

Site Visit Report

The site visit process is a sample on a particular day of an installation's compliance with some of its licence conditions. Where non-compliance against a particular condition has not been reported, this should not be construed to mean that there is full compliance with that condition of the licence.

Instructions and actions arising from the visit shall be addressed, or where applicable noted, by the licensee in order to ensure compliance, to improve the environmental performance of the installation and to provide clarification on certain issues.

The licensee shall take the actions specified to close out the non-compliances and observations raised in this Site Visit Report.

The licensee may also be requested to provide a response to the Environmental Protection Agency (hereafter referred to as the Agency) in relation to the site visit report findings.

Licensee	
Name of Installation	Echelon Clondalkin DC Services Limited
Licensee	Echelon Clondalkin DC Services Limited
Licence Register No.	P1113-02
CRO Number	706392
Site Address	Crag Avenue, Clondalkin Industrial Estate, Dublin 22, Dublin, D22 Y921
Site Visit Reference No.	SV35719

Report Detail	
Issue Date	03/09/2026
Prepared By	Niall Stenson

Site Visit Detail			
Date Of Inspection	13/08/2026		
Time In	11:30	Time Out	04:30
EPA Inspector(s)	Niall Stenson Aoife Brennan		
Additional Visitors	Tetra Tech		
Licensee Personnel and Role	N/A		

> Summary

This site visit was conducted to carry out monitoring of noise in the vicinity of the licensed site. The monitoring report is attached.

Non-compliant noise was not identified during this monitoring event. The Agency is continuing its investigations into potential noise issues at this site and the licensee is required to respond to all actions raised under Compliance Investigation No. CI002285 by the due dates specified.

> Site Areas Inspected

The areas where the survey took place were:

- N1 - Noise Sensitive Location
- N2 - Noise Sensitive Location
- The Grand Canal Greenway

> Documents Inspected

N/A

> 1. Site Specific Issues

1.1

	Answer	Condition Number	Non Compliance	Observation
Potential Noise Sources	Checked	4.5		Yes
Comment / Action Required				
Noise monitoring was carried out at three locations between 23:41hrs on 13/08/2026 and 04:14hrs on 14/08/2026.				
Action required:				
The licensee shall provide details of all plant and equipment operational during the above monitoring period. This shall include times of operation, if intermittent, together with details of any unusual/non-routine plant operation during the monitoring period. The licensee shall submit this information under CI No. CI002285 Action No. A129547 by the due date specified in the action.				

Environmental Protection Agency

Echelon Clondalkin DC Services Limited Noise Monitoring

IE Licence P1113-02

IE001017

S3 P01

24 August 2026



Tetra Tech Dublin, West Pier Business Campus, Old Dunleary Road, Dún Laoghaire, Co. Dublin,
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Document status

Document status					
Version	Purpose of document	Authored by	Reviewed by	Approved by	Date
S3 P01	Issue for review	SM	BC	JM	24/08/2026

Approval for issue	
JM	24/08/2026

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Prepared by	Prepared for
Tetra Tech	Environmental Protection Agency

Executive summary

Tetra Tech was commissioned by the Environmental Protection Agency (EPA) to conduct a noise monitoring survey and compliance assessment of the site operations at the Echelon Clondalkin DC Services Limited facility at Crag Avenue, Clondalkin Industrial Estate, Clondalkin, Co. Dublin, to support an EPA noise complaint investigation. The facility operates under IE Licence P1113-02. The survey was undertaken on the 13th and 14th of August 2026.

The methodology for the noise monitoring survey generally followed EPA NG4 guidance. An attended survey was conducted at two complainants' properties during the night-time period, as defined in IE Licence P1113-02. Additionally, two spot measurements were undertaken close to the site boundary.

All measurements have been objectively analysed for clearly audible tonal noise using BS4142 Annex C and Annex D methodology, as recommended by NG4.

In summary, findings of the assessment include:

- Facility noise emissions were audible at both monitoring locations during the survey period but were not observed to be the dominant noise source.
- Tonal noise from the facility was subjectively perceptible during the first measurement at N2 and just perceptible during the second measurement. Tonal noise was subjectively not perceptible during both measurements at N1.
- Neither the subjective nor objective assessment of tonal noise conducted as part of this assessment confirmed the presence of clearly audible tonal noise from the facility at the monitoring locations.
- During the first spot measurement close to the site boundary, facility noise emissions showed clearly audible tonal characteristics.
- Noise levels from the facility at the monitoring locations have been assessed to be below the licensed noise levels during the survey.

During the survey, the Echelon Clondalkin DC Services Limited facility is deemed to have been compliant with the night-time noise limits set out in IE Licence P1113-02.

Table of contents

Executive summary	3
1.0 Introduction	8
1.1 Site description	8
2.0 Assessment criteria	9
2.1 IE Licence P1113-02	9
2.2 Assessment of tonal and impulsive noise	9
3.0 Methodology	12
3.1 Survey locations	12
3.2 Instrumentation	12
3.3 Meteorological conditions	12
3.4 Measurement procedure	13
4.0 Results	14
4.1 Summary of the ambient noise monitoring results	14
4.2 Discussion	14
4.3 BS4142 Annex C 1/3 octave band tonal assessment	15
4.4 BS4142 Annex D tonal assessment	16
4.5 Summary of spot measurement results	17
4.6 Determination of compliance	17
5.0 Conclusion	19

List of tables

Table 2.1. P1113-02 Noise emissions limit values.	9
Table 2.2. Tonal assessment method results corresponding to BS4142 tonal penalties and compliance with the NG4 night-time tonal noise criterion.	10
Table 2.3. Impulsivity assessment method results corresponding to BS4142 tonal penalties and compliance with the NG4 night-time tonal noise criterion.	11
Table 3.1. Measurement equipment.	12
Table 4.1. Summary of ambient noise monitoring results.	14
Table 4.2. Extract of 1/3 octave band tonal assessment results of the first measurement at N2.	16
Table 4.3. Results of the BS4142 Annex D tonal assessment.	16

