DOGGER BANK D WIND FARM

Preliminary Environmental Information Report

Volume 2
Appendix 25.2 Noise and Vibration Baseline Report

Document Reference No: 2.25.2
Date: June 2025
Revision: V1

sse Renewables equinor

www.doggerbankd.com

Document Title:	**Volume 2, Appendix 25.2 Noise and Vibration Baseline Report**
Document BIM No.	**PC6250-RHD-XX-ON-RP-EV-0098**
Prepared By:	**Royal HaskoningDHV**
Prepared For:	**Dogger Bank D Offshore Wind Farm**

Revision No.	Date	Status / Reason for Issue	Author	Checked By	Approved By
V1	27/05/2025	Final	SP / NH	AT	RH

Table of Contents

Glossary

Term	Definition
Decibels (dB)	A logarithmic ratio of two values of a variable. The decibel is not a true measurement unit nor is it exclusive to noise assessments. Decibels are used because they can represent very wide ranges of ratios (from trillionths and billionths to billions and trillions) with a small range of decibel values. Decibels can be used to represent measured values by using a known reference value in the ratio. When using decibels to measure something it is therefore important to specify what variable is being measured and what reference level has been used. This is done by adding a reference value statement in the form dB re x units, where the units indicate the variable being measured and x is the reference value. Decibels are used in noise assessments because the human ear responds to sound pressure in a logarithmic way and the quantities measured in acoustics vary over wide ranges. As the decibel is used in acoustics to represent a range of sound level parameters, there is a standardised notation system. This takes the form of an italic capital letter '*L*' (referring to 'level') and subscript characters which give specific details of what is being represented. Because decibels are logarithmic, they must be added, subtracted, multiplied, divided and averaged using different techniques from normal, linear, quantities.
Effect	An effect is the consequence of an impact when considered in combination with the receptor's sensitivity / value / importance, defined in terms of significance.
Energy Storage and Balancing Infrastructure (ESBI)	A range of technologies such as battery banks to be co-located with the Onshore Converter Station, which provide valuable services to the electrical grid such as storing energy to meet periods of peak demand and improving overall reliability.
Environmental Impact Assessment (EIA)	A process by which certain planned projects must be assessed before a formal decision to proceed can be made. It involves the collection and consideration of environmental information and includes the publication of an Environmental Statement.
Environmental Statement (ES)	A document reporting the findings of the EIA which describes the measures proposed to mitigate any likely significant effects.
Impact	A change resulting from an activity associated with the Project, defined in terms of magnitude.
Landfall	The area on the coastline, south-east of Skipsea, at which the offshore export cables are brought ashore, connecting to the onshore export cables at the transition joint bay above Mean High Water Springs.
Level	Values measured in decibels.

Term	Definition
Onshore Converter Station (OCS) Zone	The area within which the Onshore Converter Station and Energy Storage and Balancing Infrastructure will be located in vicinity of Birkhill Wood Substation.
Onshore Converter Station (OCS)	A compound containing electrical equipment required to stabilise and convert electricity generated by the Wind Turbines and transmitted by the export cables into a more suitable voltage for grid connection into Birkhill Wood Substation.
Onshore Development Area	The area in which all onshore infrastructure associated with the Project will be located, including any temporary works area required during construction and permanent land required for mitigation and enhancement areas, which extends landward of Mean Low Water Springs. There is an overlap with the Offshore Development Area in the intertidal zone.
Onshore Export Cable Corridor (ECC)	The area within which the onshore export cables will be located, extending from the landfall to the Onshore Converter Station zone and onwards to Birkhill Wood Substation.
Noise	No strict definition and is often used interchangeably with sound. However, it is usually taken to mean unwanted sound.
Project Design Envelope	A range of design parameters defined where appropriate to enable the identification and assessment of likely significant effects arising from a project's worst-case scenario. The Project Design Envelope incorporates flexibility and addresses uncertainty in the DCO application and will be further refined during the EIA process.
Sound	The physical phenomenon of the transmission of energy through gaseous, liquid or solid media via rapid periodic fluctuations in pressure.
Study Areas	A geographical area and / or temporal limit defined for each EIA topic to identify sensitive receptors and assess the relevant likely significant effects.
Temporary Construction Compounds	Areas set aside to facilitate the construction works for the onshore infrastructure, which include the landfall construction compound, main and intermediate construction compounds for onshore export cable works and OCS and ESBI construction compounds.
The Applicant	SSE Renewables and Equinor acting through 'Doggerbank Offshore wind Farm Project 4 Projco Limited'.
The Project	Dogger Bank D (DBD) Offshore Wind Farm Project, also referred to as DBD in this PEIR.

25.2 Noise and Vibration Baseline Report

25.2.1 Introduction

1. This appendix to the Dogger Bank D Offshore Wind Farm (hereafter 'the Project' or 'DBD') Preliminary Environmental Information Report (PEIR) supports **Volume 1, Chapter 25 Noise and Vibration.** This appendix forms part of the PEIR for the onshore elements of the Project.

2. The purpose of this appendix is to detail the baseline sound survey undertaken to characterise the existing soundscape within the Construction and Operational Noise Study Areas of the proposed Onshore Development Area.

3. The baseline sound survey comprised of attended and unattended measurements at locations representative of identified noise and vibration sensitive receptors (NVSR) around the landfall, Onshore Converter Station (OCS) zones and areas where it is proposed to locate the main construction compounds along the onshore export cable corridor (ECC).

4. Measurements were conducted in accordance with current guidance including BS 4142:2014+A1:2019 *'Methods for rating and assessing industrial and commercial sound'* and BS 7445-2:1991 *'Description and measurement of environmental noise'*.

5. The baseline sound data will be used within the environmental noise impact assessments for the construction and operation phases of the Project.

6. The survey procedures were agreed with East Riding of Yorkshire Council (ERYC) at the second ETG11 meeting held on 27th August 2024 (see **Appendix 25.1 Consultation Responses for Noise and Vibration**). The survey was undertaken between 17th October 2024 and 20th November 2024. Use has also been made of published survey data from the Dogger Bank South (DBS) project.

25.2.2 Receptor Locations

7. Aerial imagery and ordnance survey mapping data were used to determine NVSR locations surrounding the landfall, main construction compound locations along the onshore ECC and at both potential OCS zones (Zones 4 and 8).

8. All receptors are classified as residential, and therefore have been assigned a medium sensitivity to noise. Each NVSR has been given a prefix to denoted which part of the Project it corresponds to. LF for landfall, CC for onshore ECC and SS for the OCS zones.

9. NVSR and their respective coordinates are shown in **Table 25.2-1** and on **Figure 25-2** provided in **Volume 1, Chapter 25 Noise and Vibration**. Addresses are not provided for residential dwellings to provide confidentiality.

Table 25.2-1 NVSR Coordinates

NSVR	X	Y
Landfall		
LF1	517561	454580
LF2	517664	454066
LF3	517742	453962
LF4	517707	453925
Onshore ECC		
CC1	516806	453339
CC2	515271	452516
CC3	515148	452453
CC4	511815	451544
CC5	511724	451406
CC6	512327	451281
CC7	513214	452056
CC8	511306	450918
CC9	510285	450676
CC10	510558	449323
CC11	509423	449495
CC12	509772	448886
CC13	508858	447889
CC14	508383	447727
CC15	507194	446007
CC16	505514	446057

NSVR	X	Y
CC17	504910	445757
CC18	504845	445843
CC19	502571	445403
CC20	502546	446053
CC21	501755	445443
CC22	501544	445506
CC23	501133	445547
CC24	500843	445655
CC25	499706	443112
CC26	499952	443042
CC27	499480	442660
CC28	499262	442709
CC29	499847	442207
CC30	499732	442220
CC31	499807	442054
CC32	499921	441859
CC33	509075	445457
CC34	500015	441750
CC35	500043	441292
CC36	500085	441170
CC37	499355	442696
CC38	499417	442663
CC39	500192	440845
CC40	500104	439572
CC41	500144	439519

NSVR	X	Y
CC42	500137	439244
CC43	499595	439095
CC44	499758	438593
CC45	499546	439195
CC46	498733	437402
CC47	498767	437251
CC48	499034	436900
CC49	499359	436671
CC50	499811	436705
CC51	503604	434911
CC52	503605	435673
CC53	513231	452970
CC54	508276	442249
CC55	508174	442099
CC56	502583	435083
OCS Zone 8		
SS1	499825	435899
SS2	499847	435486
SS3	500911	434899
SS4	500938	436577
SS5	502152	436035
SS17	501889	435940
SS23	500274	436911
OCS Zone 4		
SS6	502834	436286
SS7	502546	436490

NSVR	X	Y
SS8	502565	436629
SS9	502580	436763
SS10	502517	436996
SS11	502612	437340
SS12	502814	437349
SS13	502957	437603
SS14	503484	437556
SS15	503200	437552
SS16	503809	437217
SS18	504067	436955
SS19	504286	437293
SS20	503969	436633
SS21	503338	435901
SS22	502704	437616

25.2.3 Monitoring Locations

10. Measurement locations (representative of individual or groups of NVSR) were identified and agreed through the second meeting of ETG11 held on 27th August 2024 (see **Appendix 25.1 Consultation Responses for Noise and Vibration**) and are shown in **Table 25.2-2.**

11. Measurement locations at the landfall are labelled with the prefix LFM, locations for the main construction compounds along the onshore ECC are labelled with the prefix MCM and locations at the OCS zones with a prefix of OSM. Monitoring locations are illustrated on **Figure 25-1** in **Volume 1, Chapter 25 Noise and Vibration**. Photos of measurement locations are provided in **Annex 25.2.1** of this appendix.

Table 25.2-2 Baseline Sound Survey Measurement Locations

Measurement Location Identifier	Coordinates		Representative Receptors
	X	Y	
Landfall			
LFM9	517652	455128	LFR1
LFM10	517694	454130	LFR2, LFR3, LFR4
Main Construction Compound Locations along Onshore ECC			
MCM1	512361	451264	CC4, CC5, CC6
MCM1B	513238	452050	CC7, CC53
MCM2	508284	442245	CC55, CC56
MCM3	501480	445501	CC21, CC22, CC23, CC24
OCS Zone 8			
OSM4	500922	436623	SS4
OSM5	500241	436907	SS23, CC50
OSM6	499819	435892	SS1, SS2
OSM7	501897	435956	SS5, SS17
OSM12	500932	434908	SS3
OCS Zone 4			
OSM8	503280	437554	SS13, SS14, SS15, SS22
OSM11	502534	436614	SS8, SS9, SS10, SS7
OSM13	503289	435949	SS21
OSM14	502874	436318	SS6
OSM15	503988	436590	SS20
OSM16	503893	437134	SS16, SS18, SS19
OSM17	502833	437308	SS11, SS12

12. Baseline monitoring conducted for Dogger Bank South (DBS) between October and November 2022 and in January 2023 has been used to inform this appendix. It has been determined that noise levels have remained unchanged since the measurements taken between October and November 2022 and in January 2023. This is attributed to the rural location and the primary source of noise being traffic-related. Usage of DBS monitoring data in the Project's baseline characterisation has been agreed through the second ETG11 meeting held on 27th August 2024. As such, the DBS monitoring locations informing this appendix are as follow:

- Landfall: LFM9, LFM10; and
- OCS zones: OSM11, OSM12, OSM13, OSM14, OSM15, OSM16 and OSM17.

13. Where DBS baseline monitoring data are publicly available in the DBS ES (RWE, 2024) and DBS PEIR (RWE, 2023), these are listed in **Table 25.2-3**.

Table 25.2-3 DBS Baseline Noise Survey Locations Where Publicly Available Data Has Been Used to Inform the DBD PEIR Chapter

DBD Monitoring Location Identifier	DBS Monitoring Location Identifier	Relevant DBD Location	Date Surveyed
OSM11	B[1]	OCS Zone 4	13th October to 2nd November 2022
OSM12	E[2]	OCS Zone 8	13th to 31st October 2022
OSM13	J[2]	OCS Zone 4	19th to 26th January 2023
OSM14	K[2]	OCS Zone 4	13th October to 2nd November 2022
OSM17	N[2]	OCS Zone 4	13th to 29th October 2022

[1] Data publicly available in the Dogger Bank South ES (RWE, 2024)

[2] Data publicly available in the Dogger Bank South PEIR (RWE, 2023)

14. DBS baseline monitoring locations where data are not publicly available but has been obtained by the Applicant through engagement with DBS are shown in **Table 25.2-4**.

Table 25.2-4 DBS Baseline Noise Survey Locations Where Not Publicly Available Data Has Been Used to Inform the DBD PEIR Chapter

DBD Monitoring Location Identifier	DBS Monitoring Location Identifier	Relevant DBD Location	Date Surveyed
LFM9	Strawberry Fields	Landfall	18th to 19th January 2023
LFM10	Discount Hunters	Landfall	18th to 19th January 2023
OSM15	L	OCS Zone 4	19th to 26th January 2023
OSM16	M	OCS Zone 4	19th to 26th January 2023

25.2.4 Survey Procedures

15. For those NVSR with the potential to experience construction and operational noise effects (i.e. those around the proposed OCS zones), baseline noise surveys comprised unattended continuous measurements over a period of six to 14 days. For those NVSR with the potential to experience construction effects only (i.e. along the onshore ECC), the baseline noise survey consisted of unattended continuous measurements for a total of approximately 24-hours where it was possible to identify a secure survey location. It was not possible to identify secure monitoring locations around the landfall (LFM9 and LFM10). Hence, 30-minute duration attended measurements were undertaken during the daytime, evening and night periods identified in BS 5228.

16. For the unattended surveys, notes were taken during equipment setup and collection on the sources contributing to the soundscape. Notes were also taken on audible noise sources and weather conditions during the attended measurements. Copies of these notes are available on request.

17. At OSM6 and MCM2, a portable weather station was deployed to log at 15-minute intervals simultaneously with the unattended noisy surveys. These locations were chosen as it was considered likely that weather conditions would be representative of those at the other simultaneous measurement locations in the vicinity (i.e. OSM6 and MCM2 are representative of the other measurement locations around the OCS zones and onshore ECC respectively).

18. A fault occurred with the weather station during the measurements undertaken at OSM7 and OSM8. The weather data used for processing the noise measurement data were taken from publicly available sources.

19. Good practice detailed in BS 4142 recommends that representative environmental noise measurements should be undertaken during favourable weather conditions, i.e. with windspeed less than 5 m/s and no precipitation. Data recorded during periods of precipitation or wind speeds in exceedance of 5 m/s were excluded from the analysis.

