



Forth Replacement Crossing

**Employer's Delivery Team
Construction Noise Monitoring Report**

**Principal Contract and M9J1a Contract
(January 2012)**

April 2012



An agency of  The Scottish Government



FORTH REPLACEMENT CROSSING

**EMPLOYER'S DELIVERY TEAM
CONSTRUCTION NOISE MONITORING REPORT
PRINCIPAL CONTRACT AND M9J1A CONTRACT
(JANUARY 2012)**

Revision Status

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FORTH REPLACEMENT CROSSING

**EMPLOYER'S DELIVERY TEAM
CONSTRUCTION NOISE MONITORING REPORT**

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REPORTS**

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REPORTS**

1. INTRODUCTION

- 1.1 This report sets out the results of the construction noise monitoring undertaken on the Forth Replacement Crossing project.
- 1.2 The noise monitoring periods covered in this report are as follows:
- Principal Contract: January 2012 – refer to Section 2 of this report.
 - M9 Junction 1a Contract: January 2012 – refer to Section 3 of this report.
- 1.3 Construction noise monitoring was not required to be carried out for the Fife ITS Contract in January 2012 as no new phases of works commenced during the period. However, noise monitoring from the Fife ITS Contract for the period from November 2011 to December 2011 is available on the project website at <http://www.transportscotland.gov.uk/road/projects/forth-replacement-crossing/project-library/monitoring-reports/noise-and-vibration-reports>.

2. PRINCIPAL CONTRACT NOISE MONITORING

NOISE MONITORING LOCATIONS

2.1 Continuous noise monitoring was carried out at the fixed monitor locations in Table 2.1 below. The main construction activities carried out adjacent to the monitor locations are also listed.

Monitoring Location	Monitoring Period	Main Construction Activities
Tigh-Na-Grian (M3)	January 2012	Marine GI, drilling, blasting & excavation at Beamer Rock, haul road, B981 working platform, boundary fencing and landscape planting.
Port Edgar (M6)	January 2012	Marine GI and drilling, blasting & excavation at Beamer Rock.
Butlaw Fisheries (M7)	January 2012	Marine GI and drilling, blasting & excavation at Beamer Rock.
Inchgarvie Lodge (M10)	January 2012	Trial grouting, haul road, marine GI and drilling, blasting & excavation at Beamer Rock.
Linn Mill (M11)	January 2012	Trial grouting and haul road.
Clufflat Brae (M13)	January 2012	Trial grouting and haul road.
Springfield (M14)		Trial grouting and haul road.
Echline Field (M15)	January 2012	White lining at access.
Dundas Home Farm (M17)	January 2012	Haul route to BP structure, crossing points at BP structure, containment bunds to BP structure and boundary fencing.

Table 2.1 Principal Contract – Long Term Monitoring Locations

NOISE MONITORING RESULTS

2.2 Monitoring results from the Principal contract are contained in Appendix A of this report. The results are presented in a report containing noise charts using the template contained in the Construction Noise Monitoring Information Note which is available on the project website at

http://www.transportscotland.gov.uk/files/documents/projects/forth-replacement/FRC_Construction_Noise_Monitoring_Information_Note_2_.pdf.

- 2.3 The results of the construction noise monitoring provided in the Principal Contract reports indicate that all construction activities were carried out in accordance with the thresholds set out in the project Code of Construction Practice.
- 2.4 Some exceedences of the maximum noise level thresholds occurred, although the exceedences are not considered to be due to the construction works being carried out. Formal exceedence reports were prepared by the contractor for January 2012 and the investigations identified that the exceedences were not due to construction related factors. As a result of the adverse weather conditions experienced in January a large quantity of non-construction related exceedence reports were generated, and as such it was considered inappropriate to include them in this report. However, the exceedence reports are available on request from the FRC Team, contactable via email at enquiries@forthreplacementcrossing.info. A summary of the information included in the exceedence reports is provided in Table 2.2 below.

Monitoring Location	Contractor's Exceedence Report Reference	Exceedence
Butlaw Fisheries (M7)	NVIRs 49-62	During January the maximum noise threshold was exceeded on 14 occasions (daytime, 6; evening, 1; night time, 7). No exceedences were due to construction related activities. The majority of exceedences were attributed to adverse weather conditions.
Clufflat Brae (M13)	NVIRs 42-44	During January the maximum noise threshold was exceeded on 3 occasions (daytime, 2; night time, 1). These exceedences were not due to construction activities and were determined to be due to windy conditions and other non-construction noise.
Inchgarvie Lodge (M10)	NVIRs 40-59	During January the maximum noise threshold was exceeded on 20 occasions (daytime, 10; evening, 3; night time, 7). The exceedences were not attributable to construction and investigation found the causes to be various noise sources including the weather, monitor maintenance and the dropping of objects at the property.
Linn Mill (M11)	NVIRs 38-43	During January the maximum noise threshold was exceeded on 6 occasions (daytime, 4; evening, 1; night time, 1). These exceedences

Monitoring Location	Contractor's Exceedance Report Reference	Exceedance
		were not attributable to construction. Exceedances were due to adverse weather conditions and monitor maintenance.
Tigh-Na-Grian (M3)	NVIRs 32-42	During January the maximum noise threshold was exceeded on 11 occasions (daytime, 7; night time, 4). Exceedances were not related to construction and were attributed to a range of factors including adverse weather conditions, device maintenance and the dropping of objects at the property.
Dundas Home Farm (M17)	NVIRs 7-14	During January the maximum noise threshold was exceeded on 8 occasions. Exceedances were not attributable to construction works. Exceedances were the result of windy conditions and traffic noises including car horns.
Echline Field (M15)	NVIRs 11-23	During January the maximum noise threshold was exceeded on 13 occasions. Exceedances were not due to construction activities and were attributed to existing traffic noise on the adjacent road.
Springfield (M14)	NVIRs 1-3	During January the maximum noise threshold was exceeded on 3 occasions. Exceedances were not due to construction activities. Exceedances were attributed to device maintenance

Table 2.2 Principal Contract – Summary of Noise Threshold Exceedances

3. M9 J1A CONTRACT NOISE MONITORING

NOISE MONITORING LOCATIONS

- 3.1 Continuous noise monitoring was carried out at the fixed monitor locations in Table 3.1 below. The main construction activities carried out adjacent to the monitor locations are also listed.

Monitoring Location	Monitoring Period	Main Construction Activities
93/95 King Edwards Way (CNV02)	January 2012	Site clearance and tree harvesting.
15-17 Buie Rigg (CNV07)	January 2012	Site clearance, tree harvesting, traffic management on M9 Spur and construction of temporary ramps to M9 Spur.
8 Kirklands Park Grove (CNV16)	January 2012	Earthworks, piling works, traffic management on M9 Spur and construction of temporary ramps to M9 Spur.

Table 3.1 M9 J1a Contract – Long Term Monitoring Locations

NOISE MONITORING RESULTS

- 3.2 Monitoring results from the M9 Junction 1a contract are contained in Appendix B of this report. The results are presented in charts using the template contained in the Construction Noise Monitoring Information Note which is available on the project website at http://www.transportscotland.gov.uk/files/documents/projects/forth-replacement/FRC_Construction_Noise_Monitoring_Information_Note_2.pdf.
- 3.3 The results of the construction noise monitoring provided in the M9 Junction 1a reports indicate that all construction activities were carried out in accordance with the thresholds set out in the project Code of Construction Practice.
- 3.4 Some exceedences of the maximum noise level thresholds occurred, although the exceedences are not considered to be due to the construction works being carried out. Formal exceedance reports were prepared by the contractor for January 2012 and the investigations identified that the exceedences were not due to construction related factors. Summary information regarding the exceedences of the maximum

noise level thresholds is provided In Table 3.2 below. Copies of the exceedance reports are contained in Appendix B to this report.

Monitoring Location	Contractor's Exceedance Report Reference	Exceedance
93/95 King Edwards Way (CNV02)	NERs 18 and 19	Maximum noise level threshold exceeded on 22 occasions during January 2012. Analysis determined that the exceedances were unlikely to be construction related and were attributed to high winds, emergency service vehicle sirens, vehicle horns, dogs barking, and bird activity at the noise monitor. The site was also closed between 01/01/12 and 08/01/12 with no construction activities being carried out during this period.
15-17 Buie Rigg (CNV07)	NER 15	Maximum noise level threshold exceeded on 1 occasion during January 2012. The exceedance is not attributed to construction works as the site was closed during this period with no construction activities being carried out.
8 Kirklands Park Grove (CNV16)	NERs 13,14,16 and 17	Maximum noise level threshold exceeded on 4 occasions during January 2012. Analysis determined that the exceedances were unlikely to be construction related and were attributed to high winds.

Table 3.2 M9 J1a Contract – Summary of Noise Threshold Exceedances

APPENDIX A -

**PRINCIPAL CONTRACT - CONSTRUCTION
NOISE MONITORING REPORTS**



Contractor



Forth Crossing Bridge Constructors

HOCHTIEF Solutions
 American Bridge International
 DRAGADOS
 Morrison Construction

Project

FORTH REPLACEMENT CROSSING

Document title

**CONSTRUCTION NOISE MONITORING
 REPORT:
 JANUARY 2012**

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- 2. Noise Monitoring Locations**
- 3. Noise Monitoring Results**

1 Introduction

- 1.1** This report presents the construction noise monitoring results acquired for construction works associated with the main crossing and related network. This report covers noise monitoring undertaken throughout the month of January 2012
- 1.2** Monitoring of construction noise has been undertaken in accordance with the Code of Construction Practice (CoCP) and the Noise and Vibration Management Plan (NVMP).

2 Noise Monitoring Locations

- 2.1** During January 2012 construction noise was monitored using permanent, continuous noise monitoring devices at the locations listed in Table 1. The monitors were installed throughout November and December 2011.
- 2.2** At some monitoring locations, the noise monitoring devices are accompanied by an associated weather station. Weather stations are present at Echline Field, Tigh-Na-Grian, Clufflat Brae, Dundas Home Farm and Butlaw Fisheries.
- 2.3** Various construction works were undertaken across the site during January. The main construction activities undertaken in the locality of each of the noise meters during the period have been listed in Table 1.

Table 1: Monitoring Locations

Ref.	Monitoring Location	Main Construction Activities During January 2012
M3	Tigh-Na-Grian	Marine GI Drilling, blasting and excavation at Beamer Rock Haul route B981 working platform Fencing Early Planting
M6	Port Edgar	Marine GI Drilling, blasting and excavation at Beamer Rock
M7	Butlaw Fisheries	Marine GI Drilling, blasting and excavation at Beamer Rock
M10	Inchgarvie Lodge	Trial Grouting Haul Road Marine GI Drilling, blasting and excavation at Beamer Rock
M11	Linn Mill	Trial Grouting Haul Road
M13	Clufflat Brae	Trial Grouting Haul Road
M14	Springfield	Trial Grouting Haul Road
M15	Echline Field	White lining at access N.B. No evening or night time construction in vicinity.
M17	Dundas Home Farm	Haul route to BP structure Crossing points at BP structure Containment bunds to BP structure LMA fencing N.B. No evening or night time construction in vicinity.

3 Noise Monitoring Results

3.1 All noise monitoring results for construction days have been presented in charts using the template provided in the Construction Noise Monitoring Information Note, as available on the project website (http://www.transportscotland.gov.uk/files/documents/projects/forth-replacement/FRC_Construction_Noise_Monitoring_Information_Note_2_.pdf). All charts can be found in the appendices of this report.

3.2 With regard to the noise monitoring results charts, the following should be noted:

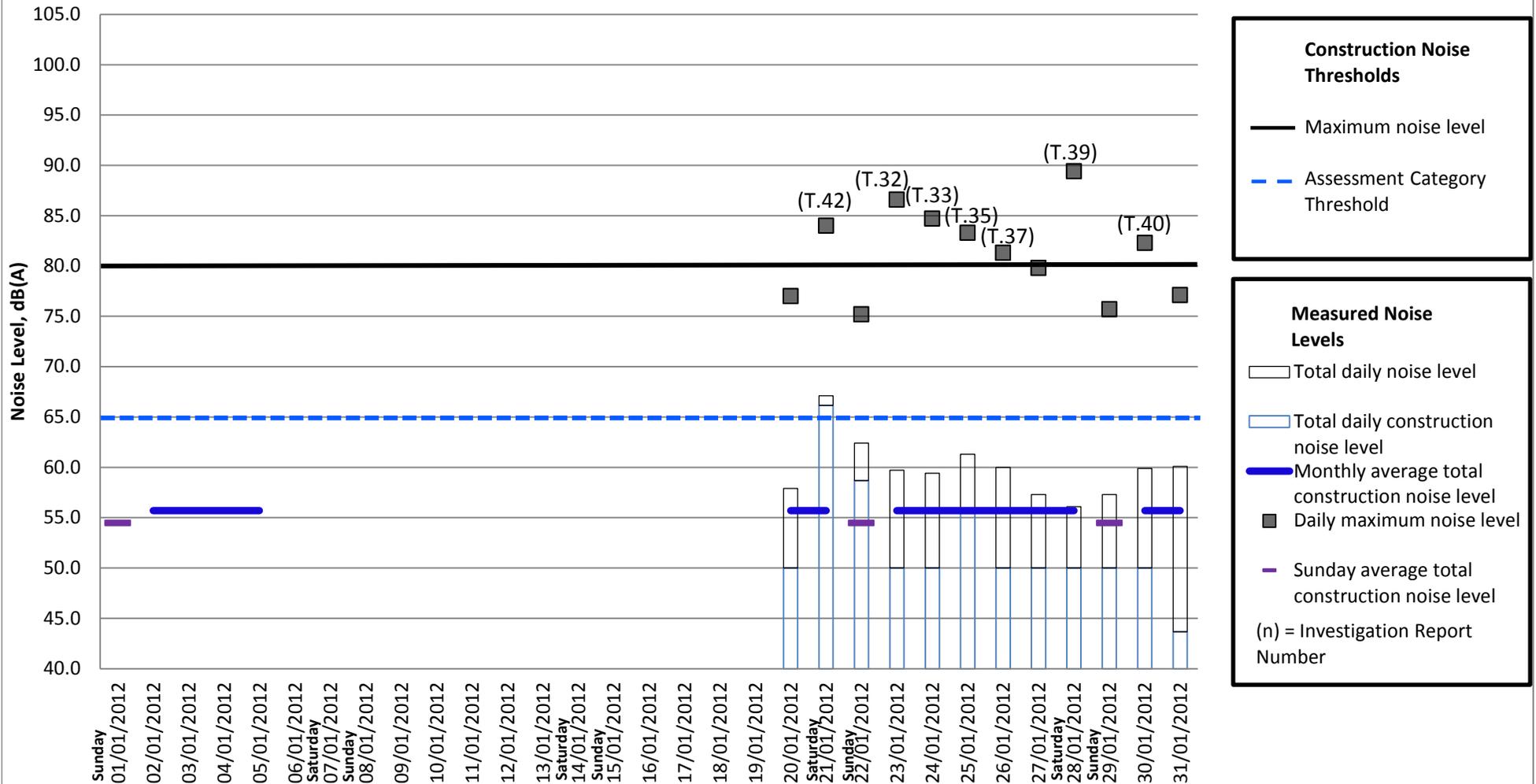
- Noise data for days, evening and nights on which no construction works were conducted have been excluded from the results.
 - Construction works ceased during the Christmas period, thus data from this period has not been included.
- As set out in the CoCP, the assessment time for evening and nights is 1 hour periods. To present the construction noise results for these periods, therefore, the maximum $L_{Amax, F}$ (fast time response) and maximum L_{Aeq} within the overall evening/night time period has been taken.
- Where noise data is missing for days, evening or nights during which construction works were conducted, this has been indicated. Missing data is a result of device error. Device errors have typically been a result of the following:
 - Adverse weather conditions causing physical damage to the monitoring equipment;
 - Continually high noise levels (such as during high winds) causing the monitors to repeatedly trigger noise recordings and the memory becoming full, leading to a failure to record further noise data;
 - Other software issues.

- 3.3** Results demonstrate that the monthly average total construction noise threshold has not been exceeded for any of the monitoring locations during daytime, evening or night time periods within January.
- 3.4** Whilst there were no exceedances of the monthly average construction noise, exceedances of the maximum noise thresholds did occur. Each exceedance of the threshold was investigated using live calls to the device, triggered audio recordings, records of construction works (i.e. site diaries) and analysis of weather station data. Where the wind speed was found to be greater than 5 meters per second (m/s), this was deemed to be a contributing factor to noise level threshold exceedances. Noise and Vibration Investigative Reports (NVIRs) have been produced for each exceedance, detailing the results of the investigation.
- 3.5** The exceedances of the maximum noise level thresholds, however, are considered to have occurred as a result of non-construction related noise. Adverse weather conditions, in particular wind, were found to be a significant contributor to maximum noise level exceedances during January. Additionally, at some locations, notably Echline Field, existing traffic noise had an effect on maximum noise levels during the period covered in this report. This impact was exacerbated during periods of wet weather when the road surface was wet, thus increasing noise levels of passing traffic. Several of the exceedances during January were also attributed to device maintenance as following the Christmas break the majority of the devices required an on-site check to ensure correct functioning. A summary of the findings for exceedances occurring at each of the locations can be found in Table 2.