Table 4.4. Summary of spot measurement results.	17
Table 4.5. Summary of noise monitoring results.....	18

List of figures

Figure 1.1. Aerial view showing the Echelon Clondalkin DC Services Limited facility (outlined in red) in the greater context.	8
Figure 4.1. Unweighted 1/3 octave band spectrum of first measurement at N2.	15

Appendices

Appendix A: Equipment Calibration Certificates

Appendix B: BS4142 Annex C 1/3 Octave Band Tonal Analysis

Glossary

Term	Definition
A-weighting	A spectrum adaption that is applied to measured noise levels to represent human hearing. A-weighted levels are used as human hearing does not respond equally at all frequencies.
dB	Decibel: a unit of measurement used to express sound level. It is based on a logarithmic scale which means a sound that is 3 dB higher has twice as much energy. Humans typically perceive a 10 dB increase in sound as a doubling of that sound level.
dB(A)	Decibel, A-weighted.
$L_{Aeq,T}$	The A-weighted equivalent continuous noise level. Energy average of noise over the sample period (T).
L_{AFmax}	The maximum RMS A-weighted sound pressure level measured with a fast time weighting occurring within a specified time period.
L_{AF90}	Refers to those A-weighted noise levels in the lower 90 percentile of the sampling interval; it is the level which is exceeded for 90% of the measurement period. It is commonly used to describe a background noise level.
L_{AF10}	Refers to those A-weighted noise levels in the top 10 percentile of the sampling interval; it is the level which is exceeded for 10% of the measurement period. It is used to determine the intermittent high noise level features of locally generated noise and usually gives an indicator of the level of road traffic.
$L_{Ar,T}$	The rating level ($L_{Ar,T}$) is calculated by adding a penalty to the measured equivalent continuous A-weighted sound pressure level ($L_{Aeq,T}$). Typically, penalties are added for noise with tonal or impulsive characteristics.
Ambient sound	Total sound at a given location, includes sound from source(s) being measured and any extraneous noise sources near and far which may be present.
Ambient sound level	A-weighted equivalent sound pressure level of the total sound at a given location.
Specific sound source	Sound source being assessed.
Specific sound level	Equivalent continuous A-weighted sound pressure level of the residual sound at the assessment location over a given time interval.
Residual sound	Ambient sound remaining at the assessment location when the specific sound source is suppressed to such a degree that it does not contribute to the ambient sound.

Term	Definition
Residual sound level	Equivalent continuous A-weighted sound pressure level of the residual sound at the assessment location over a given time interval.
Background sound level	A-weighted sound pressure level that is exceeded by the residual sound at the assessment location for 90% of a given time interval.
NSL	Noise Sensitive Location. A dwelling or other location (e.g. nursing home, hotel, health centre) where a person may experience adverse impacts due to noise.

1.0 Introduction

Tetra Tech was commissioned by the Environmental Protection Agency (EPA) to conduct a noise monitoring survey and compliance assessment of the site operations at the Echelon Clondalkin DC Services Limited facility at Crag Avenue, Clondalkin Industrial Estate, Clondalkin, Co. Dublin, to support an EPA noise complaint investigation. The facility operates under IE Licence P1113-02. The survey was undertaken on the 13th and 14th of August 2026.

1.1 Site description

The site is situated within the Clondalkin Industrial Estate in a primarily urban and industrial environment, bounded to the south by the Grand Canal, to the east and north-east by the M50 motorway and to the west and north-west by other facilities within the industrial estate. The closest residential dwellings are located south of the facility in apartment complexes and housing estates off Nangor Road (R134). **Figure 1.1** presents an aerial view showing the Echelon Clondalkin DC Services Limited facility (outlined in red) in the greater context.

Figure 1.1. Aerial view showing the Echelon Clondalkin DC Services Limited facility (outlined in red) in the greater context.



2.0 Assessment criteria

2.1 IE Licence P1113-02

With regard to noise emissions, IE Licence P1113-02 outlines the facility's requirements under Condition 4.5 as follows:

- Condition 4.5 "Noise from the installation must not give rise to sound pressure levels measured at any noise-sensitive locations (NSLs), which exceed the limit values set out in *Schedule B.3 Noise Emissions* of this licence."

Schedule B.3 outlines the noise emissions limit values that are applicable to the facility. These are presented in **Table 2.1** below.

Table 2.1. P1113-02 Noise emissions limit values.

Daytime dB $L_{A,T}$ (30 minutes)	Evening time dB $L_{A,T}$ (30 minutes)	Night-time dB $L_{Aeq,T}$ (30 minutes) ^{Note 1}
55	50	45

Note 1: During nighttime hours, there must be no clearly audible tonal component or impulsive component in the noise emission from the activity at any noise-sensitive location.

The licence states that "During nighttime hours, there must be no clearly audible tonal component or impulsive component in the noise emission from the activity at any noise-sensitive location." Assessment of tonal audibility is conducted with guidance from EPA's 'Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)', published in 2016 (see **Section 2.2** below).

The daytime period, as defined in IE Licence P1113-02, is from 07:00 to 19:00 hrs, the evening period is defined as 19:00 to 23:00 hrs and the night-time period is defined as 23:00 to 07:00 hrs.

