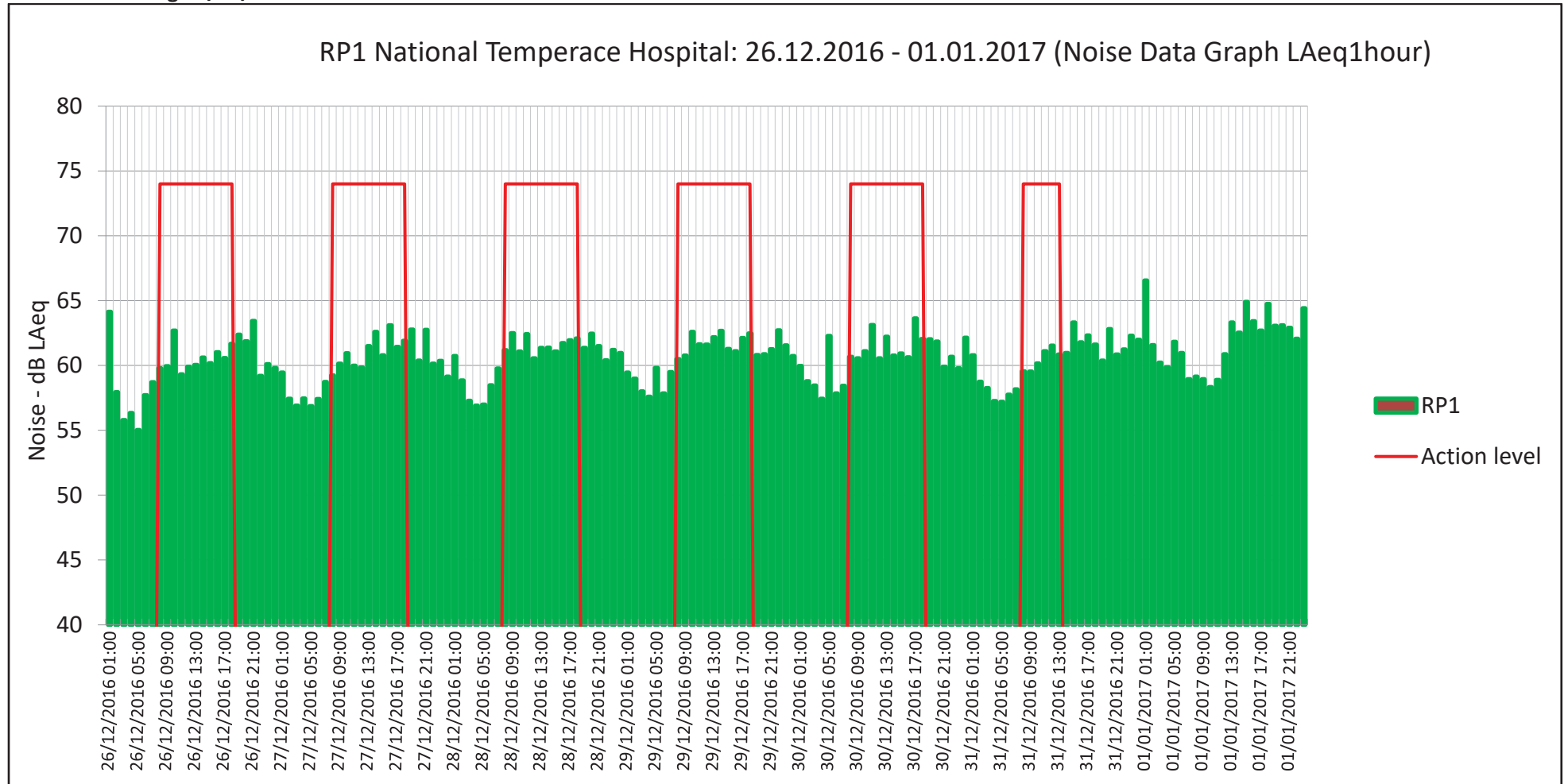
The measured unattended noise levels can be used to compare with measured and recorded noise levels during other demolition activities and periods.

4.0 Measurement Results

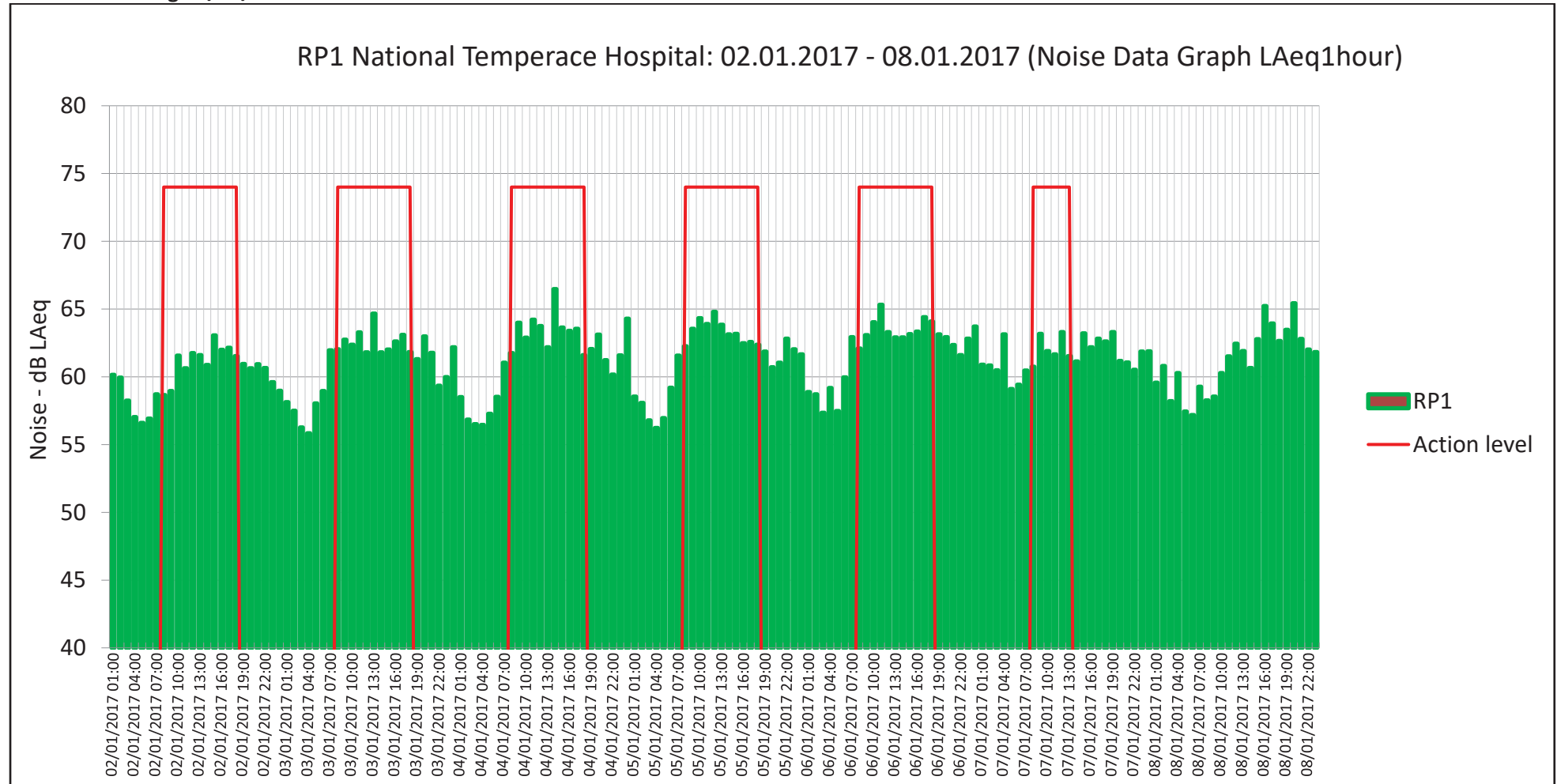
The recorded unattended noise measurements in this period are presented as graphs in section 5.0 of this report using LAeq1hour data points.