25.2.5 Instrumentation

20. The instrumentation used to conduct the surveys is detailed in **Table 25.2-5**.

Table 25.2-5 Instrumentation Details

Measurement Location	Equipment Type	Model Number	Serial Number
LFM9, LFM10, MCM3, OSM5, OSM8 and OSM13	Sound level meter	Rion NL52	898320
MCM1 and OSM4	Sound level meter	Rion NL52	921176
MCM1B, OSM6, OSM7 and OSM11	Sound level meter	Rion NL52	864983
MCM2	Sound level meter	Rion NL52	864982
OSM12	Sound level meter	Rion NL52	1143558
OSM14	Sound level meter	Rion NL52	586907
OSM15	Sound level meter	Rion NL52	620802
OSM16	Sound level meter	Rion NL52	821105
OSM17	Sound level meter	Rion NL52	586905
LFM9, LFM10, OSM7, OSM8, OSM11, OSM12, OSM13, OSM14, OSM15, OSM16 and OSM17,	Field calibrator	Rion NC74	1020506
MCM1, MCM1b, MCM2, MCM3, OSM4, OSM5 and OSM6	Field calibrator	Rion NC75	35081041
OSM6 and MCM2	Weather station	Vantage Vue	MQ189111003

21. All the above instrumentation has in-date laboratory calibration certificates which are available on request. Each sound level meter (SLM) was calibrated immediately before and after each survey period and no changes greater than +/- 0.2 dB were noted.

22. Various sound level indicators were logged every 15-minutes, including the equivalent noise level ($L_{Aeq,T}$), maximum noise level (L_{Amax}) and statistical indices such as background sound levels ($L_{A90,T}$) as well as 1/3 octave band data. The sound measurements were taken at a height which was between 1.2 and 1.5m above ground level. Measurements were taken at least 3.5m away from any vertical reflecting surfaces at all locations except from location OSM4, where security constraints required the equipment to be positioned around 2m from a building apex. Neither building façade was positioned directly behind the microphone in such a way as to introduce significant contributions from reflected sound. Hence, the presence of the building was considered to have a negligible effect on the measured level at OSM4.

25.2.6 Results

23. The following subsections provide summaries of the data obtained at each survey location.

25.2.6.1 Landfall Measurement Locations Data Summary

24. The results of the baseline noise survey at the landfall measurement locations are summarised in **Table 25.2-6** and **Table 25.2-7** for LFM9 and LFM10 respectively over the BS 5228-1 daytime (07:00 to 19:00), evening (19:00 to 23:00) and night-time (23:00 to 07:00) reference periods.

Table 25.2-6 Baseline Noise Summary – Measurement Location LFM9

Period	Measurement Start and End Date/Time	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
Daytime (07:00 – 19:00)	18/01/2023 – 15:25 to 15:55	45	42	61
Evening (19:00 – 23:00)	18/01/2023 – 22:08 to 22:23	41	40	50
Night-time	18/01/2023 – 23:43 to 00:13	40	37	60

Table 25.2-7 Baseline Noise Summary – Measurement Location LFM10

Period	Measurement Start and End Date/Time	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
Daytime (07:00 – 19:00)	18/01/2023 – 14:45 to 15:15	60	40	75
Evening (19:00 – 23:00)	18/01/2023 – 21:31 to 22:01	52	38	72
Night-time	18/01/2023 – 23:05 to 23:35	50	36	71

25.2.6.2 Onshore Export Cable Corridor (Main Construction Compound) Measurement Locations Data Summary

25. The results of the baseline noise survey at the measurement locations for main construction compounds along the onshore ECC are summarised in **Table 25.2-8**,

26. **Table** 25.2-9, **Table 25.2-10** and **Table 25.2-11** for MCM1, MCM1b, MCM2 and MCM3 respectively over the BS 5228-1 daytime (07:00 to 19:00), evening (19:00 to 23:00) and night-time (23:00 to 07:00) reference periods.

Table 25.2-8 Baseline Noise Summary – Measurement Location MCM1

Period	Measurement Start and End Date/Time	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
Daytime (07:00 – 19:00)	20/11/2024 – 12:15 to 21/11/2024 – 12:30	58	37	90
Evening (19:00 – 23:00)		55	29	85
Night-time		52	26	84

Table 25.2-9 Baseline Noise Summary – Measurement Location MCM1b

Period	Measurement Start and End Date/Time	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
Daytime (07:00 – 19:00)	20/11/2024 – 12:00 to 21/11/2024 – 12:30	57	51	89
Evening (19:00 – 23:00)		53	37	67
Night-time		49	32	68

Table 25.2-10 Baseline Noise Summary – Measurement Location MCM2

Period	Measurement Start and End Date/Time	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
Daytime (07:00 – 19:00)	21/11/2024 – 13:00 to 22/11/2024 – 10:15	60	89	57
Evening (19:00 – 23:00)		59	72	45
Night-time		56	73	34

Table 25.2-11 Baseline Noise Summary – Measurement Location MCM3

Period	Measurement Start and End Date/Time	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
Daytime (07:00 – 19:00)	20/11/2024 – 13:45 to 21/11/2024 – 13:15	46	44	77
Evening (19:00 – 23:00)		43	37	70
Night-time		40	31	59

25.2.6.3 Onshore Converter Station Zone Measurement Locations Data Summary

27. The results of the unattended baseline noise survey at measurement locations for the OCS zones are summarised in this section for the BS 4142 daytime (07:00 to 23:00) reference period, the BS 5228-1 daytime (weekdays 07:00 to 19:00 and Saturday 07:00 to 13:00) and evening and weekend (weekdays 19:00 to 23:00, Saturdays 13:00 to 23:00, Sundays 07:00 to 23:00) periods and the night-time period (23:00 to 07:00 Monday to Sunday in both BS 4142 and BS 5228-1).

28. All samples measured during non-compliant weather conditions have been removed from the data presented in this section.

29. To determine the relevant sound level parameter over the specified time periods, the measured 15-minute data has been processed as follows:

- $L_{Aeq,15min}$ data has been logarithmically averaged;
- $L_{A90,15min}$ data has been arithmetically averaged; and
- Maximum of the recorded $L_{AMax,15min}$ data.

30. To determine the relevant sound level parameters over the entire measurement, the following procedures have been followed:

- Calculated L_{Aeq} values over each day/night-time period have been logarithmically averaged; and
- Calculated L_{Amax}, L_{A10} and L_{A90} values over each day/night-time period have been arithmetically averaged.

25.2.6.3.1 Measurement Location OSM4 Data Summary (OCS Zone 8)

31. **Table 25.2-12** summarises the BS5228 and BS 4142 weather compliant unattended baseline survey data measured at location OSM4 for the specified time period. This measurement was undertaken from 16:30hrs on 6th November to 10:15hrs on 20th November 2024.

Table 25.2-12 Specified Time Periods Baseline Noise Summary – Measurement Location OSM4

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
06/11/2024	Daytime (BS4142)	48	32	82
	Daytime (BS5228)	48	39	82
	Evening and weekends (BS 5228)	47	28	67
	Night-time	43	28	66
07/11/2024	Daytime (BS4142)	52	36	81
	Daytime (BS5228)	53	37	81
	Evening and weekends (BS 5228)	47	31	68
	Night-time	42	28	70
08/11/2024	Daytime (BS4142)	51	37	74
	Daytime (BS5228)	52	38	74
	Evening and weekends (BS 5228)	46	33	67
	Night-time	41	28	65
09/11/2024	Daytime (BS4142)	52	34	88
	Daytime (BS5228)	52	38	76
	Evening and weekends (BS 5228)	52	32	88
	Night-time	42	27	69
10/11/2024	Daytime (BS4142)	51	35	81
	Daytime (BS5228)	*	*	*
	Evening and weekends (BS 5228)	51	35	81
	Night-time	46	34	69
11/11/2024	Daytime (BS4142)	55	44	78
	Daytime (BS5228)	56	45	78
	Evening and weekends (BS 5228)	51	40	69
	Night-time	46	34	68

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
12/11/2024	Daytime (BS4142)	54	44	82
	Daytime (BS5228)	55	46	82
	Evening and weekends (BS 5228)	51	38	68
	Night-time	46	31	78
13/11/2024	Daytime (BS4142)	55	45	87
	Daytime (BS5228)	56	46	87
	Evening and weekends (BS 5228)	51	41	69
	Night-time	47	34	77
14/11/2024	Daytime (BS4142)	58	44	86
	Daytime (BS5228)	59	47	86
	Evening and weekends (BS 5228)	52	34	69
	Night-time	45	29	82
15/11/2024	Daytime (BS4142)	54	39	90
	Daytime (BS5228)	55	40	90
	Evening and weekends (BS 5228)	48	34	69
	Night-time	42	30	73
16/11/2024	Daytime (BS4142)	55	40	102
	Daytime (BS5228)	57	41	102
	Evening and weekends (BS 5228)	53	40	74
	Night-time	45	32	71
17/11/2024	Daytime (BS4142)	54	40	81
	Daytime (BS5228)	*	*	*
	Evening and weekends (BS 5228)	54	40	81
	Night-time	47	32	72
18/11/2024	Daytime (BS4142)	54	42	73
	Daytime (BS5228)	55	44	73

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
	Evening and weekends (BS 5228)	48	35	69
	Night-time	44	34	69
19/11/2024	Daytime (BS4142)	56	45	84
	Daytime (BS5228)	56	46	80
	Evening and weekends (BS 5228)	54	42	84
	Night-time	48	40	70

32. **Table 25.2-13** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey data measured at location OSM4 over the entire measurement.

Table 25.2-13 Baseline Noise Summary – Measurement Location OSM4

Start and End Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
06/11/2024 to 19/11/2024	Daytime (BS4142)	54	40	102
	Daytime (BS5228)	55	43	102
	Evening and weekends (BS 5228)	52	36	88
	Night-time	45	31	82

33. Statistical analysis of the background sound levels ($L_{A90,15min}$) measured during the baseline survey at location OSM4 is presented in **Table 25.2-14**.

Table 25.2-14 Baseline L_{A90} Noise Data Analysis – OSM4

Period	Number of BS 4142 Compliant 15-minute Samples Collected	$L_{A90,15min}$ Analytics (dB)			
		Mode	Average	Median	Standard Deviation
Daytime	850	43	40	41	5.6
Night-time	436	27	32	30	4.7

25.2.6.3.2 Measurement Location OSM5 Data Summary (OCS Zone 8)

34. **Table 25.2-15** summarises the BS5228 and BS 4142 weather compliant unattended baseline survey sound data measured at location OSM5 for the specified time period. This measurement was undertaken from 17:00hrs on 6th November to 10:00hrs on 20th November 2024.

Table 25.2-15 Specified Time Periods Baseline Noise Summary – Measurement Location OSM5

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
06/11/2024	Daytime (BS4142)	40	26	75
	Daytime (BS5228)	41	33	75
	Evening and weekends (BS 5228)	31	24	66
	Night-time	29	21	54
07/11/2024	Daytime (BS4142)	44	33	82
	Daytime (BS5228)	45	35	82
	Evening and weekends (BS 5228)	34	28	53
	Night-time	30	22	65
08/11/2024	Daytime (BS4142)	43	34	78
	Daytime (BS5228)	44	35	78
	Evening and weekends (BS 5228)	35	28	70
	Night-time	31	23	59
09/11/2024	Daytime (BS4142)	39	31	78
	Daytime (BS5228)	40	33	78
	Evening and weekends (BS 5228)	38	30	74
	Night-time	30	22	67
10/11/2024	Daytime (BS4142)	42	31	73
	Daytime (BS5228)	*	*	*
	Evening and weekends (BS 5228)	42	31	73
	Night-time	37	31	74

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
11/11/2024	Daytime (BS4142)	45	39	78
	Daytime (BS5228)	45	40	78
	Evening and weekends (BS 5228)	44	37	69
	Night-time	36	31	59
12/11/2024	Daytime (BS4142)	43	38	73
	Daytime (BS5228)	44	40	73
	Evening and weekends (BS 5228)	38	33	64
	Night-time	32	25	71
13/11/2024	Daytime (BS4142)	45	37	82
	Daytime (BS5228)	46	38	82
	Evening and weekends (BS 5228)	37	33	66
	Night-time	36	28	67
14/11/2024	Daytime (BS4142)	51	34	83
	Daytime (BS5228)	52	36	83
	Evening and weekends (BS 5228)	33	27	69
	Night-time	29	22	67
15/11/2024	Daytime (BS4142)	50	35	81
	Daytime (BS5228)	51	36	81
	Evening and weekends (BS 5228)	34	30	50
	Night-time	34	25	70
16/11/2024	Daytime (BS4142)	44	33	79
	Daytime (BS5228)	44	34	74
	Evening and weekends (BS 5228)	44	33	79
	Night-time	35	29	55
17/11/2024	Daytime (BS4142)	47	34	75
	Daytime (BS5228)	*	*	*

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
	Evening and weekends (BS 5228)	47	34	75
	Night-time	34	26	59
18/11/2024	Daytime (BS4142)	42	35	79
	Daytime (BS5228)	43	36	79
	Evening and weekends (BS 5228)	37	30	68
	Night-time	38	32	58
19/11/2024	Daytime (BS4142)	50	40	87
	Daytime (BS5228)	47	40	82
	Evening and weekends (BS 5228)	54	39	87
	Night-time	46	37	68

35. **Table 25.2-16** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey data measured at location OSM5 over the entire measurement.

Table 25.2-16 Baseline Noise Summary – Measurement Location OSM5

Measurement Start and End Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
06/11/2024 to 20/11/2024	Daytime (BS4142)	46	35	87
	Daytime (BS5228)	47	37	83
	Evening and weekends (BS 5228)	44	31	87
	Night-time	37	27	74

36. Statistical analysis of the background sound levels ($L_{A90,15min}$) measured during the baseline survey at location OSM5 is presented in **Table 25.2-17**.

Table 25.2-17 Baseline L_{A90} Noise Data Analysis – OSM5

Period	Number of BS 4142 Compliant 15-minute Samples Collected	$L_{A90, 15min}$ Analytics (dB)			
		Mode	Average	Median	Standard Deviation
Daytime	847	36	35	35	4.4
Night-time	436	21	27	26	5.8

25.2.6.3.3 Measurement Location OSM6 Data Summary (OCS Zone 8)

37. **Table 25.2-18** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey sound data measured at location OSM6 for the specified time period. This measurement was undertaken from 17:30hrs on 6th November to 18:15hrs on 19th November 2024.