2.2 Assessment of tonal and impulsive noise

NG4 refers to BS4142 with regard to the assessment of tonal noise and states "A tonal noise source can normally be subjectively identified by a competent person familiar with noise impact assessments". BS4142 recommends rating penalties for tonal and impulsive noise subjectively described as "just perceptible", "clearly perceptible", and "highly perceptible" and details three methods for tonal noise assessment, the subjective method, the Annex C one-third octave method, and the Annex D Joint Nordic Method, high-level descriptions of which are listed below:

- Subjective Method: relies on professional judgement to determine a tonal penalty ranging from 0 to +6 dB, with a penalty of +2 dB for just perceptible, +4 dB for clearly perceptible and +6 dB for highly perceptible tones.

- Annex C One-Third Octave Method: can only identify a “highly perceptible” tone, with a penalty of +6 dB, when the sound pressure level in the one-third octave band containing the tone exceeds both side band levels by an amount greater than or equal to the threshold value for that frequency range.
- Annex D Joint Nordic Method: for sound ranging from not tonal to highly tonal this method gives a correction, K_t , of between 0 dB and +6 dB for tonality – BS4142 suggests calculating K_t to one decimal point and rounding the result to an integer value.

NG4 states “During the night-time period no tonal or impulsive noise from the facility should be clearly audible or measurable at any NSL”, i.e., that noise from a facility measured at a noise sensitive location during the night-time should not contain a tone that results in a BS4142 tonal penalty of +4 dB. The results of the three BS4142 methods corresponding to tonal penalties, and how they relate to compliance with the NG4 night-time tonal noise criterion, are summarised in **Table 2.2**.

Table 2.2. Tonal assessment method results corresponding to BS4142 tonal penalties and compliance with the NG4 night-time tonal noise criterion.

NG4 Night-time Criterion	Tonal Penalty	Subjective Method Description	Annex C One-Third Octave Method Result	Annex D Joint Nordic Method K_t Integer Value
Compliant	+2 dB	Just Perceptible	--	+2 dB
Not Compliant	+4 dB	Clearly Perceptible	--	+4 dB
Not Compliant	+6 dB	Highly Perceptible	Tone Identified	+6 dB

Given the above, where the penalty arrived at from a tonal assessment of facility night-time noise measurements is less than +4 dB, the facility will be judged to be in compliance with the NG4 night-time tonal noise criterion. Subjective descriptions of tonality will be given as “just perceptible”, “perceptible”, “clearly perceptible” and “highly perceptible”.

BS4142 states the following regarding impulsive noise: “A correction of up to +9 dB can be applied for sound that is highly impulsive, considering both the rapidity of the change in sound level and the overall change in sound level. Subjectively, this can be converted to a penalty of 3 dB for impulsivity which is just perceptible at the noise receptor, 6 dB where it is clearly perceptible, and 9 dB where it is highly perceptible”. Impulsive noise can be assessed either subjectively or using the BS4142 Annex E reference method.

The results of the two BS4142 methods corresponding to impulsivity penalties, and how they relate to compliance with the NG4 night-time impulsive noise criterion, are summarised in **Table 2.3**.

Table 2.3. Impulsivity assessment method results corresponding to BS4142 tonal penalties and compliance with the NG4 night-time tonal noise criterion.

NG4 Night-time Criterion	Impulsivity Penalty	Subjective Method Description	Annex E Nordtest Method K _t Integer Value
Compliant	+3 dB	Just Perceptible	+3 dB
Not Compliant	+6 dB	Clearly Perceptible	+6 dB
Not Compliant	+9 dB	Highly Perceptible	+9 dB

Given the above, where the penalty arrived at from an impulsivity assessment of facility night-time noise measurements is less than +6 dB, the facility will be judged to be in compliance with the NG4 night-time impulsive noise criterion.

3.0 Methodology

The methodology for the noise monitoring survey generally followed EPA NG4 guidance. An attended survey was conducted at two complainants' properties during the night-time period, as defined in IE Licence P1113-02. Additionally, two spot measurements were undertaken close to the site boundary. All measurements were undertaken on the 13th and 14th of August 2026.

3.1 Survey locations

The noise monitoring survey was undertaken outside the two complainants' properties, which are two-storey dwellings south of the facility (referred to as "N1" and "N2"). All measurements were conducted at a height of 4.0 m.

3.2 Instrumentation

A class 1 sound level meter in accordance with IEC 61672-1:2013 was used for all measurements. **Table 3.1** summarises the measurement equipment used.

Table 3.1. Measurement equipment.

Description	Manufacturer	Model	Serial Number
Sound Level Meter	Brüel and Kjær	2250	2690265
Acoustic Calibrator	Svantek	SV36	124177

All equipment has calibration certificates traceable back to the relevant standard. A calibration check of the sound level meter was conducted prior to and following the survey period using an external acoustic calibrator, with a calibration drift of 0.03 dB observed. This is below the 0.5 dB permitted drift for valid measurements as specified by ISO 1996-2:2017. Equipment calibration certificates are provided in Appendix A.

3.3 Meteorological conditions

During the night-time survey, the weather was generally warm and dry with moderate cloud coverage. Temperatures peaked during the first measurement at 21 °C and reduced over the survey period to a low of 19 °C. Average wind speeds were low, with speeds of less than 2 m/s observed during all measurements.

During the second measurement at N1, some light spitting rain was observed which lasted approximately seven minutes. Within this period, there was approximately 45 to 60 seconds of heavier rain. Road surfaces dried quickly and were not wet during the second measurement at N2.

3.4 Measurement procedure

All measurements at the two monitoring locations were undertaken at a height of 4.0 m. All measurements were performed in accordance with ISO 1996-1:2016 and taken free field, at least 3.5 m away from any reflective surface or structure. Measurements consisted of two 30-minute 1/3 octave band measurements at each location.

Additionally, two 15-minute 1/3 octave band spot measurements were undertaken along the Grand Canal Greenway, close to the site boundary.

4.0 Results

4.1 Summary of the ambient noise monitoring results

The results of the night-time noise measurements at the two noise monitoring locations are summarised in **Table 4.1**. All results are presented rounded to the nearest whole integer, with 0.5 being rounded up.