5.0 Noise Monitoring Graphs

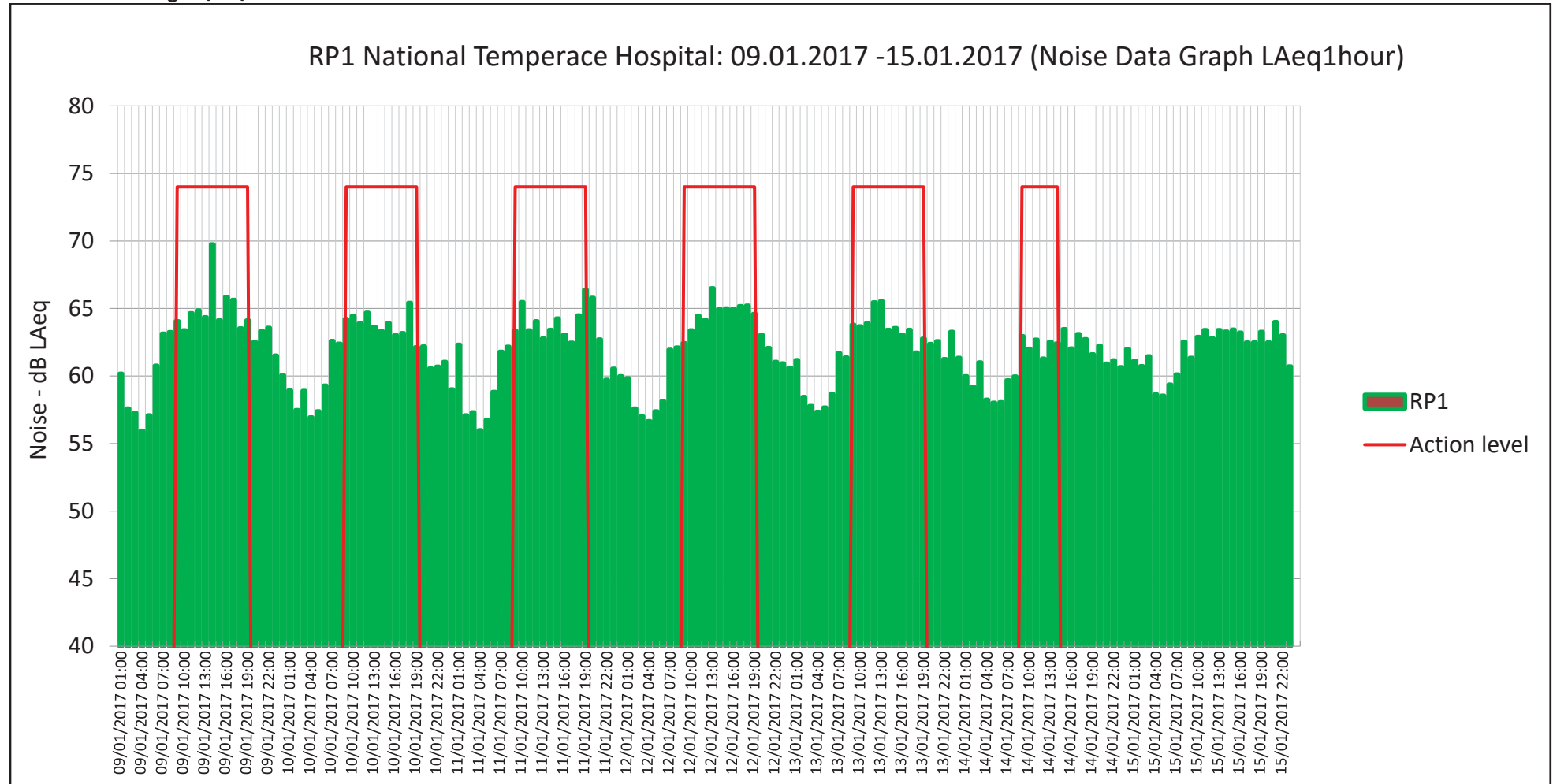
RP1 Week ending 01/01/17



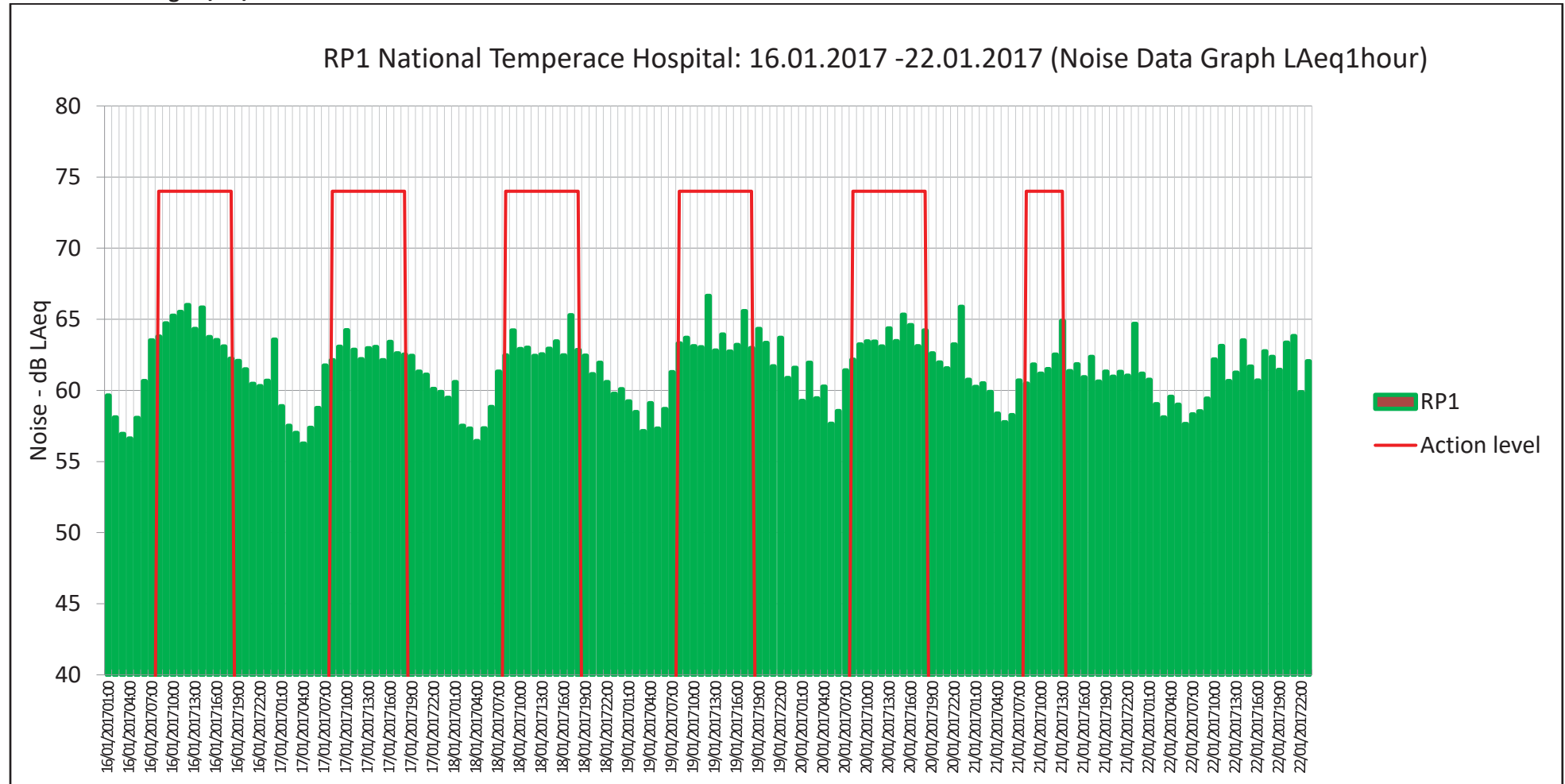
RP1 Week ending 08/01/17



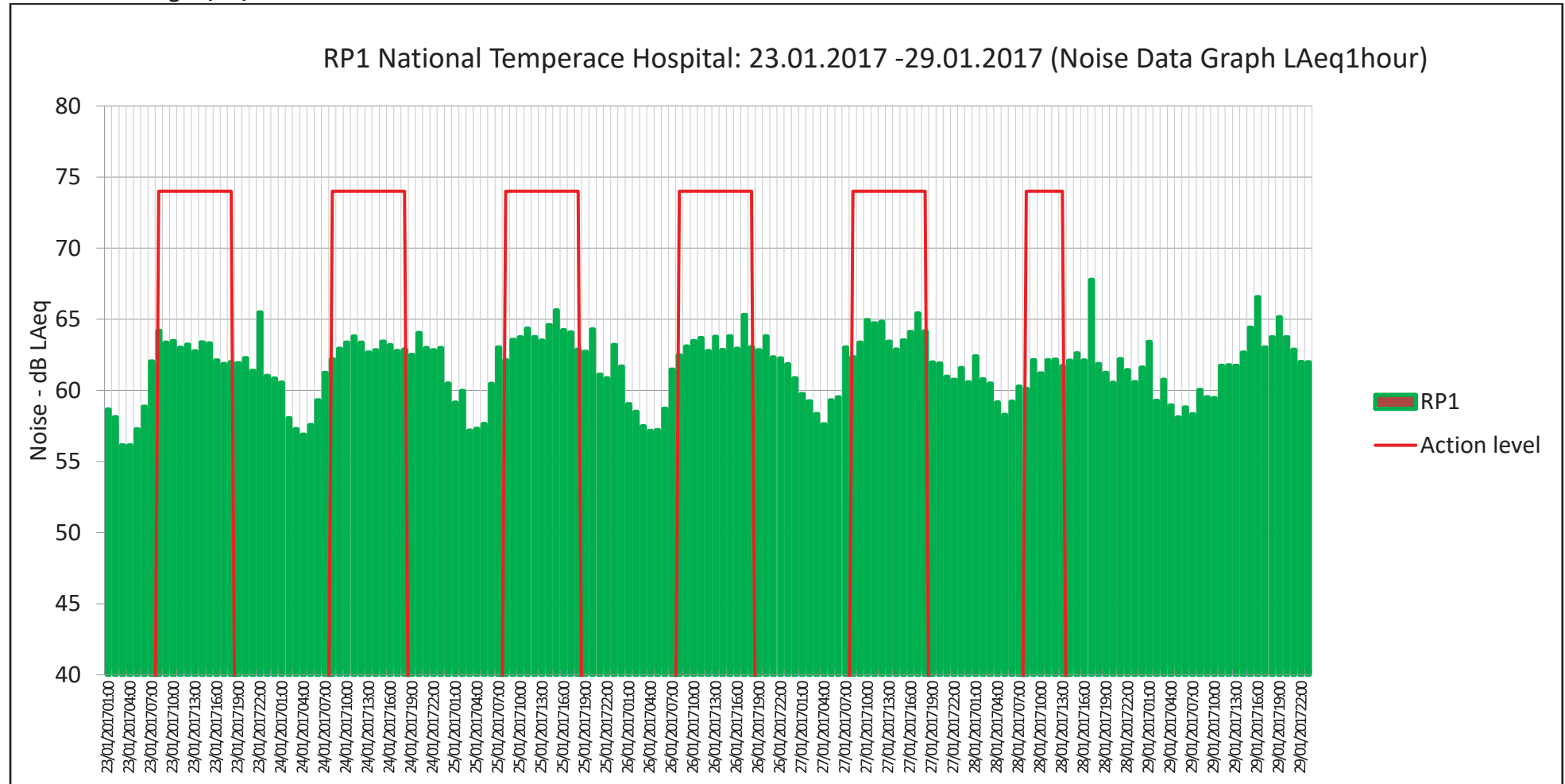
RP1 Week ending 15/01/17



RP1 Week ending 22/01/17



RP1 Week ending 29/01/17



6.0 Discussion

Unattended ambient noise monitoring has been undertaken during works for phase 1 at National Temperance Hospital at RP1.

The activities in the period 26 December 2016 to 29 January 2017 would include:
General site housekeeping; maintenance of scaffoldings and hoarding installations and office and site facilities servicing deliveries.

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

dBLAeq10hours						dBLAeq5hours
Date	26/12/2016	27/12/2016	28/12/2016	29/12/2016	30/12/2016	31/12/2016
RP1	60.7	61.3	61.7	61.9	61.7	67.7
Action Level	74	74	74	74	74	74
dBLAeq1hour						
7 - 8 AM	59.80	59.23	61.19	60.49	60.67	59.54
6 - 7 PM	62.37	62.76	61.36	60.80	62.01	60.96

Table 6.1

dBLAeq10hours						dBLAeq5hours
Date	02/01/2017	03/01/2017	04/01/2017	05/01/2017	06/01/2017	07/01/2017
RP1	61.5	62.7	63.8	63.5	63.7	69.4
Action Level	74	74	74	74	74	74
dBLAeq1hour						
7 - 8 AM	58.66	62.03	61.75	62.25	62.09	60.74
6 - 7 PM	60.95	61.31	62.05	61.86	63.13	61.14

Table 6.2

dBLAeq10hours						dBLAeq5hours
Date	09/01/2017	10/01/2017	11/01/2017	12/01/2017	13/01/2017	14/01/2017
RP1	65.5	64.0	63.8	64.8	63.9	69.3
Action Level	74	74	74	74	74	74
dBLAeq1hour						
7 - 8 AM	63.25	62.39	62.18	62.11	61.39	59.97
6 - 7 PM	64.12	62.13	66.38	64.59	62.77	61.61

Table 6.3

dBLAeq10hours						dBLAeq5hours
Date	16/01/2017	17/01/2017	18/01/2017	19/01/2017	20/01/2017	21/01/2017
RP1	64.6	62.9	63.3	64.0	63.9	69.6
Action Level	74	74	74	74	74	74
dBLAeq1hour						
7 - 8 AM	63.79	62.12	62.46	63.31	62.16	60.48
6 - 7 PM	62.06	62.42	62.44	64.32	62.61	61.36

Table 6.4

dBLAeq10hours						dBLAeq5hours
Date	23/01/2017	24/01/2017	25/01/2017	26/01/2017	27/01/2017	28/01/2017
RP1	62.9	63.1	64.1	63.5	64.2	68.9
Action Level	74	74	74	74	74	74
dBLAeq1hour						
7 - 8 AM	64.19	62.20	62.12	62.46	62.34	60.10
6 - 7 PM	61.91	62.49	62.72	62.82	61.96	62.08

Table 6.5

There were no exceedances of the 74dBLAeq10hour action level in this period. Recorded levels were significantly below the action level. The measurements recorded for the shoulder hours LAeq1hour were also below the action level and predominately below the relevant LAeq10hour.

Unattended Noise Monitoring Report

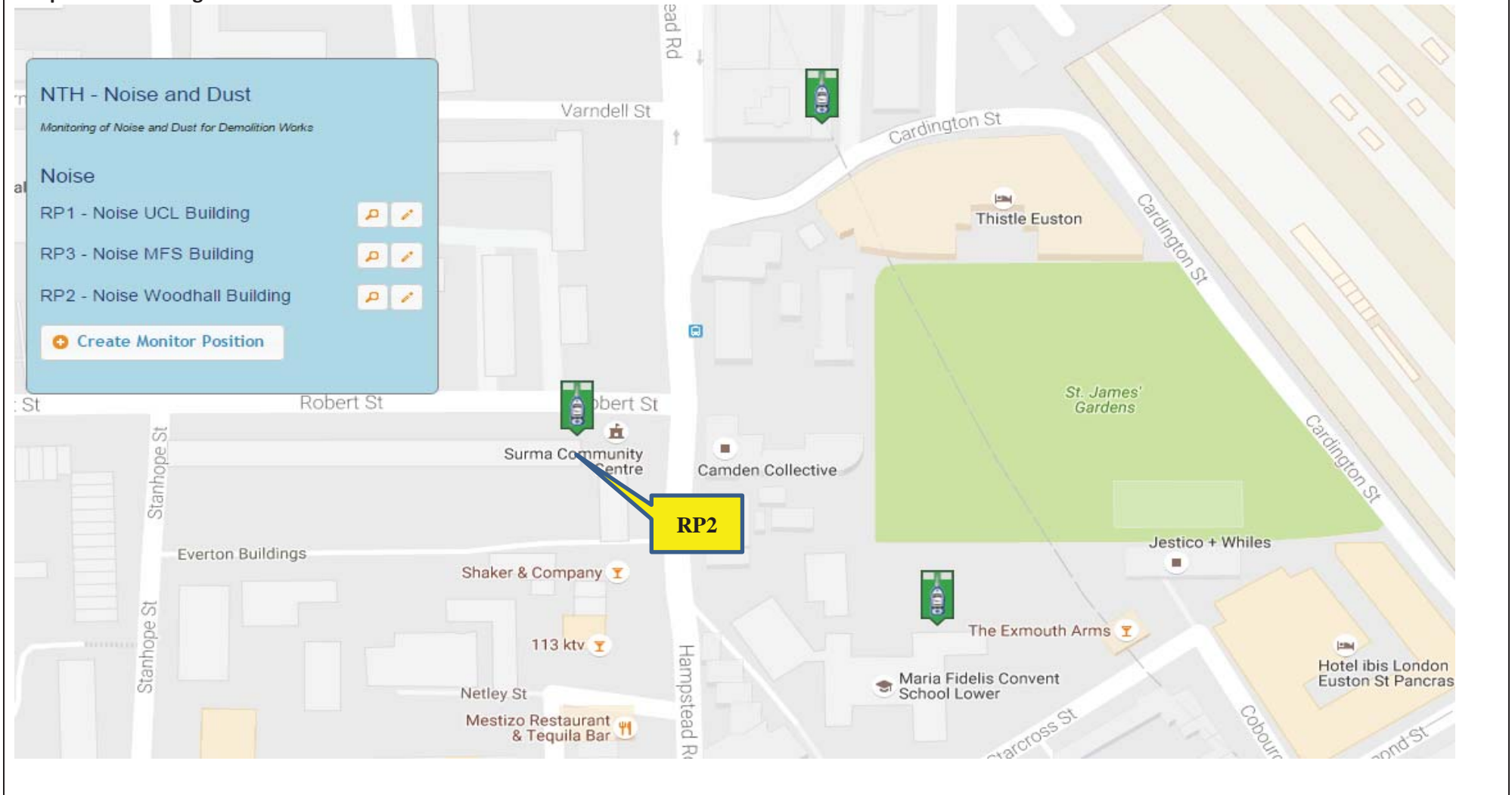
Period: 26 December 2016 to 29 January 2017