Table 2: Summary of Exceedances at Monitoring Locations

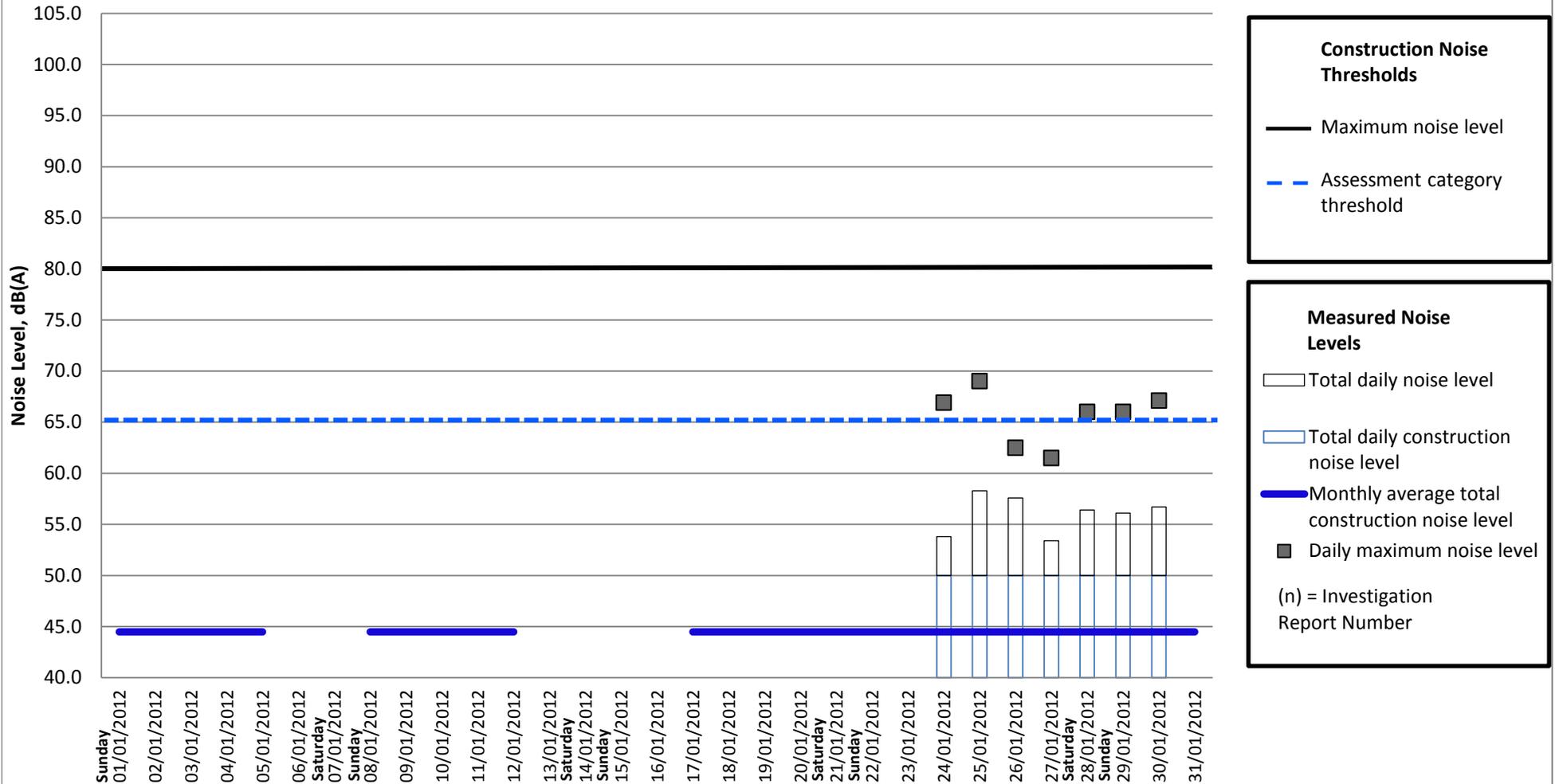
Monitoring Location	Associated NVIR Numbers	Summary of Exceedance Details
Butlaw Fisheries	49-62	During January the maximum noise threshold was exceeded on 14 occasions (daytime, 6; evening, 1; night time, 7). No exceedances were due to construction related activities. The majority of exceedances were attributed to adverse weather conditions.
Clufflat Brae	42-44	During January the maximum noise threshold was exceeded on 3 occasions (daytime, 2; night time, 1). These exceedances were not due to construction activities and were determined to be due to windy conditions and other non-construction noise.
Inchgarvie Lodge	40-59	During January the maximum noise threshold was exceeded on 20 occasions (daytime, 10; evening, 3; night time, 7). The exceedances were not attributable to construction and investigation found the causes to be various noise sources including the weather, monitor maintenance and the dropping of objects at the property.
Linn Mill	38-43	During January the maximum noise threshold was exceeded on 6 occasions (daytime, 4; evening, 1; night time, 1). These exceedances were not attributable to construction. Exceedances were due to adverse weather conditions and monitor maintenance.
Tigh-Na-Grian	32-42	During January the maximum noise threshold was exceeded on 11 occasions (daytime, 7; night time, 4). Exceedances were not related to construction and were attributed to a range of factors including adverse weather conditions, device maintenance and the dropping of objects at the property.
Dundas Home Farm	7-14	During January the maximum noise threshold was exceeded on 8 occasions. Exceedances were not attributable to construction works. Exceedances were the result of windy conditions and traffic noises including car horns.
Echline Field	11-23	During January the maximum noise threshold was exceeded on 13 occasions. Exceedances were not due to construction activities and were attributed to existing traffic noise on the adjacent road.
Springfield	1-3	During January the maximum noise threshold was exceeded on 3 occasions. Exceedances were not due to construction activities. Exceedances were attributed to device maintenance

Measured Daytime Noise Levels at Tigh-Na-Grian Measurement period: January 2012



Note: Daytime construction works restarted on 06/01/12 following the Christmas break. Daytime noise data is missing for the period 06/01/12 to 19/01/12 due to device error.

Measured Evening Noise Levels at Tigh-Na-Grian Measurement period: January 2012



Construction Noise Thresholds

- Maximum noise level
- - - Assessment category threshold

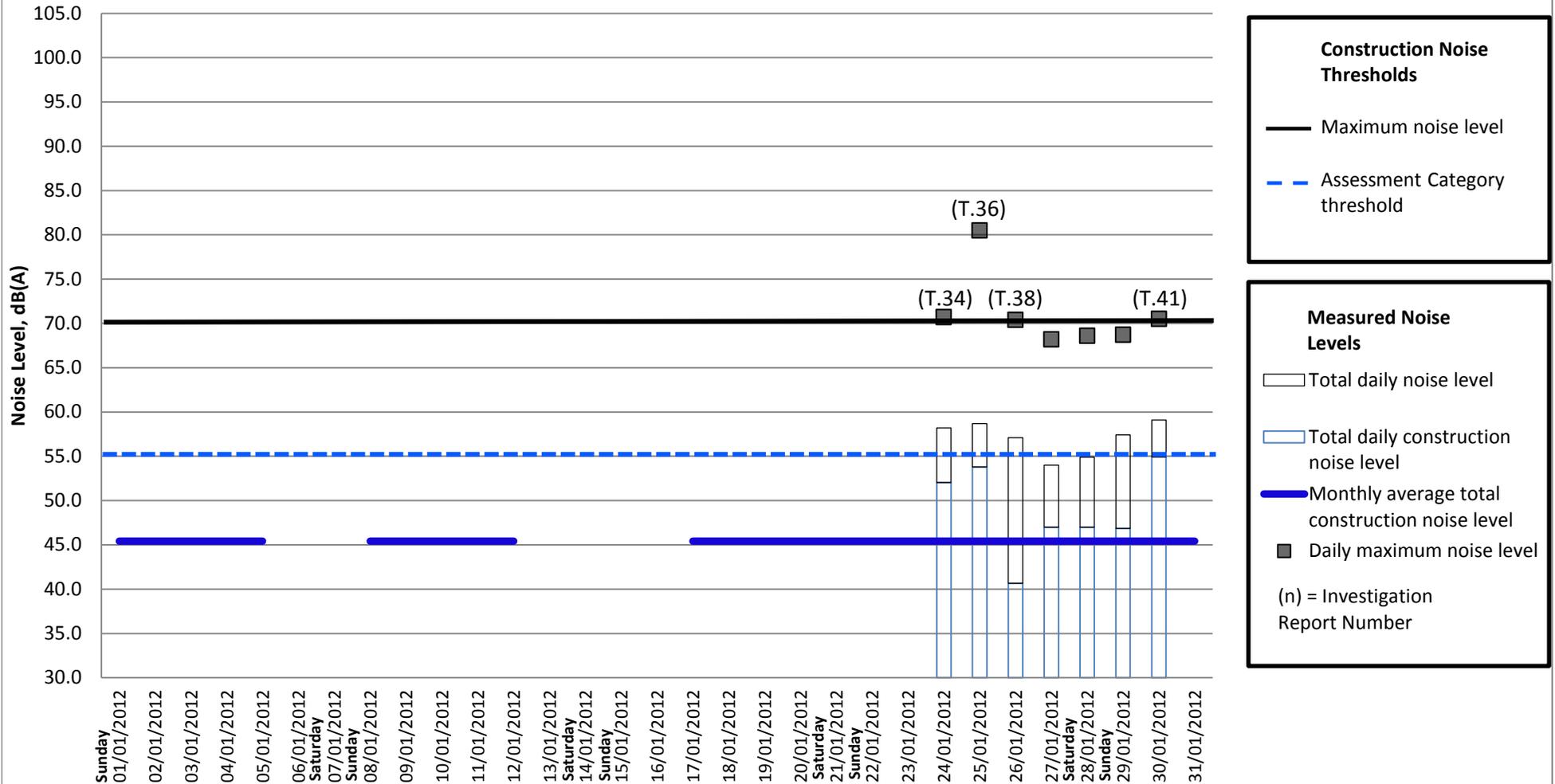
Measured Noise Levels

- Total daily noise level
- Total daily construction noise level
- Monthly average total construction noise level
- Daily maximum noise level

(n) = Investigation Report Number

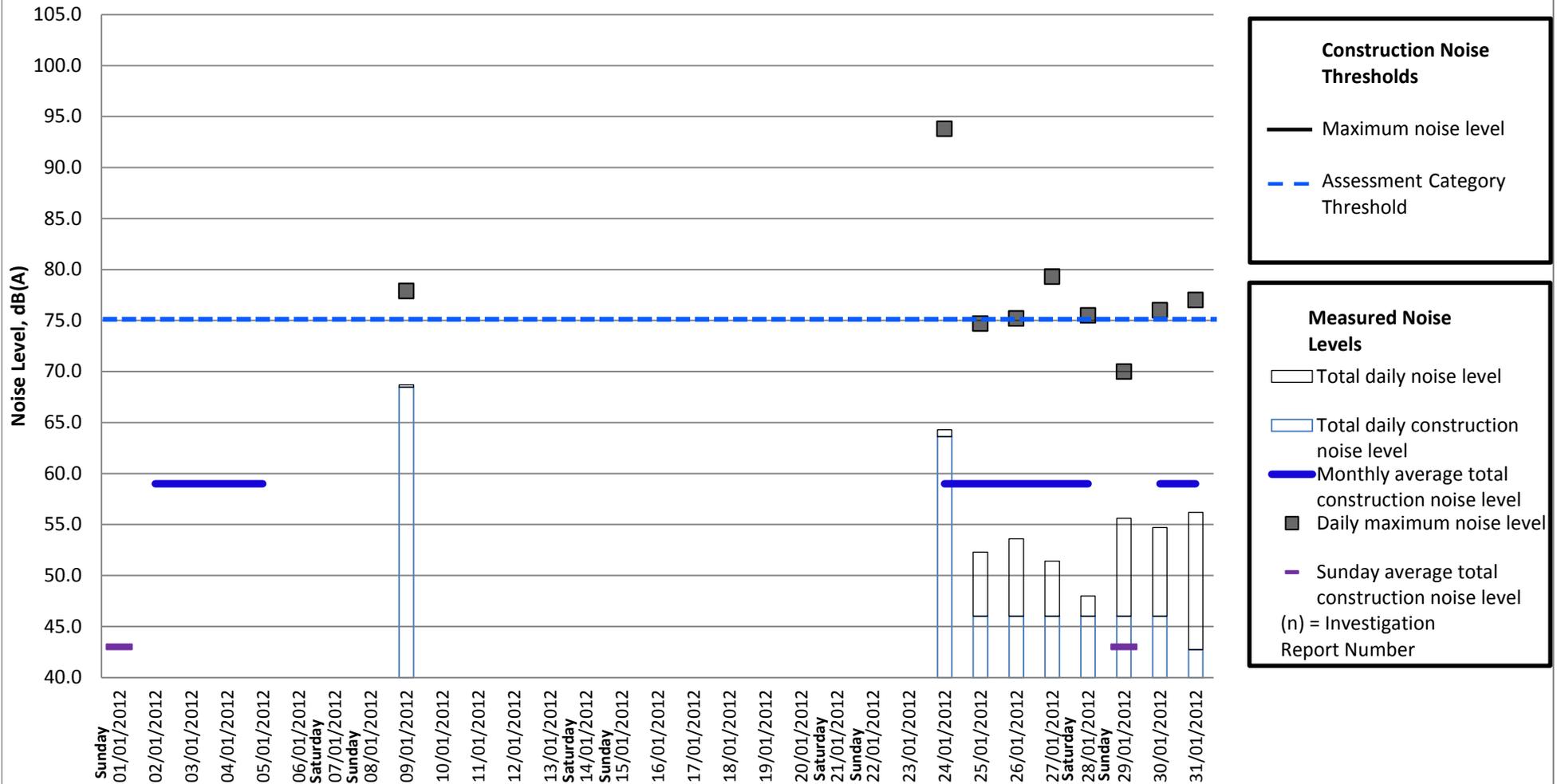
Note: Evening construction works restarted on 06/01/12 following the Christmas break. Evening noise data is missing for the periods 06/01/12 to 07/01/12 and 13/01/12 to 16/01/12 due to device error. No evening construction works were conducted during the periods 08/01/12 to 12/01/12, 17/01/12 to 23/01/12 and on 31/01/12.

Measured Night-time Noise Levels at Tigh-Na-Grian Measurement period: January 2012



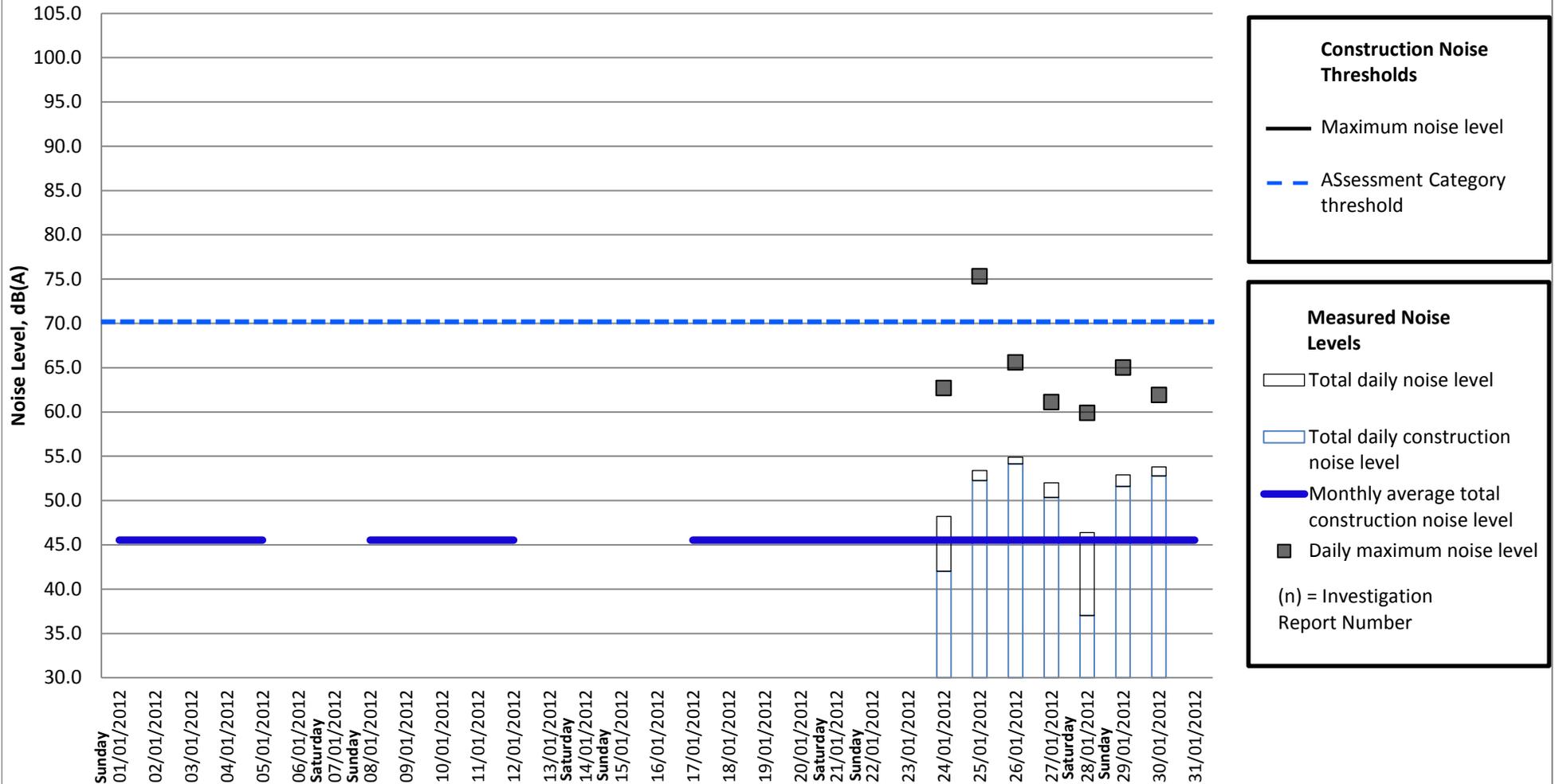
Note: Night time construction works restarted on 06/01/12 following the Christmas break. Night time noise data is missing for the periods 06/01/12 to 07/01/12 and 13/01/12 to 16/01/12 due to device error. No night time construction works were conducted during the periods 08/01/12 to 12/01/12, 17/01/12 to 23/01/12 and on 31/01/12.