Table 4.1. Summary of ambient noise monitoring results.

Location	Start Time	Subjectively Observed Tonality	Subjectively Observed Impulsivity	Measured Noise Levels (dB re. 2 × 10 ⁻⁵ Pa)		
				L _{Aeq}	L _{AFMax}	L _{AF90}
N1	14/08/2026 00:34	None	None	48	60	44
	14/08/2026 02:23			47 ¹	58	41
N2	14/08/2026 01:34	Perceptible		39	51	36
	14/08/2026 03:06	Just Perceptible		39	48	36
Location	Subjective Observations					
N1	- Distant road traffic noise (RTN) was continuous and dominant. - Facility noise emissions were faintly audible, consisting of faint broadband swishing noise and faint intermittent pressure release noise. - Other noise sources: Vegetation rustle, local vehicle movements on surrounding roads, local activity and occasional distant aircraft noise.					
N2	- Local RTN dominated when present but vehicle movements were sporadic. - Soundscape primarily comprised distant RTN, with facility noise emissions audible during both measurements. - Facility noise emissions consisted of perceptible mid-frequency tonality and distant intermittent pressure release noise. - Other noise sources: Vegetation rustle, occasional local activity and occasional distant aircraft noise.					

¹ Removing the short period of heavier rain from this measurement results in no change in the L_{Aeq} .

4.2 Discussion

At N1, measured noise levels were 48 and 47 dB L_{Aeq} and distant continuous RTN was judged to be the dominant noise source. Facility noise emissions were faintly audible, comprising faint broadband swishing noise and faint intermittent broadband pressure release noise. Both measurements at N1 exceed the night-time noise criterion by 3 and 2 dB, respectively. However, due to the dominance of distant RTN and the faint audibility of

noise emissions from the facility, specific facility noise levels at N1 are likely less than the night-time noise criterion.

At N2, both measurements were 39 dB L_{Aeq} . Sporadic local vehicle movements dominated when present, with the soundscape primarily comprising distant RTN. Facility noise emissions were audible, consisting of a continuous perceptible mid-frequency tone, a just perceptible higher frequency tone and intermittent distant broadband pressure release noise. Tonal noise was decreased during the second measurement compared to the first. Both measurements are 6 dB below the night-time noise criterion. Taking into account the contributions from local and distant RTN, it is likely that the specific facility noise levels at N2 are lower than 39 dB L_{Aeq} .

4.3 BS4142 Annex C 1/3 octave band tonal assessment

Figure 4.1 shows the 1/3 octave band spectrum for the first of the two measurements at N2, where the tonal component of the facility's noise emissions was subjectively assessed to be perceptible.

Figure 4.1. Unweighted 1/3 octave band spectrum of first measurement at N2.

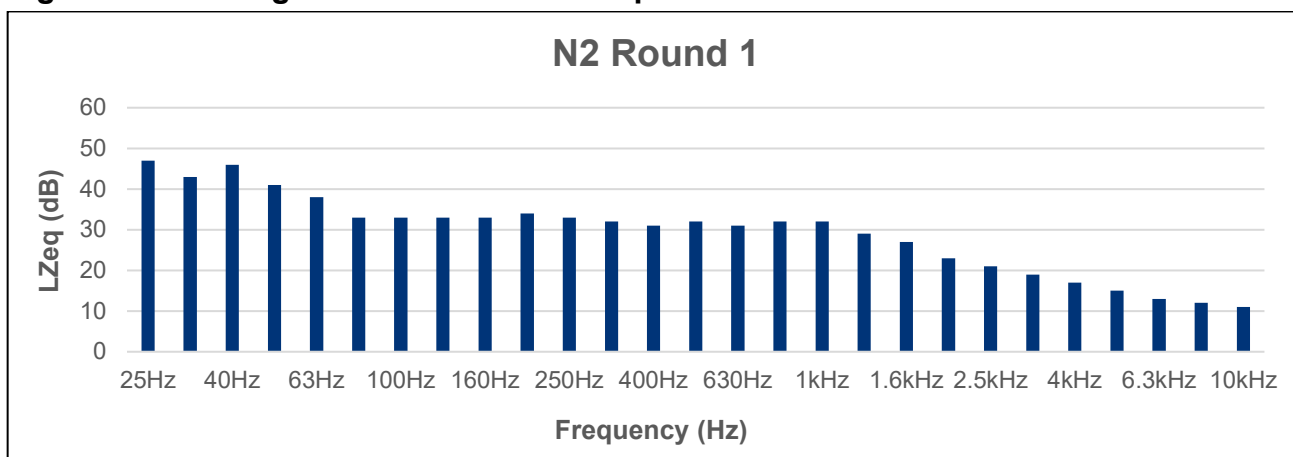


Table 4.2 shows the results of the BS4142 Annex C 1/3 octave band analysis. The prominence threshold above adjacent 1/3 octave bands is not exceeded for any of the 1/3 octave levels in the spectrum and therefore, the presence of a “highly perceptible” tone is not confirmed by this objective analysis. All measurements have been objectively assessed for clearly audible tones using the BS4142 Annex C one-third octave method, the results of which are presented in Appendix B. No tones were identified in any measurement.

Table 4.2. Extract of 1/3 octave band tonal assessment results of the first measurement at N2.