Project No EEMC/065/2016
Report No. EEMC-NTH-065.011 – NTH, HS2 Rev 01
Client: Keltbray Limited
Title: EEMC/065-011-NTH, HS2 - Unattended Noise Monitoring Report No.11
Period: 26 December 2016 - 29 January 2017

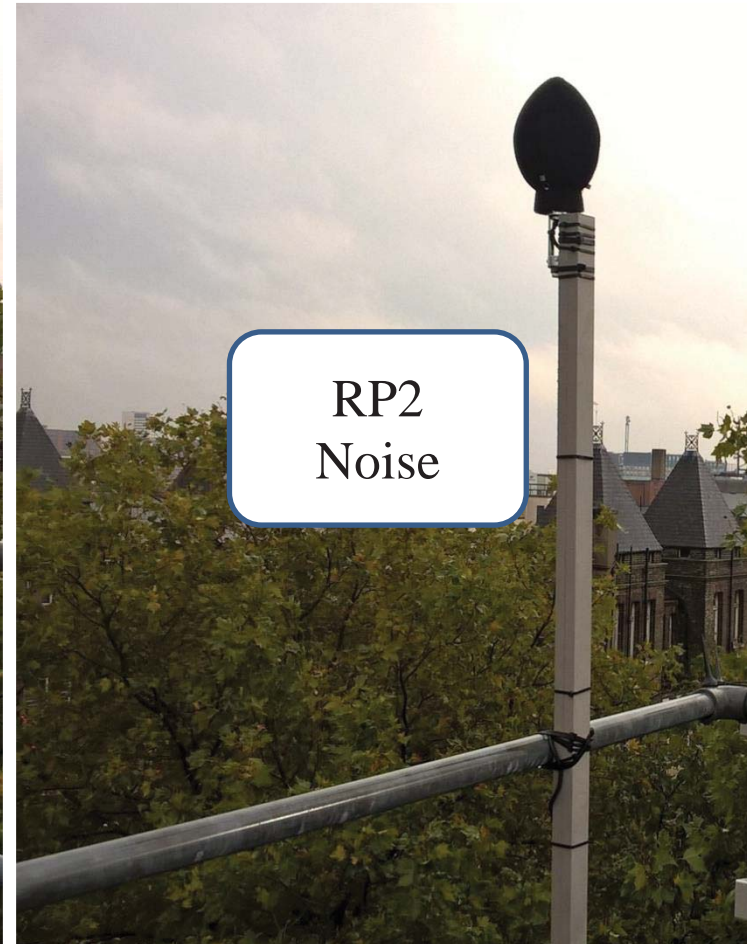
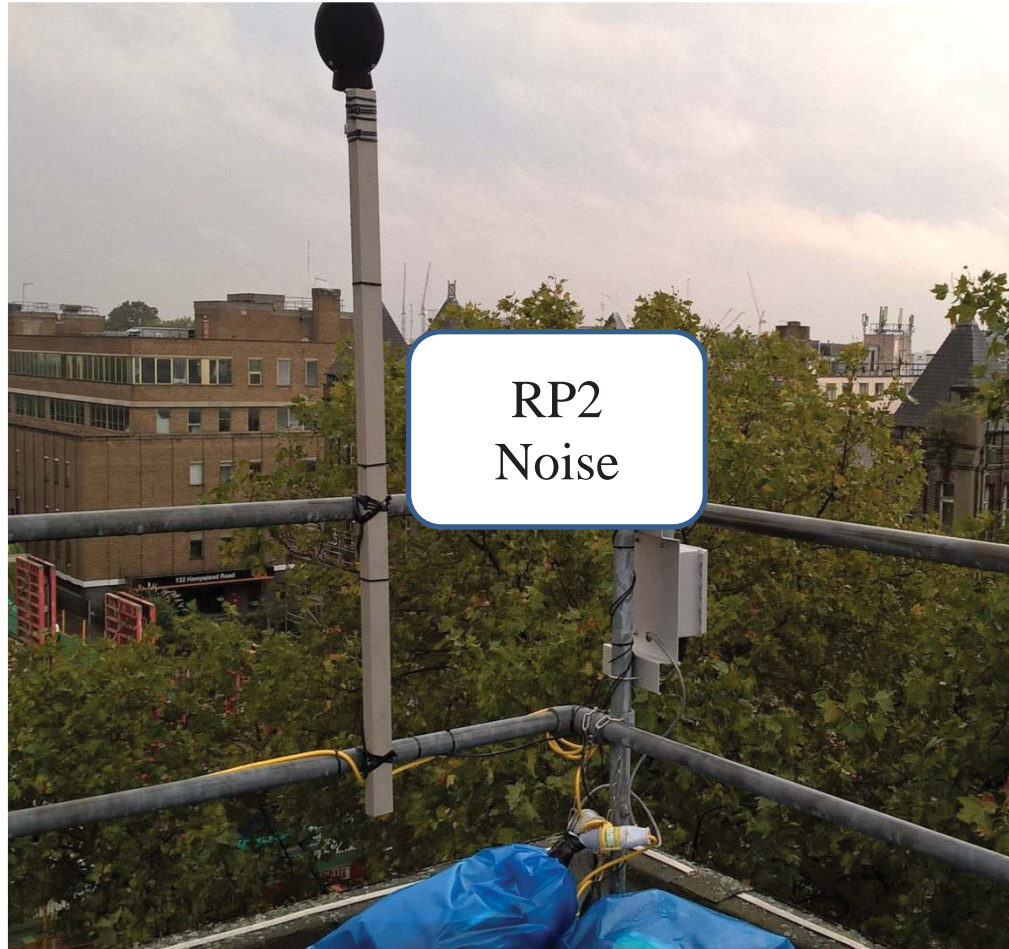
Details of Noise Monitor at Receptor Point (RP2)

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: See attached certificate (Appendix 1)	03/10/2016 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 26 December 2016 to 29 January 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:

- General site housekeeping
- Maintenance of scaffolds and hoarding installations
- Office and site facilities servicing deliveries

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

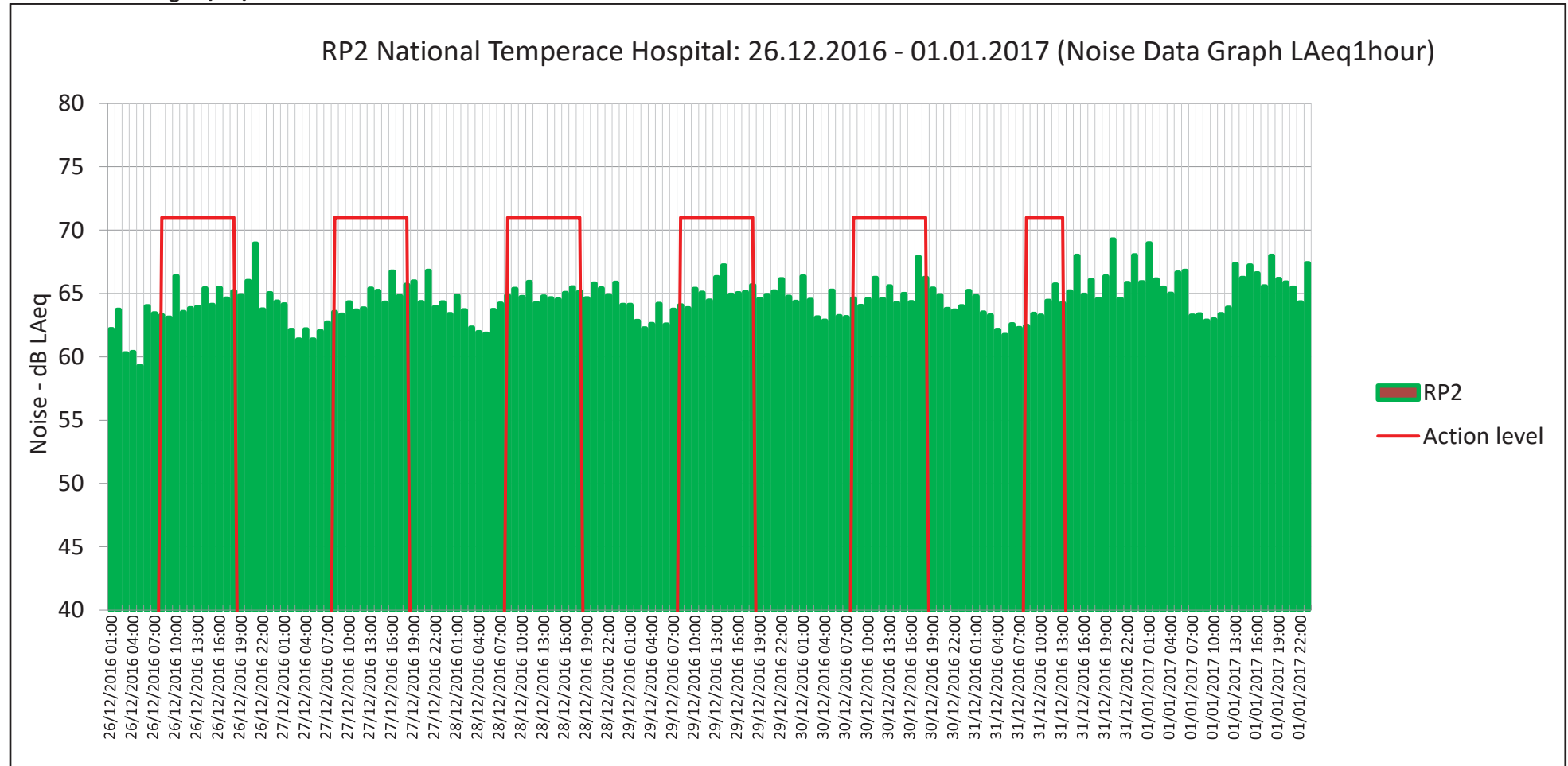
The measured unattended noise levels can be used to compare with the measured and recorded noise levels during the demolition activities.

4.0 Measurement Results

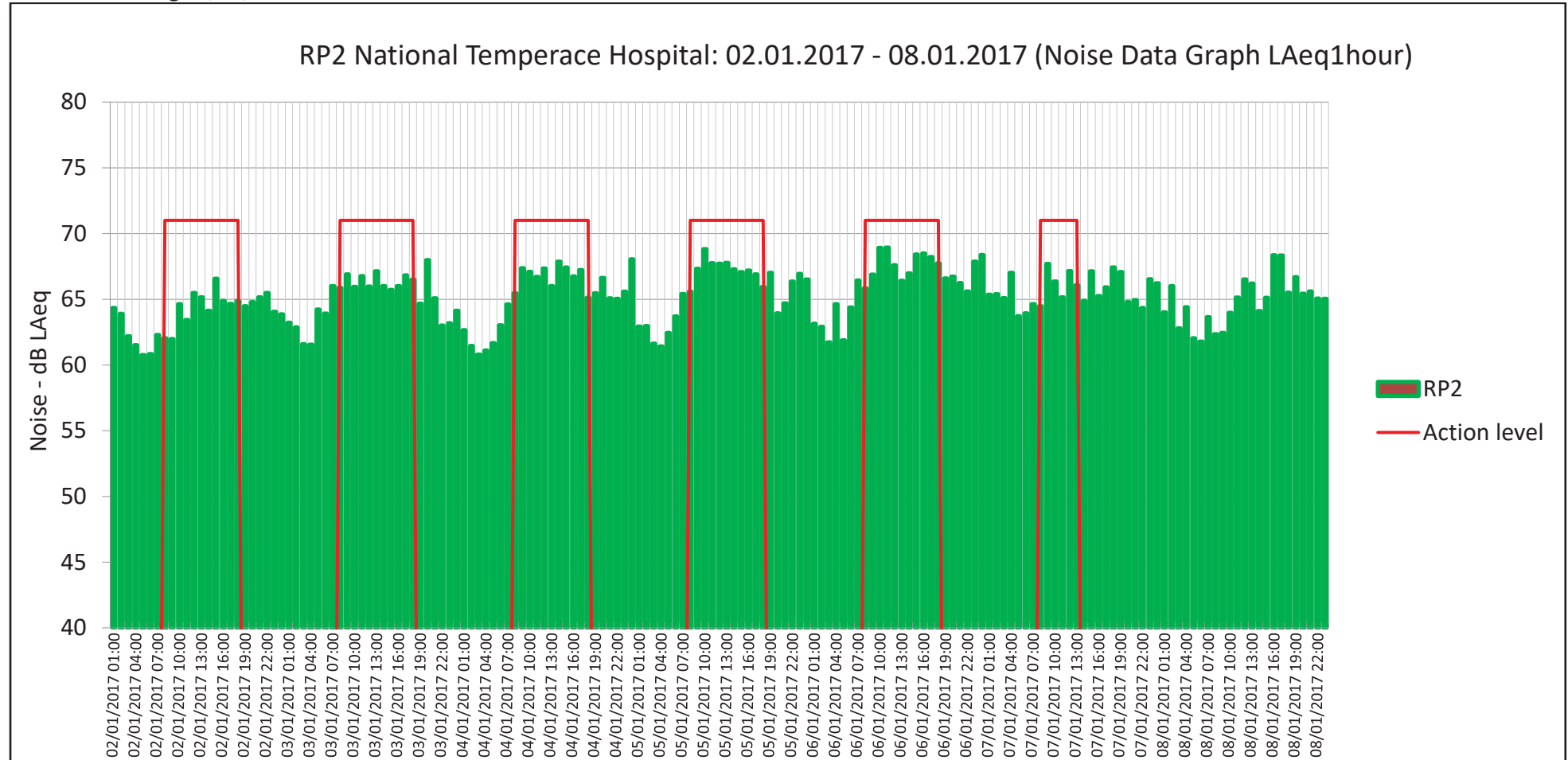
The recorded unattended noise measurements in this period are presented as graphs in section 5.0 of this report using LAeq1hour data points.