Measured Daytime Noise Levels at Port Edgar Measurement period: January 2012



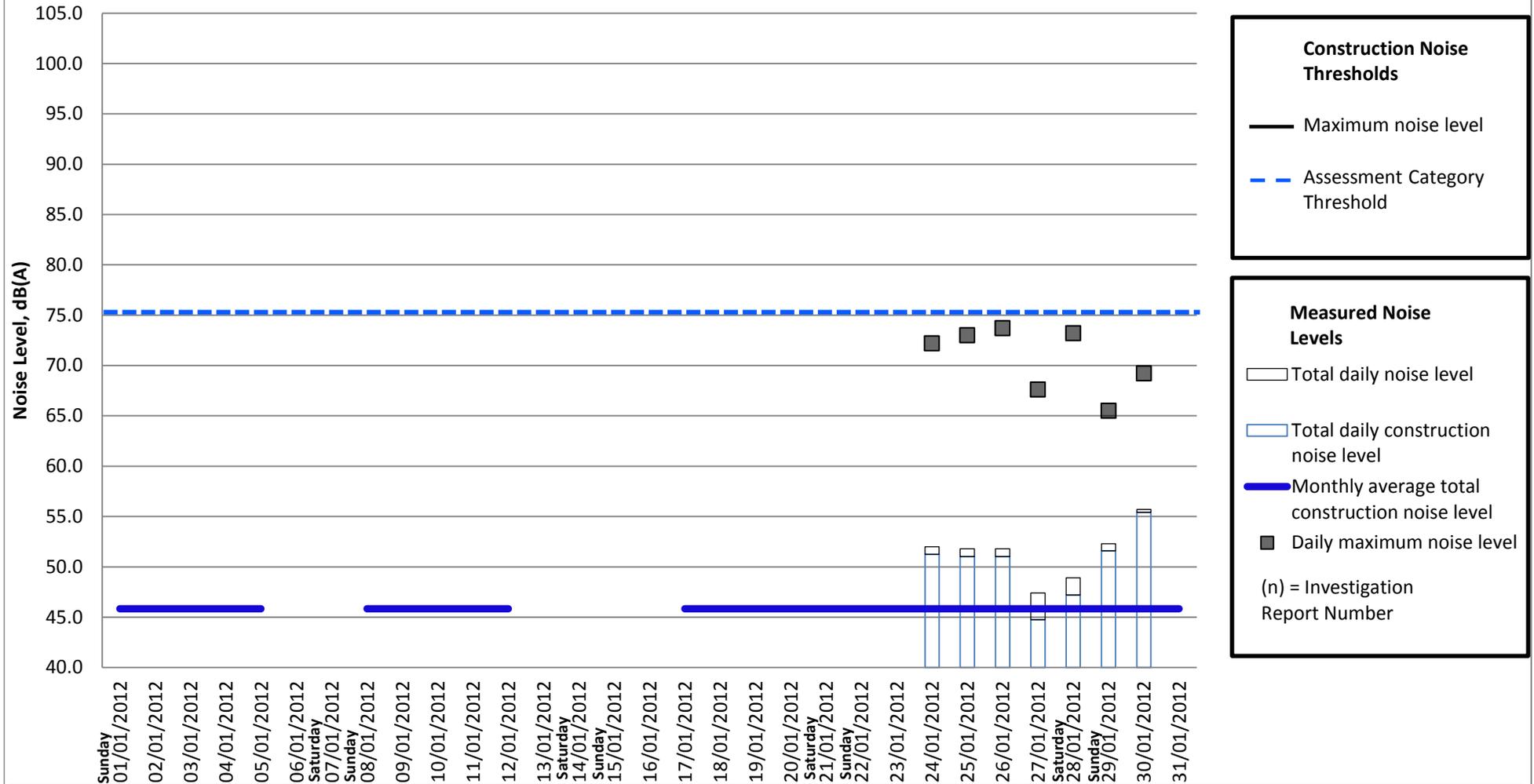
Note: Daytime construction works restarted on 06/01/12 following the Christmas break. Daytime noise data is missing for the periods 06/01/12 to 08/01/12 and 10/01/12 to 23/01/12 due to device error.

Measured Evening Noise Levels at Port Edgar Measurement period: January 2012



Note: Evening construction works restarted on 06/01/12 following the Christmas break. Evening noise data is missing for the periods 06/01/12 to 07/01/12 and 13/01/12 to 16/01/12 due to device error. No evening construction works were conducted during the periods 08/01/12 to 12/01/12, 17/01/12 to 23/01/12 and on 31/01/12.

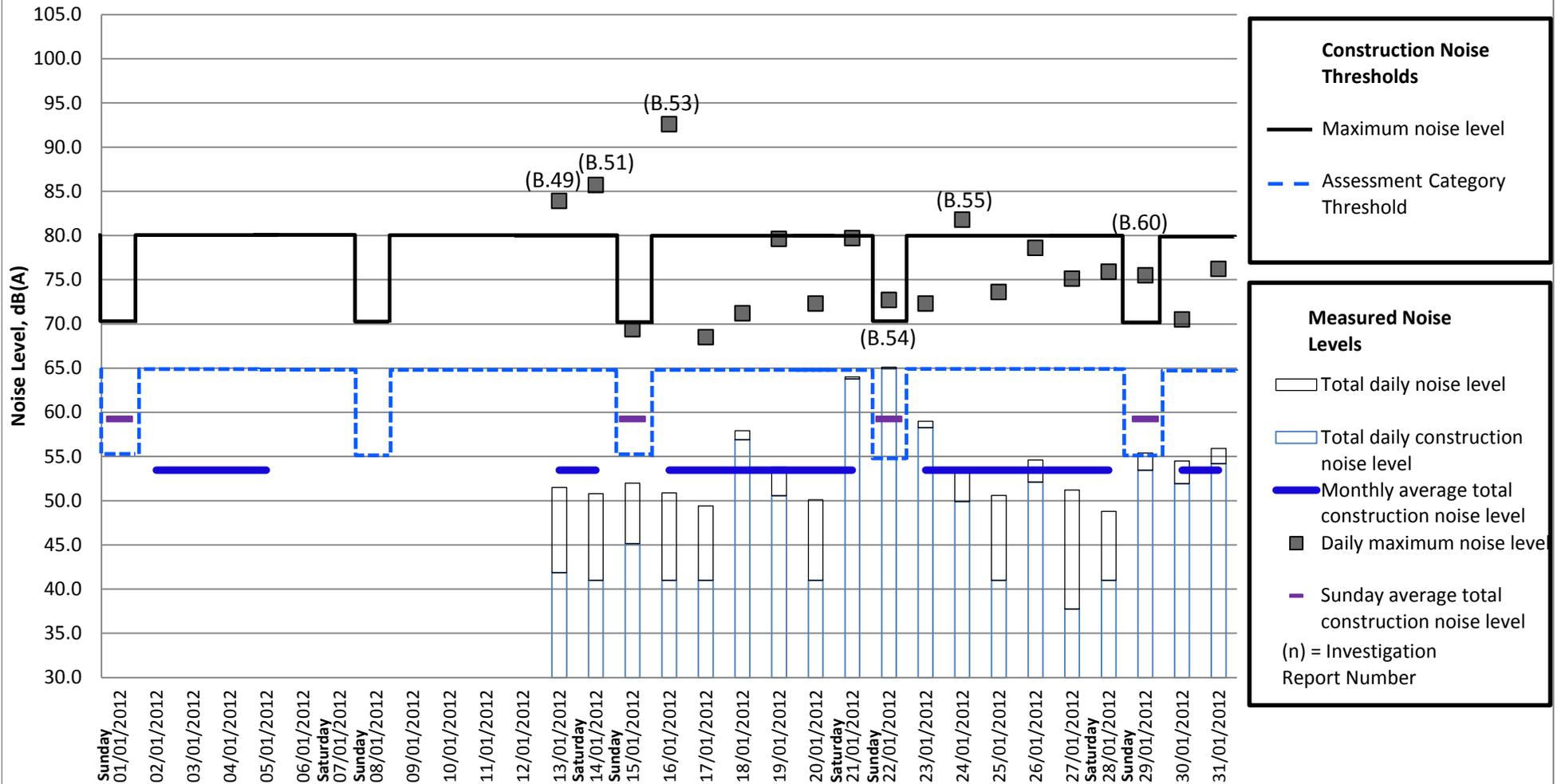
Measured Night-time Noise Levels at Port Edgar Measurement period: January 2012



Note: Night time construction works restarted on 06/01/12 following the Christmas break. Night time noise data is missing for the periods 06/01/12 to 07/01/12 and 13/01/12 to 16/01/12 due to device error. No night time construction works were conducted during the periods 08/01/12 to 12/01/12, 17/01/12 to 23/01/12 and on 31/01/12.

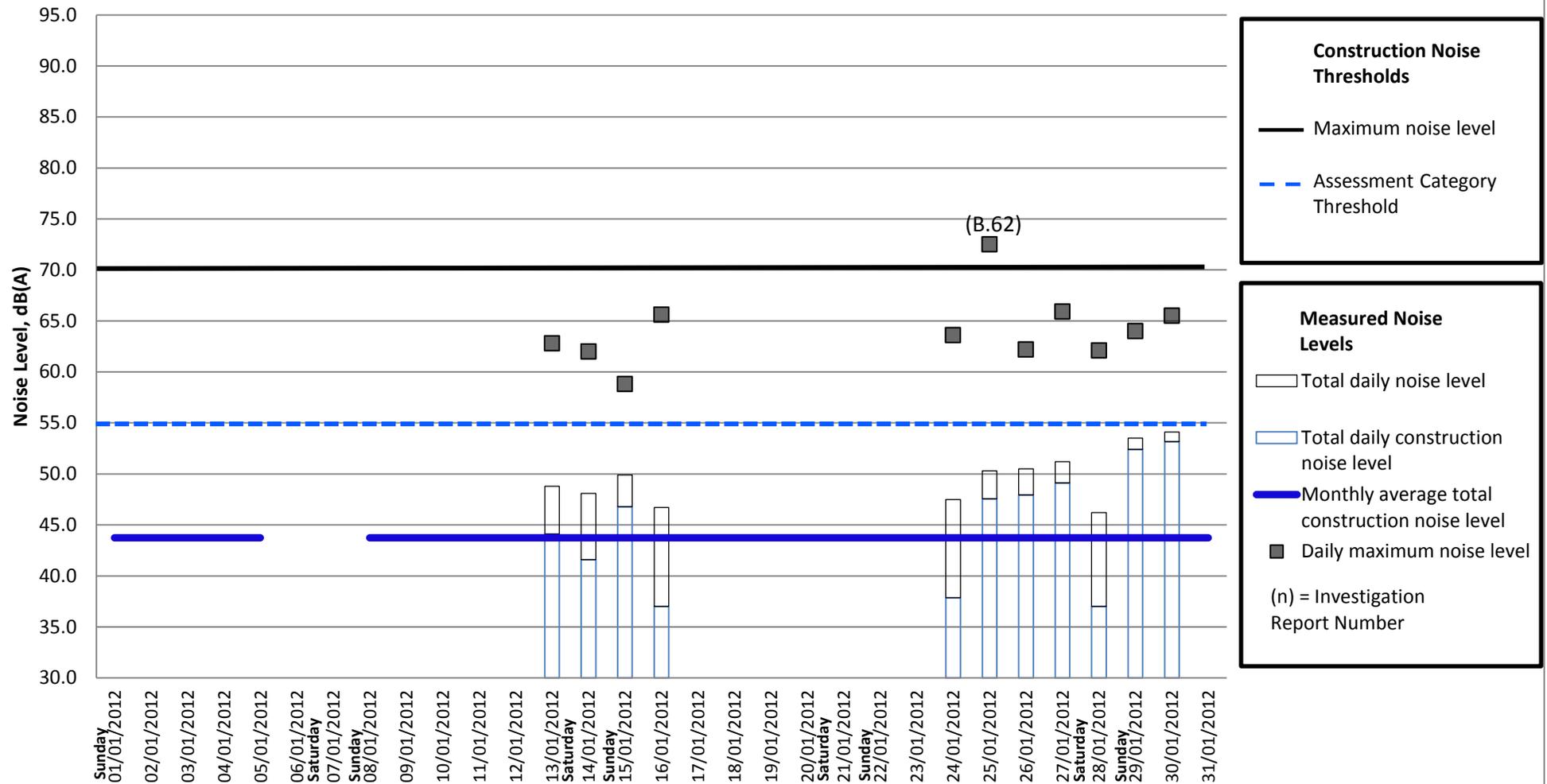
Measured Daytime Noise Levels at Butlaw Fisheries

Measurement period: January 2012



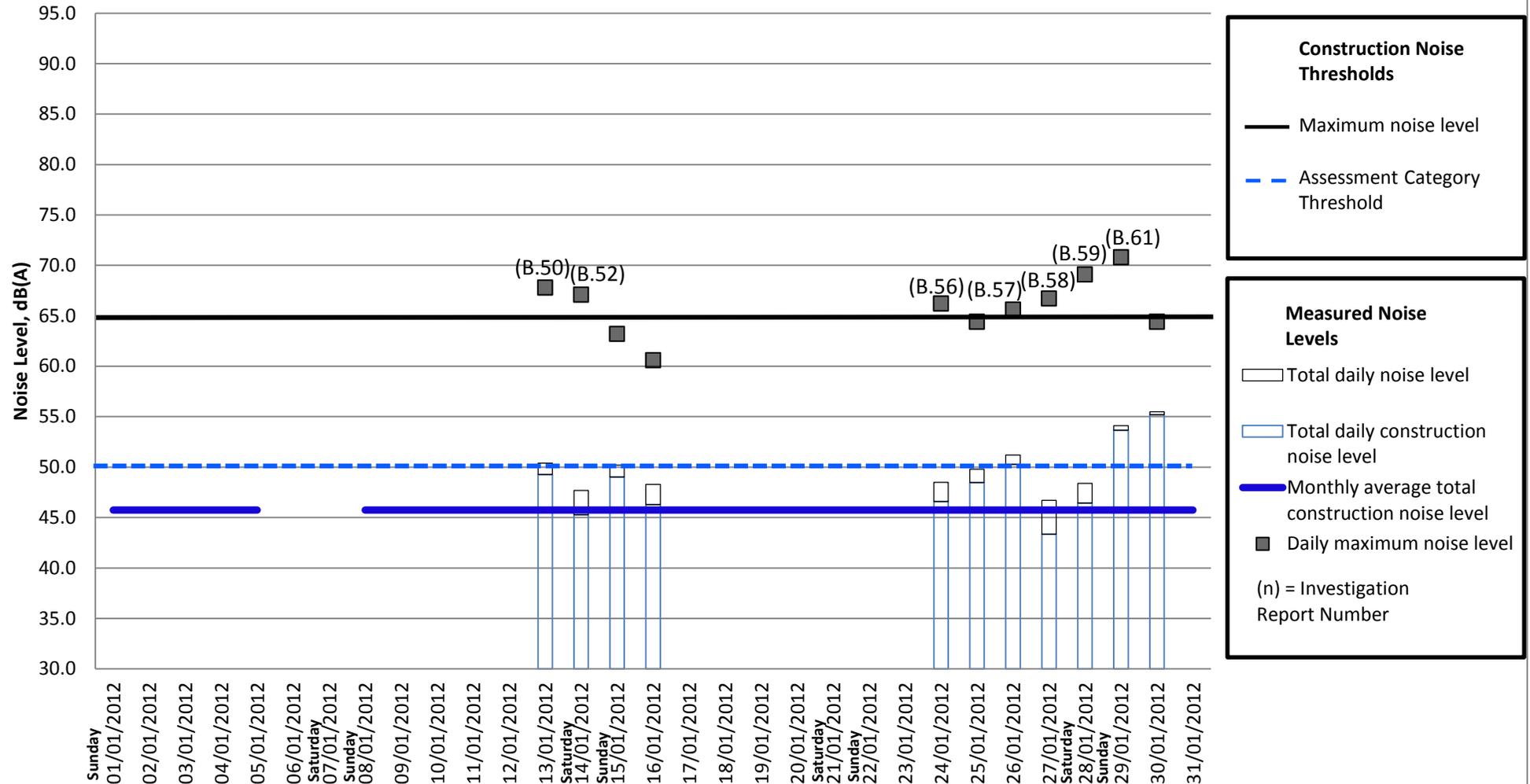
Note: Daytime construction works restarted on 06/01/12 following the Christmas break. Daytime noise data is missing for the period 06/01/12 to 12/01/12 due to device error.