Frequency (Hz)	Measured L_{Zeq} (dB)	Difference Between Preceding Bands (dB)	Difference Between Following Bands (dB)	Acceptable Difference (dB)	Tonal
25	47	-1	4	15	No
31.5	43	-4	-3	15	No
40	46	3	5	15	No
50	41	-5	3	15	No
63	38	-3	5	15	No
80	33	-5	0	15	No
100	33	0	0	15	No
125	33	0	0	15	No
160	33	0	-1	8	No
200	34	1	1	8	No
250	33	-1	1	8	No
315	32	-1	1	8	No
400	31	-1	-1	8	No
500	32	1	1	5	No
630	31	-1	-1	5	No
800	32	1	0	5	No
1000	32	0	3	5	No

4.4 BS4142 Annex D tonal assessment

While the BS4142 Annex C tonal assessment did not identify any tones, it is deemed appropriate to conduct further tonal analysis in accordance with the BS4142 Annex D Joint Nordic Method due to the subjectively perceptible tonality at N2.

Table 4.3. Results of the BS4142 Annex D tonal assessment.

Location	Start Time	Maximum K_t Identified (dB)	Tonal Noise Determination
N1	14/08/2026 00:34	0	Compliant with Night-time Tonal Noise Criterion
	14/08/2026 02:23	0	
N2	14/08/2026 01:34	3	
	14/08/2026 03:06	0	

No K_t correction was identified for either measurement at N1 or the second measurement at N2. During the first measurement at N2, the maximum K_t correction identified was 3 dB at

493.75 Hz, which aligns with subjective impressions of the facility noise emissions. This correction was identified for a 30 second section of the measurement where tonal energy was observed to temporarily increase at the measurement location.

This correction of 3 dB does not meet the threshold for non-compliance, as outlined in **Section 2.2**, meaning the presence of a clearly audible tone during this measurement is not confirmed by the BS4142 Annex D tonal assessment.

4.5 Summary of spot measurement results

Two 15-minute spot measurements were undertaken on the Grand Canal Greenway close to the site boundary to characterise the noise emissions from the facility and to help identify any noise sources other than the facility which may be contributing to the noise complaints. One spot measurement was taken before and after the survey period.

Table 4.4. Summary of spot measurement results.

Survey Period	Start Time	Measured Noise Levels (dB re. 2×10^{-5} Pa)			Maximum K_t Identified (dB)
		L_{Aeq}	L_{AFMax}	L_{AF90}	
Before Survey Period ¹	13/08/2026 23:41	54	86	47	5
After Survey Period	14/08/2026 03:59	51	66	43	0

¹ High L_{AFMax} due to passing emergency sirens on R134. Tonal analysis was conducted for periods where this noise source was absent from the ambient noise levels and L_{Aeq} was adjusted to remove this source.

The soundscape during both measurements comprised local and distant RTN and facility noise emissions. During the first spot measurement, facility noise consisted of a constant low frequency rumble, broadband swishing noise, mid frequency tonal components and intermittent broadband pressure release noise. During the second measurement, this constant low frequency rumble was absent and facility noise in general was noted to have decreased.

A K_t correction of 5 dB was identified at frequencies of 52.125 and 103.125 Hz during the first spot measurement, indicating the presence of clearly audible tones close to the site boundary. This aligns with subjective observations made during this measurement.

No correction was identified for any frequencies during the second spot measurement.

4.6 Determination of compliance

Table 4.5 below summarises the measured noise levels at the two noise monitoring locations and compares them against the night-time noise limit specified in IE Licence P1113-02 (see **Table 2.1**).

Table 4.5. Summary of noise monitoring results.

Location	Start Time	Noise Level (L_{Aeq})	Facility Noise Dominant	Tonal Noise Confirmed	Compliant
N1	14/08/2026 00:34	48	No	No	Yes
	14/08/2026 02:23	47			
N2	14/08/2026 01:34	39	No	No	Yes
	14/08/2026 03:06	39			

In summary, the Echelon Clondalkin DC Services Limited facility is deemed to have been compliant with the night-time noise limits set out in IE Licence P1113-02 during the survey.

5.0 Conclusion

Tetra Tech was commissioned by the Environmental Protection Agency (EPA) to conduct a noise monitoring survey and compliance assessment of the site operations at the Echelon Clondalkin DC Services Limited facility at Crag Avenue, Clondalkin Industrial Estate, Clondalkin, Co. Dublin, to support an EPA noise complaint investigation. The facility operates under IE Licence P1113-02. The survey was undertaken on the 13th and 14th of August 2026.

The methodology for the noise monitoring survey generally followed EPA NG4 guidance. An attended survey was conducted at two complainants' properties during the night-time period, as defined in IE Licence P1113-02. Additionally, two spot measurements were undertaken close to the site boundary.

All measurements have been objectively analysed for clearly audible tonal noise using BS4142 Annex C and Annex D methodology, as recommended by NG4.

In summary, findings of the assessment include:

- Facility noise emissions were audible at both monitoring locations during the survey period but were not observed to be the dominant noise source.
- Tonal noise from the facility was subjectively perceptible during the first measurement at N2 and just perceptible during the second measurement. Tonal noise was subjectively not perceptible during both measurements at N1.
- Neither the subjective nor objective assessment of tonal noise conducted as part of this assessment confirmed the presence of clearly audible tonal noise from the facility at the monitoring locations.
- During the first spot measurement close to the site boundary, facility noise emissions showed clearly audible tonal characteristics.
- Noise levels from the facility at the monitoring locations have been assessed to be below the licensed noise levels during the survey.

During the survey, the Echelon Clondalkin DC Services Limited facility is deemed to have been compliant with the night-time noise limits set out in IE Licence P1113-02.

Appendix A: Equipment Calibration Certificates



NSAI

National Metrology Laboratory

Certificate of Calibration

Issued to **RPS Consulting Engineers Ltd**
West Pier Business
Dun Laoghaire
Co Dublin

Certificate Number	25-4242
Item Calibrated	Bruel & Kjaer 2250 Sound Level Meter
Serial Number	2690265
ID Number	None
Order Number	30783
Date Received	09 Apr 2025
NML Procedure Number	TFAP-NM-16 Rev 1.2

Method The above sound level meter was allowed to stabilise for a suitable period in laboratory conditions. It was then calibrated by carrying out the verification tests detailed in IEC 61672-3 (2006), *Periodic tests, specification for the verification of sound level meters*. This standard specifies a procedure for the periodic verification of conformance of a sound level meter or integrating-averaging meter to IEC 61672-1 (2003).