Table 25.2-18 Specified Time Periods Baseline Noise Summary – Measurement Location OSM6

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
06/11/2024	Daytime (BS4142)	45	24	86
	Daytime (BS5228)	46	31	86
	Evening and weekends (BS 5228)	29	21	68
	Night-time	35	20	70
07/11/2024	Daytime (BS4142)	44	30	82
	Daytime (BS5228)	45	31	82
	Evening and weekends (BS 5228)	29	26	61
	Night-time	33	21	70
08/11/2024	Daytime (BS4142)	44	31	91
	Daytime (BS5228)	44	32	91
	Evening and weekends (BS 5228)	43	27	73
	Night-time	35	21	71
09/11/2024	Daytime (BS4142)	43	28	81
	Daytime (BS5228)	47	30	81

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
	Evening and weekends (BS 5228)	34	26	72
	Night-time	36	22	70
10/11/2024	Daytime (BS4142)	42	31	77
	Daytime (BS5228)	*	*	*
	Evening and weekends (BS 5228)	42	31	77
	Night-time	37	29	71
11/11/2024	Daytime (BS4142)	42	37	74
	Daytime (BS5228)	42	38	74
	Evening and weekends (BS 5228)	42	34	64
	Night-time	37	29	71
12/11/2024	Daytime (BS4142)	41	36	74
	Daytime (BS5228)	42	38	74
	Evening and weekends (BS 5228)	37	30	64
	Night-time	36	24	70
13/11/2024	Daytime (BS4142)	47	38	84
	Daytime (BS5228)	48	39	84
	Evening and weekends (BS 5228)	38	34	63
	Night-time	35	27	68
14/11/2024	Daytime (BS4142)	41	33	82
	Daytime (BS5228)	43	36	82
	Evening and weekends (BS 5228)	32	26	62
	Night-time	33	23	68
15/11/2024	Daytime (BS4142)	43	36	86
	Daytime (BS5228)	44	37	86
	Evening and weekends (BS 5228)	36	32	52
	Night-time	36	28	71

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
16/11/2024	Daytime (BS4142)	44	34	84
	Daytime (BS5228)	45	35	84
	Evening and weekends (BS 5228)	44	33	78
	Night-time	34	27	70
17/11/2024	Daytime (BS4142)	40	34	72
	Daytime (BS5228)	*	*	*
	Evening and weekends (BS 5228)	40	34	72
	Night-time	36	27	69
18/11/2024	Daytime (BS4142)	43	36	75
	Daytime (BS5228)	45	39	75
	Evening and weekends (BS 5228)	35	29	56
	Night-time	32	27	58

38. **Table 25.2-19** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey data measured at location OSM6 over the entire measurement.

Table 25.2-19 Baseline Noise Summary – Measurement Location OSM6

Measurement Start and End Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
06/11/2024 to 19/11/2024	Daytime (BS4142)	43	34	91
	Daytime (BS5228)	45	36	91
	Evening and weekends (BS 5228)	40	30	78
	Night-time	35	25	71

39. Statistical analysis of the background sound levels ($L_{A90,15min}$) measured during the baseline survey at location OSM6 is presented in **Table 25.2-20**.

Table 25.2-20 Baseline L_{A90} Noise Data Analysis – OSM6

Period	Number of BS 4142 Compliant 15-minute Samples Collected	$L_{A90, 15min}$ Analytics (dB)			
		Mode	Average	Median	Standard Deviation
Daytime	827	36	34	34	4.9
Night-time	406	22	25	24	4.7

25.2.6.3.4 Measurement Location OSM7 Data Summary (OCS Zone 8)

40. **Table 25.2-21** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey sound data measured at location OSM7 for the specified time period. This measurement was undertaken from 12.15hrs on 17th October to 11:00hrs on 24th October 2024.

Table 25.2-21 Specified Time Periods Baseline Noise Summary – Measurement Location OSM7

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
17/10/2024	Daytime (BS4142)	49	38	97
	Daytime (BS5228)	50	39	97
	Evening and weekends (BS 5228)	40	36	65
	Night-time	38	29	59
18/10/2024	Daytime (BS4142)	45	41	80
	Daytime (BS5228)	46	42	80
	Evening and weekends (BS 5228)	41	38	59
	Night-time	36	30	62
19/10/2024	Daytime (BS4142)	42	37	73
	Daytime (BS5228)	43	39	73
	Evening and weekends (BS 5228)	40	36	58
	Night-time	37	29	64
20/10/2024	Daytime (BS4142)	49	46	84
	Daytime (BS5228)	*	*	*

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
	Evening and weekends (BS 5228)	49	46	84
	Night-time	48	45	80
21/10/2024	Daytime (BS4142)	46	40	78
	Daytime (BS5228)	47	42	78
	Evening and weekends (BS 5228)	39	35	55
	Night-time	38	31	69
22/10/2024	Daytime (BS4142)	44	39	75
	Daytime (BS5228)	45	40	75
	Evening and weekends (BS 5228)	40	35	56
	Night-time	38	30	68
23/10/2024	Daytime (BS4142)	46	40	74
	Daytime (BS5228)	46	41	74
	Evening and weekends (BS 5228)	42	37	67
	Night-time	38	32	76

41. **Table 25.2-22** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey data measured at location OSM7 for the entire measurement.

Table 25.2-22 Baseline Noise Summary – Measurement Location OSM7

Measurement Start and End Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
17/10/2024 to 24/10/2024	Daytime (BS4142)	46	40	97
	Daytime (BS5228)	46	41	97
	Evening and weekends (BS 5228)	46	39	84
	Night-time	42	32	80

42. Statistical analysis of the background sound levels ($L_{A90,15min}$) measured during the baseline survey at location OSM7 is presented in **Table 25.2-23**.

Table 25.2-23 Baseline L_{A90} Noise Data Analysis – OSM7

Period	Number of BS 4142 Compliant 15-minute Samples Collected	$L_{A90, 15min}$ Analytics (dB)			
		Mode	Average	Median	Standard Deviation
Daytime	441	36	38	38	4.6
Night-time	223	27	30	28	6.5

25.2.6.3.5 Measurement Location OSM8 Data Summary (OCS Zone 4)

43. **Table 25.2-24** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey sound data measured at location OSM8 for the specified time period. This measurement was undertaken from 13:15hrs on 17th October to 11:15hrs on 24th October 2024.

Table 25.2-24 Specified Time Periods Baseline Noise Summary – Measurement Location OSM8

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
17/10/2024	Daytime (BS4142)	55	41	97
	Daytime (BS5228)	56	43	97
	Evening and weekends (BS 5228)	50	39	69
	Night-time	46	33	67
18/10/2024	Daytime (BS4142)	54	43	84
	Daytime (BS5228)	55	44	84
	Evening and weekends (BS 5228)	51	40	68
	Night-time	45	32	70
19/10/2024	Daytime (BS4142)	53	41	71
	Daytime (BS5228)	54	43	69
	Evening and weekends (BS 5228)	50	39	69
	Night-time	43	33	68
20/10/2024	Daytime (BS4142)	56	47	76
	Daytime (BS5228)	*	*	*

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
	Evening and weekends (BS 5228)	56	47	76
	Night-time	52	45	70
21/10/2024	Daytime (BS4142)	55	44	77
	Daytime (BS5228)	56	45	77
	Evening and weekends (BS 5228)	51	39	70
	Night-time	47	35	67
22/10/2024	Daytime (BS4142)	54	43	74
	Daytime (BS5228)	55	45	74
	Evening and weekends (BS 5228)	51	39	70
	Night-time	48	34	68
23/10/2024	Daytime (BS4142)	54	43	78
	Daytime (BS5228)	54	45	78
	Evening and weekends (BS 5228)	50	39	68
	Night-time	47	34	72

44. **Table 25.2-25** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey data measured at location OSM8 for the entire measurement.

Table 25.2-25 Baseline Noise Summary – Measurement Location OSM8

Measurement Start and End Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
17/10/2024 to 24/10/2024	Daytime (BS4142)	54	43	97
	Daytime (BS5228)	55	44	97
	Evening and weekends (BS 5228)	53	42	76
	Night-time	48	35	72

45. Statistical analysis of the background sound levels ($L_{A90,15min}$) measured during the baseline survey at location OSM8 is presented in **Table 25.2-26**.

Table 25.2-26 Baseline L_{A90} Noise Data Analysis – OSM8

Period	Number of BS 4142 Compliant 15-minute Samples Collected	$L_{A90, 15min}$ Analytics (dB)			
		Mode	Average	Median	Standard Deviation
Daytime	438	44	43	44	3.4
Night-time	219	30	35	34	5.9

25.2.6.3.6 Measurement Location OSM11 Data Summary (OCS Zone 4)

46. **Table 25.2-27** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey data measured at location OSM11 for the specified time periods. This measurement was undertaken from 15:30hrs on 13th October to 19:00hrs on 27th November 2022.

Table 25.2-27 Specified Time Periods Baseline Noise Summary – Measurement Location OSM11

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
13/10/2022	Daytime (BS4142)	55	53	76
	Daytime (BS5228)	52	53	76
	Evening and weekends (BS 5228)	59	52	75
	Night-time	53	37	71
14/10/2022	Daytime (BS4142)	57	53	90
	Daytime (BS5228)	58	54	90
	Evening and weekends (BS 5228)	56	49	77
	Night-time	49	37	69
15/10/2022	Daytime (BS4142)	58	54	81
	Daytime (BS5228)	59	55	79
	Evening and weekends (BS 5228)	57	49	76
	Night-time	51	42	70
16/10/2022	Daytime (BS4142)	58	52	89
	Daytime (BS5228)	*	*	*

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
	Evening and weekends (BS 5228)	58	52	89
	Night-time	54	40	72
17/10/2022	Daytime (BS4142)	58	53	84
	Daytime (BS5228)	59	56	84
	Evening and weekends (BS 5228)	55	47	70
	Night-time	53	36	70
18/10/2022	Daytime (BS4142)	57	51	96
	Daytime (BS5228)	57	53	96
	Evening and weekends (BS 5228)	54	46	79
	Night-time	52	36	74
19/10/2022	Daytime (BS4142)	59	54	87
	Daytime (BS5228)	60	56	86
	Evening and weekends (BS 5228)	57	49	87
	Night-time	52	38	68
20/10/2022	Daytime (BS4142)	55	52	91
	Daytime (BS5228)	54	55	91
	Evening and weekends (BS 5228)	57	50	72
	Night-time	52	33	69
21/10/2022	Daytime (BS4142)	58	55	85
	Daytime (BS5228)	59	56	85
	Evening and weekends (BS 5228)	56	50	70
	Night-time	52	38	70
22/10/2022	Daytime (BS4142)	59	54	87
	Daytime (BS5228)	60	55	87
	Evening and weekends (BS 5228)	60	54	85
	Night-time	50	35	75

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
23/10/2022	Daytime (BS4142)	56	50	77
	Daytime (BS5228)	*	*	*
	Evening and weekends (BS 5228)	56	50	77
	Night-time	48	30	69
24/10/2022	Daytime (BS4142)	58	54	81
	Daytime (BS5228)	58	55	81
	Evening and weekends (BS 5228)	56	49	74
	Night-time	53	36	69
25/10/2022	Daytime (BS4142)	59	54	84
	Daytime (BS5228)	59	56	84
	Evening and weekends (BS 5228)	57	51	69
	Night-time	54	40	70
26/10/2022	Daytime (BS4142)	60	55	94
	Daytime (BS5228)	61	56	94
	Evening and weekends (BS 5228)	57	49	79
	Night-time	53	37	71

47. **Table 25.2-28** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey data measured at location OSM11 for the entire measurement.

Table 25.2-28 Baseline Noise Summary – Measurement Location OSM11

Measurement Start and End Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
13/10/2022 to 27/10/2022	Daytime (BS4142)	58	53	96
	Daytime (BS5228)	59	55	96
	Evening and weekends (BS 5228)	57	50	89

Measurement Start and End Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
	Night-time	52	37	75

48. Statistical analysis of the background sound levels ($L_{A90,15min}$) measured during the baseline survey at location OSM11 is presented in **Table 25.2-29**.

Table 25.2-29 Baseline L_{A90} Noise Data Analysis – OSM11

Period	Number of BS 4142 Compliant 15-minute Samples Collected	$L_{A90,15min}$ Analytics (dB)			
		Mode	Average	Median	Standard Deviation
Daytime	844	56	54	55	43.9
Night-time	413	30	37	36	8.5

25.2.6.3.7 Measurement Location OSM12 Data Summary (OCS Zone 8)

49. **Table 25.2-30** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey data measured at location OSM12 for the specified time periods. This measurement was undertaken from 14:00hrs on 13th October to 19:00hrs on 27th November 2022.

Table 25.2-30 Specified Time Periods Baseline Noise Summary – Measurement Location OSM12

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
13/10/2022	Daytime (BS4142)	38	32	67
	Daytime (BS5228)	38	31	66
	Evening and weekends (BS 5228)	40	34	67
	Night-time	38	30	73
14/10/2022	Daytime (BS4142)	45	35	74
	Daytime (BS5228)	46	38	74
	Evening and weekends (BS 5228)	36	26	64
	Night-time	36	26	56
15/10/2022	Daytime (BS4142)	51	42	72
	Daytime (BS5228)	53	45	71

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
	Evening and weekends (BS 5228)	45	40	61
	Night-time	52	46	67
16/10/2022	Daytime (BS4142)	50	40	78
	Daytime (BS5228)	*	*	*
	Evening and weekends (BS 5228)	50	40	78
	Night-time	46	40	64
17/10/2022	Daytime (BS4142)	52	44	85
	Daytime (BS5228)	53	45	85
	Evening and weekends (BS 5228)	49	41	67
	Night-time	38	29	65
18/10/2022	Daytime (BS4142)	47	37	80
	Daytime (BS5228)	48	38	80
	Evening and weekends (BS 5228)	40	35	68
	Night-time	39	33	61
19/10/2022	Daytime (BS4142)	51	45	79
	Daytime (BS5228)	52	46	79
	Evening and weekends (BS 5228)	50	44	66
	Night-time	44	37	57
20/10/2022	Daytime (BS4142)	44	38	69
	Daytime (BS5228)	45	42	69
	Evening and weekends (BS 5228)	40	34	62
	Night-time	34	27	59
21/10/2022	Daytime (BS4142)	46	41	75
	Daytime (BS5228)	46	41	75
	Evening and weekends (BS 5228)	44	40	62
	Night-time	46	40	67

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
22/10/2022	Daytime (BS4142)	48	39	74
	Daytime (BS5228)	49	42	74
	Evening and weekends (BS 5228)	46	37	72
	Night-time	32	26	60
23/10/2022	Daytime (BS4142)	44	38	73
	Daytime (BS5228)	*	*	*
	Evening and weekends (BS 5228)	44	38	73
	Night-time	41	28	64
24/10/2022	Daytime (BS4142)	48	38	73
	Daytime (BS5228)	48	40	72
	Evening and weekends (BS 5228)	44	34	73
	Night-time	43	37	60
25/10/2022	Daytime (BS4142)	49	37	87
	Daytime (BS5228)	50	37	87
	Evening and weekends (BS 5228)	40	36	59
	Night-time	44	36	64
26/10/2022	Daytime (BS4142)	54	46	84
	Daytime (BS5228)	55	47	84
	Evening and weekends (BS 5228)	47	43	64
	Night-time	41	33	69

50. **Table 25.2-31** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey data measured at location OSM12 for the entire measurement.

Table 25.2-31 Baseline Noise Summary – Measurement Location OSM12

Measurement Start and End Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
13/10/2022 to 27/10/2022	Daytime (BS4142)	49	40	87
	Daytime (BS5228)	50	41	87
	Evening and weekends (BS 5228)	46	38	78
	Night-time	44	34	73

51. Statistical analysis of the background sound levels ($L_{A90,15min}$) measured during the baseline survey at location OSM12 is presented in **Table 25.2-32**.