5.0 Noise Monitoring Graphs

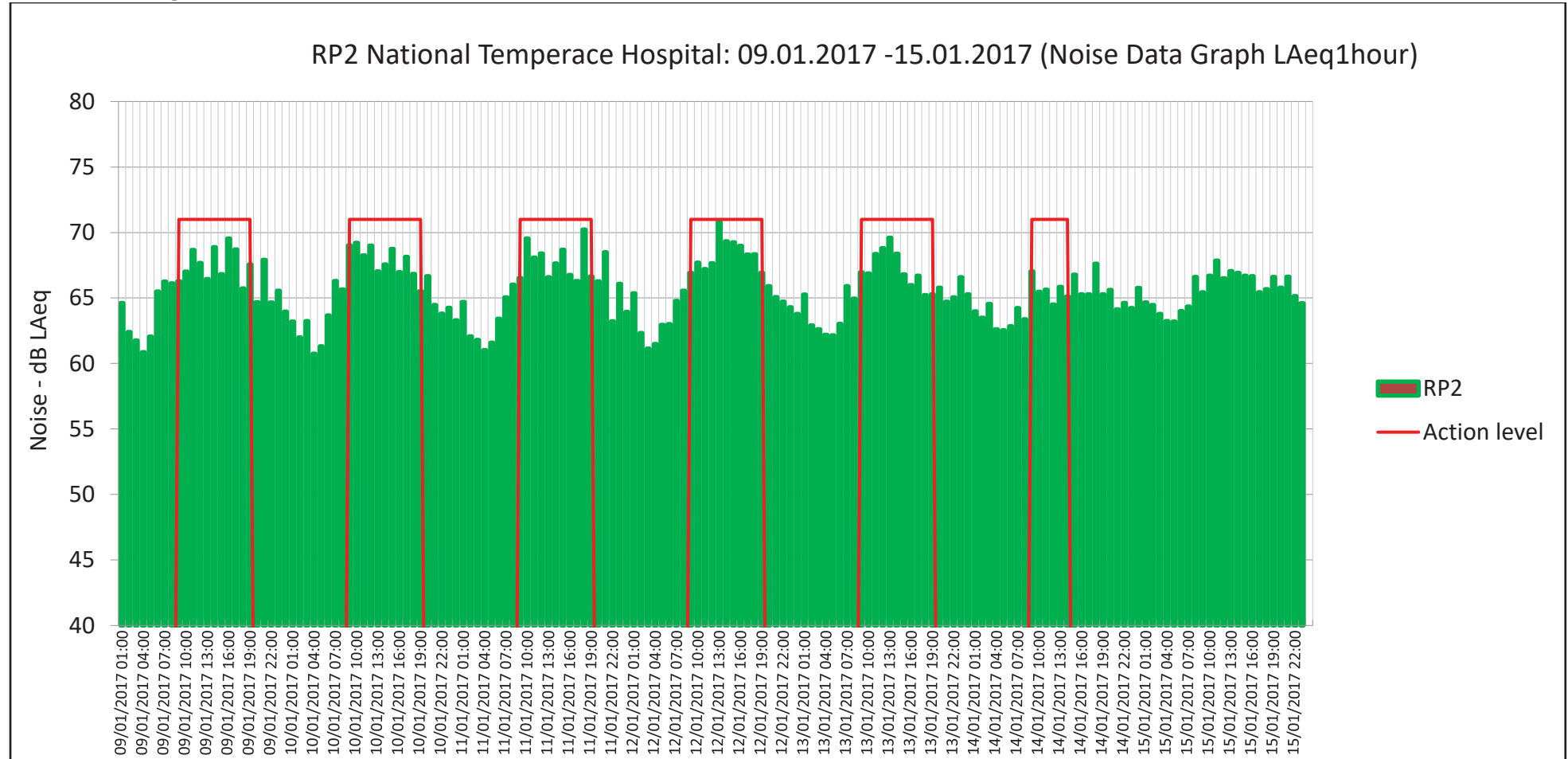
RP2 Week ending 01/01/17



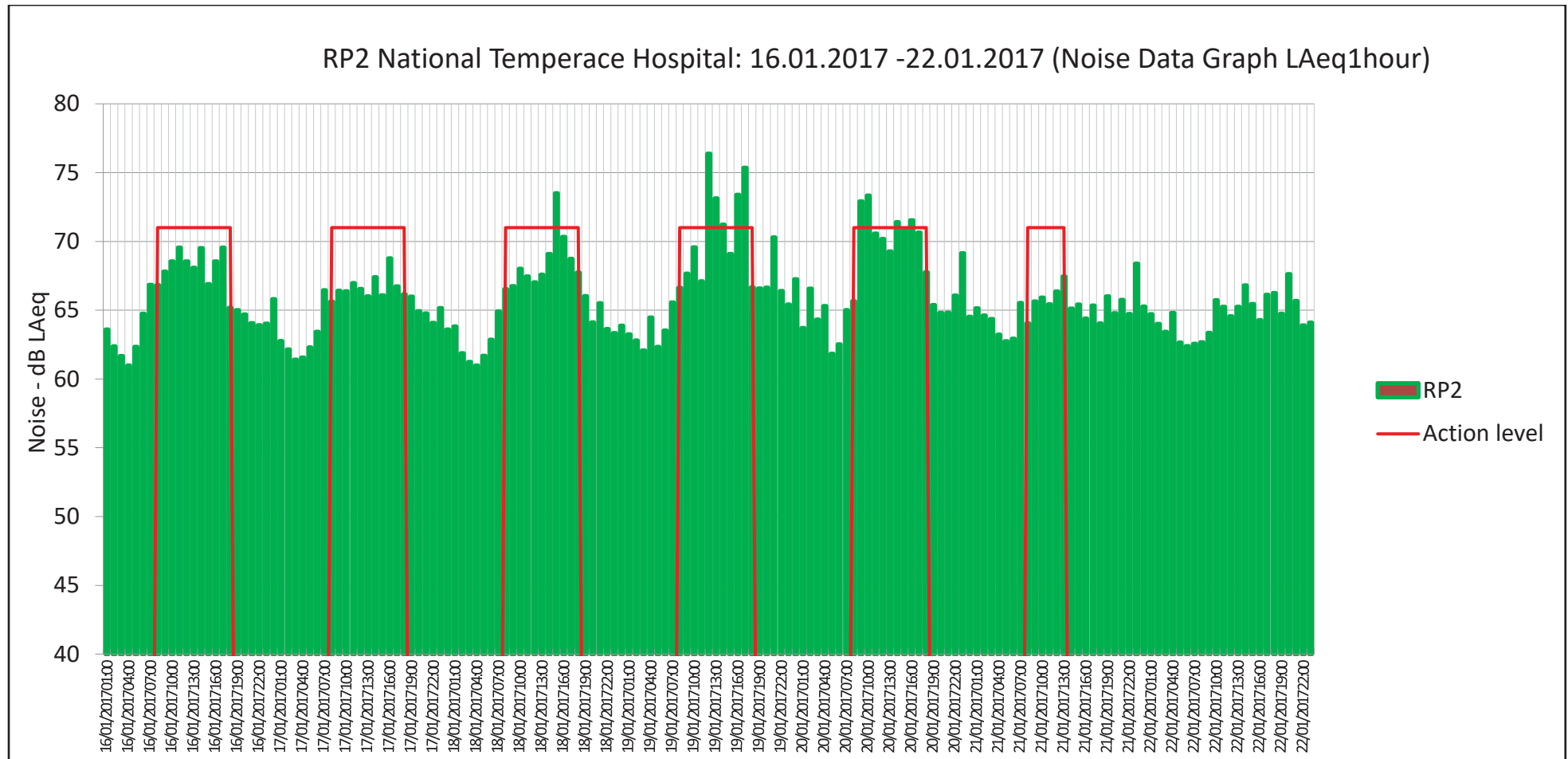
RP2 Week ending 08/01/17



RP2 Week ending 15/01/17

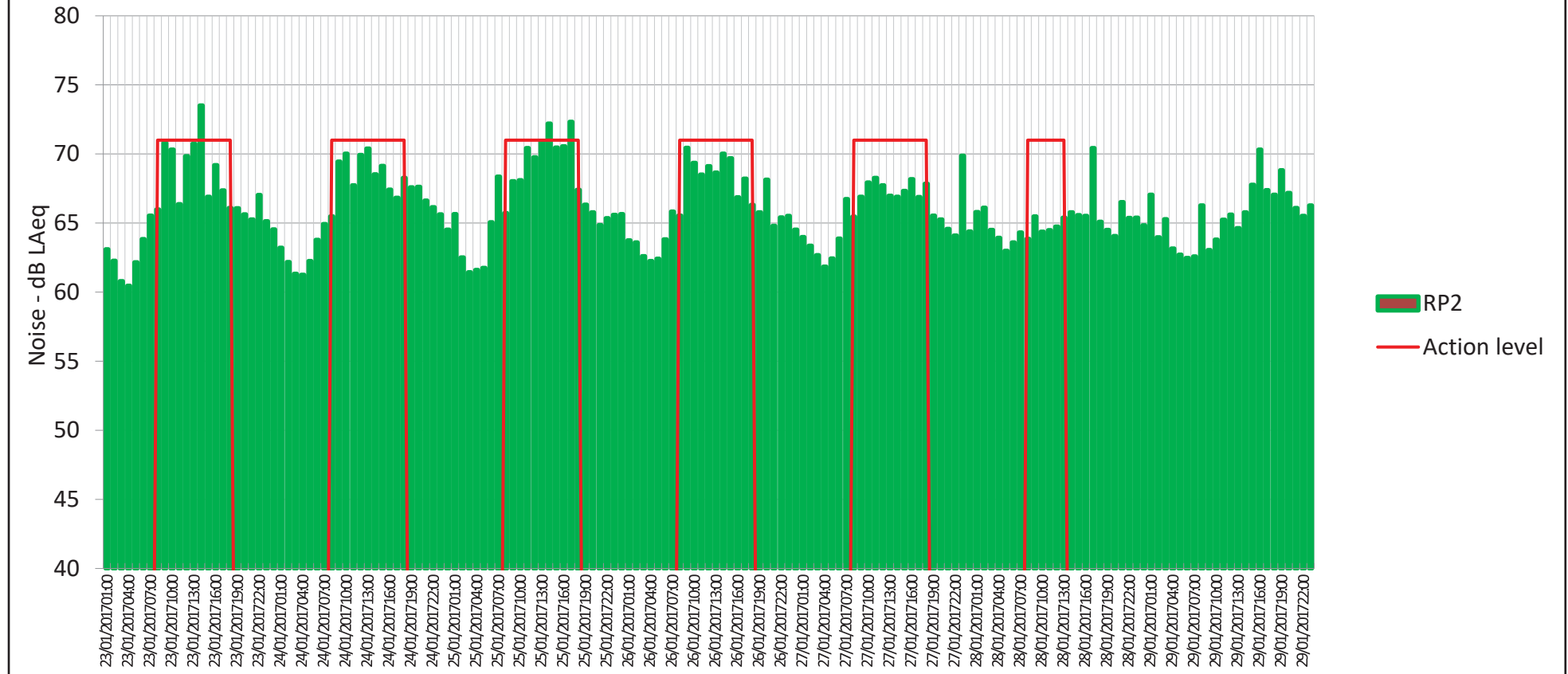


RP2 Week ending 22/01/17



RP2 Week ending 29/01/17

RP2 National Temperance Hospital: 23.01.2017 -29.01.2017 (Noise Data Graph LAeq1hour)



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 28 November 2016 to 25 December 2016 would include:

General site housekeeping; maintenance of scaffolds and hoarding installations and office and site facilities servicing deliveries.