Calibration Standards Norsonic 1504A Calibration System incorporating:
 SR DS360, No. 0735 (Cal. Due Date: 24 Mar 2026)
 Agilent 34401A, No. 0736 (Cal. Due Date: 25 Mar 2026)
 B&K 4180, No. 1069 (Cal. Due Date: 15 Sep 2025)
 B&K 4228, No. 0741 (Cal. Due Date: 14 Sep 2025)
 B&K 4226, No. 0150 (Cal. Due Date: 20 Mar 2026)

Calibrated by		Approved by	
	David Fleming		Ronan O'Doherty
Date of Calibration	04 Jun 2025	Date of Issue	04 Jun 2025



This certificate is consistent with Calibration and Measurement Capabilities (CMCs) that are included in Appendix C of the Mutual Recognition Arrangement (MRA) drawn up by the International Committee for Weights and Measures (CIPM). Under the MRA, all participating institutes recognize the validity of each other's calibration certificates and measurement reports for quantities, ranges and measurement uncertainties specified in Appendix C (for details see www.bipm.org)

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NSAI

National Metrology Laboratory

Certificate of Calibration

Issued to RPS Consulting Engineers Ltd
West Pier Business
Dun Laoghaire
Co Dublin

Certificate Number	25-16125
Item Calibrated	Svantek SV36 Sound Level Calibrator
Serial Number	124177
ID Number	None
Order Number	31350
Date Received	02 Jan 2026
NML Procedure Number	TFAP-NM-11 Rev 1.6

Method The above calibrator was allowed to stabilize for a suitable period in laboratory conditions. It was then calibrated by measuring the sound pressure level generated in its measuring cavity (half-inch configuration). The calibrator's operating frequency was also measured.

Calibration Standards Norsonic 1504A Calibration System incorporating:
Agilent 34401A, No. 0736 (Cal. Due Date: 25 Mar 2026)
B&K 4134, No. 0744 (Cal. Due Date: 01 Aug 2027)
B&K 4228, No. 0740 (Cal. Due Date: 31 Jul 2027)

Calibrated by

David Fleming

Approved by

Dubhaltach
MacLochlainn

Date of Calibration

14 Jan 2026

Date of Issue

16 Jan 2026

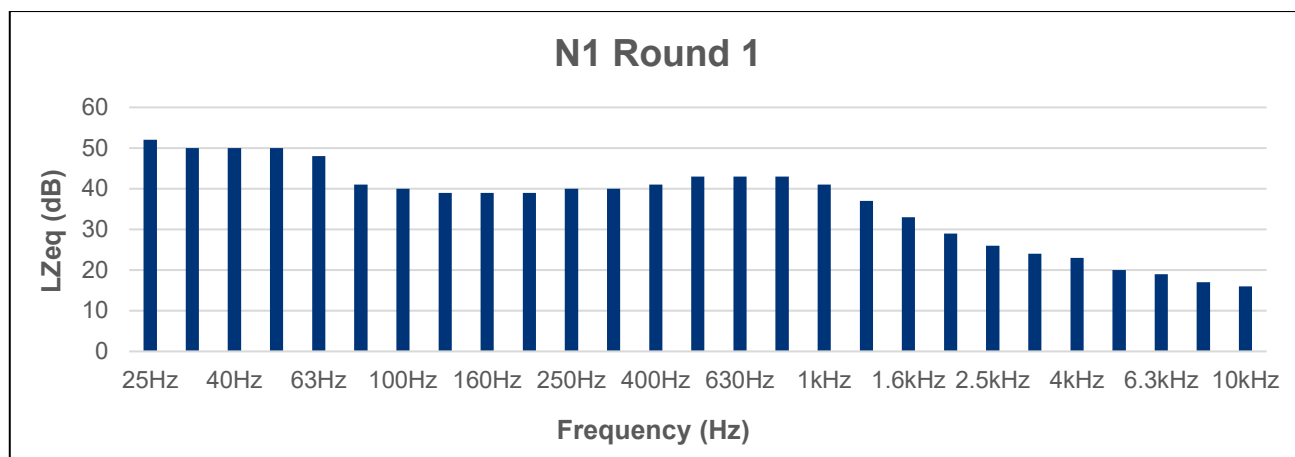


This certificate is consistent with Calibration and Measurement Capabilities (CMCs) that are included in Appendix C of the Mutual Recognition Arrangement (MRA) drawn up by the International Committee for Weights and Measures (CIPM). Under the MRA, all participating institutes recognize the validity of each other's calibration certificates and measurement reports for quantities, ranges and measurement uncertainties specified in Appendix C (for details see www.bipm.org). The "CIPM MRA Logo" and this statement attest only to the measurement component of the certificate.