Table 25.2-32 Baseline L_{A90} Noise Data Analysis – OSM12

Period	Number of BS 4142 Compliant 15-minute Samples Collected	$L_{A90, 15min}$ Analytics (dB)			
		Mode	Average	Median	Standard Deviation
Daytime	867	41	40	40	5.3
Night-time	424	32	33	32	6.7

25.2.6.3.8 Measurement Location OSM13 Data Summary (OCS Zone 4)

52. **Table 25.2-33** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey sound data measured at location OSM13 for the specified time period. This measurement was undertaken from 12:45hrs on 19th January to 13:30hrs on 26th January 2023.

Table 25.2-33 Specified Time Periods Baseline Noise Summary – Measurement Location OSM13

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
19/01/2023	Daytime (BS4142)	46	44	79
	Daytime (BS5228)	46	46	79
	Evening and weekends (BS 5228)	45	43	60
	Night-time	44	36	70
20/01/2023	Daytime (BS4142)	51	48	78

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
	Daytime (BS5228)	52	49	78
	Evening and weekends (BS 5228)	50	46	62
	Night-time	47	36	75
21/01/2023	Daytime (BS4142)	48	43	77
	Daytime (BS5228)	50	46	77
	Evening and weekends (BS 5228)	44	41	54
	Night-time	38	32	54
22/01/2023	Daytime (BS4142)	43	40	72
	Daytime (BS5228)	*	*	*
	Evening and weekends (BS 5228)	43	40	72
	Night-time	39	31	59
23/01/2023	Daytime (BS4142)	44	41	68
	Daytime (BS5228)	45	42	68
	Evening and weekends (BS 5228)	42	39	54
	Night-time	41	34	58
24/01/2023	Daytime (BS4142)	56	44	93
	Daytime (BS5228)	58	45	93
	Evening and weekends (BS 5228)	44	40	59
	Night-time	41	32	61
25/01/2023	Daytime (BS4142)	49	46	68
	Daytime (BS5228)	49	47	68
	Evening and weekends (BS 5228)	48	44	63
	Night-time	45	35	71

53. **Table 25.2-34** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey data measured at location OSM13 for the entire measurement.

Table 25.2-34 Baseline Noise Summary – Measurement Location OSM13

Measurement Start and End Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
19/01/2023 to 26/01/2023	Daytime (BS4142)	51	44	93
	Daytime (BS5228)	52	46	93
	Evening and weekends (BS 5228)	45	41	72
	Night-time	43	34	75

54. Statistical analysis of the background sound levels ($L_{A90,15min}$) measured during the baseline survey at location OSM13 is presented in **Table 25.2-35**.

Table 25.2-35 Baseline L_{A90} Noise Data Analysis – OSM13

Period	Number of BS 4142 Compliant 15-minute Samples Collected	$L_{A90, 15min}$ Analytics (dB)			
		Mode	Average	Median	Standard Deviation
Daytime	442	45	44	45	4.3
Night-time	219	30	34	32	6.4

25.2.6.3.9 Measurement Location OSM14 Data Summary (OCS Zone 4)

55. **Table 25.2-36** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey sound data measured at location OSM14 for the specified time periods. This measurement was undertaken from 14:00hrs on 13th October to 19:00hrs on 27th November 2022.

Table 25.2-36 Specified Time Periods Baseline Noise Summary – Measurement Location OSM14

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
13/10/2022	Daytime (BS4142)	46	45	81
	Daytime (BS5228)	46	46	79
	Evening and weekends (BS 5228)	48	44	81
	Night-time	43	33	66
14/10/2022	Daytime (BS4142)	51	47	89
	Daytime (BS5228)	52	48	89
	Evening and weekends (BS 5228)	48	45	64
	Night-time	40	34	57
15/10/2022	Daytime (BS4142)	51	47	79
	Daytime (BS5228)	52	48	78
	Evening and weekends (BS 5228)	46	43	76
	Night-time	46	42	61
16/10/2022	Daytime (BS4142)	51	46	82
	Daytime (BS5228)	*	*	*
	Evening and weekends (BS 5228)	51	46	82
	Night-time	44	38	77
17/10/2022	Daytime (BS4142)	51	48	85
	Daytime (BS5228)	52	49	85
	Evening and weekends (BS 5228)	49	44	78
	Night-time	46	36	69
18/10/2022	Daytime (BS4142)	53	49	82
	Daytime (BS5228)	54	51	82
	Evening and weekends (BS 5228)	49	45	80
	Night-time	45	34	80

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
19/10/2022	Daytime (BS4142)	53	48	85
	Daytime (BS5228)	54	50	85
	Evening and weekends (BS 5228)	49	45	81
	Night-time	45	37	63
20/10/2022	Daytime (BS4142)	49	47	84
	Daytime (BS5228)	50	50	77
	Evening and weekends (BS 5228)	49	43	84
	Night-time	42	31	79
21/10/2022	Daytime (BS4142)	48	45	82
	Daytime (BS5228)	49	46	82
	Evening and weekends (BS 5228)	44	42	59
	Night-time	42	36	59
22/10/2022	Daytime (BS4142)	58	46	108
	Daytime (BS5228)	60	47	108
	Evening and weekends (BS 5228)	49	45	83
	Night-time	38	31	61
23/10/2022	Daytime (BS4142)	48	44	80
	Daytime (BS5228)	*	*	*
	Evening and weekends (BS 5228)	48	44	80
	Night-time	42	28	62
24/10/2022	Daytime (BS4142)	53	48	86
	Daytime (BS5228)	54	50	86
	Evening and weekends (BS 5228)	49	43	82
	Night-time	44	36	58
25/10/2022	Daytime (BS4142)	51	45	83
	Daytime (BS5228)	51	46	83

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
	Evening and weekends (BS 5228)	46	41	81
	Night-time	42	36	59
26/10/2022	Daytime (BS4142)	54	47	90
	Daytime (BS5228)	55	48	90
	Evening and weekends (BS 5228)	46	42	79
	Night-time	43	34	60

56. **Table 25.2-37** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey data measured at location OSM14 for the entire measurement.

Table 25.2-37 Baseline Noise Summary – Measurement Location OSM14

Measurement Start and End Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
13/10/2022 to 27/10/2022	Daytime (BS4142)	52	47	108
	Daytime (BS5228)	53	48	108
	Evening and weekends (BS 5228)	49	44	84
	Night-time	43	35	80

57. Statistical analysis of the background sound levels ($L_{A90,15min}$) measured during the baseline survey at location OSM14 is presented in **Table 25.2-38**.

Table 25.2-38 Baseline L_{A90} Noise Data Analysis – OSM14

Period	Number of BS 4142 Compliant 15-minute Samples Collected	$L_{A90,15min}$ Analytics (dB)			
		Mode	Average	Median	Standard Deviation
Daytime	867	47	47	47	3.5
Night-time	410	32	35	35	6.7

25.2.6.3.10 Measurement Location OSM15 Data Summary (OCS Zone 4)

58. **Table 25.2-39** summarises the BS 4142 weather compliant unattended baseline survey sound data measured at location OSM15 for the specified time period. This measurement was undertaken from 16:15hrs on 19th January to 15:30hrs on 26th January 2023.

Table 25.2-39 Specified Time Periods Baseline Noise Summary – Measurement Location OSM15

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
19/01/2023	Daytime (BS4142)	46	47	71
	Daytime (BS5228)	45	50	71
	Evening and weekends (BS 5228)	48	45	63
	Night-time	45	39	80
20/01/2023	Daytime (BS4142)	51	47	82
	Daytime (BS5228)	52	49	82
	Evening and weekends (BS 5228)	44	40	65
	Night-time	42	36	72
21/01/2023	Daytime (BS4142)	53	47	82
	Daytime (BS5228)	56	49	82
	Evening and weekends (BS 5228)	47	44	65
	Night-time	42	36	70
22/01/2023	Daytime (BS4142)	49	45	79
	Daytime (BS5228)	*	*	*
	Evening and weekends (BS 5228)	49	45	79
	Night-time	44	35	71
23/01/2023	Daytime (BS4142)	51	48	77
	Daytime (BS5228)	52	49	77
	Evening and weekends (BS 5228)	48	44	72
	Night-time	47	39	81

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
24/01/2023	Daytime (BS4142)	58	51	91
	Daytime (BS5228)	59	52	91
	Evening and weekends (BS 5228)	50	46	60
	Night-time	50	38	80
25/01/2023	Daytime (BS4142)	57	49	87
	Daytime (BS5228)	58	51	87
	Evening and weekends (BS 5228)	46	43	68
	Night-time	44	35	76

59. **Table 25.2-40** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey data measured at location OSM15 for the entire measurement.

Table 25.2-40 Baseline Noise Summary – Measurement Location OSM15

Measurement Start and End Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
19/01/2023 to 26/01/23	Daytime (BS4142)	54	47	91
	Daytime (BS5228)	56	49	91
	Evening and weekends (BS 5228)	48	44	79
	Night-time	46	37	81

60. Statistical analysis of the background sound levels ($L_{A90,15min}$) measured during the baseline survey at location OSM15 is presented in **Table 25.2-41**.

Table 25.2-41 Baseline L_{A90} Noise Data Analysis – OSM15

Period	Number of BS 4142 Compliant 15-minute Samples Collected	$L_{A90,15min}$ Analytics (dB)			
		Mode	Average	Median	Standard Deviation
Daytime	440	48	48	48	4

Period	Number of BS 4142 Compliant 15-minute Samples Collected	$L_{A90,\ 15min}$ Analytics (dB)			
		Mode	Average	Median	Standard Deviation
Night-time	212	34	37	36	5.9

25.2.6.3.11 Measurement Location OSM16 Data Summary (OCS Zone 4)

61. **Table 25.2-42** summarises the BS 4142 weather compliant unattended baseline survey sound data measured at location OSM16 for the specified time period. This measurement was undertaken from 15:30hrs on 19th January to 14:45hrs on 26th January 2023.

Table 25.2-42 Specified Time Periods Baseline Noise Summary – Measurement Location OSM16

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
19/01/2023	Daytime (BS4142)	43	43	79
	Daytime (BS5228)	43	45	79
	Evening and weekends (BS 5228)	44	41	60
	Night-time	41	35	77
20/01/2023	Daytime (BS4142)	48	44	75
	Daytime (BS5228)	48	46	75
	Evening and weekends (BS 5228)	46	41	69
	Night-time	41	34	65
21/01/2023	Daytime (BS4142)	47	44	79
	Daytime (BS5228)	50	47	79
	Evening and weekends (BS 5228)	44	41	58
	Night-time	39	34	70
22/01/2023	Daytime (BS4142)	45	42	73
	Daytime (BS5228)	*	*	*
	Evening and weekends (BS 5228)	45	42	73
	Night-time	41	33	67

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
23/01/2023	Daytime (BS4142)	47	43	83
	Daytime (BS5228)	48	44	83
	Evening and weekends (BS 5228)	44	41	64
	Night-time	43	36	73
24/01/2023	Daytime (BS4142)	57	46	92
	Daytime (BS5228)	58	48	92
	Evening and weekends (BS 5228)	44	42	54
	Night-time	41	32	73
25/01/2023	Daytime (BS4142)	47	44	83
	Daytime (BS5228)	48	46	83
	Evening and weekends (BS 5228)	44	41	70
	Night-time	40	32	71

62. **Table 25.2-43** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey data measured at location OSM16 over the entire measurement.

Table 25.2-43 Baseline Noise Summary – Measurement Location OSM16

Measurement Start and End Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
19/01/2023 to 26/01/23	Daytime (BS4142)	50	44	92
	Daytime (BS5228)	52	46	92
	Evening and weekends (BS 5228)	45	41	73
	Night-time	41	34	77

63. Statistical analysis of the background sound levels ($L_{A90,15min}$) measured during the baseline survey at location OSM16 is presented in **Table 25.2-44**.

Table 25.2-44 Baseline L_{A90} Noise Data Analysis – OSM16

Period	Number of BS 4142 Compliant 15-minute Samples Collected	$L_{A90, 15min}$ Analytics (dB)			
		Mode	Average	Median	Standard Deviation
Daytime	440	46	44	44	3.1
Night-time	219	31	34	33	5.6

25.2.6.3.12 Measurement Location OSM17 Data Summary (OCS Zone 4)

64. **Table 25.2-45** summarises the BS 4142 weather compliant unattended baseline survey sound data measured at location OSM17 for the specified time period. This measurement was undertaken from 16:15hrs on 13th October to 19:00hrs on 16th October 2022.

Table 25.2-45 Specified Time Periods Baseline Noise Summary – Measurement Location OSM17

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
13/10/2022	Daytime (BS4142)	48	49	70
	Daytime (BS5228)	46	51	70
	Evening and weekends (BS 5228)	51	48	70
	Night-time	49	38	69
14/10/2022	Daytime (BS4142)	54	51	81
	Daytime (BS5228)	55	53	81
	Evening and weekends (BS 5228)	51	48	71
	Night-time	43	36	69
15/10/2022	Daytime (BS4142)	55	52	77
	Daytime (BS5228)	56	53	70
	Evening and weekends (BS 5228)	51	48	72
	Night-time	48	44	67
16/10/2022	Daytime (BS4142)	57	50	106
	Daytime (BS5228)	*	*	*

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
	Evening and weekends (BS 5228)	57	50	106
	Night-time	49	41	82
17/10/2022	Daytime (BS4142)	55	52	74
	Daytime (BS5228)	56	54	74
	Evening and weekends (BS 5228)	51	46	70
	Night-time	48	38	65
18/10/2022	Daytime (BS4142)	50	44	89
	Daytime (BS5228)	51	46	89
	Evening and weekends (BS 5228)	42	38	54
	Night-time	44	32	62
19/10/2022	Daytime (BS4142)	51	46	81
	Daytime (BS5228)	51	48	81
	Evening and weekends (BS 5228)	45	42	68
	Night-time	43	35	66
20/10/2022	Daytime (BS4142)	50	49	73
	Daytime (BS5228)	49	50	73
	Evening and weekends (BS 5228)	52	49	65
	Night-time	45	35	64
21/10/2022	Daytime (BS4142)	52	50	75
	Daytime (BS5228)	53	51	75
	Evening and weekends (BS 5228)	49	47	67
	Night-time	47	40	64
22/10/2022	Daytime (BS4142)	54	51	80
	Daytime (BS5228)	55	53	80
	Evening and weekends (BS 5228)	53	50	75
	Night-time	44	35	65

Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
23/10/2022	Daytime (BS4142)	50	46	94
	Daytime (BS5228)	*	*	*
	Evening and weekends (BS 5228)	50	46	94
	Night-time	43	31	61
24/10/2022	Daytime (BS4142)	55	52	75
	Daytime (BS5228)	56	54	70
	Evening and weekends (BS 5228)	52	48	75
	Night-time	48	39	72
25/10/2022	Daytime (BS4142)	54	51	81
	Daytime (BS5228)	55	53	81
	Evening and weekends (BS 5228)	51	47	62
	Night-time	47	39	65
25/10/2022	Daytime (BS4142)	57	52	91
	Daytime (BS5228)	58	54	91
	Evening and weekends (BS 5228)	51	48	78
	Night-time	47	38	64

65. **Table 25.2-46** summarises the BS 5228 and BS 4142 weather compliant unattended baseline survey data measured at location OSM17 over the entire measurement.