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	26/12/2016	27/12/2016	28/12/2016	29/12/2016	30/12/2016	31/12/2016
RP2	64.7	64.8	65.0	65.4	65.4	64.3
Action Level	71	71	71	71	71	71
dBLAeq1hour						
7 - 8 AM	63.26	63.53	64.84	64.07	64.61	62.45
6 - 7 PM	64.87	65.94	64.63	64.57	65.39	65.17

Table 6.1

dBLAeq10hours						dBLAeq5hours
Date	02/01/2017	03/01/2017	04/01/2017	05/01/2017	06/01/2017	07/01/2017
RP2	64.7	66.4	66.9	67.4	67.9	66.6
Action Level	71	71	71	71	71	71
dBLAeq1hour						
7 - 8 AM	62.04	65.86	65.47	65.58	65.83	64.48
6 - 7 PM	64.48	64.66	65.45	67.01	66.59	64.87

Table 6.2

dBLAeq10hours						dBLAeq5hours
Date	09/01/2017	10/01/2017	11/01/2017	12/01/2017	13/01/2017	14/01/2017
RP2	67.8	68.2	68.1	68.6	67.6	65.8
Action Level	71	71	71	71	71	71
dBLAeq1hour						
7 - 8 AM	66.11	65.64	66.01	65.56	64.94	63.37
6 - 7 PM	67.57	65.51	66.64	66.92	65.28	65.10

Table 6.3

dBLAeq10hours						dBLAeq5hours
Date	16/01/2017	17/01/2017	18/01/2017	19/01/2017	20/01/2017	21/01/2017
RP2	68.4	66.8	69.1	72.2	71.1	66.2
Action Level	71	71	71	71	71	71
dBLAeq1hour						
7 - 8 AM	66.82	65.62	66.53	66.62	65.65	64.04
6 - 7 PM	65.00	65.98	66.02	66.58	65.38	65.12

Table 6.4

dBLAeq10hours						dBLAeq5hours
Date	23/01/2017	24/01/2017	25/01/2017	26/01/2017	27/01/2017	28/01/2017
RP2	69.7	68.9	70.3	68.9	67.5	64.9
Action Level	71	71	71	71	71	71
dBLAeq1hour						
7 - 8 AM	65.99	65.49	65.72	65.53	65.46	63.86
6 - 7 PM	66.08	67.59	66.32	65.77	65.55	65.78

Table 6.5

Marginal exceedances of the 71dBLAeq10hour action level occurred on the 19/01/2017 and 20/01/2017. Audio evidence of these exceedances from Livenviro indicate that these exceedances were likely to be the result of works on the Lovell site on the corner of Roberts Road and Hampstead Road opposite NTH (National Temperance Hospital) site. The audio recordings at position RP2 identify noise from heavy plant, angle grinder cutting and impact noise from breaking operations on the Lovell site. None of these activities took place on the NTH site in this period

The measured and recorded shoulder hours show no exceedance of the action level.

It is very likely that noise from the Lovell site will have significant influence on the cumulative noise levels recorded at RP2. Noise at RP2 will also include significant contribution from road traffic.

Unattended Noise Monitoring Report

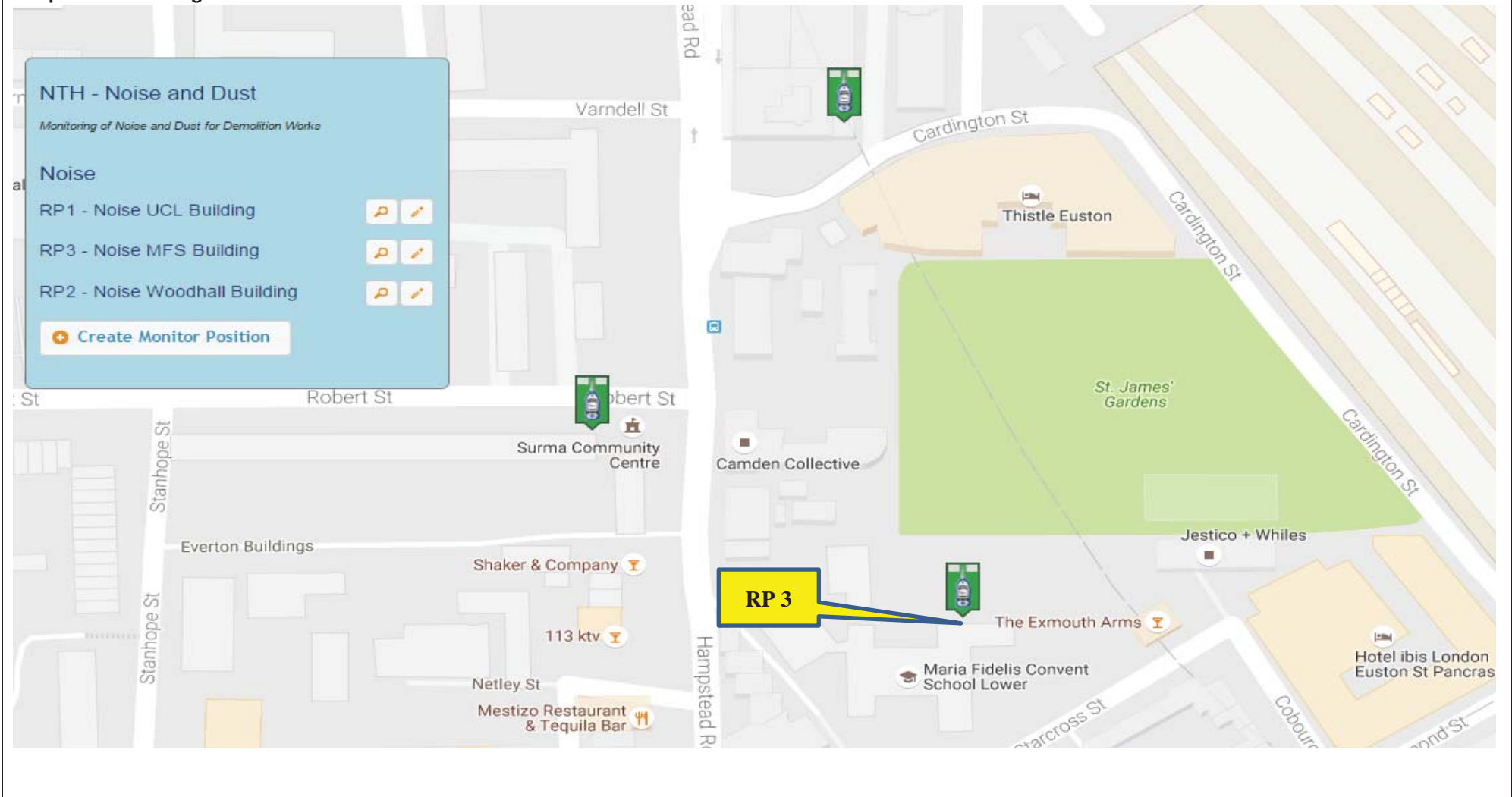
Period: 26 December 2016 to 29 January 2017

Project No EEMC/065/2016
Report No. EEMC-NTH-065.012 – NTH, HS2 Rev 01
Client: Keltbray Limited
Title: EEMC/065-012-NTH, HS2 - Unattended Noise Monitoring Report No.12
Period: 26 December 2016 - 29 January 2017

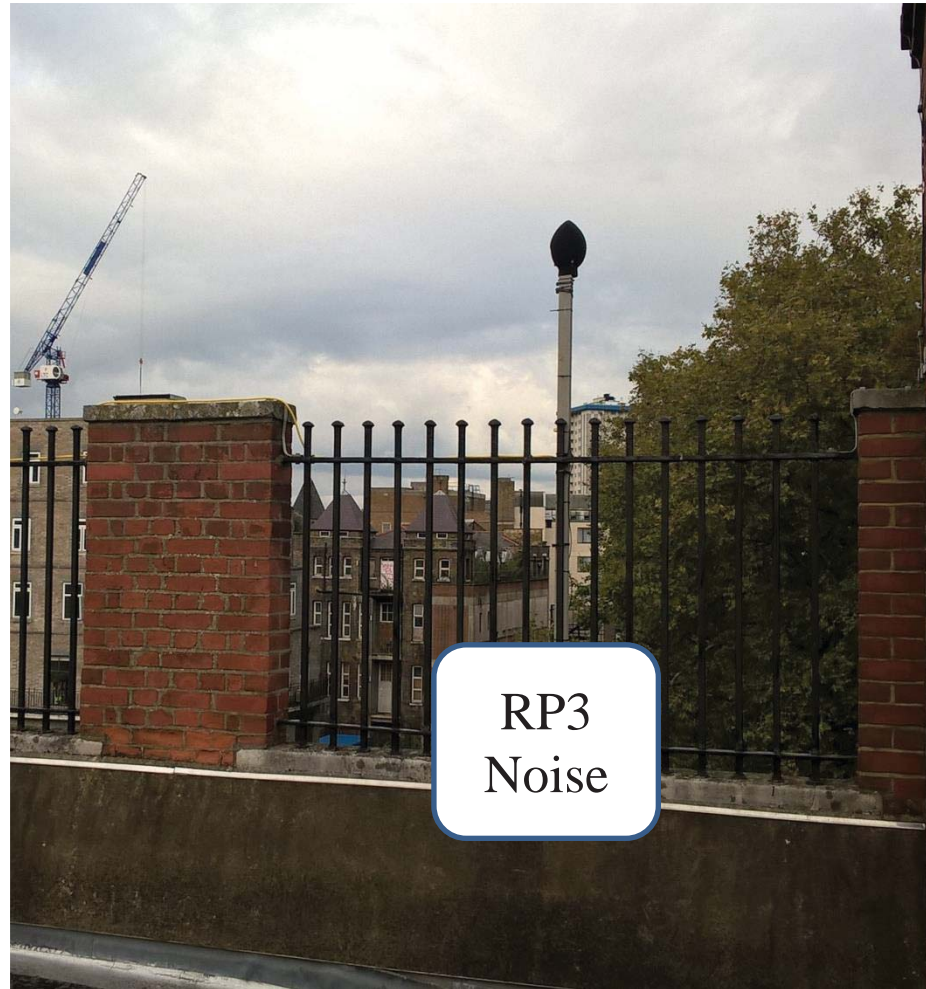
Details of Noise Monitor at Receptor Point (RP3)

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

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 26 December 2016 to 29 January 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

The principal works in this period were:

General site housekeeping; maintenance of scaffolds and hoarding installations; office and site facilities servicing and deliveries.

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 63dB LAeq10hour and 73dB LAeq30min.

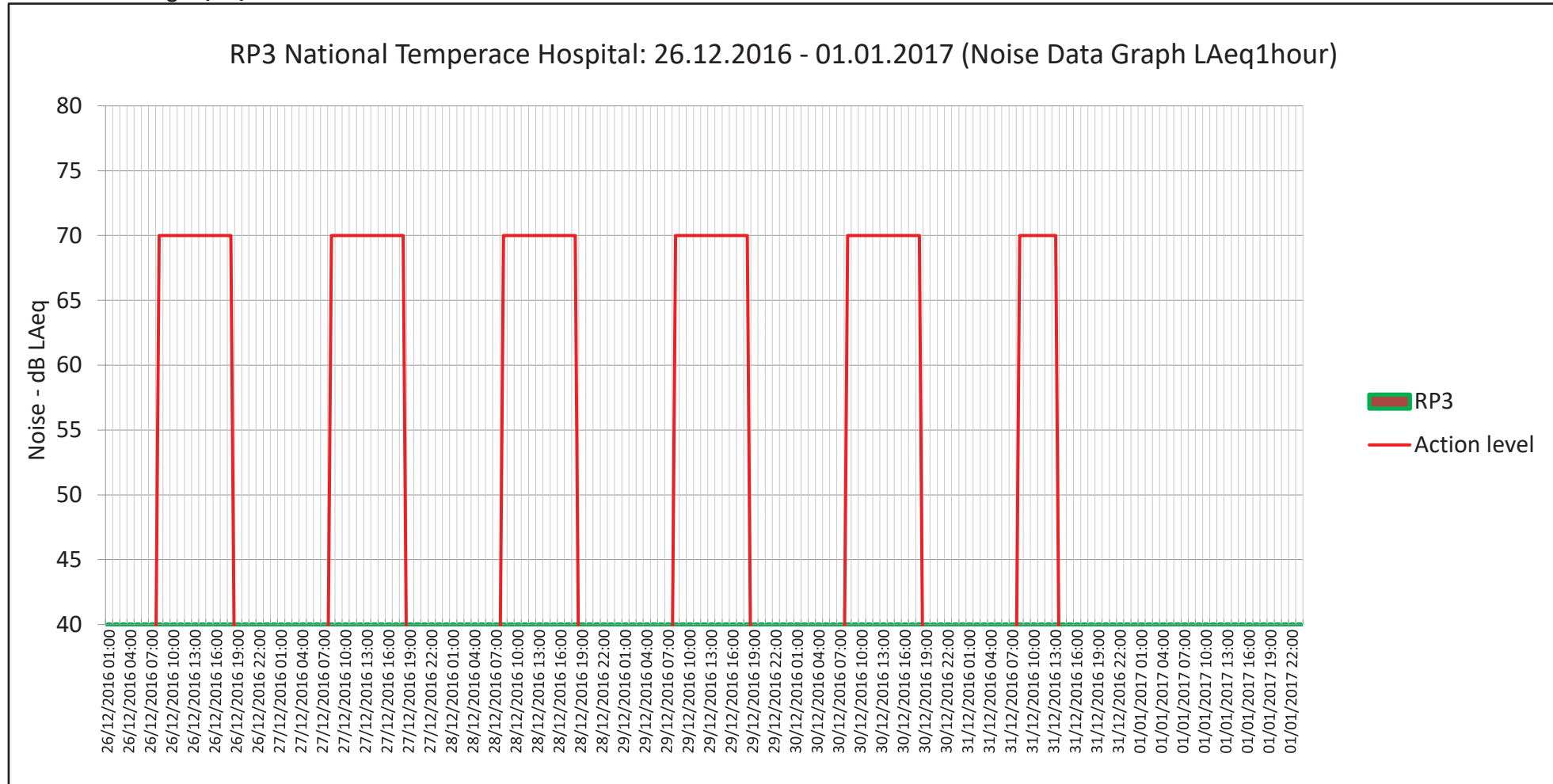
The measured unattended noise levels can be used to compare with the measured and recorded noise levels during the demolition activities.