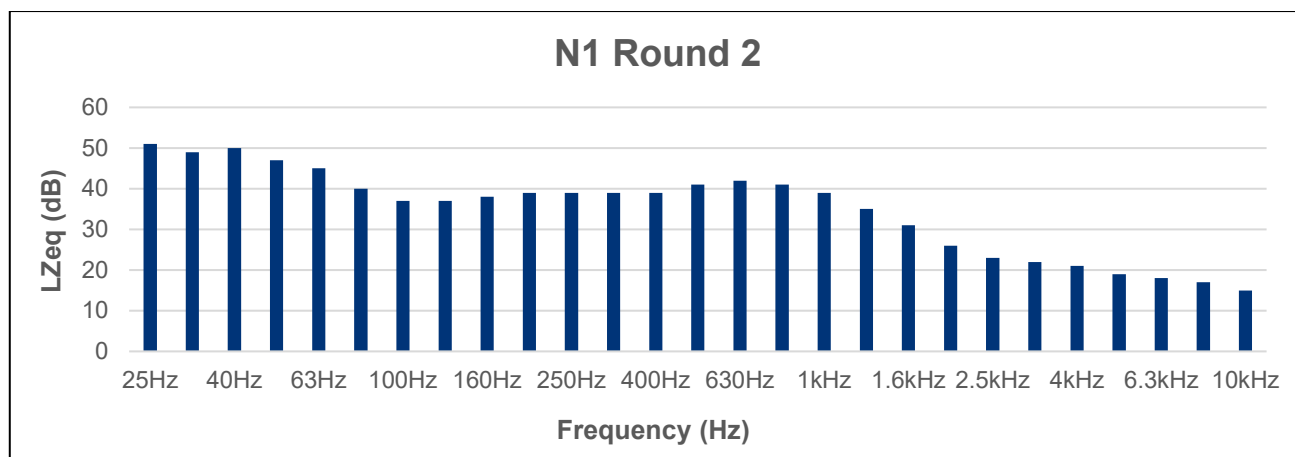
Glas Naíon | Baile Átha Cliath 11 | Éire
Glasnevin | Dublin 11 | Ireland T+353 1 808 2609 | F+353 1 808 2603 | NSAI.ie

Page 1 of 4

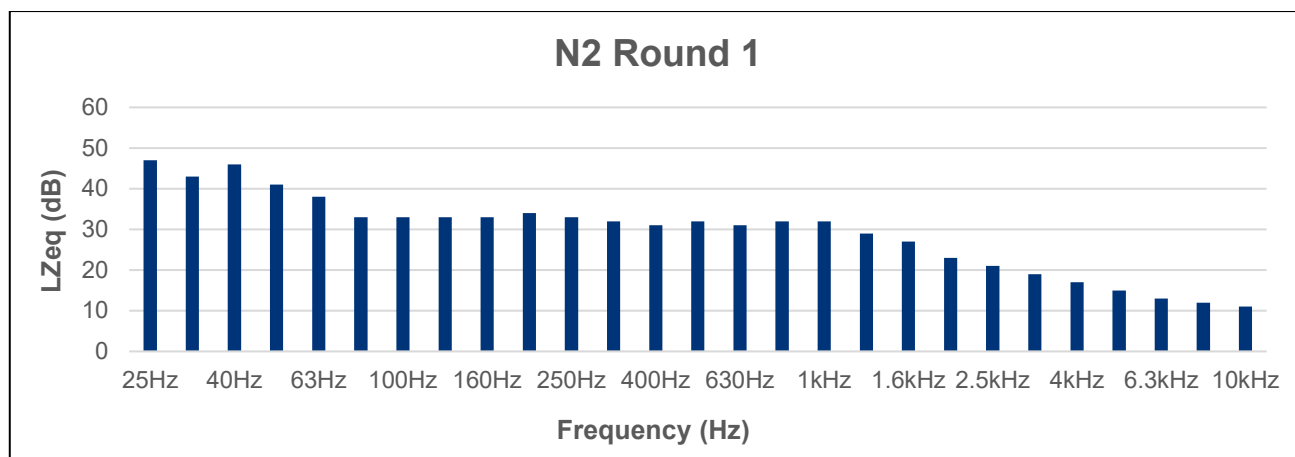
Appendix B: BS4142 Annex C 1/3 Octave Band Tonal Analysis



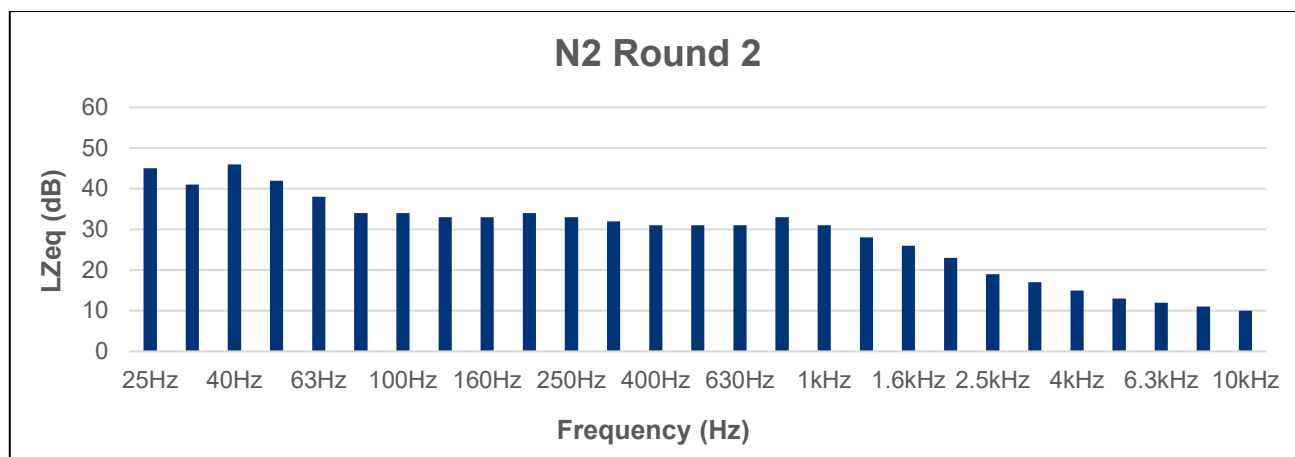
Frequency (Hz)	Measured L _{ZeQ} (dB)	Difference Between Preceding Bands (dB)	Difference Between Following Bands (dB)	Acceptable Difference (dB)	Tonal
25	52	-2	2	15	No
31.5	50	-2	0	15	No
40	50	0	0	15	No
50	50	0	2	15	No
63	48	-2	7	15	No
80	41	-7	1	15	No
100	40	-1	1	15	No
125	39	-1	0	15	No
160	39	0	0	8	No
200	39	0	-1	8	No
250	40	1	0	8	No
315	40	0	-1	8	No
400	41	1	-2	8	No
500	43	2	0	5	No
630	43	0	0	5	No
800	43	0	2	5	No
1000	41	-2	4	5	No
1250	37	-4	4	5	No
1600	33	-4	4	5	No
2000	29	-4	3	5	No
2500	26	-3	2	5	No
3250	24	-2	1	5	No
4000	23	-1	3	5	No
5000	20	-3	1	5	No
6300	19	-1	2	5	No
8000	17	-2	1	5	No
10000	16	-1	2	5	No