Table 25.2-46 Baseline Noise Summary – Measurement Location OSM17

Measurement Start and End Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
13/10/2022 to 26/10/2022	Daytime (BS4142)	54	50	106
	Daytime (BS5228)	55	52	91

Measurement Start and End Date	Period	$L_{Aeq,15min}$ (dB)	$L_{A90,15min}$ (dB)	$L_{Amax,15min}$ (dB)
	Evening and weekends (BS 5228)	53	47	106
	Night-time	47	37	82

66. Statistical analysis of the background sound levels ($L_{A90,15min}$) measured during the baseline survey at location OSM17 is presented in **Table 25.2-47**.

Table 25.2-47 Baseline L_{A90} Noise Data Analysis – OSM17

Period	Number of BS 4142 Compliant 15-minute Samples Collected	$L_{A90,\ 15min}$ Analytics (dB)			
		Mode	Average	Median	Standard Deviation
Daytime	857	54	50	51	4.1
Night-time	424	37	37	37	7.5

25.2.7 BS 4142 Background Sound Levels ($L_{A90,\ 15min}$)

67. Statistical analysis of the baseline background sound level (L_{A90}) was undertaken following guidance detailed in BS 4142 and the BS 4142:2014+A1:2019 Technical Note (Association of Noise Consultants, 2020). This process identifies a representative background sound level for use in the operational noise assessment, as provided in **Table 25.2-48**.

68. As suggested by BS 4142, histograms of the measured L_{A90},15min levels during the day and night-time at each OCS zone measurement location are provided in **Annex 25.2.2** of this appendix.

Table 25.2-48 Baseline L_{A90} Selections and Justifications

Measurement Location Identifier	Representative LA90,15min (dB)		Justification
	Daytime	Night-time	
OSM4	35	27	Daytime – the modal value represents the 68th percentile and significantly above the mean level. The 25th percentile therefore represents a worst-case.

Measurement Location Identifier	Representative LA90,15min (dB)		Justification
	Daytime	Night-time	
			Night-time – the sample shows a cluster at the lowest end of the data range. The selected value of 27dB is the lower of two modal values and is located at the 20th percentile of the data to ensure a worst-case.
OSM5	31	21	Daytime – a strong modal value is located towards the upper end of the data range. This value is at the 66th percentile, therefore a lower value representative of the 20th percentile has been selected to ensure a worst-case. Night-time – bimodal sample at 21 and 22 dB, the lower of the two values represents the 20th percentile and is therefore worst-case.
OSM6	30	21	Daytime and Night-time – Neither data set contains a strong modal value with large clusters in each data set. The values selected are around the 20th percentiles to ensure a worst-case.
OSM7	34	24	Daytime – 20th percentile is 34dB L_{A90}, this is the lowest value in the cluster of frequently measured values (34 to 42dB L_{A90}) and therefore represents a worst-case. Night-time – there is a cluster towards the lower end of the data range, however the model value is above the 25th percentile, selected a lower value representative of the 20th percentile to ensure a worst-case.
OSM8	40	29	Daytime – the modal value represents the 61st percentile and significantly above the mean level. The 20th percentile therefore represents a worst-case. Night-time – strong modal value towards the lower end of the data range, however this value is above the 25th percentile, selected a lower value representative of the 20th percentile to ensure a worst-case.
OSM11	50	29	Daytime – the modal value represents the 79th percentile and significantly above the mean level. The 20th percentile therefore represents a worst-case. Night-time – there is no strong mode within the dataset. The value selected is representative of the 20th percentile to ensure a worst-case.
OSM12	35	27	Daytime – data indicates no strong mode. The value selected is representative of the 20th percentile to ensure a worst-case.

Measurement Location Identifier	Representative LA90,15min (dB)		Justification
	Daytime	Night-time	
			Night-time – there is a modal cluster (29 to 32dB L_{A90}), however the model value is above the 25th percentile, selected a lower value representative of the 20th percentile to ensure a worst-case.
OSM13	40	28	Daytime – a strong modal value is located towards the upper end of the data range. This value is at the 60th percentile, therefore a lower value representative of the 20th percentile has been selected to ensure a worst-case. Night-time – a strong modal cluster is located towards the lower end of the data range (28 to 30dB L_{A90}). The selected value is representative of the 20th percentile ensuring a worst-case.
OSM14	43	29	Daytime – 20th percentile is 43dB L_{A90}, this is the lowest value in the cluster of frequently measured values (43 to 51dB L_{A90}) and therefore represents a worst-case. Night-time – the modal value is towards the lower end of the data range, however this value is above the 25th percentile, selected a lower value representative of the 20th percentile to ensure a worst-case.
OSM15	44	31	Daytime and Night-time – Neither data set contains a strong modal value with large clusters in each data set. The values selected are around the 20th percentiles to ensure a worst-case.
OSM16	41	28	Daytime – a strong modal value is located towards the upper end of the data range. This value is at the 81st percentile, therefore a lower value representative of the 20th percentile has been selected to ensure a worst-case. Night-time – the sample shows wide cluster (27 to 36dB L_{A90}). The value selected is representative of the 20th percentile and the lowest of three modes ensuring and worst-case.
OSM17	47	30	Daytime – a strong modal value is located towards the upper end of the data range. This value is at the 93rd percentile, therefore a lower value representative of the 20th percentile has been selected to ensure a worst-case.

Measurement Location Identifier	Representative LA90,15min (dB)		Justification
	Daytime	Night-time	
			Night-time – the sample shows wide cluster (30 to 45dB L_{A90}). The value selected is representative of the 20th percentile, at the lowest end of the cluster and considered worst-case.

References

Association of Noise Consultants (2020). BS 4142:2014+A1:2019 Technical Note. Available online at https://www.association-of-noise-consultants.co.uk/wp-content/uploads/2020/07/ANC-BS-4142-Guide-March-2020.pdf

British Standards Institute (BSI) (1991). BS 7445-2:1991 - Description and measurement of environmental noise. Guide to the acquisition of data pertinent to land use. London.

BSI (2003). BS EN 61672-1:2003 - Electroacoustics. Sound level meters. Specifications. London.

BSI (2014). BS 5228-1:2009+A1:2014 “Code of practice for noise and vibration control on construction and open sites – Part 1: Noise”.

BSI (2019). BS 4142:2014+A1:2019 - Methods for rating and assessing industrial and commercial sound. London.

List of Tables

List of Annexes

List of Acronyms

Acronym	Definition
DBD	Dogger Bank D
DBS	Dogger Bank South
ECC	Export Cable Corridor
ERYC	East Riding of Yorkshire Council
ETG	Expert Topic Group
NVSR	Noise and Vibration Sensitive Receptor
OCS	Onshore Converter Station
PEIR	Preliminary Environmental Information Report
SLM	Sound Level Meter

Annex 25.2.1 Measurement Location Photos

69. This section details photos of measurement locations. Coordinates for each location can be found in **Table 25.2-2** and monitoring locations are illustrated on **Figure 25-1** provided in **Volume 1, Chapter 25 Noise and Vibration**.

Plate 25.2-1 LFM9 Strawberry Fields, Landfall

Plate 25.2-2 LFM10 Discount hunters, Landfall

Plate 25.2-3 MCM1 Grange Road, Onshore ECC (Main Construction Compound)

Plate 25.2-4 MCM1b, Pinderhill Farm, Beverley Road, Onshore ECC (Main Construction Compound)

Plate 25.2-5 MCM2 Hall Farm, Main road, Onshore ECC (Main Construction Compound)

Plate 25.2-6 MCM3 Beeler Close, Onshore ECC (Main Construction Compound)