4.0 Measurement Results

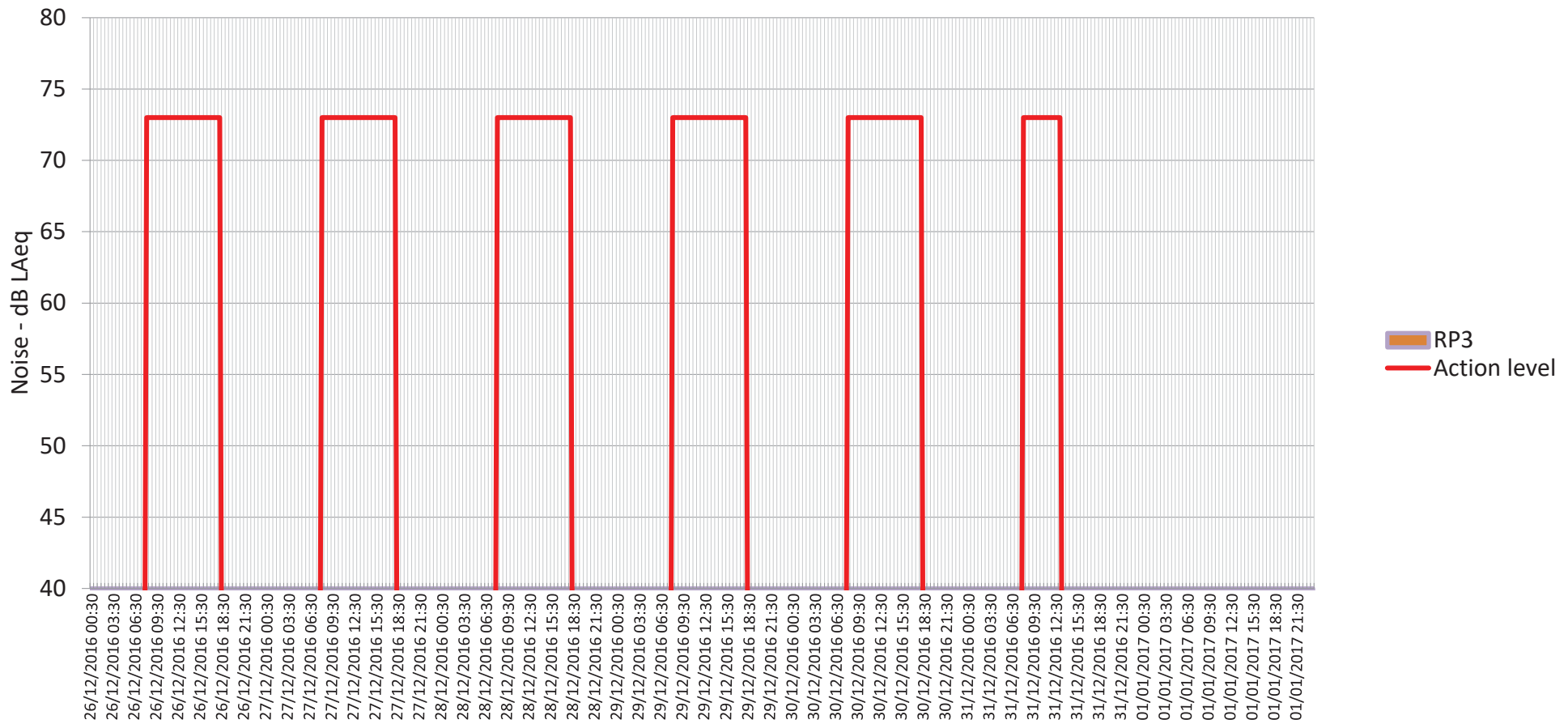
The recorded unattended noise measurements in this period are presented as graphs in section 5.0 of this report using LAeq30min data points.

5.0 Noise Monitoring Graphs

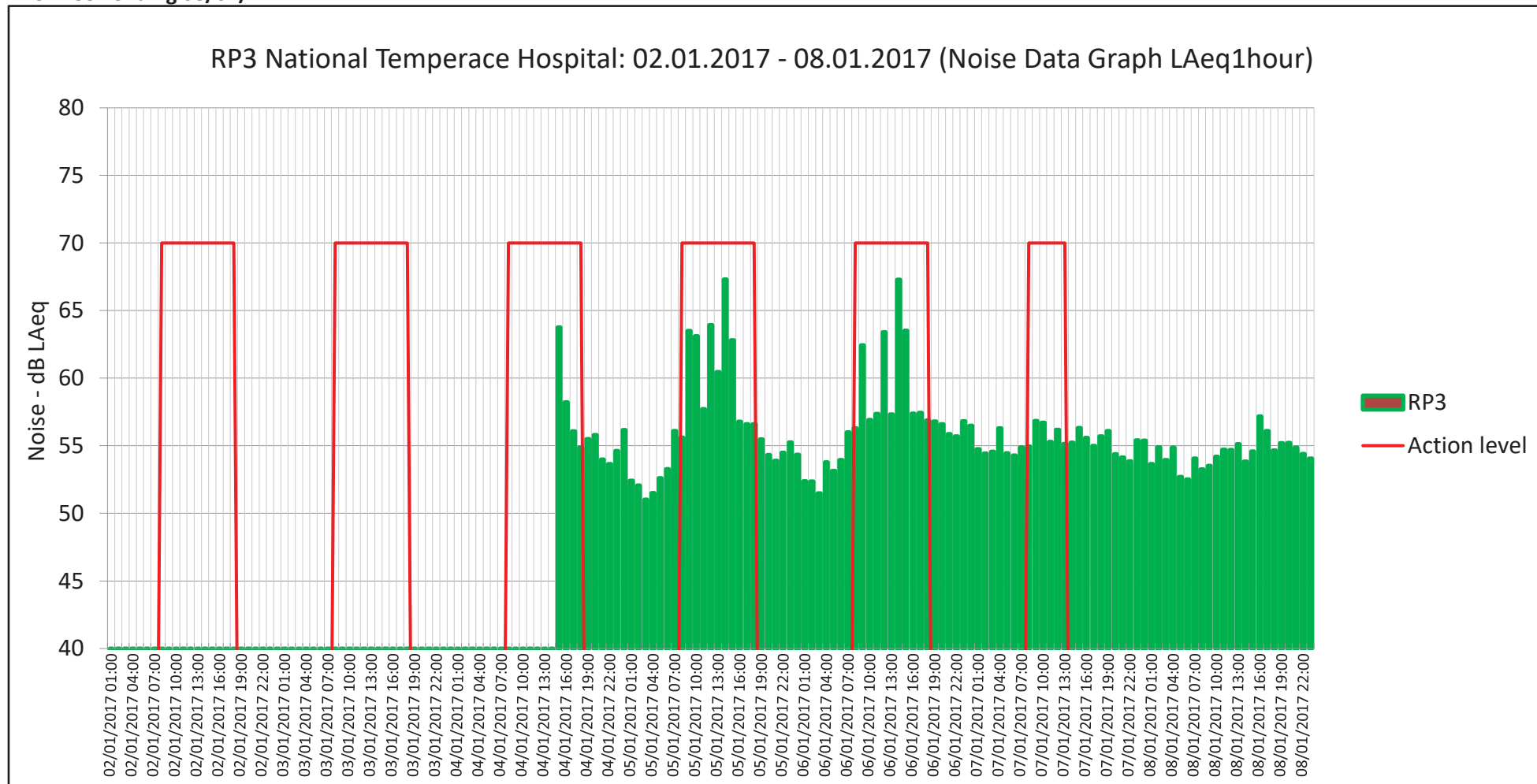
RP3 Week ending 01/01/17



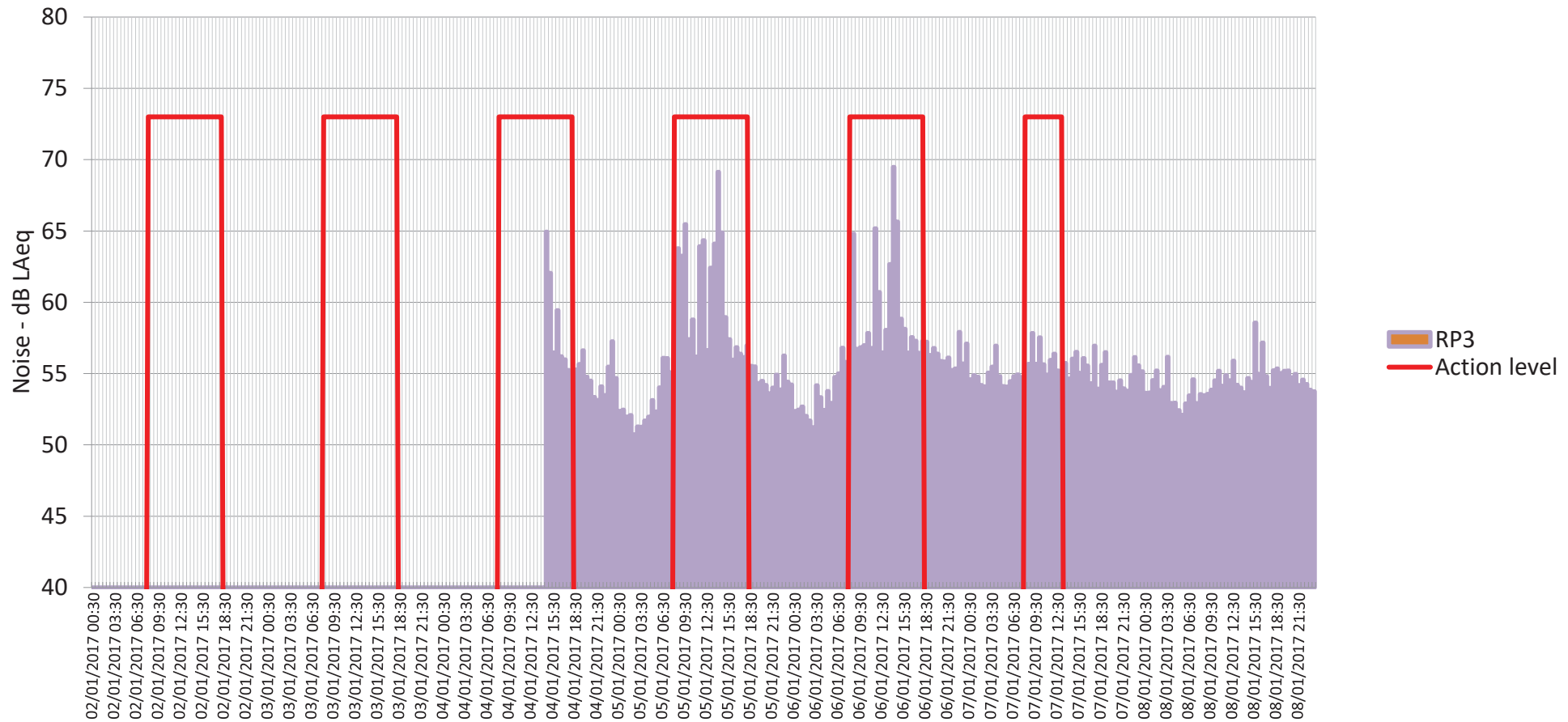
RP3 National Temperance Hospital: 26.12.2016 - 01.01.2017 (Noise data graph LAeq30minutes)