Measured Evening Noise Levels at Butlaw Fisheries Measurement period: January 2012



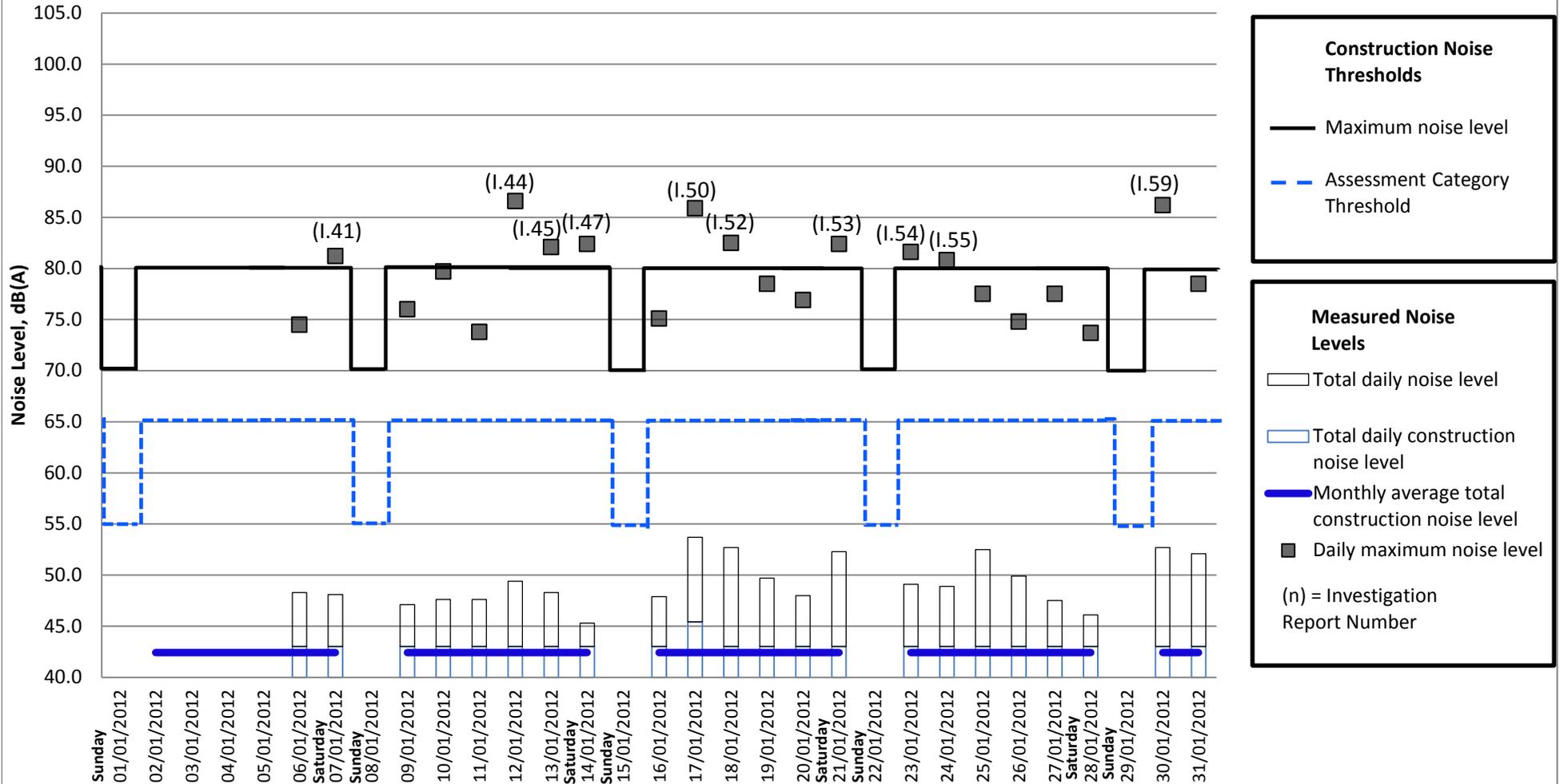
Note: Evening construction works restarted on 06/01/12 following the Christmas break. Evening noise data is missing for the period 06/01/12 and 07/01/12 due to device error. No evening construction works were conducted during the periods 08/01/12 to 12/01/12, 17/01/12 to 23/01/12 and on 31/01/12.

Measured Night time Noise Levels at Butlaw Fisheries Measurement period: January 2012



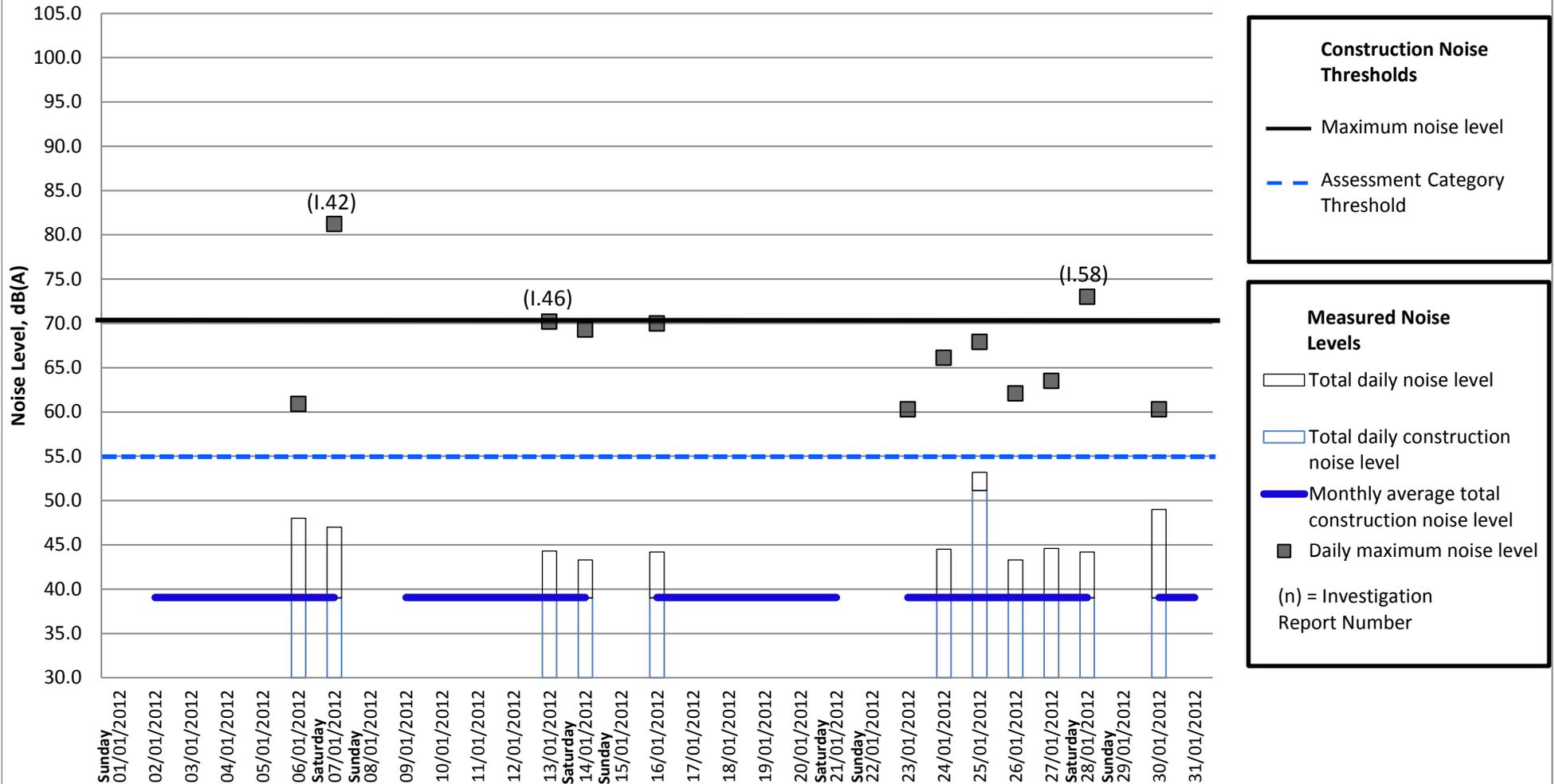
Note: Night time construction works restarted on 06/01/12 following the Christmas break. Night time noise data is missing for the period 06/01/12 to 12/01/12 due to device error. No night time construction works were conducted during the periods 08/01/12 to 12/01/12, 17/01/12 to 23/01/12 and on 31/01/12.

Measured Daytime Noise Levels at Inchgarvie Measurement period: January 2012



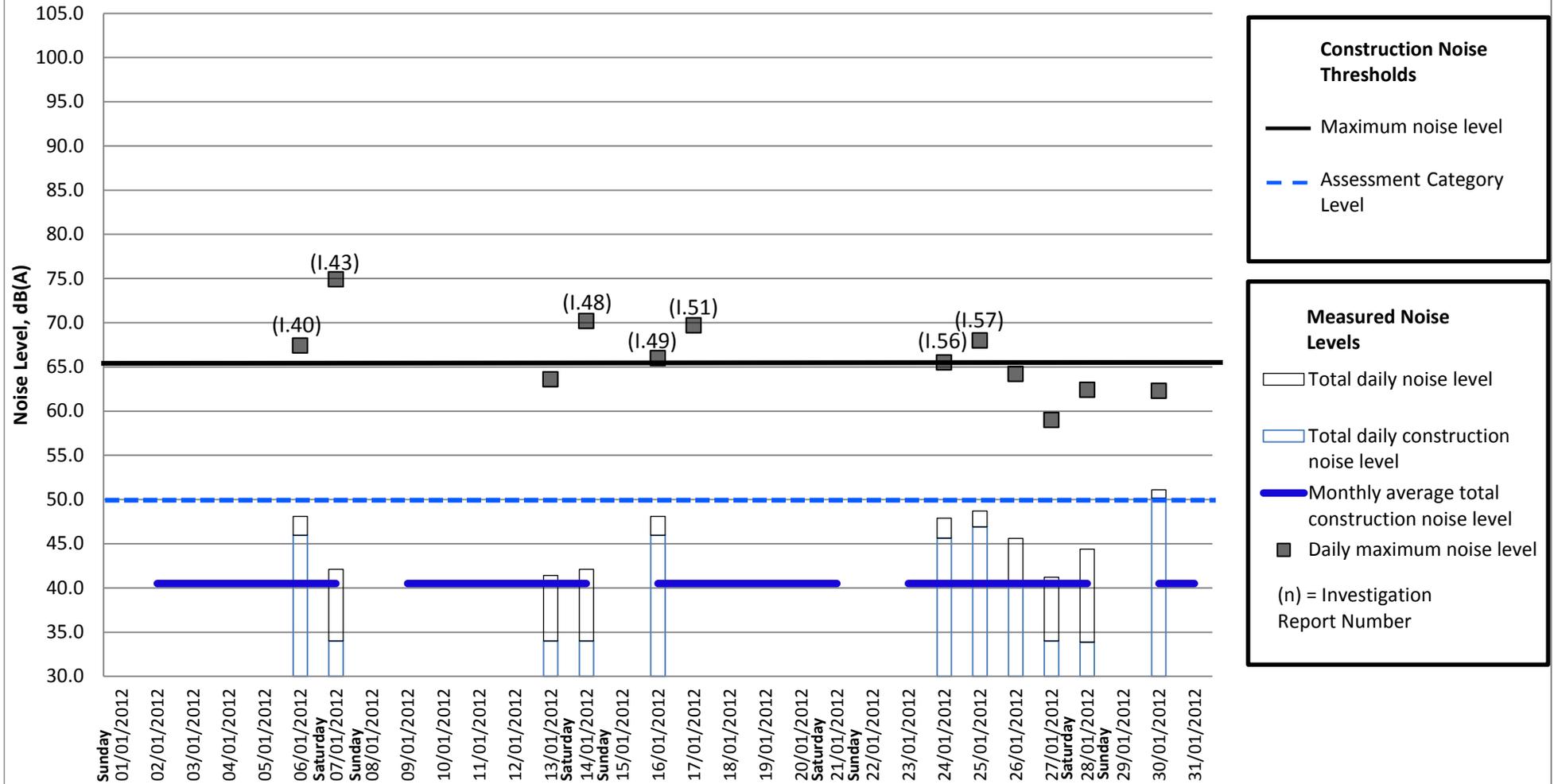
Note: Sunday noise data has not been included as no construction works have been conducted during these hours. Daytime construction works restarted on 06/01/12 following the Christmas break.

Measured Evening Noise Levels at Inchgarvie Measurement period: January 2012



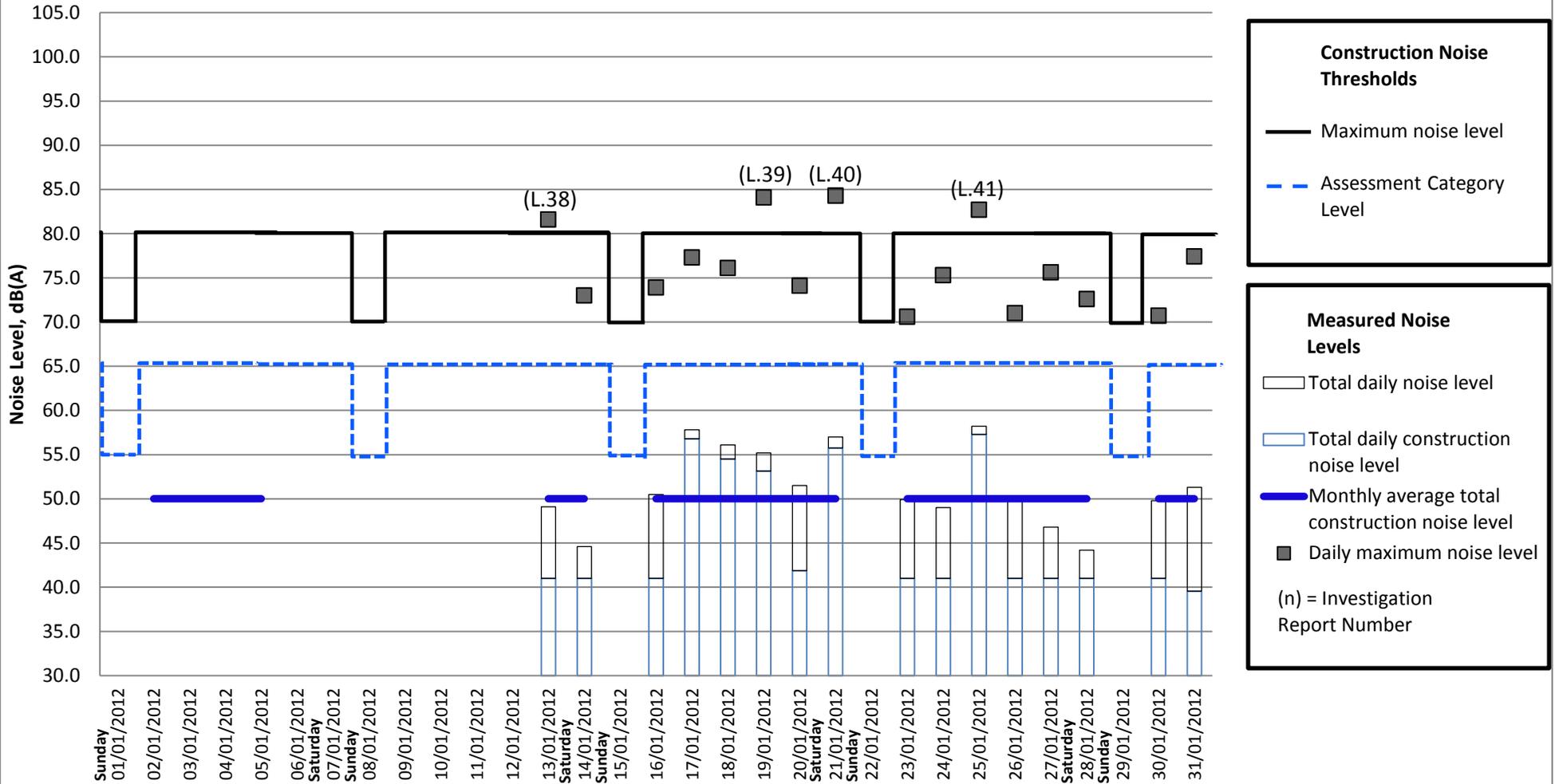
Note: Sunday noise data has not been included as no construction works have been conducted during these hours. Evening construction works restarted on 06/01/12 following the Christmas break. No evening construction works were conducted during the periods 08/01/12 to 12/01/12, 17/01/12 to 23/01/12 and on 31/01/12.