Plate 25.2-7 OSM4 Bentley Hall, OCS Zone 8

Plate 25.2-8 OSM7 Lake Farm, Main Street, OCS Zone 8

Plate 25.2-9 OSM8 Teesdale Croft, OCS Zone 8

Plate 25.2-10 OSM11, Spring Mount Studios, OCS Zone 4

Plate 25.2-11 OSM12, Risby East Side, OCS Zone 8

Plate 25.2-12 OSM13, OCS Zone 4

Plate 25.2-13 OSM14, OCS Zone 4

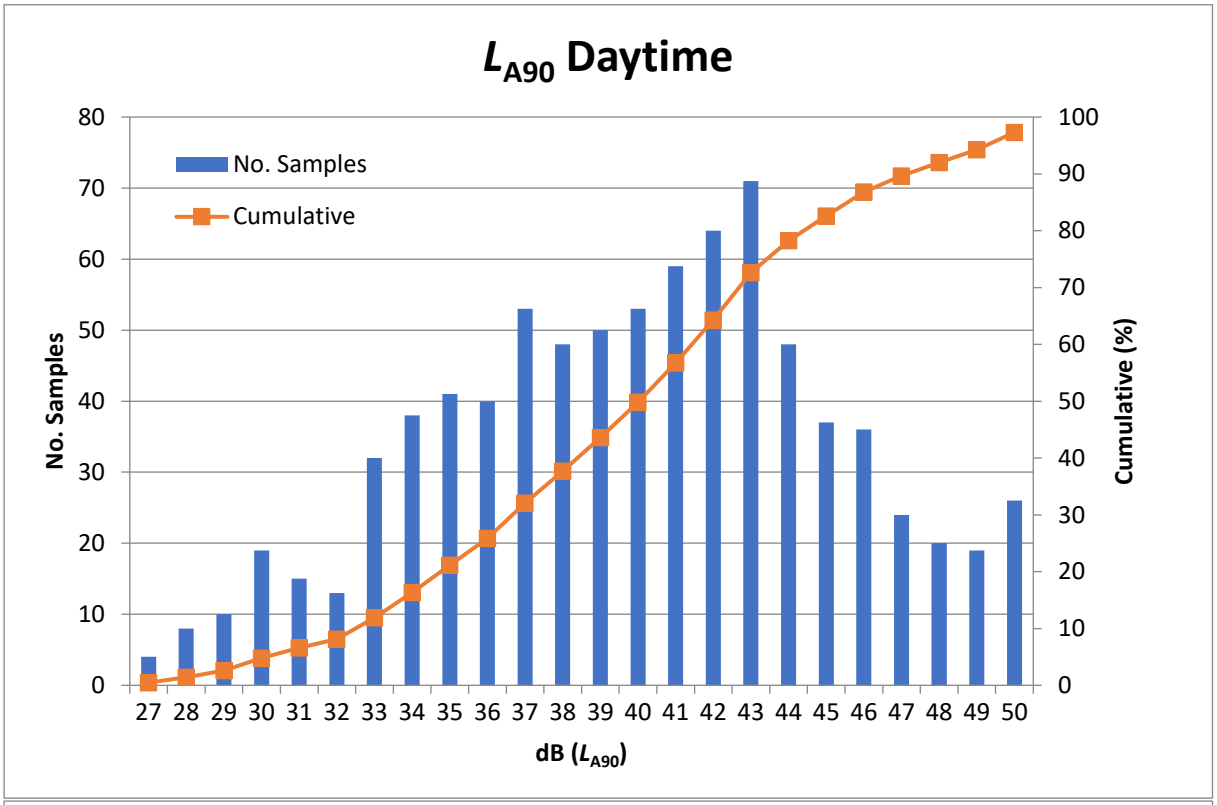
Plate 25.2-14 OSM15, OCS Zone 4

Plate 25.2-15 OSM16, Woodmansy G & son, OCS Zone 4

Plate 25.2-16 OSM17, Woodmansy G & son, OCS Zone 4

Annex 25.2.2 L_{A90} Histograms

Plate 25.2-17 OSM4 Daytime and Night-time L_{A90} Histograms



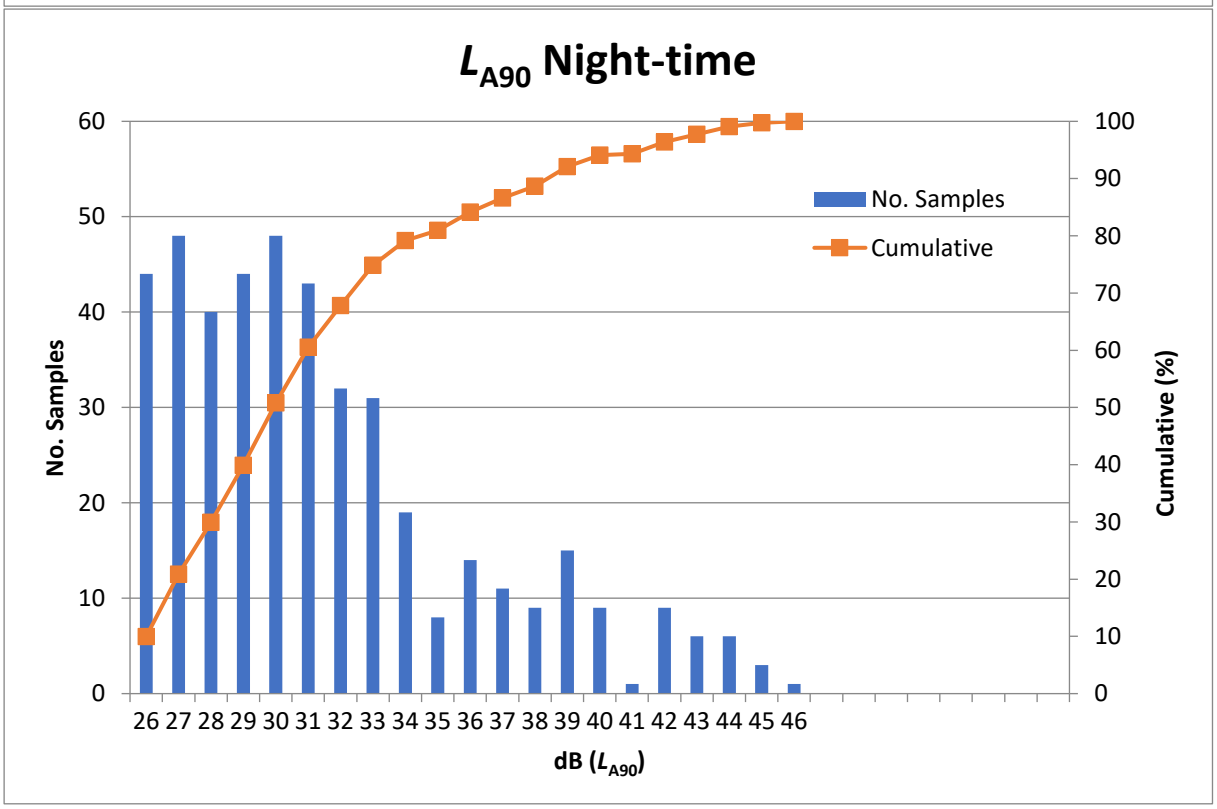


Plate 25.2-18 OSM5 Daytime and Night-time L_{A90} Histograms

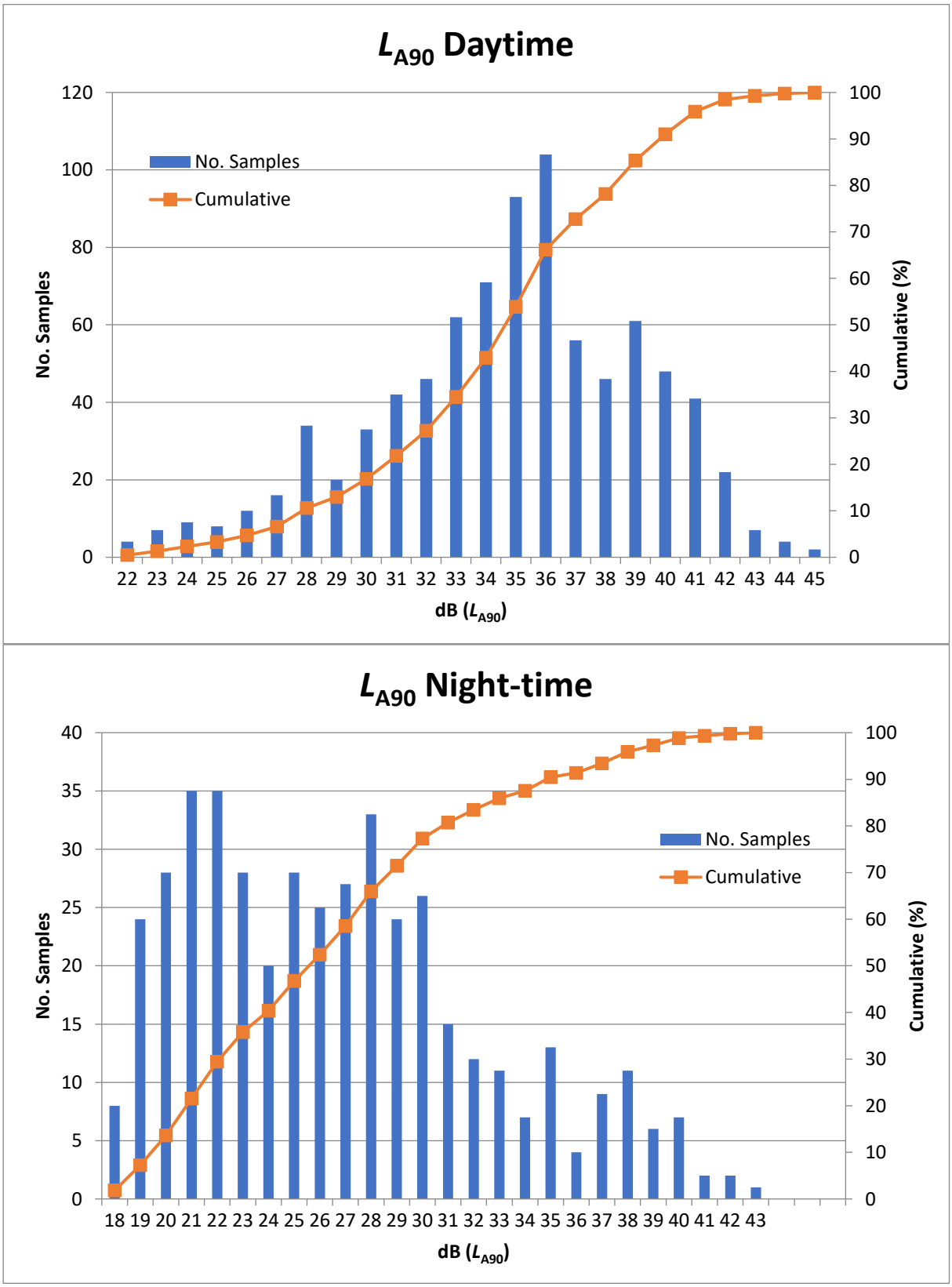


Plate 25.2-19 OSM6 Daytime and Night-time L_{A90} Histograms

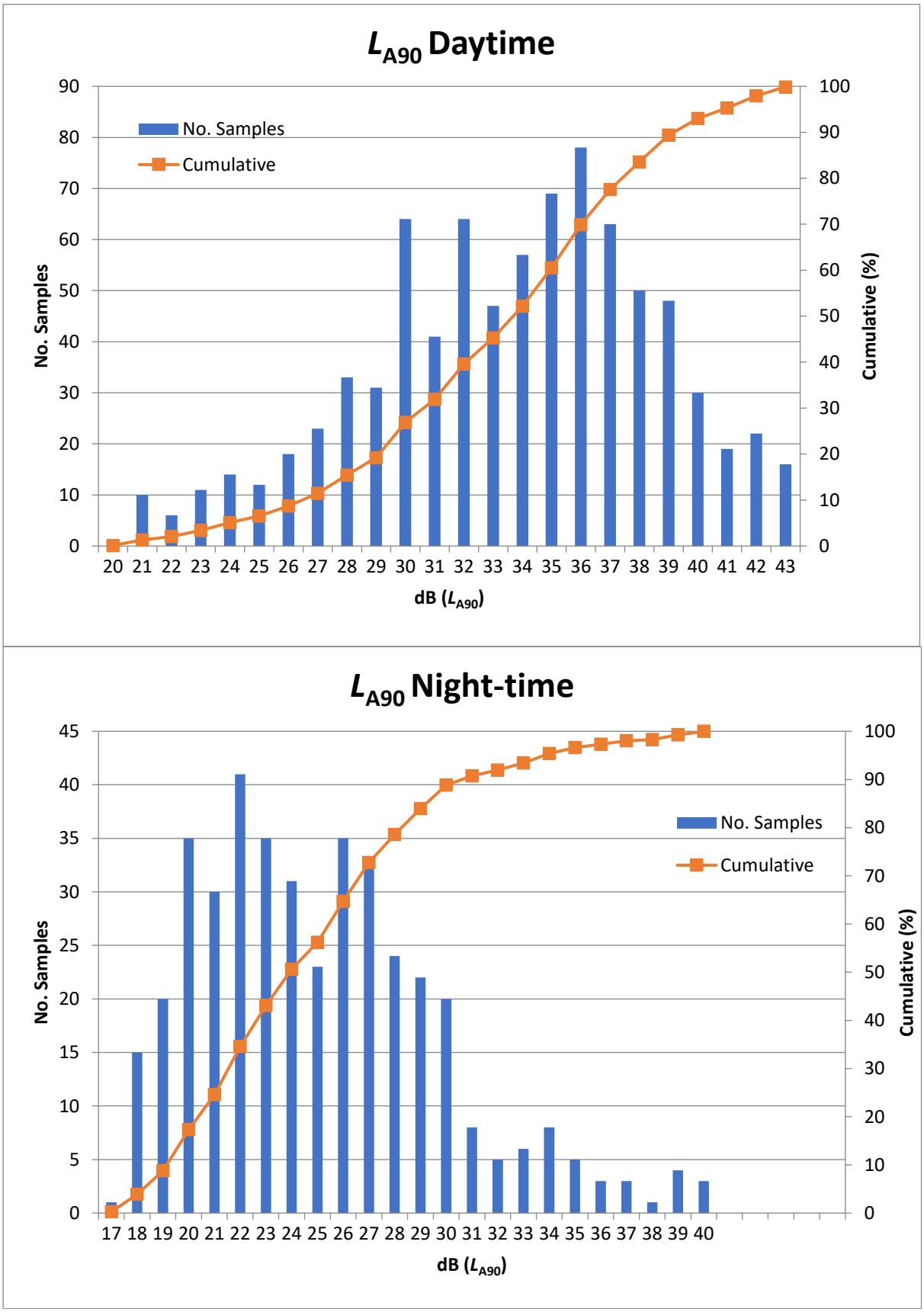


Plate 25.2-20 OSM7 Daytime and Night-time L_{A90} Histograms

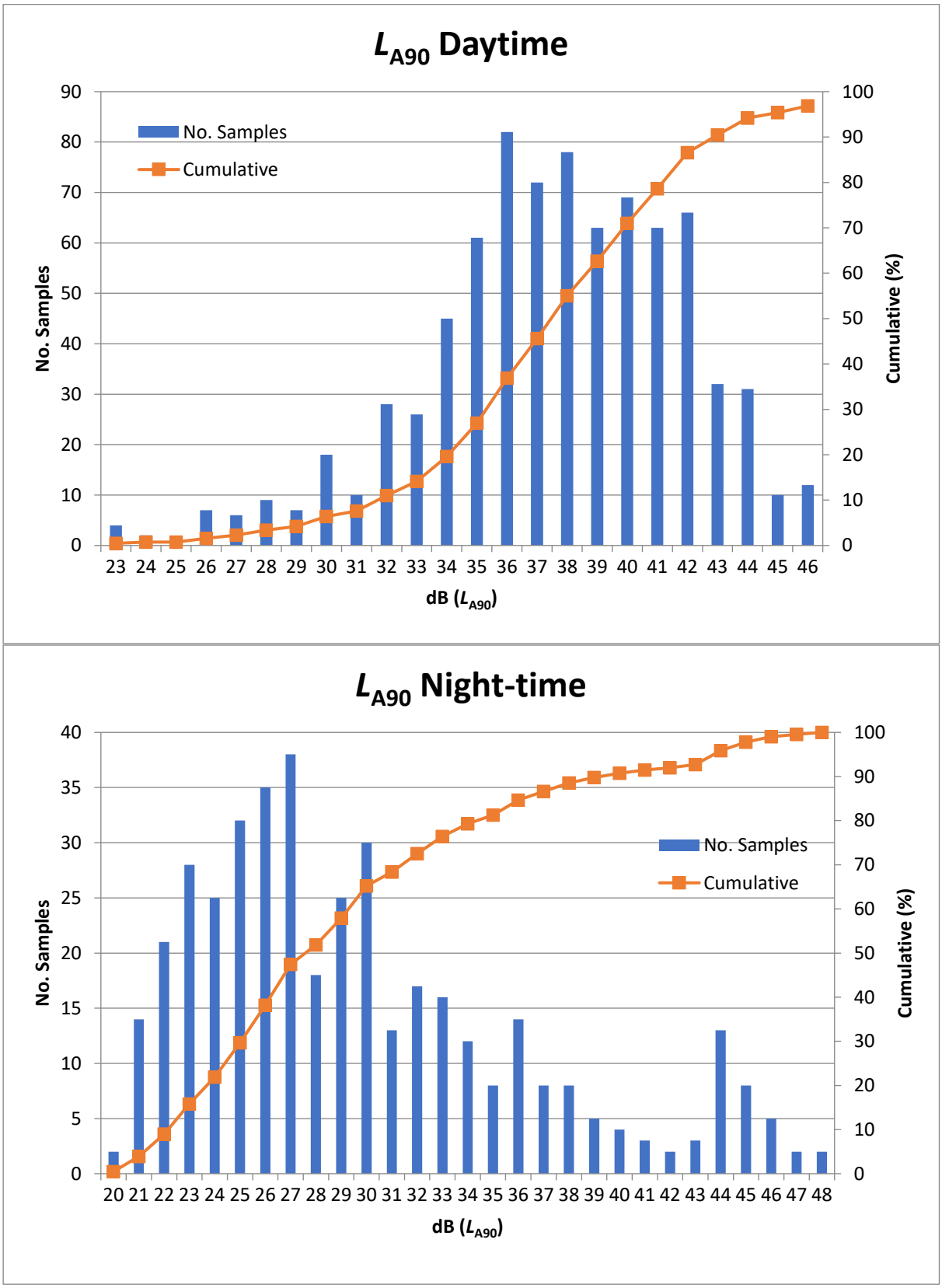
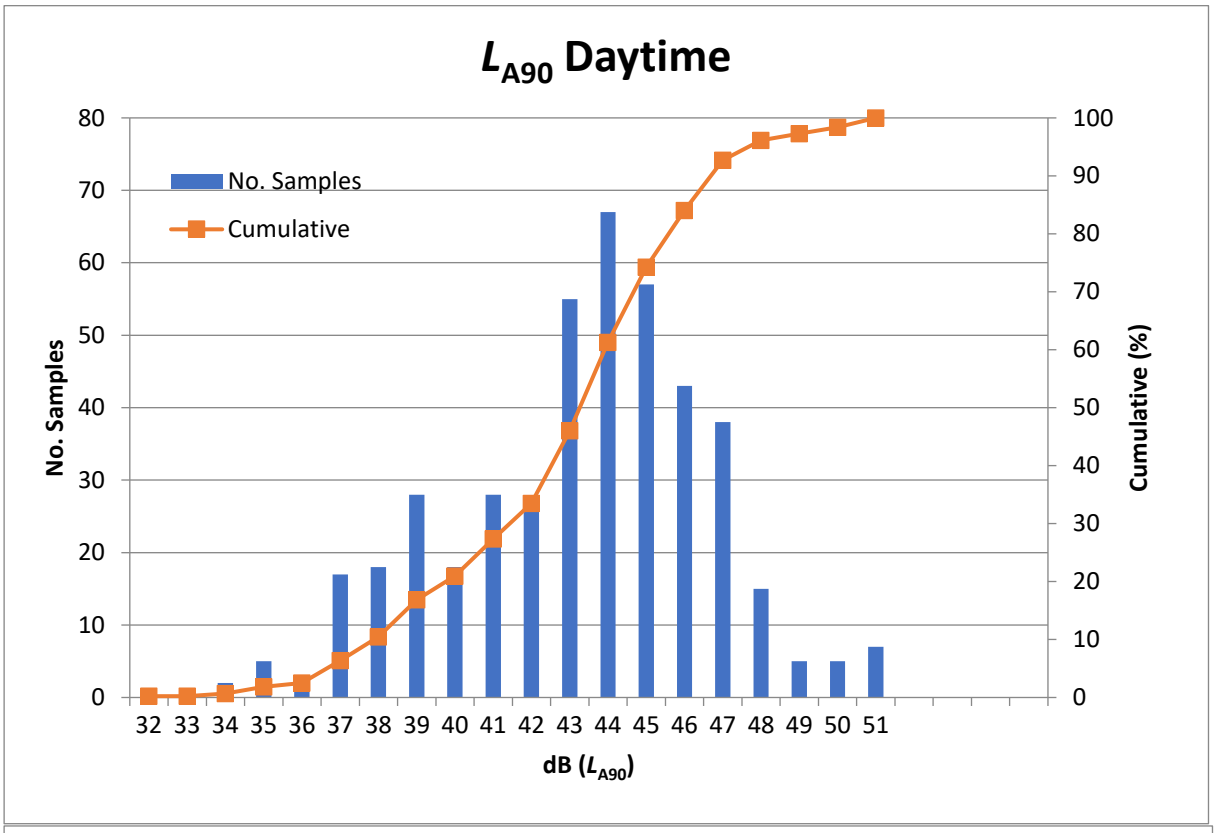