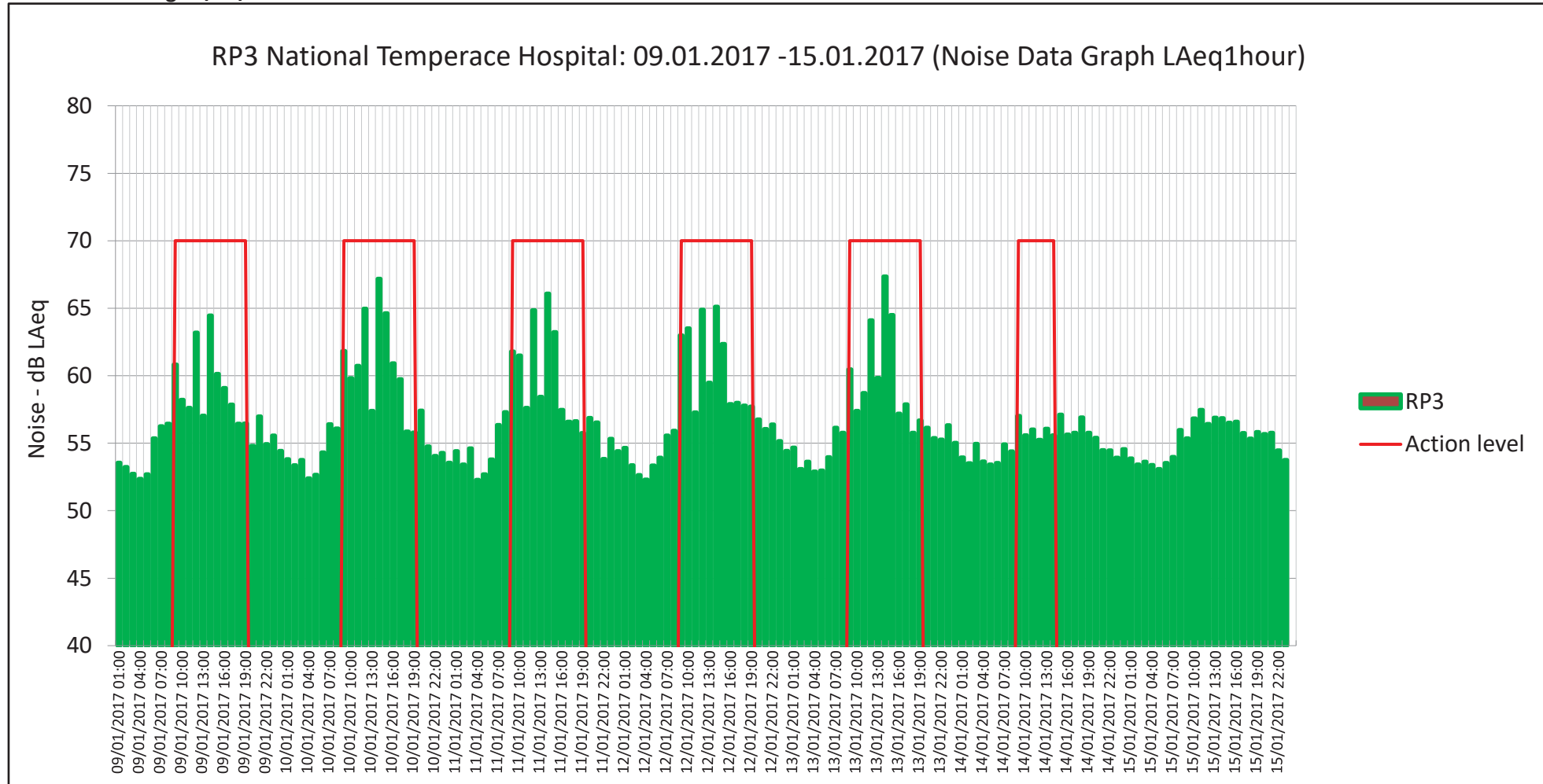
RP3 Week ending 08/01/17



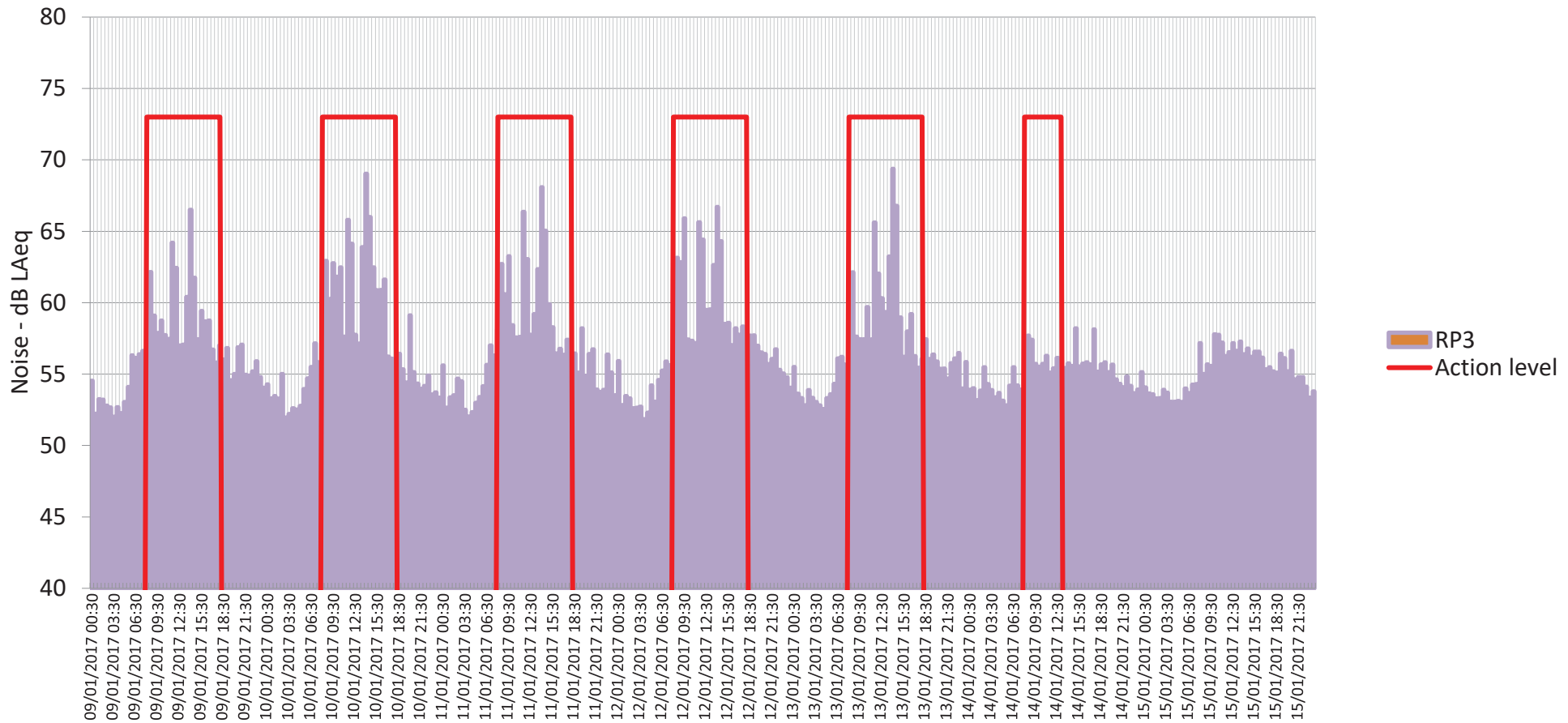
RP3 National Temperance Hospital: 02.01.2017 - 08.01.2017 (Noise data graph LAeq30minutes)