Measured Night-time Noise Levels at Inchgarvie Measurement period: January 2012



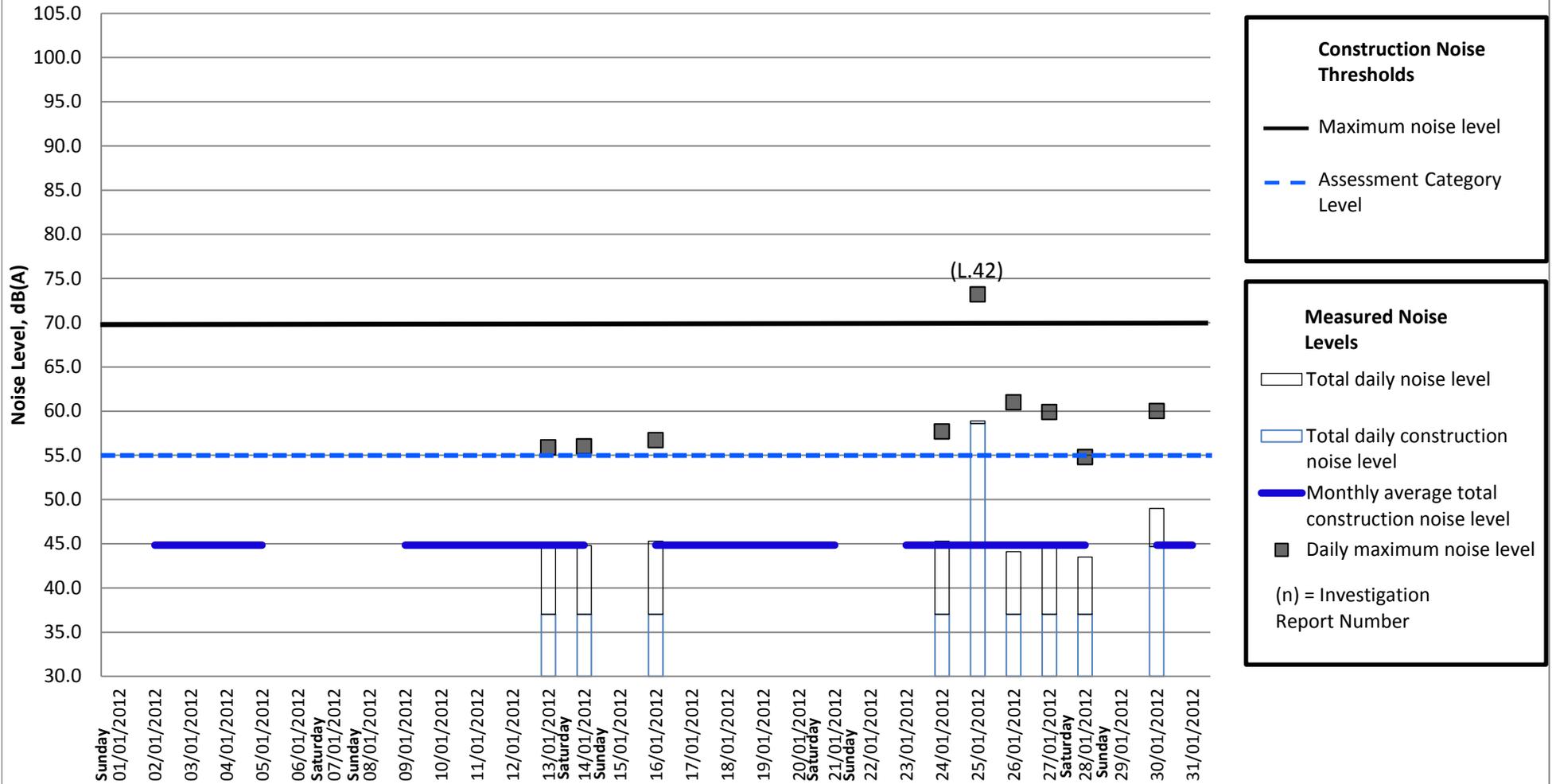
Note: Sunday noise data has not been included as no construction works have been conducted during these hours. Night time construction works restarted on 06/01/12 following the Christmas break. No night time construction works were conducted during the periods 08/01/12 to 12/01/12, 17/01/12 to 23/01/12 and on 31/01/12.

Measured Daytime Noise levels at Linn Mill Measurement period: January 2012



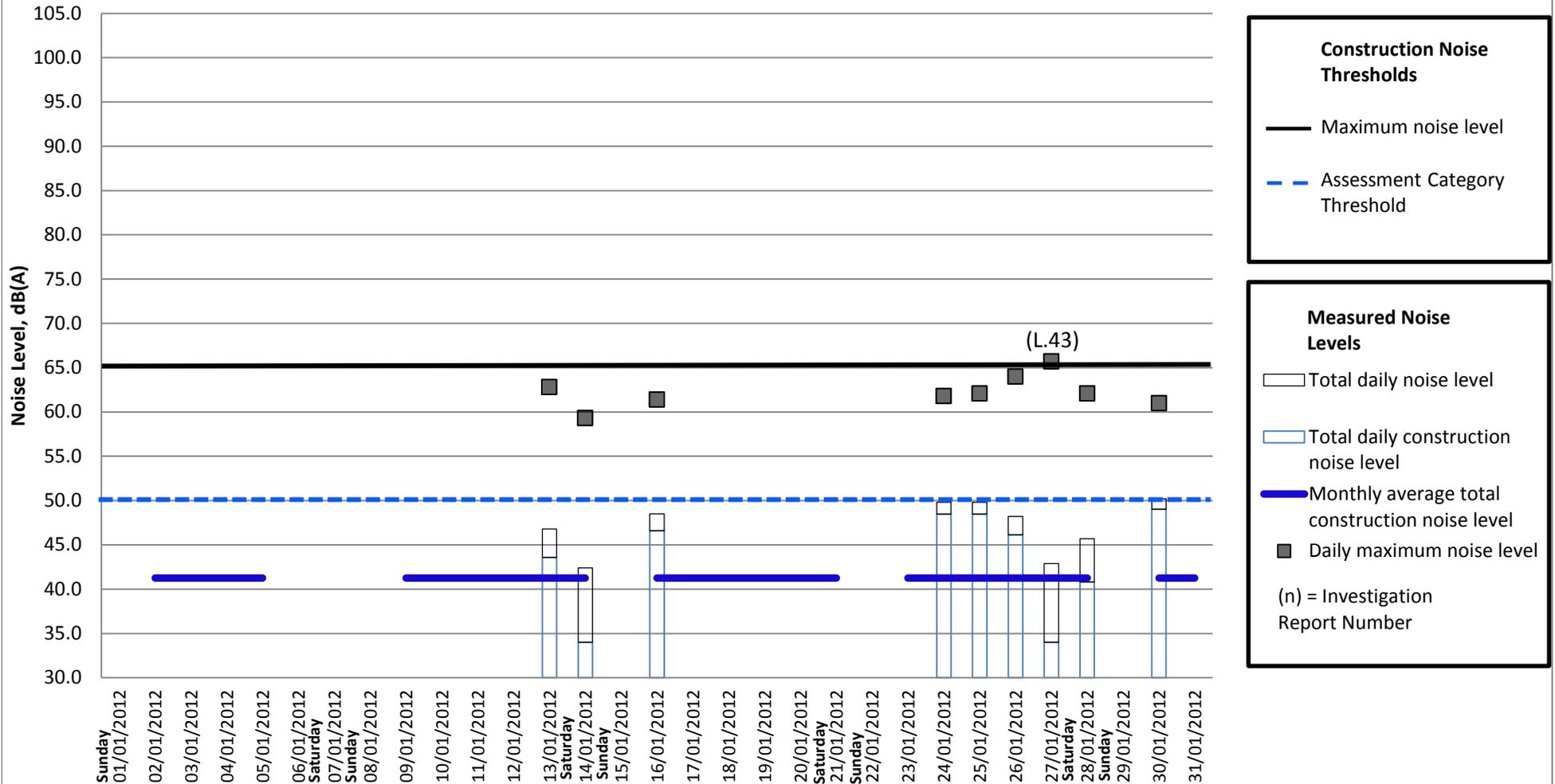
Note: Sunday noise data has not been included as no construction works have been conducted during these hours. Daytime construction works restarted on 06/01/12 following the Christmas break. Daytime noise data is missing for the period 06/01/12 to 12/01/12 due to device error.

Measured Evening Noise Levels at Linn Mill Measurement period: January 2012



Note: Sunday noise data has not been included as no construction works have been conducted during these hours. Evening construction works restarted on 06/01/12 following the Christmas break. No evening construction works were conducted during the periods 08/01/12 to 12/01/12, 17/01/12 to 23/01/12 and on 31/01/12. Evening data is missing for 06/01/12 and 07/01/12 due to device error.

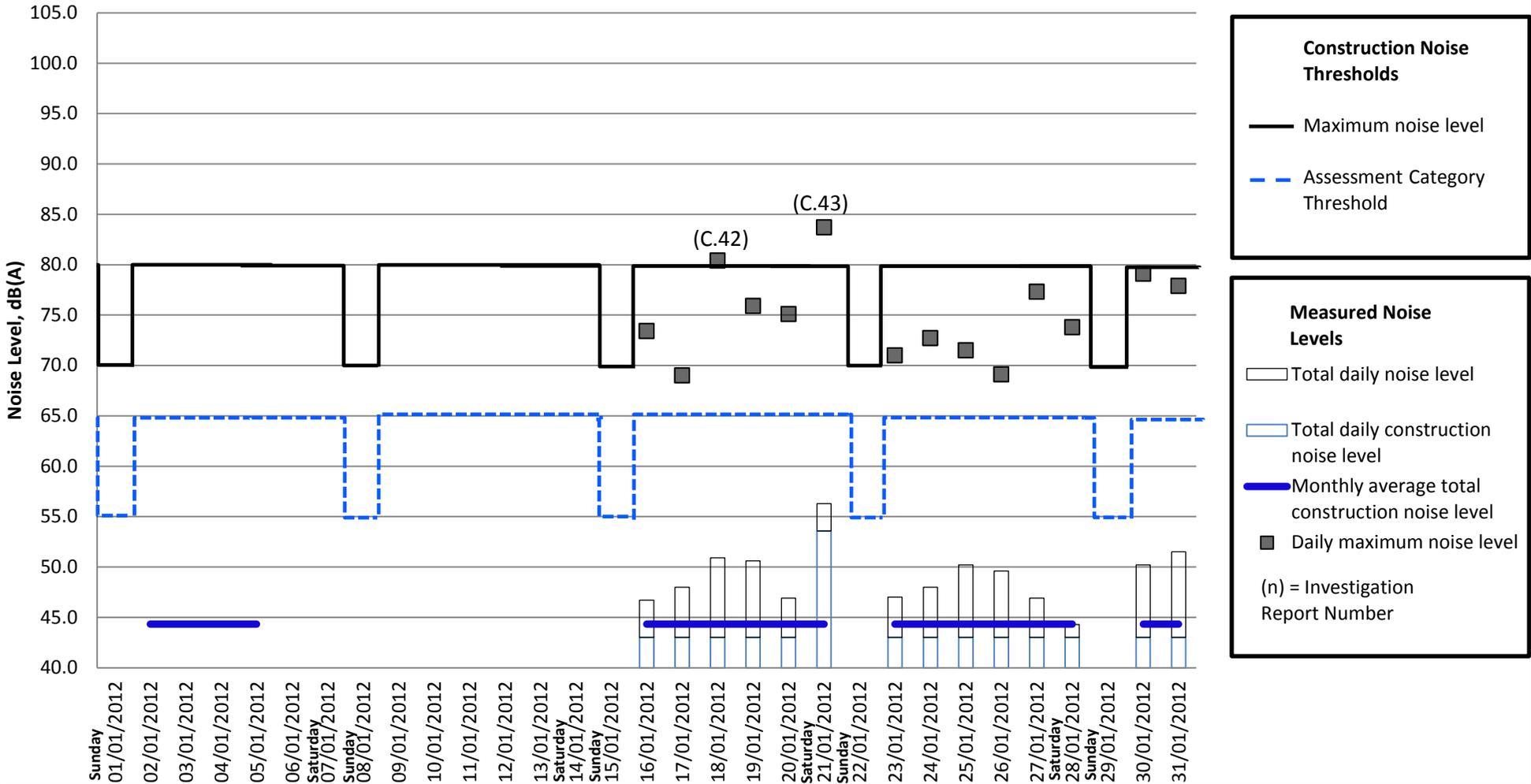
Measured Night-time Noise Levels at Linn Mill Measurement period: January 2012



Note: Sunday noise data has not been included as no construction works have been conducted during these hours. Night time construction works restarted on 06/01/12 following the Christmas break. No night time construction works were conducted during the periods 08/01/12 to 12/01/12, 17/01/12 to 23/01/12 and on 31/01/12. Night time data is missing for 06/01/12 and 07/01/12 due to device error.