Plate 25.2-21 OSM8 Daytime and Night-time L_{A90} Histograms



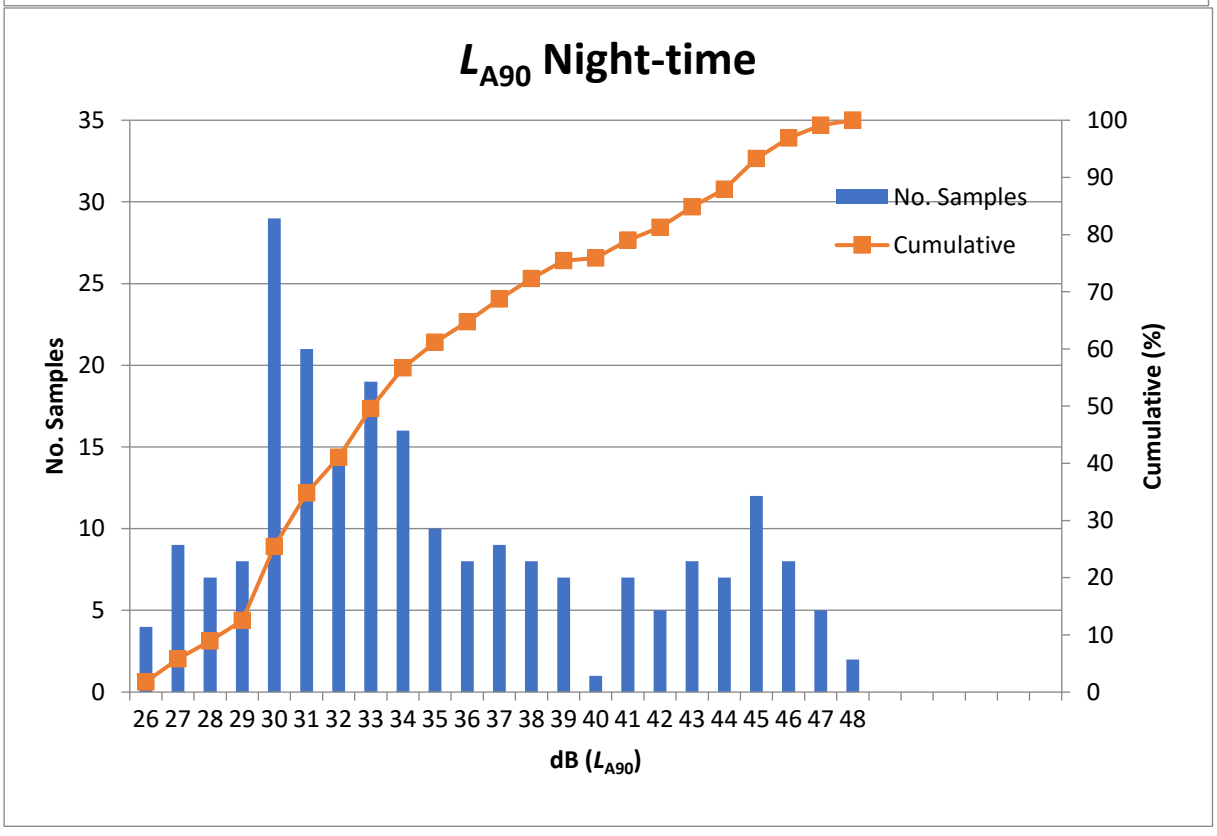


Plate 25.2-22 OSM11 Daytime and Night-time L_{A90} Histograms

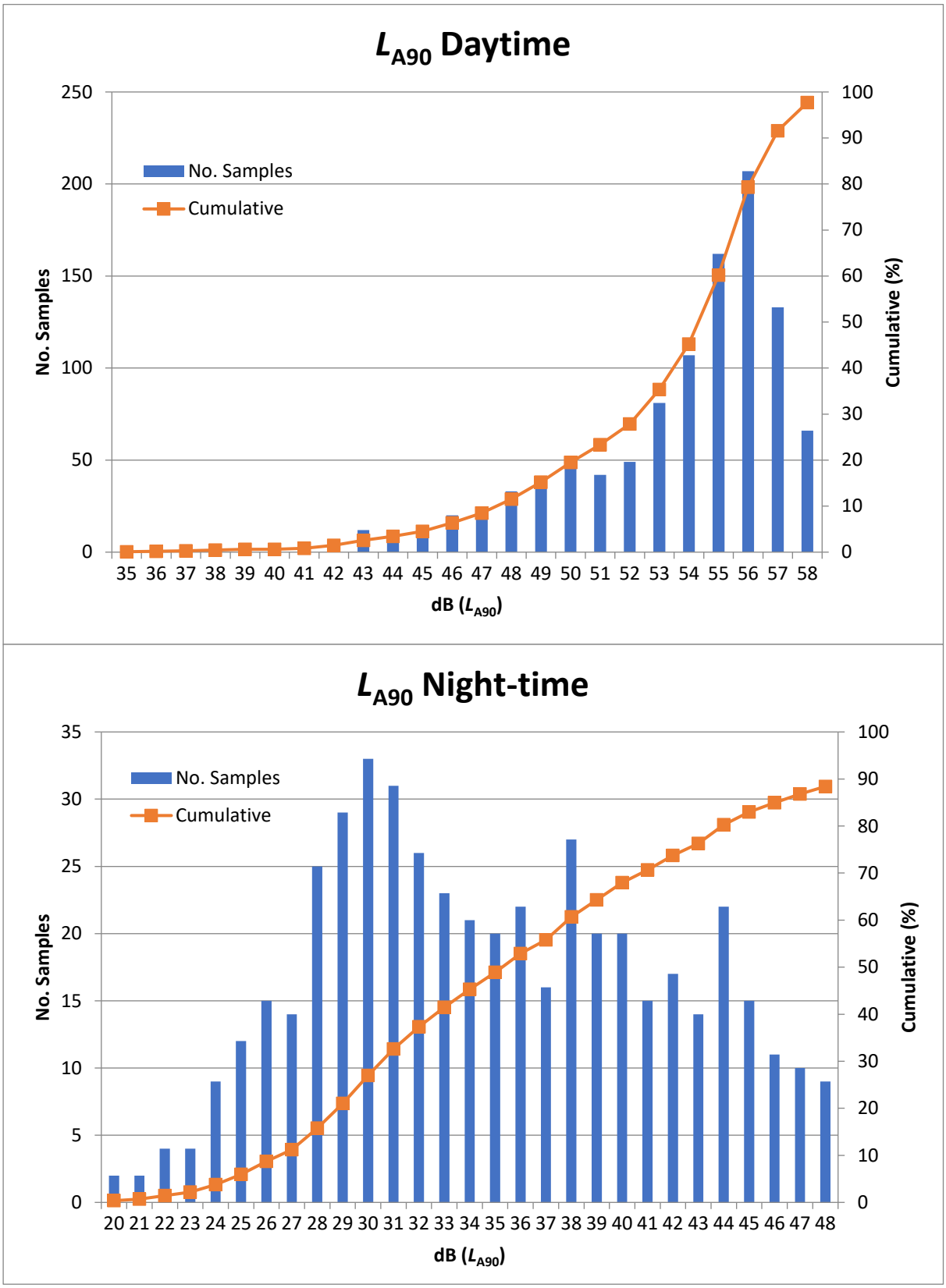


Plate 25.2-23 OSM12 Daytime and Night-time L_{A90} Histograms

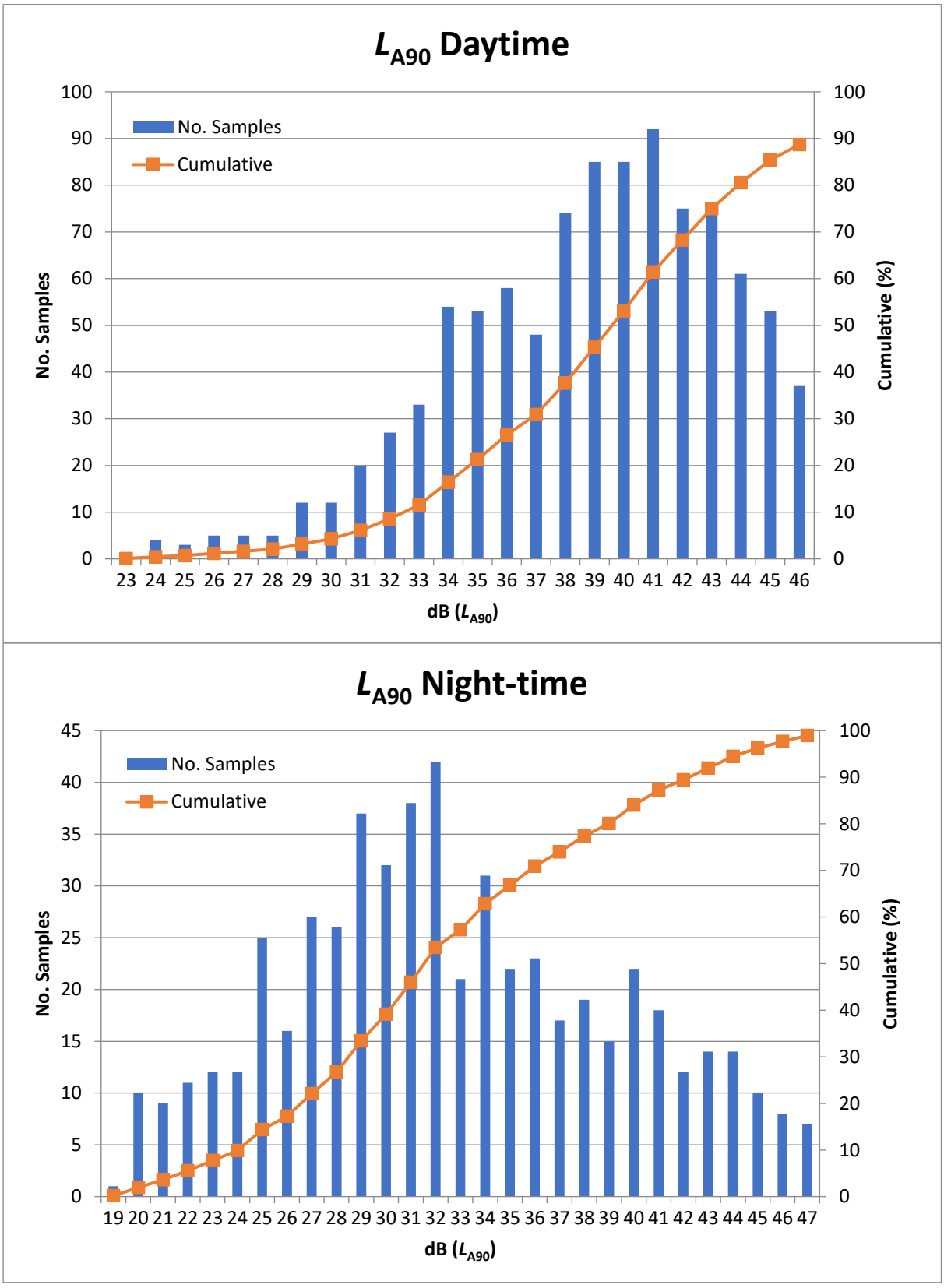


Plate 25.2-24 OSM13 Daytime and Night-time L_{A90} Histograms

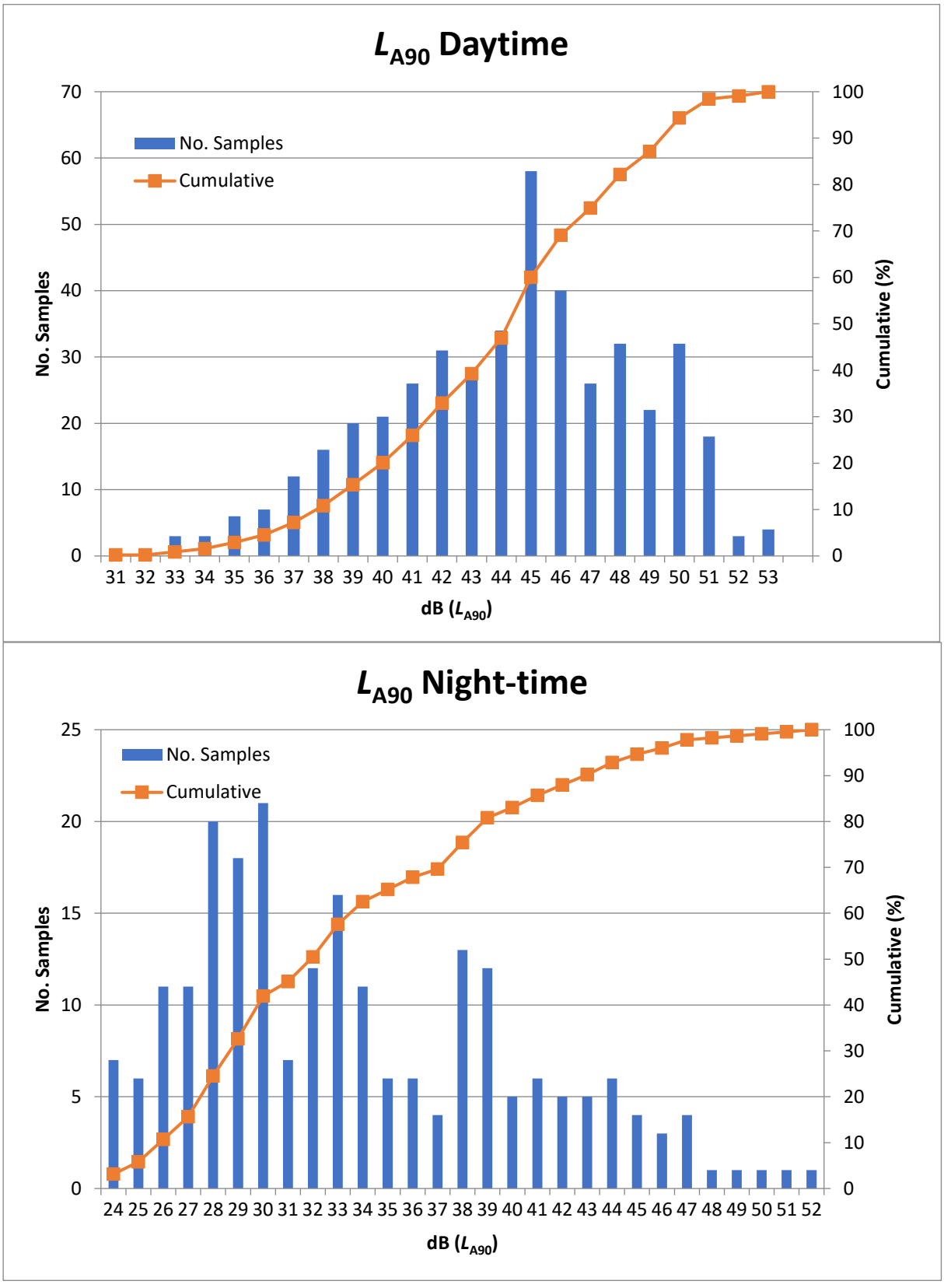