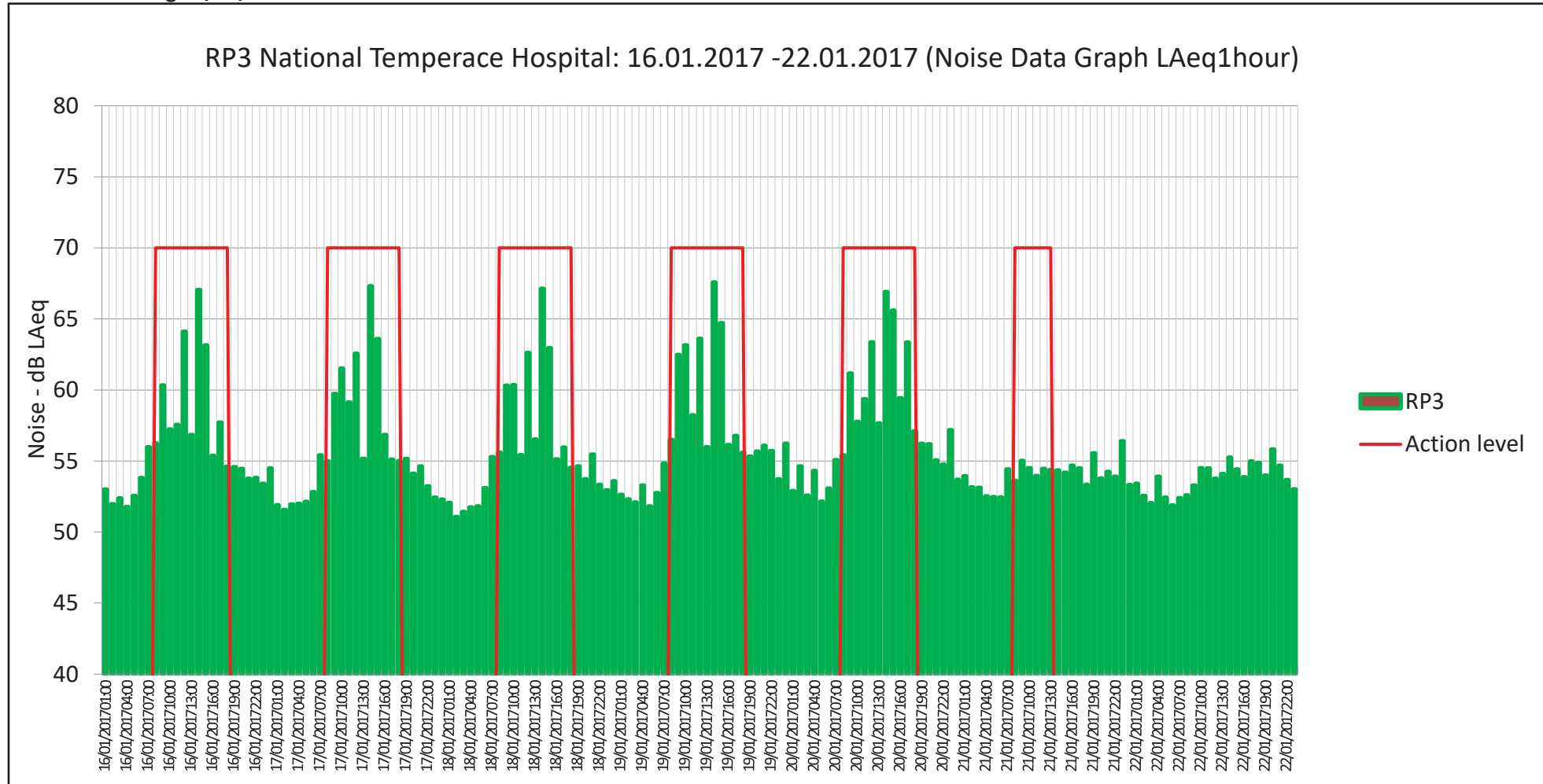
RP3 Week ending 15/01/17



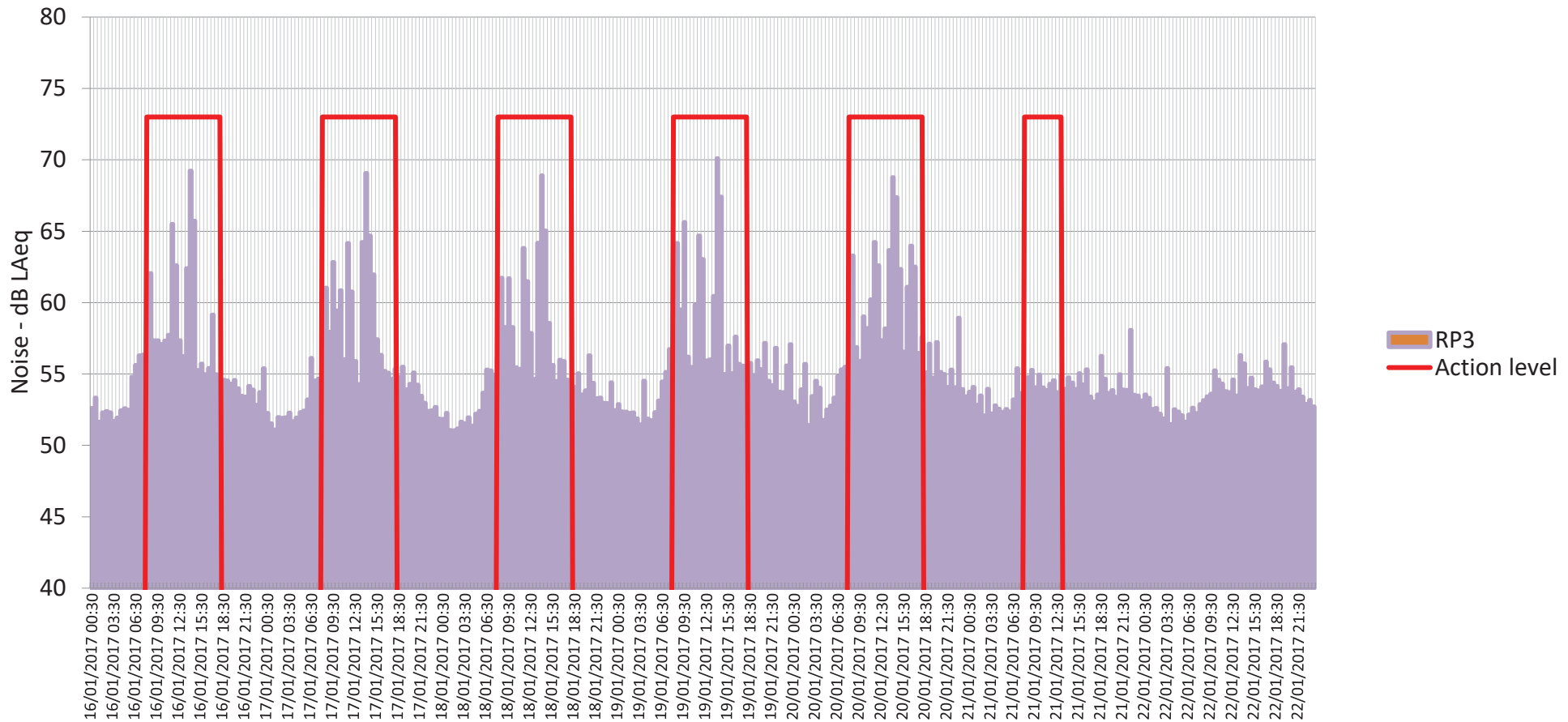
RP3 National Temperance Hospital: 09.01.2017 - 15.01.2017 (Noise data graph LAeq30minutes)



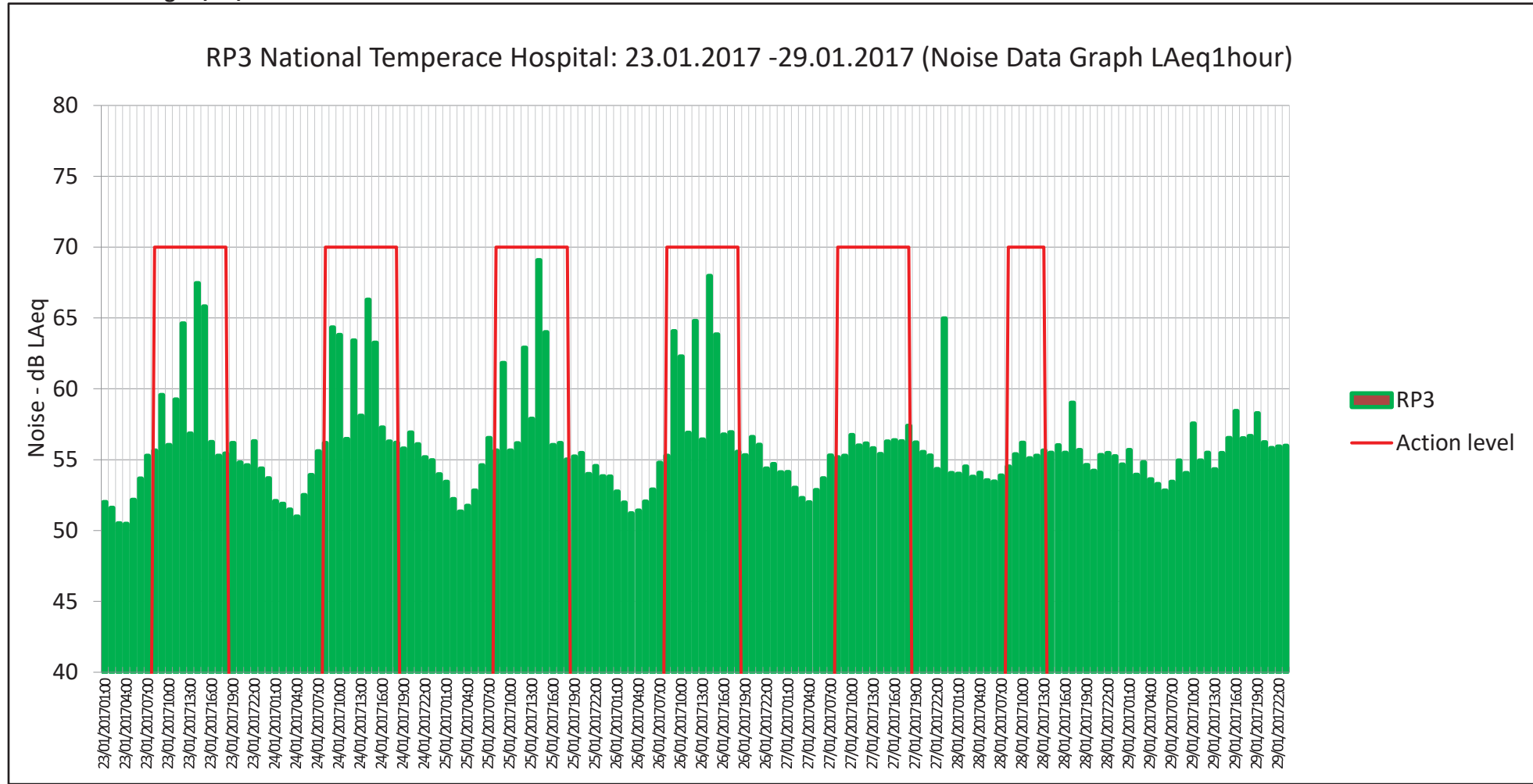
RP3 Week ending 22/01/17



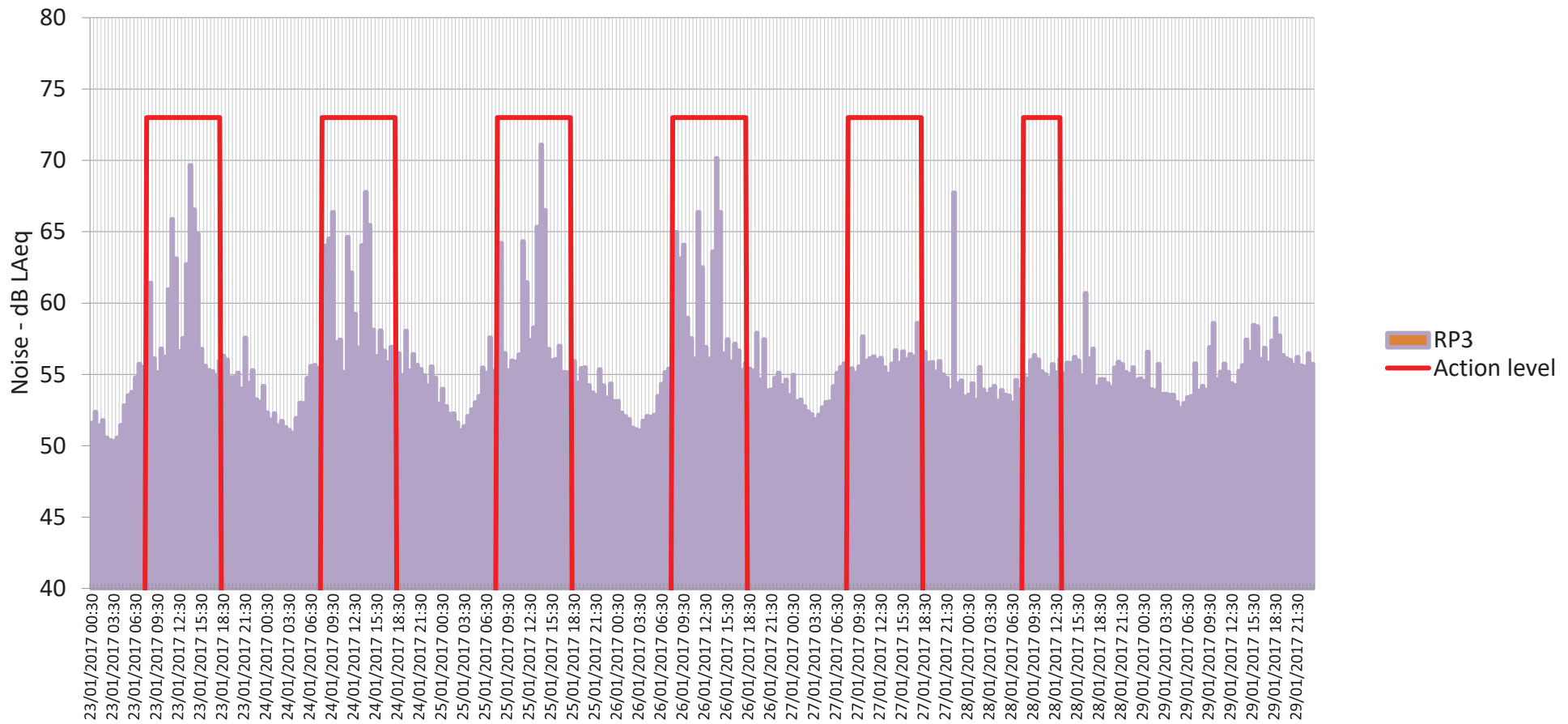
RP3 National Temperance Hospital: 16.01.2017 - 22.01.2017 (Noise data graph LAeq30minutes)



RP3 Week ending 29/01/17



RP3 National Temperance Hospital: 23.01.2017 - 29.01.2017 (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 26 December 2016 to 29 January 2017 include:
General site housekeeping; maintenance of scaffold and hoarding installations; office and site facilities servicing and deliveries.

The unattended measured and recorded noise levels are presented graphically in this report. There was some loss of data capture during the Christmas and New Year site shut down 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 6.5:

dBLAeq10hours						dBLAeq5hours
Date	26/12/2016	27/12/2016	28/12/2016	29/12/2016	30/12/2016	31/12/2016
RP3	0.0	0.0	0.0	0.0	0.0	0.0
Action Level	63	63	63	63	63	63
dBLAeq1hour						
7 - 8 AM	0.0	0.0	0.0	0.0	0.0	0.0
6 - 7 PM	0.0	0.0	0.0	0.0	0.0	0.0

Table 6.1

dBLAeq10hours						dBLAeq5hours
Date	02/01/2017	03/01/2017	04/01/2017	05/01/2017	06/01/2017	07/01/2017
RP3	0.0	0.0	55.7	62.3	61.7	56.1
Action Level	63	63	63	63	63	63
dBLAeq1hour						
7 - 8 AM	0.0	0.0	0.0	55.6	56.3	54.9
6 - 7 PM	0.0	0.0	55.5	55.5	56.8	55.2

Table 6.2

dBLAeq10hours						dBLAeq5hours
Date	09/01/2017	10/01/2017	11/01/2017	12/01/2017	13/01/2017	14/01/2017
RP3	60.3	62.6	61.7	61.9	62.0	56.0
Action Level	63	63	63	63	63	63
dBLAeq1hour						
7 - 8 AM	56.4	56.1	57.3	55.9	55.8	54.4
6 - 7 PM	56.5	55.8	55.7	57.7	56.7	55.6

Table 6.3

dBLAeq10hours						dBLAeq5hours
Date	16/01/2017	17/01/2017	18/01/2017	19/01/2017	20/01/2017	21/01/2017
RP3	61.3	61.5	61.1	62.3	62.4	54.5
Action Level	63	63	63	63	63	63
dBLAeq1hour						
7 - 8 AM	56.2	55.0	55.6	56.5	55.4	53.6
6 - 7 PM	54.6	55.2	54.6	55.3	56.2	54.3

Table 6.4

dBLAeq10hours						dBLAeq5hours
Date	23/01/2017	24/01/2017	25/01/2017	26/01/2017	27/01/2017	28/01/2017
RP3	62.0	62.1	62.2	62.6	56.2	55.5
Action Level	63	63	63	63	63	63
dBLAeq1hour						
7 - 8 AM	55.6	56.2	55.6	55.3	55.2	54.5
6 - 7 PM	56.2	55.8	55.2	55.3	56.2	55.5

Table 6.5

There were no exceedances of the 63dBLAeq10hour or the 73dBLAeq0.5hour action level in this period. The measured and recorded levels were consistently below the action levels.

The measurements recorded for the shoulder hours LAeq1hour were also below the action level and below the relevant LAeq10hour day.

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