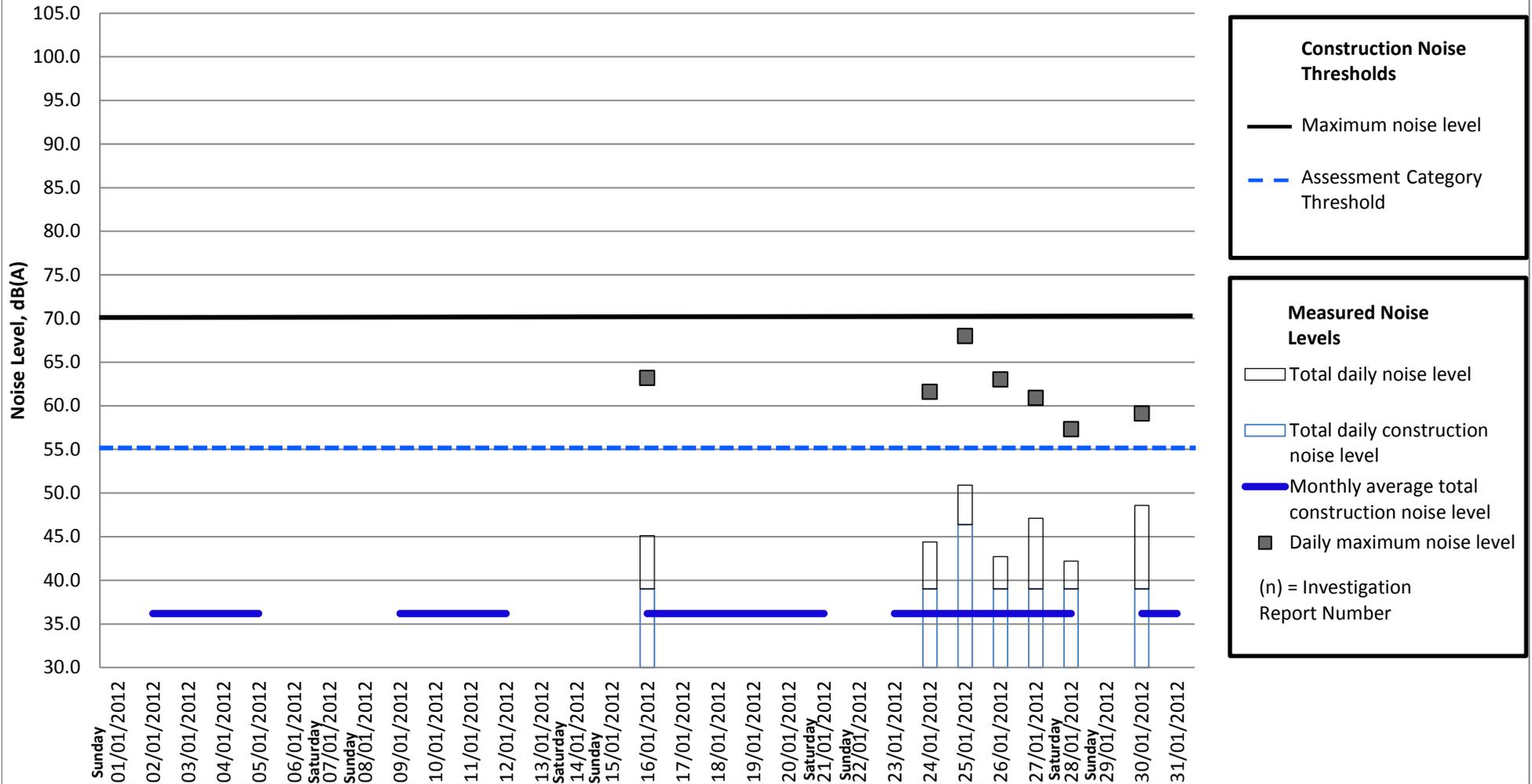
Measured Daytime Noise Levels at Clufflat Brae

Measurement period: January 2012



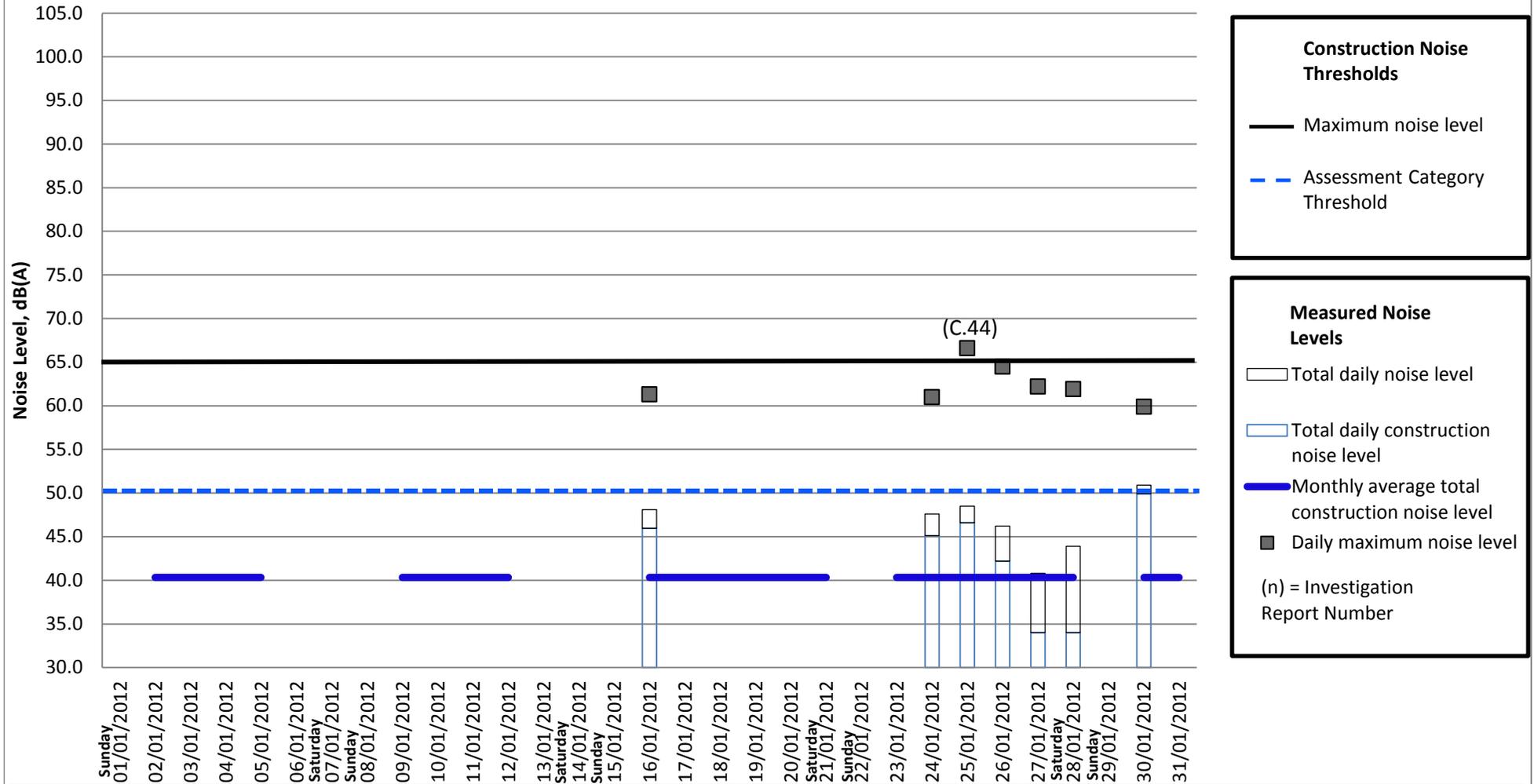
Note: Sunday noise data has not been included as no construction works have been conducted during these hours. Daytime construction works restarted on 06/01/12 following the Christmas break. Daytime noise data is missing for the period 06/01/12 to 14/01/12 due to device error.

Measured Evening Noise Levels at Clufflat Brae Measurement period: January 2012



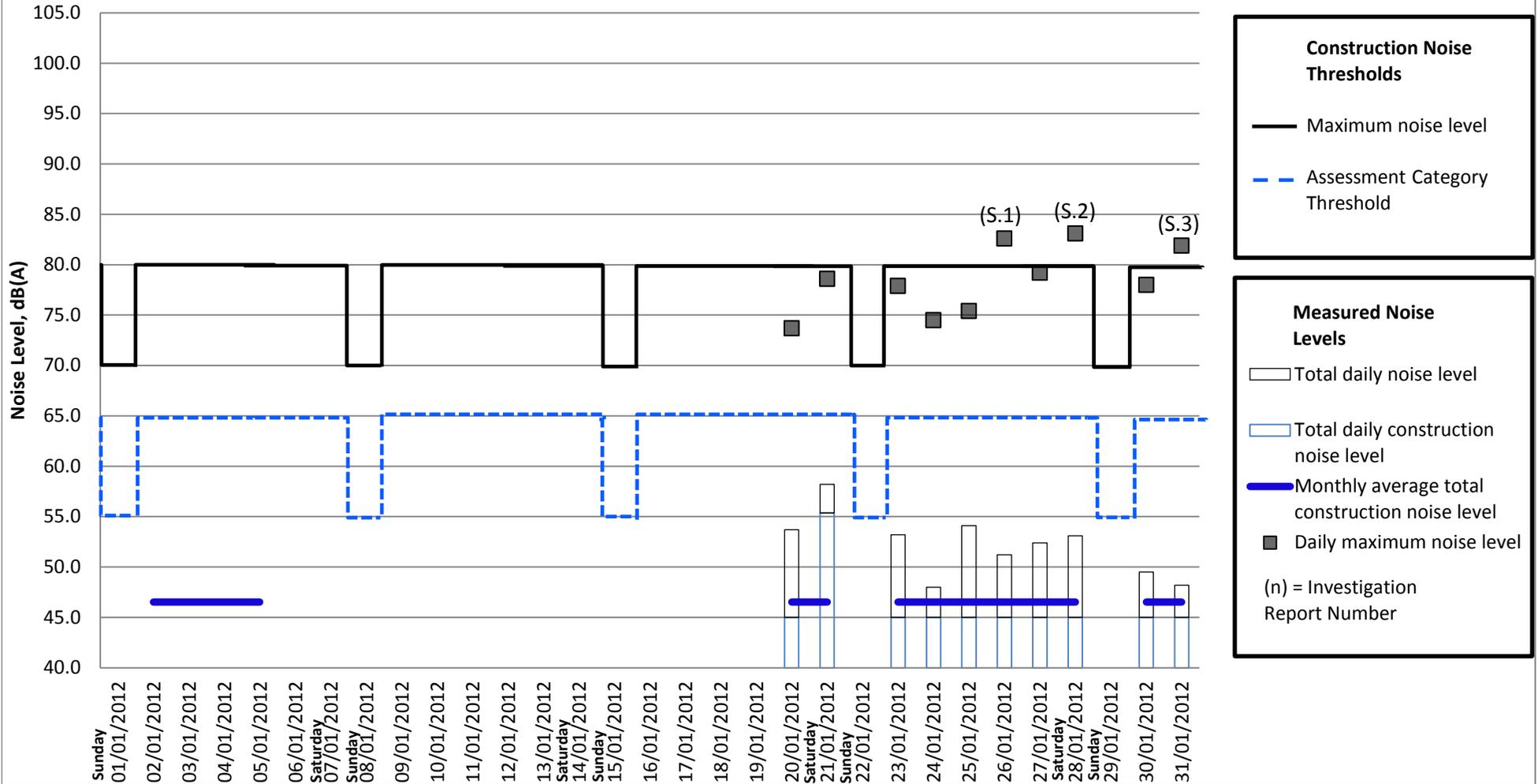
Note: Sunday noise data has not been included as no construction works have been conducted during these hours. Evening construction works restarted on 06/01/12 following the Christmas break. Evening noise data is missing for the period 06/01/12, 07/01/12, 13/01/12 and 14/01/12 due to device error. No evening construction works were conducted during the periods 08/01/12 to 12/01/12, 17/01/12 to 23/01/12 and on 31/01/12.

Measured Night-time Noise Levels at Clufflat Brae Measurement period: January 2012



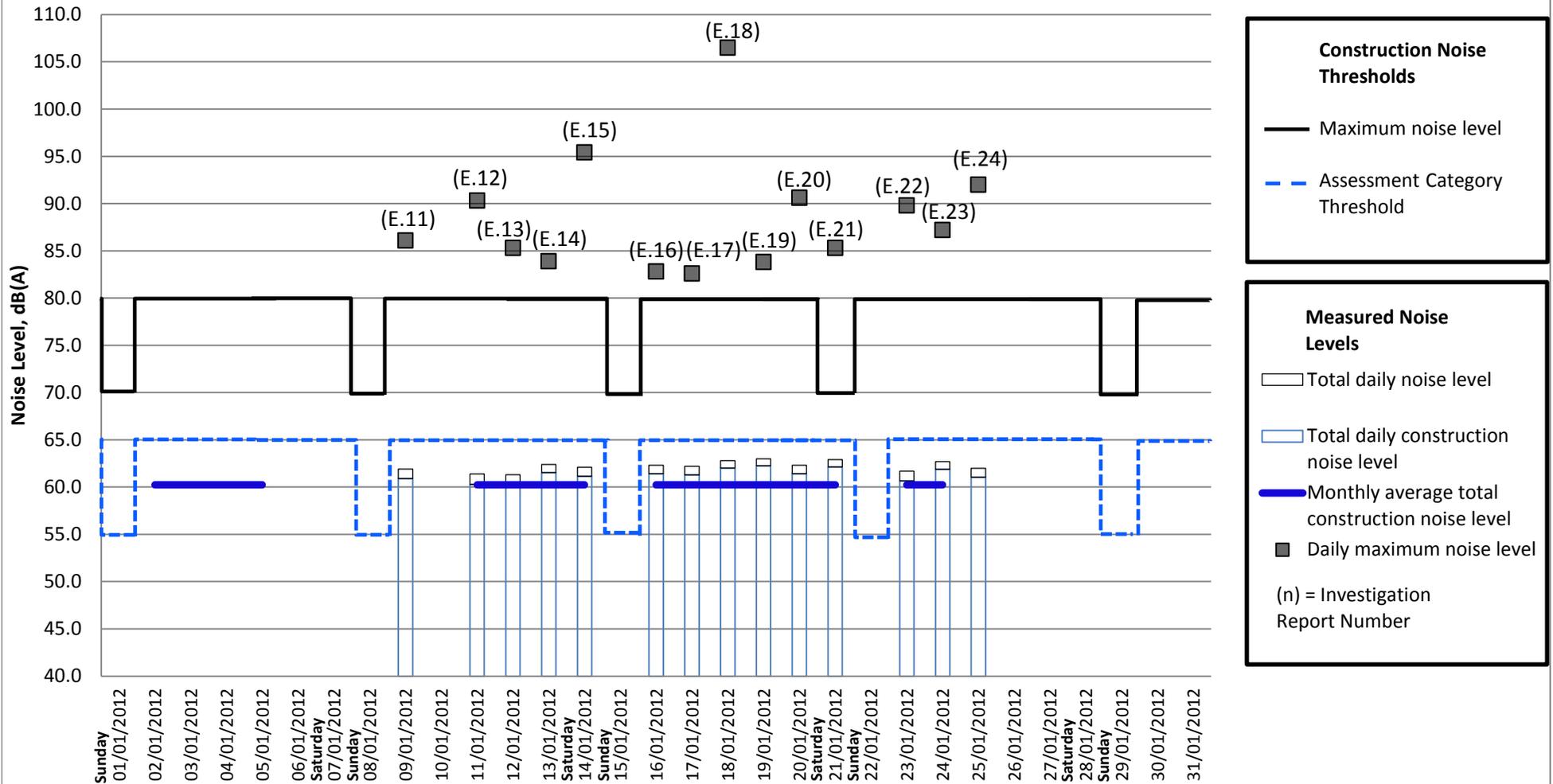
Note: Sunday noise data has not been included as no construction works have been conducted during these hours. Night time construction works restarted on 06/01/12 following the Christmas break. Night time noise data is missing for the period 06/01/12, 07/01/12, 13/01/12 and 14/01/12 due to device error. No night time construction works were conducted during the periods 08/01/12 to 12/01/12, 17/01/12 to 23/01/12 and on 31/01/12.

Measured Daytime Noise Levels at Springfield Measurement period: January 2012



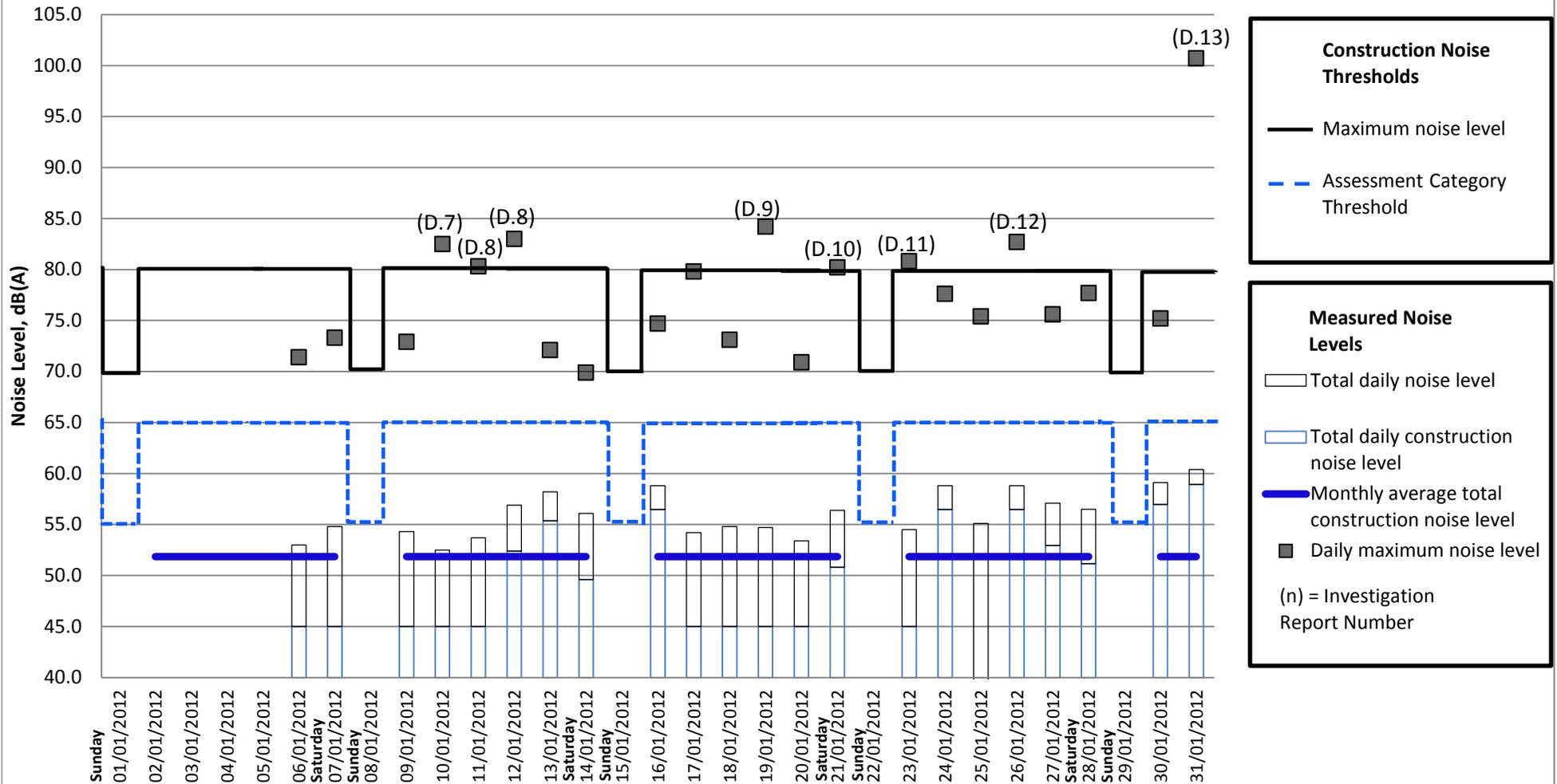
Note: Sunday noise data has not been included as no construction works have been conducted during these hours. Daytime construction works restarted on 06/01/12 following the Christmas break. Daytime noise data is missing for the period 06/01/12 to 19/01/12 due to device error.