Plate 25.2-25 OSM14 Daytime and Night-time L_{A90} Histograms

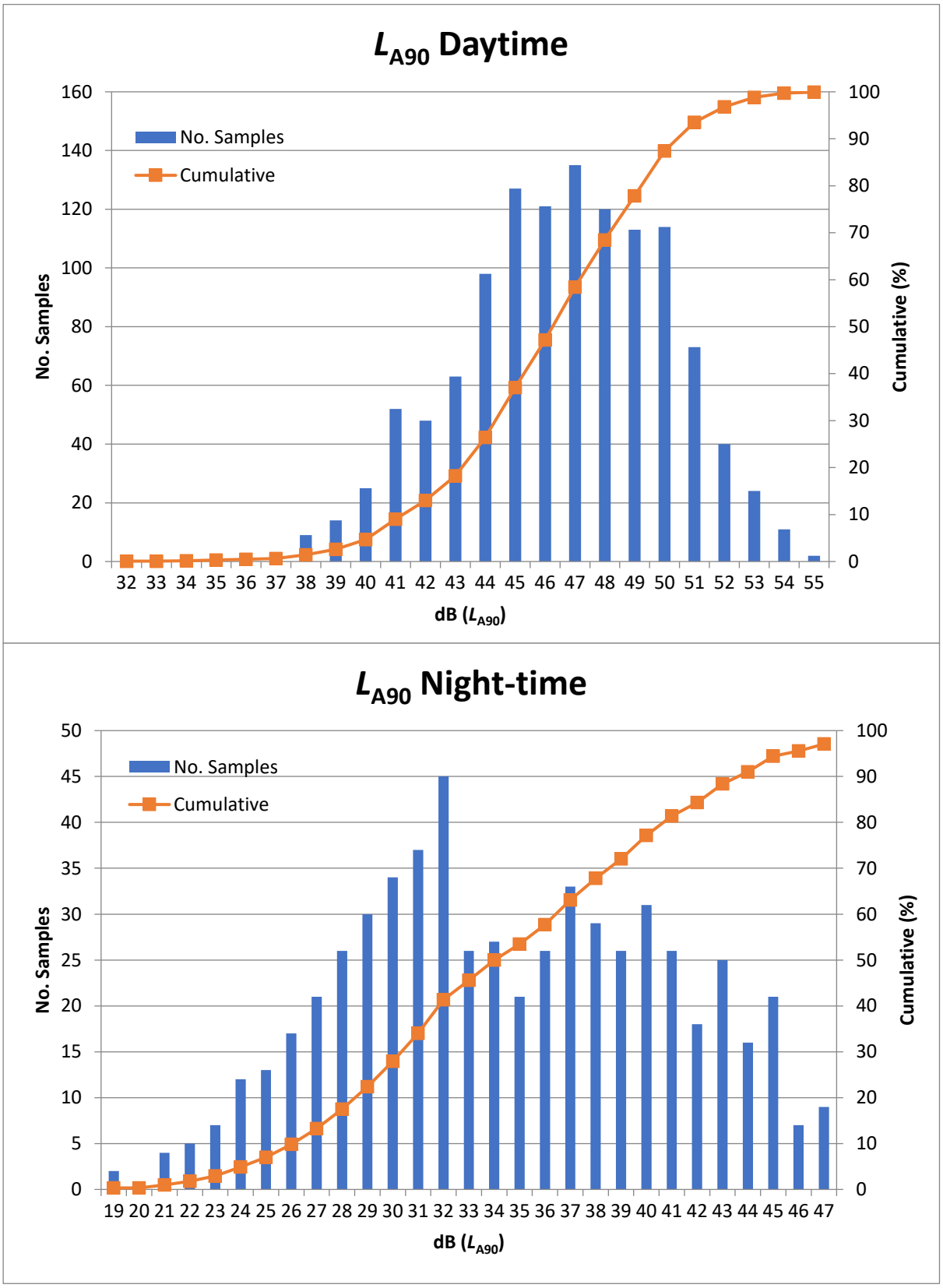
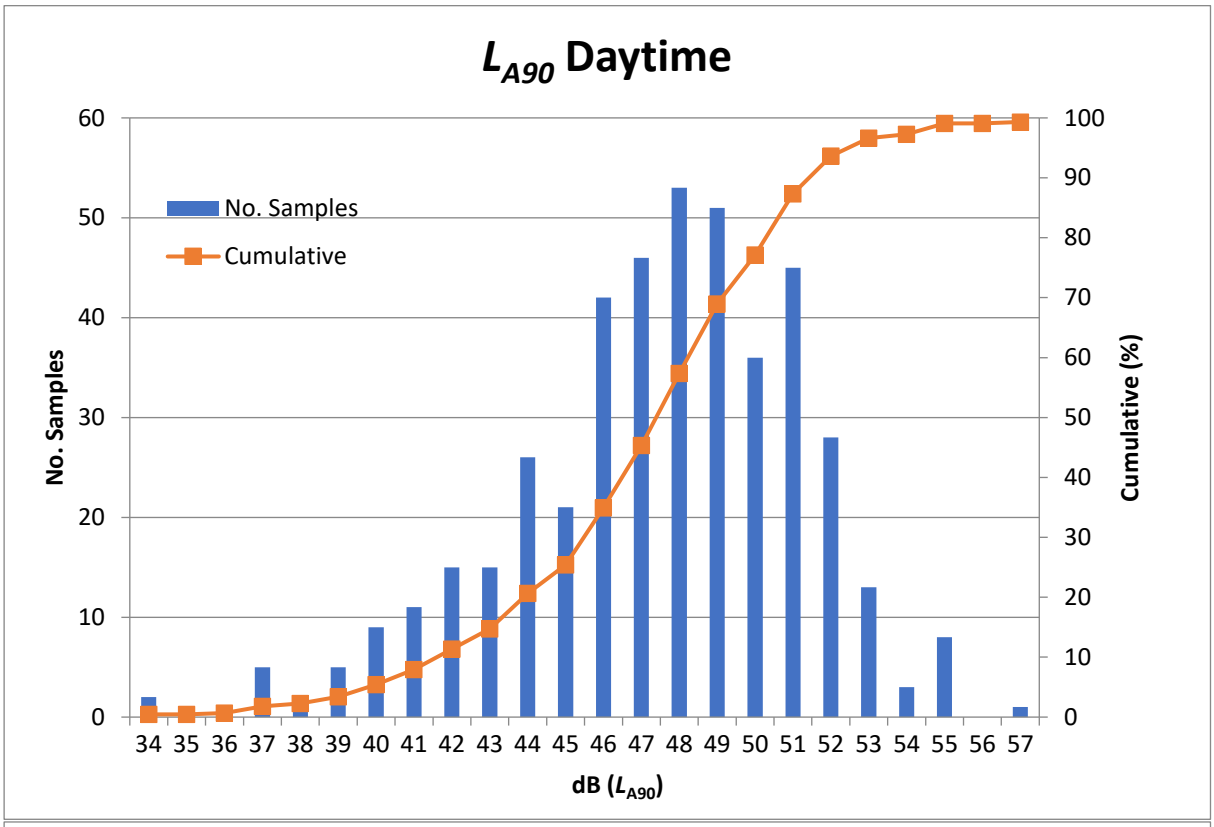


Plate 25.2-26 OSM15 Daytime and Night-time L_{A90} Histograms



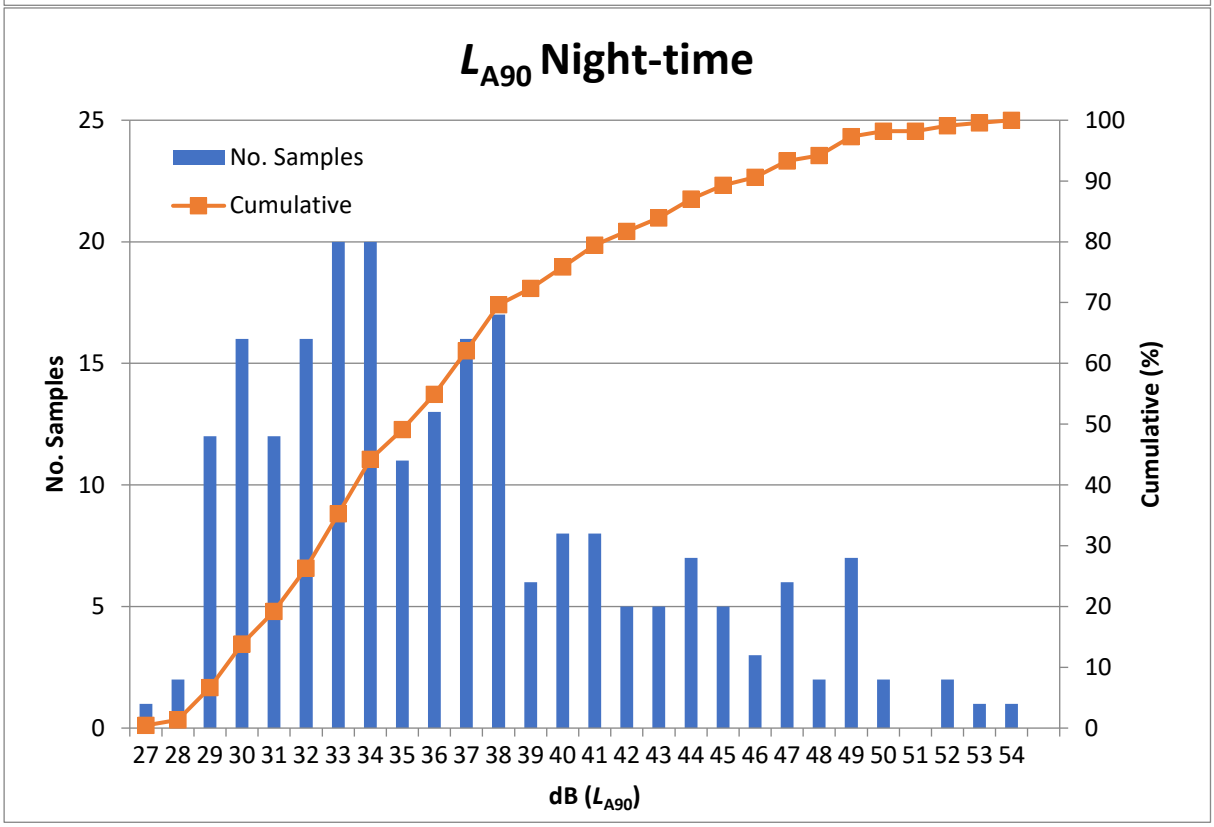


Plate 25.2-27 OSM16 Daytime and Night-time L_{A90} Histograms

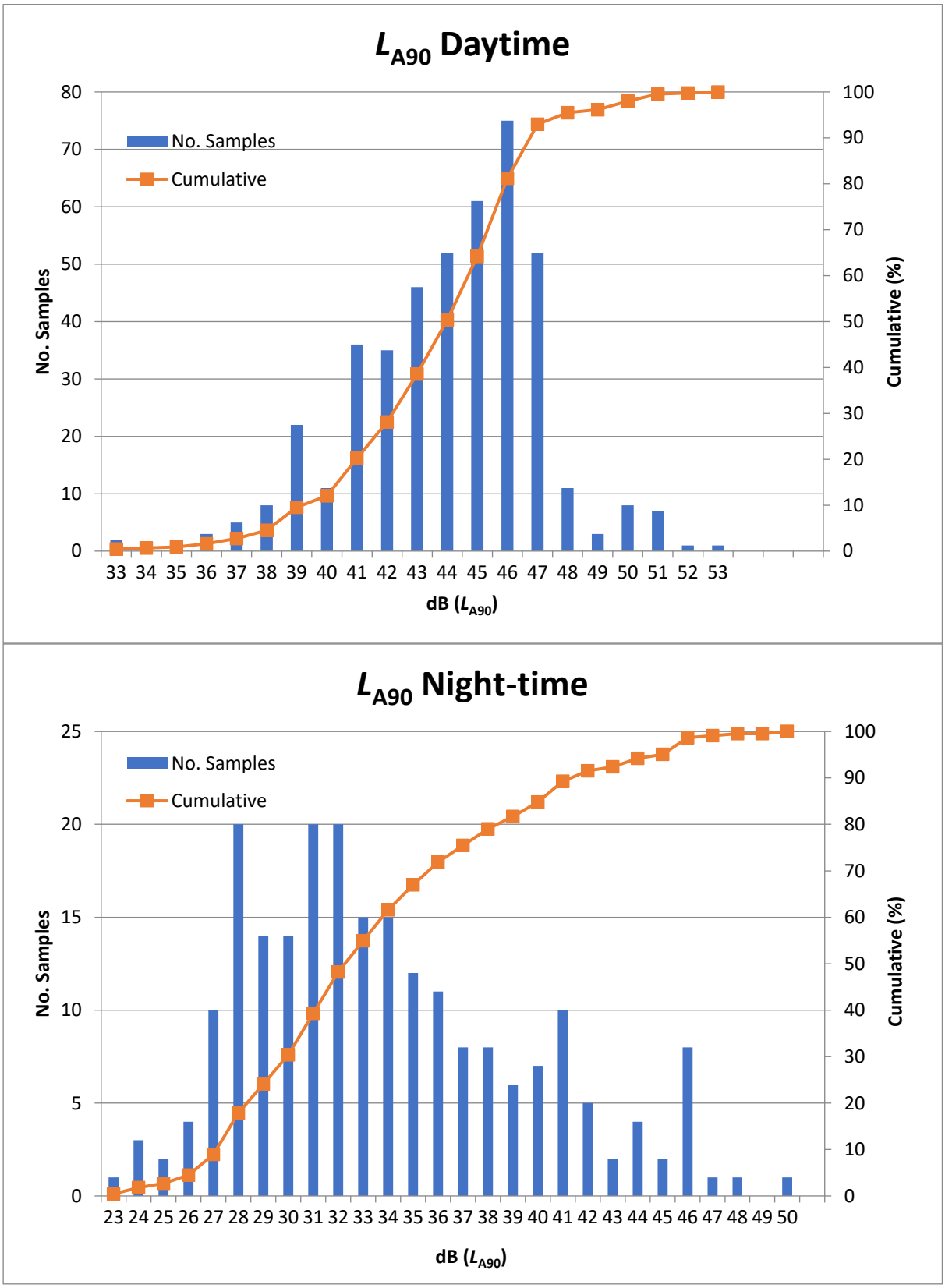


Plate 25.2-28 OSM17 Daytime and Night-time L_{A90} Histograms