Frequency (Hz)	Measured L _{ZeQ} (dB)	Difference Between Preceding Bands (dB)	Difference Between Following Bands (dB)	Acceptable Difference (dB)	Tonal
25	51	-3	2	15	No
31.5	49	-2	-1	15	No
40	50	1	3	15	No
50	47	-3	2	15	No
63	45	-2	5	15	No
80	40	-5	3	15	No
100	37	-3	0	15	No
125	37	0	-1	15	No
160	38	1	-1	8	No
200	39	1	0	8	No
250	39	0	0	8	No
315	39	0	0	8	No
400	39	0	-2	8	No
500	41	2	-1	5	No
630	42	1	1	5	No
800	41	-1	2	5	No
1000	39	-2	4	5	No
1250	35	-4	4	5	No
1600	31	-4	5	5	No
2000	26	-5	3	5	No
2500	23	-3	1	5	No
3250	22	-1	1	5	No
4000	21	-1	2	5	No
5000	19	-2	1	5	No
6300	18	-1	1	5	No
8000	17	-1	2	5	No
10000	15	-2	1	5	No



Frequency (Hz)	Measured L _{ZeQ} (dB)	Difference Between Preceding Bands (dB)	Difference Between Following Bands (dB)	Acceptable Difference (dB)	Tonal
25	47	-1	4	15	No
31.5	43	-4	-3	15	No
40	46	3	5	15	No
50	41	-5	3	15	No
63	38	-3	5	15	No
80	33	-5	0	15	No
100	33	0	0	15	No
125	33	0	0	15	No
160	33	0	-1	8	No
200	34	1	1	8	No
250	33	-1	1	8	No
315	32	-1	1	8	No
400	31	-1	-1	8	No
500	32	1	1	5	No
630	31	-1	-1	5	No
800	32	1	0	5	No
1000	32	0	3	5	No
1250	29	-3	2	5	No
1600	27	-2	4	5	No
2000	23	-4	2	5	No
2500	21	-2	2	5	No
3250	19	-2	2	5	No
4000	17	-2	2	5	No
5000	15	-2	2	5	No
6300	13	-2	1	5	No
8000	12	-1	1	5	No
10000	11	-1	0	5	No



Frequency (Hz)	Measured L _{ZeQ} (dB)	Difference Between Preceding Bands (dB)	Difference Between Following Bands (dB)	Acceptable Difference (dB)	Tonal
25	45	-2	4	15	No
31.5	41	-4	-5	15	No
40	46	5	4	15	No
50	42	-4	4	15	No
63	38	-4	4	15	No
80	34	-4	0	15	No
100	34	0	1	15	No
125	33	-1	0	15	No
160	33	0	-1	8	No
200	34	1	1	8	No
250	33	-1	1	8	No
315	32	-1	1	8	No
400	31	-1	0	8	No
500	31	0	0	5	No
630	31	0	-2	5	No
800	33	2	2	5	No
1000	31	-2	3	5	No
1250	28	-3	2	5	No
1600	26	-2	3	5	No
2000	23	-3	4	5	No
2500	19	-4	2	5	No
3250	17	-2	2	5	No
4000	15	-2	2	5	No
5000	13	-2	1	5	No
6300	12	-1	1	5	No
8000	11	-1	1	5	No
10000	10	-1	0	5	No

FOLLOW-UP ACTIONS

The licensee is required to complete the actions outlined in this site visit report within the specified timeframes. Where required, the licensee shall also respond to actions specified in Compliance Investigations and/or submit a response to this site visit report via the EDEN system. The licensee shall maintain a documentary evidence, for review by the Agency, that the prescribed actions were completed within the required timeframe.

(i) Compliance Investigations

The Agency may generate a Compliance Investigation through the EDEN system and issue instructions and actions to the licensee. The licensee will receive notification when an instruction or action is issued and the licensee must respond to the actions within the Compliance Investigation within the specified timeframe.

(ii) Response to Site Visit Report

Where the licensee is requested to (or wishes to) respond to the Agency in relation to this site visit report, the licensee may select the 'Make a Response' link on the Site Visits page in EDEN where a .pdf document containing the response can be attached and submitted. The response should include details of the actions taken by the licensee to address the issues raised in this site visit report and the target completion dates. This Licensee Public Response provides the licensee with an opportunity to inform both the Agency and the public about the implementing of actions set out in the Agency site visit report. The response must be submitted **within 21 calendar days** of the issue date of this site visit report.

(iii) Publication of Reports

This site visit report will be published on the EPA's website, www.epa.ie, 30 calendar days after the site visit report issue date.

Any licensee response to this site visit report will be published on the EPA's website simultaneously (i.e. 30 calendar days after the site visit report issue date).

Please note that licensees are required to comply with the conditions of the licence at all times, and where non-compliance occurs, compliance must be restored within the shortest possible time. These actions will be verified during subsequent Agency visits. Please quote the above Inspection Reference Number in any correspondence in relation this Report.