Measured Daytime Noise Levels at Echline Field Measurement period: January 2012



Note: Sunday noise data has not been included as no construction works have been conducted during these hours. Daytime onstruction works restarted on 06/12/11 following the Christmas break. Daytime noise data is missing for 06/01/12, 07/01/12, 10/01/12 and the period 26/01/12 to 31/01/12 due to device error.

Measured Daytime Noise Levels at Dundas Home Farm Measurement period: January 2012

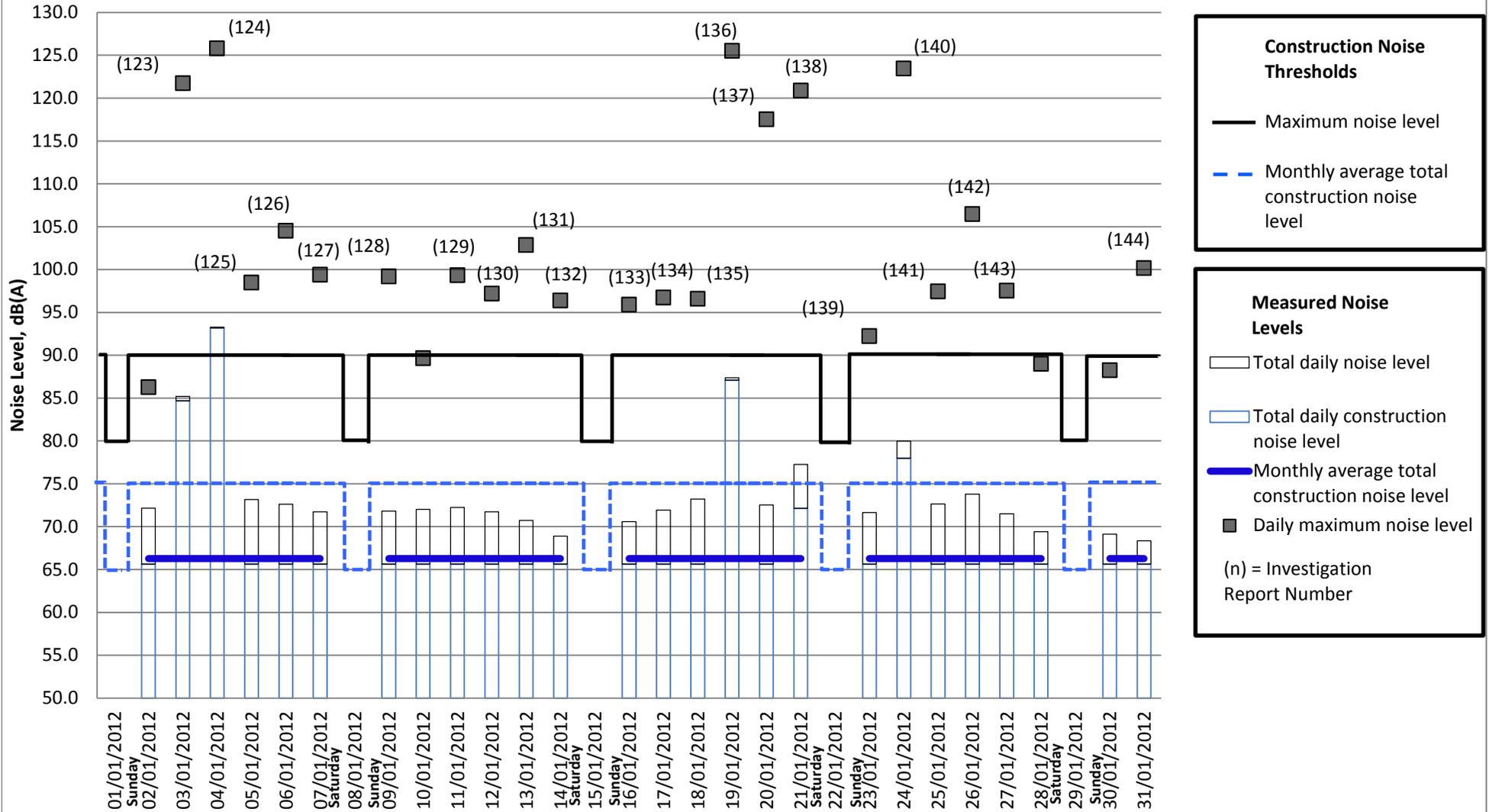


Note: Sunday noise data has not been included as no construction works have been conducted during these hours. Daytime construction works restarted on 06/01/12 following the Christmas break.

APPENDIX B -

**M9 J1A CONTRACT - CONSTRUCTION
NOISE MONITORING REPORTS**

Measured daytime noise levels, 93/95 King Edwards Way (CNV02) 1st January 2012 to 31st January 2012



Sunday data have not been included as no construction works have been conducted during these hours.

 <p>QUALITY MANAGEMENT SYSTEM</p>	Project Title: FORTH REPLACEMENT CROSSING M9 Junction 1A		Project Number: 208
	Contractor: SRB	Date: 25-01-12	NER. 18
	NOISE EXCEEDENCE REPORT		
<p>Summary of Finding(s): <u>January 1st to 8th 2012– CNV02</u></p> <p>Exceedences 123 to 127: Maximum Noise Level: 125.8 dB (A)</p> <p>Analysis:</p> <p>There were no works ongoing during this period as the Site was closed for the Christmas Holidays. An analysis was carried out using the following data:</p> <ul style="list-style-type: none"> • Recorded Noise Logs and Noise Data • Noise type • Site Diaries / Weather Data • Inspections by Senior Engineer (Roland Tarrant) <p>Findings:</p> <p>Many of the instances of high noise levels were discovered to be due to the high winds that were experienced in the first week in January. There were gusts of over 100mph and these resulted in the monitor being triggered over 250 times during the period 1st Jan to 8th Jan.</p> <p>It is considered unlikely that construction operations resulted in the exceedence recorded.</p> <p>Corrective Action Required:</p> <p>Maintain current monitoring levels</p> <p>SignatureRoland Tarrant..... Date25-01-12.....</p>			
<p>NER Closed</p> <p>Works have been inspected and completed as described above.</p> <p>SignatureSeamus O'Brien.....Date25-01-12...</p> <p style="text-align: center;">Project Manager / Assist Project Manager</p>			



Project Title:
**FORTH REPLACEMENT
 CROSSING
 M9 Junction 1A**

Project
 Number:

 208

Contractor:
 SRB

Date:
 31-01-12

NER. 19

**QUALITY MANAGEMENT
 SYSTEM**

NOISE EXCEEDENCE REPORT

Summary of Finding(s): January 9th to 31st 2012– CNV02

Exceedences 128 to 144: Maximum Noise Level: 125.5 dB (A)

Analysis:

An analysis was carried out using the following data:

- Recorded Noise Logs and Noise Data
- Noise type
- Site Diaries / Weather Data
- Inspections by Senior Engineer (Roland Tarrant)

Findings:

An analysis of the site diaries shows that there were no construction activities carried out in this area over the month. This is in the main due to the earthworks being halted until weather conditions improve.

Noise logs recorded did not show any evidence of construction activity resulting in noise exceedences.

Various noises recorded on the Sound Level Monitor were as follows:

- Gusts of wind
- Constant gales
- Emergency Response Vehicle Horns
- Lorry Horns (musical)
- Dog barking
- Bird activity near the microphone

One reading on the 31st of January was associated with a drill being used. SRB were able to verify that there were no personnel in this area and that it is likely that some household DIY was the cause.

It is considered unlikely that construction operations resulted in the exceedence recorded.

Corrective Action Required:

Maintain current monitoring and surveillance levels

SignatureRoland Tarrant.....

Date31-01-12.....

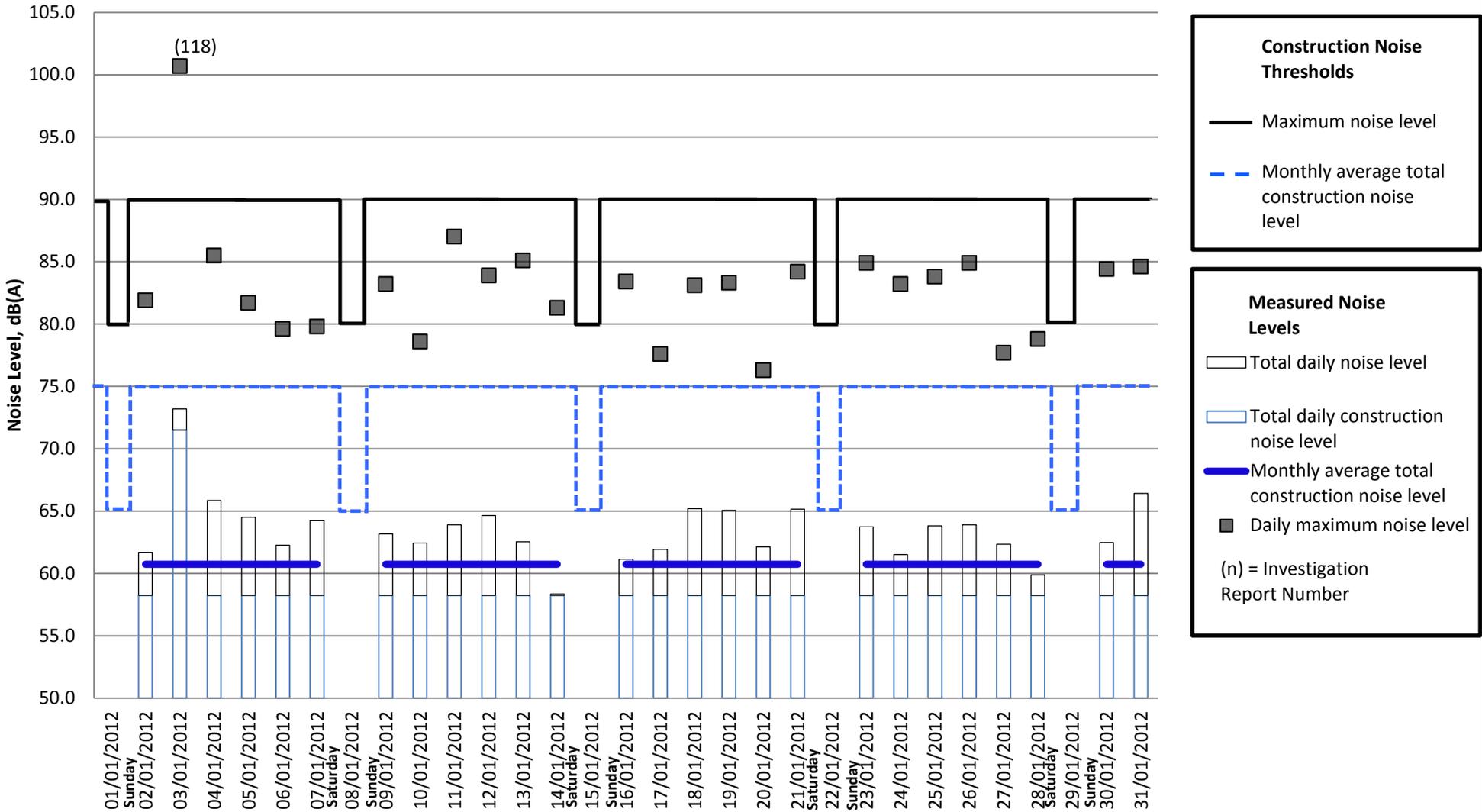
NER Closed

Works have been inspected and completed as described above.

SignatureSeamus O'Brien.....Date31-01-12...

Project Manager / ~~Assist Project Manager~~

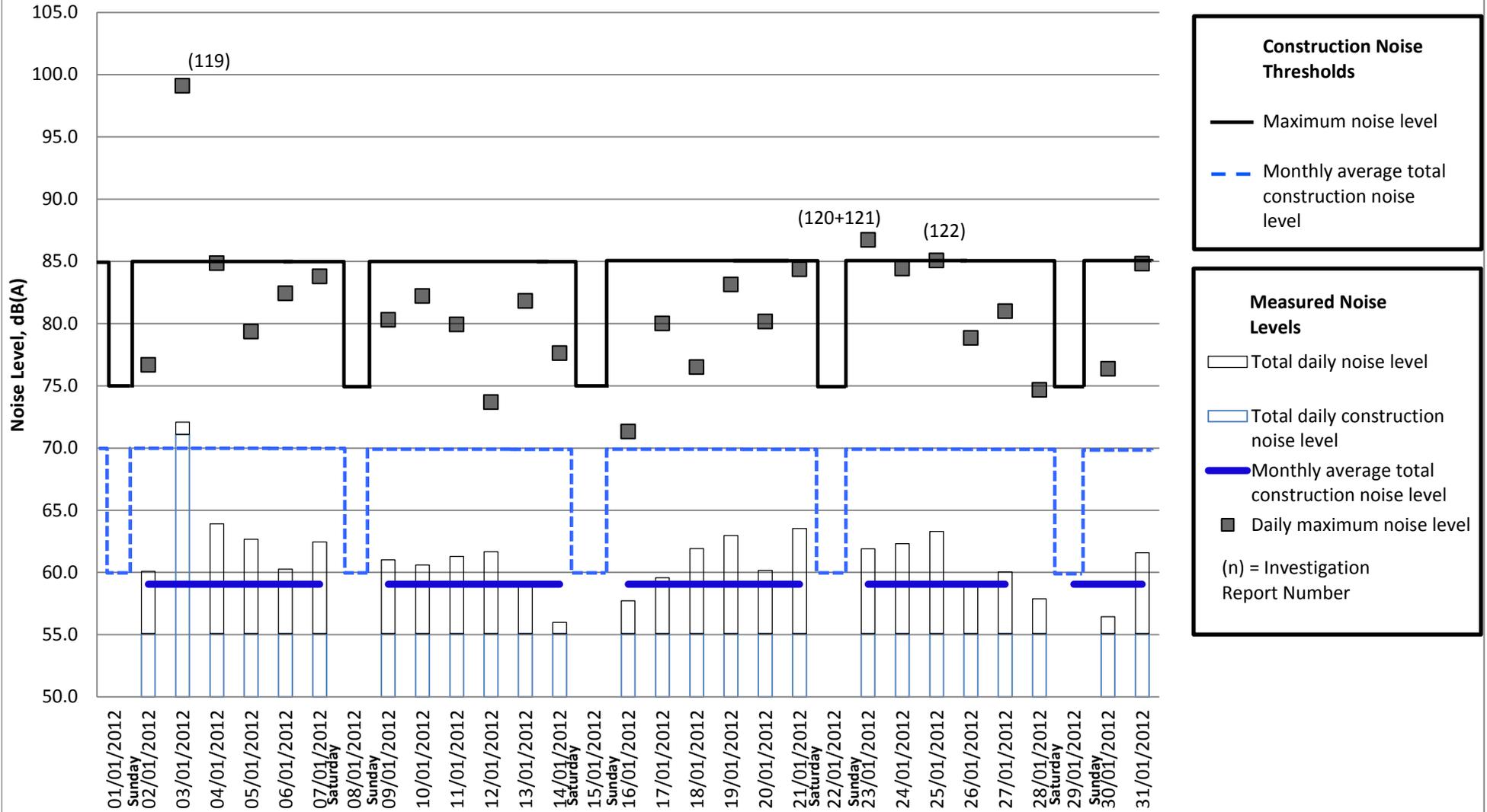
Measured daytime noise levels, 15-17 Buie Rigg (CNV07) 1st January 2012 to 31st January 2012



Sunday data have not been included as no construction works have been conducted during these hours.

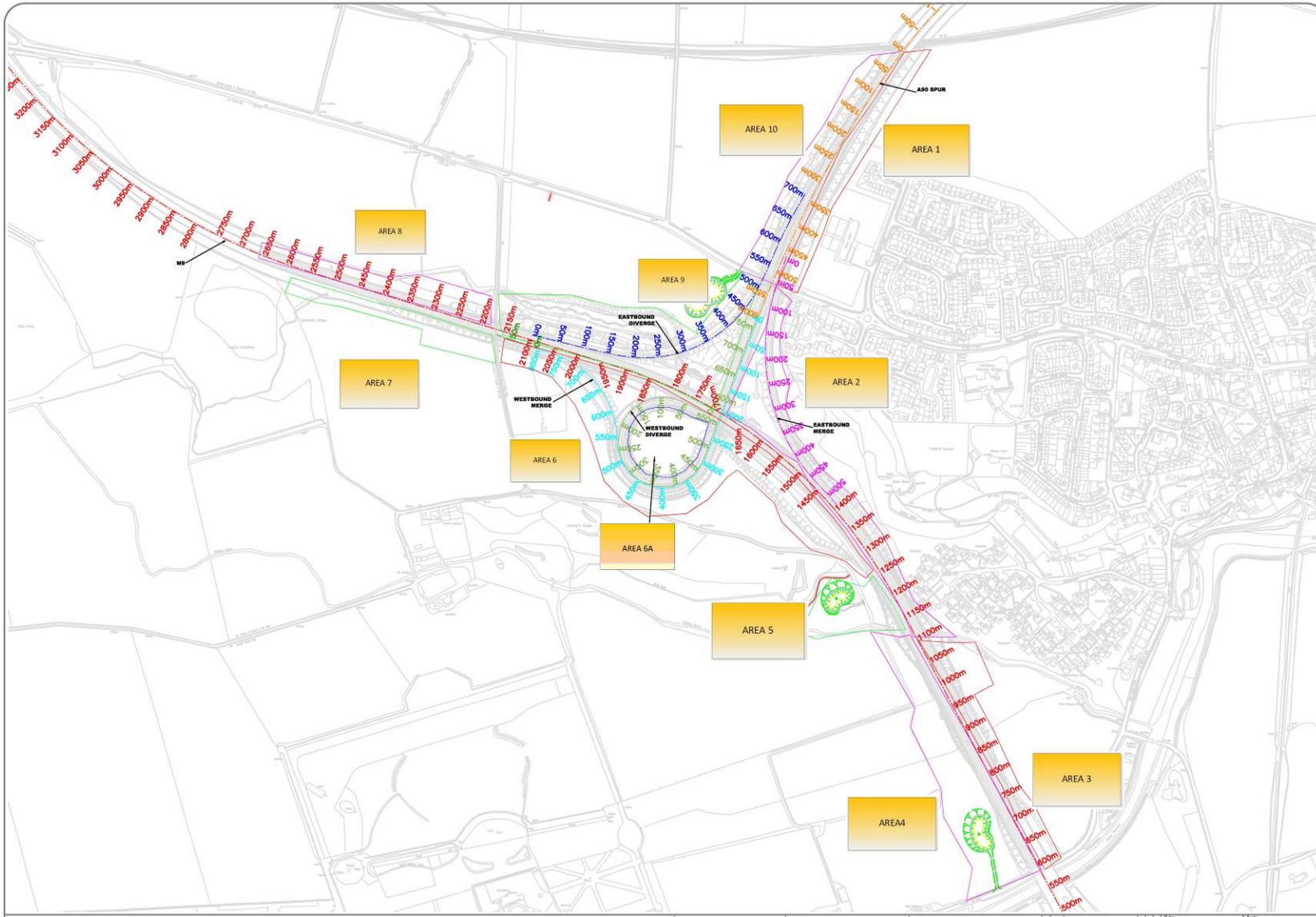
 <p>QUALITY MANAGEMENT SYSTEM</p>	Project Title: FORTH REPLACEMENT CROSSING M9 Junction 1A		Project Number: 208
	Contractor: SRB	Date: 24-01-12	NER. 15
	NOISE EXCEEDENCE REPORT		
Summary of Finding(s): <u>January 03rd 2012– CNV7 9.51am</u> Exceedence 118: Maximum Noise Level: 100.7 dB (A)			
Analysis: There were no works ongoing during this period as the Site was closed for the Christmas Holidays. Findings: It is considered unlikely that construction operations resulted in the exceedence recorded. Findings: It is considered unlikely that the piling operations resulted in the exceedence recorded.			
Corrective Action Required: Maintain current monitoring levels			
SignatureRoland Tarrant..... Date24-01-12.....			
NER Closed Works have been inspected and completed as described above.			
SignatureSeamus O'Brien.....Date24-01-12... Project Manager / Assist Project Manager			

Measured daytime noise levels, 8 Kirklands Park Grove (CNV16) 1st January 2012 to 31st January 2012



Sunday data have not been included as no construction works have been conducted during these hours.

 QUALITY MANAGEMENT SYSTEM	Project Title: FORTH REPLACEMENT CROSSING M9 Junction 1A		Project Number: 208
	Contractor: SRB	Date: 24-01-12	NER. 13
	NOISE EXCEEDENCE REPORT		
Summary of Finding(s): <u>January 23rd 2012– CNV16 8.56am</u> Exceedence 120: Maximum Noise Level: 86.7dB (A)			
Analysis: Sheet piling works took place at Newmains Road during this time period. An analysis was carried out using the following data: <ul style="list-style-type: none"> • Recorded Noise Logs and Noise Data • Noise type • Site Diaries / Weather Data • Inspections by Senior Engineer (Roland Tarrant) 			
Findings: The Piling Operations took place over 240m from CNV 016. This would have required the Piling operation to exceed 114 dB (A) at 10m. Site Diary Notes attached show that works were delayed due to the machine running out of diesel and did not start until 11.30am. CNV016 Noise File appears to indicate that the noise is due to gusting wind. It is considered unlikely that the piling operations resulted in the exceedence recorded.			
Corrective Action Required: Maintain monitoring regime and communication with the local community			
SignatureRoland Tarrant..... Date24-01-12.....			
NER Closed Works have been inspected and completed as described above.			
SignatureSeamus O'Brien.....Date24-01-12... Project Manager / Assist Project Manager			



 QUALITY MANAGEMENT SYSTEM	Project Title: FORTH REPLACEMENT CROSSING M9 Junction 1A		Project Number: 208
	Contractor: SRB	Date: 24-01-12	NER. 14
	NOISE EXCEEDENCE REPORT		
Summary of Finding(s): <u>January 23rd 2012– CNV16 9.51am</u> Exceedence 121: Maximum Noise Level: 86.7 dB (A)			
Analysis: Sheet piling works took place at Newmains Road (West Side – North Face) during this time period. An analysis was carried out using the following data: <ul style="list-style-type: none"> • Recorded Noise Logs and Noise Data • Noise type • Site Diaries / Weather Data • Inspections by Senior Engineer (Roland Tarrant) 			
Findings: The Piling Operations took place over 240m from CNV 016. This would have required the Piling operation to exceed 114 dB (A) at 10m. In addition, Site Diary Notes (Structures Diary) shows that works were delayed due to the piling rig running out of diesel and that works did not commence until 11.30am. The recorded noise file appears to indicate that the noise is due to gusting wind.			
It is considered unlikely that the piling operations resulted in the exceedence recorded. It is also noted that the noise exceedence is 1.7 dB(A) over the limit.			
Corrective Action Required: Maintain monitoring regime and communication with the local community			
SignatureRoland Tarrant.....		Date24-01-12.....	
NER Closed Works have been inspected and completed as described above.			
SignatureSeamus O'Brien.....		Date24-01-12...	
Project Manager / Assist Project Manager			

* Steel Piers @ Newmans North Side with Crane. Started @ 11:30. Finished @ 16:30.

0900
0915
0930
0945
1000
1015
1030
1045
1100
1115
1130
1145
1200
1215
1230
1245
1300
1315
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1445
1500
1515
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1600
1615
1630
1645
1700
1715
1730
1745
1800

* PJ Edwards tracked to G14 & started boring 900 φ pile.

* steel fixed @ G15 N/B.

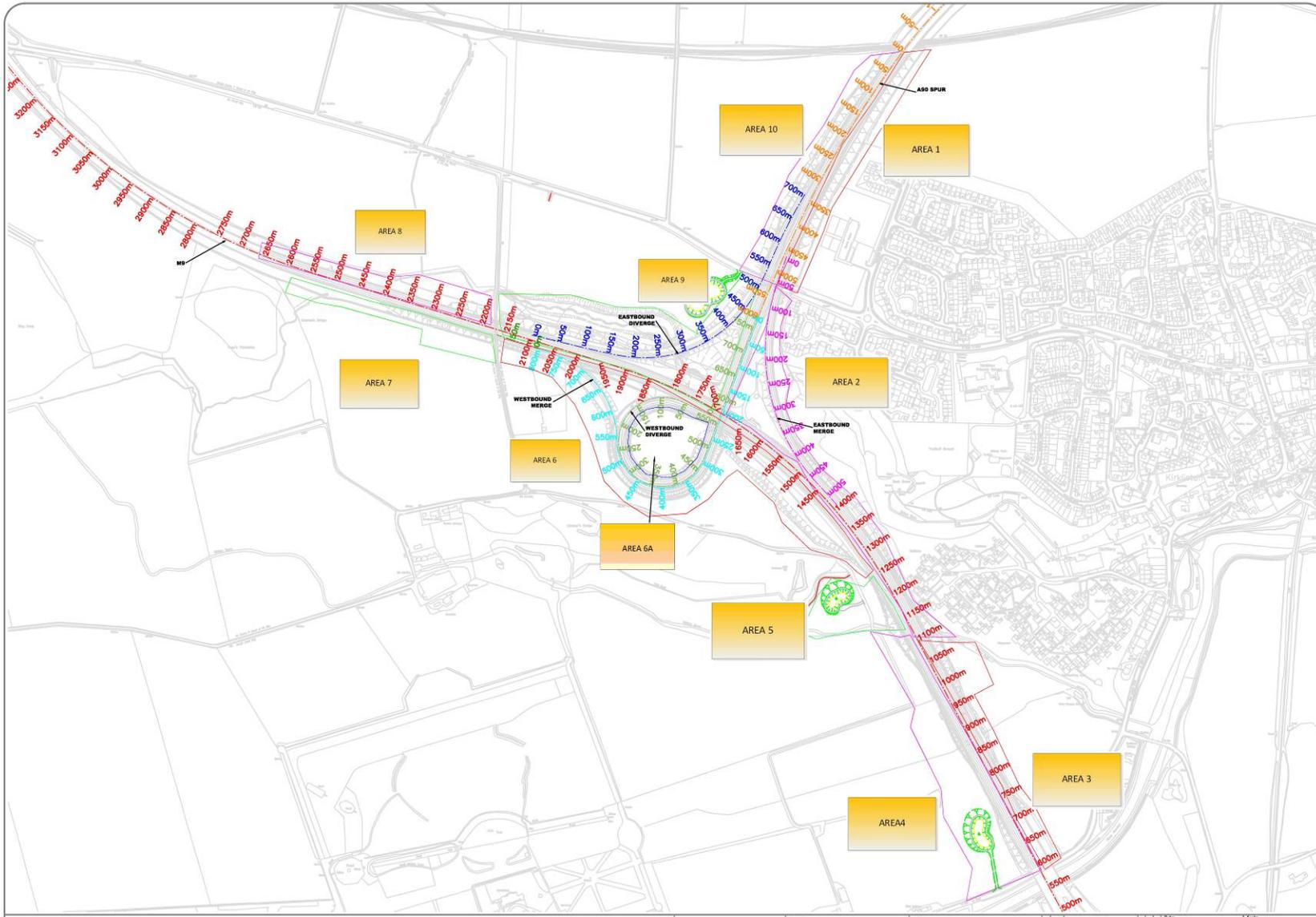
* Shutter stand @ G15 N/B + level girder for top of concrete.

* Danivan, Tomas & RT @ G13+15 ~~the~~ S/B bracking down piles.

8"

Evening Appointments

February					March						
M	6	13	20	27	M	5	12	19	26		
T	7	14	21	28	T	6	13	20	27		
W	1	8	15	22	29	W	7	14	21	28	
T	2	9	16	23	T	1	8	15	22	29	
F	3	10	17	24	F	2	9	16	23	30	
S	4	11	18	25	S	3	10	17	24	31	
S	5	12	19	26	S	4	11	18	25		
Wk	5	6	7	8	9	Wk	9	10	11	12	13



 QUALITY MANAGEMENT SYSTEM	Project Title: FORTH REPLACEMENT CROSSING M9 Junction 1A		Project Number: 208
	Contractor: SRB	Date: 25-01-12	NER. 16
	NOISE EXCEEDENCE REPORT		
Summary of Finding(s): <u>January 25th 2012– CNV16 9.40am (Wednesday)</u> Exceedence 122: Maximum Noise Level: 85.1 dB (A)			
Analysis: Sheet piling works took place at Newmains Road (West Side – North Face) during this time period. An analysis was carried out using the following data: <ul style="list-style-type: none"> • Recorded Noise Logs and Noise Data • Noise type • Site Diaries / Weather Data • Inspections by Senior Engineer (Roland Tarrant) 			
Findings: The Piling Operations took place over 240m from CNV 016. This would have required the Piling operation to exceed 114 dB (A) at 10m. Also, see site diary extract (Structures Diary) showing that piling works only took place between 12pm and 1pm before being discontinued due to high winds. CNV 016 Noise File appears to indicate that the noise is due to gusting wind. It is considered unlikely that the piling operations resulted in the exceedence recorded. It is also noted that the noise exceedence is 0.1 dB(A) over the limit.			
Corrective Action Required: Maintain monitoring regime and communication with the local community SignatureRoland Tarrant..... Date25-01-12.....			
NER Closed Works have been inspected and completed as described above. SignatureSeamus O'Brien.....Date25-01-12... Project Manager / Assist Project Manager			

WEEK 43

PT Edwards

0900

0915 Poured G14 @ 9:00. 2 loads Slump 160 & 190. Could only
0930 get cage halfway down. Piled out cage and augered
0945 out concrete. Poured again @ 16:00. Got cage in and
1000 finished @ 5:30.

1015

1030

Steel Pilers

1100 Piling Newmans North. Crane ran out of diesel when
1115 it got going only drove 3 or 4 piles before having to stop
1130 due to winds. Working between 12 and 4.

1145

1200 Stuart & Kerry on G15/~~16~~ N/B and pulling out steel for
1215 G13 1/2.

1230

1245 Brian + ?? + Bart on G16 N/B preparing shutters.

1300

1315 Pavel, Marek, Tomas & Damian @ G15 N/B. Poured
1330 pile cap. Concrete delay over an hour. Ordered for
1345 half 1. Nearly 3 when started.

1400

1415 Duck: with pilers & Chippies.

1430

1445 ST: @ G16 with Chippies lifting shutters.

1500

1515 George getting Platforms 2 & 3 ready.

1530

1545

1600

1615

1630

1645

1700

1715

1730

1745

1800

Evening Appointments

February					March						
M	6	13	20	27	M	5	12	19	26		
T	7	14	21	28	T	6	13	20	27		
W	1	8	15	22	29	W	7	14	21	28	
T	2	9	16	23	T	1	8	15	22	29	
F	3	10	17	24	F	2	9	16	23	30	
S	4	11	18	25	S	3	10	17	24	31	
S	5	12	19	26	S	4	11	18	25		
Wk	5	6	7	8	9	Wk	9	10	11	12	13

 <p>QUALITY MANAGEMENT SYSTEM</p>	Project Title: FORTH REPLACEMENT CROSSING M9 Junction 1A		Project Number: 208
	Contractor: SRB	Date: 25-01-12	NER. 17
	NOISE EXCEEDENCE REPORT		
Summary of Finding(s): <u>January 25th 2012– CNV16 9.40am (Wednesday)</u> Exceedence 119: Maximum Noise Level: 85.1 dB (A)			
Analysis: Sheet piling works took place at Newmains Road (West Side – North Face) during this time period. An analysis was carried out using the following data: <ul style="list-style-type: none"> • Recorded Noise Logs and Noise Data • Noise type • Site Diaries / Weather Data • Inspections by Senior Engineer (Roland Tarrant) 			
Findings: The Piling Operations took place over 240m from CNV 016. This would have required the Piling operation to exceed 114 dB (A) at 10m. Also, see site diary extract (Structures Diary) showing that piling works only took place between 12pm and 1pm before being discontinued due to high winds. CNV 016 Noise File appears to indicate that the noise is due to gusting wind. It is considered unlikely that the piling operations resulted in the exceedence recorded. It is also noted that the noise exceedence is 0.1 dB(A) over the limit.			
Corrective Action Required: Maintain monitoring regime and communication with the local community			
SignatureRoland Tarrant..... Date25-01-12.....			
NER Closed Works have been inspected and completed as described above.			
SignatureSeamus O'Brien.....Date25-01-12... Project Manager / Assist Project Manager			

