



Derry City & Strabane
District Council
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Chathair Dhoire &
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Derry Cittie & Stràbane
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Entertainment Noise



Health &
Community
Wellbeing

Introduction



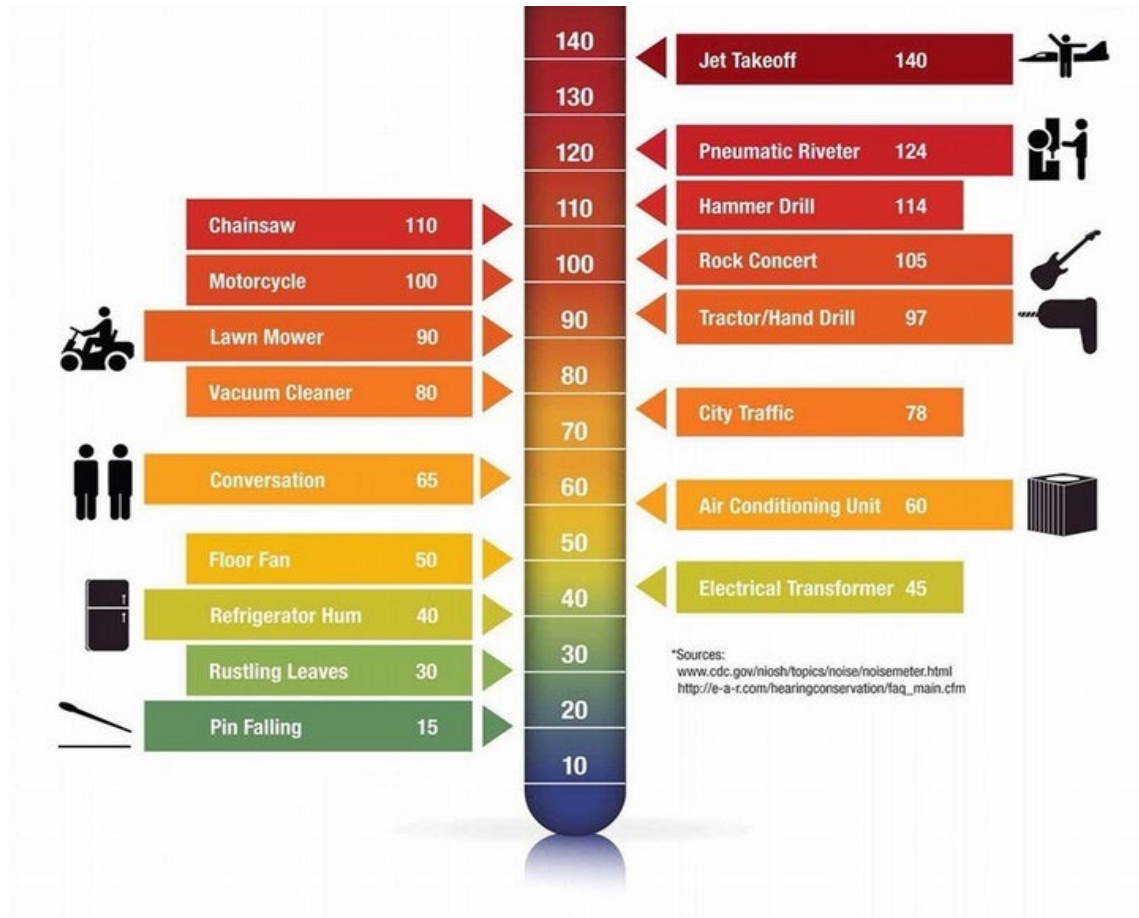
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Decibels (dB)



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Legislation

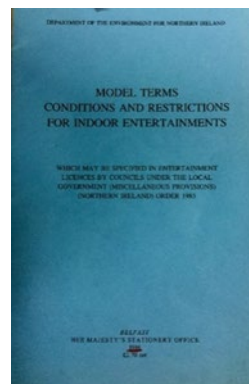


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- Clean Neighbourhoods and Environment Act (NI) 2011
- Local Government (Miscellaneous Provisions) (Northern Ireland) Order 1985
- Noise Act 1996



Guidance to District Councils on Part 7
(Statutory Nuisances) of the Clean



Clean Neighbourhoods and Environment Act (NI) 2011

- **Section 63** (1) Subject to subsections (2) to (9), the following matters constitute “statutory nuisances” for the purposes of this Part, that is to say –
 - (i) **noise emitted from premises** so as to be prejudicial to health or a nuisance
- **Section 65**—(1) where a district council is satisfied that a statutory nuisance exists, or is likely to occur or recur, in the district of the council, the district council **shall** serve a notice (“an abatement notice”) imposing all or any of the following requirements—
 - requiring the abatement of the nuisance or prohibiting or restricting its occurrence or recurrence,
 - requiring the execution of such works, and the taking of such other steps, as may be necessary for any of those purposes,and the notice shall specify the time or times within which the requirements of the notice are to be complied with.



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Local Government (Miscellaneous Provisions) (Northern Ireland) Order 1985

The model terms provides a list of model conditions that can be applied to entertainment licenses. With respect to noise, the key condition is 13.09:

“Noise arising from the entertainment on the premises shall be controlled so that:

(a) It prevents persons in the neighbourhood being unreasonably disturbed; and

(b) It is not audible within any neighbouring residential property between the hours of 2300 and 0700, or such other hours as the Council may determine”

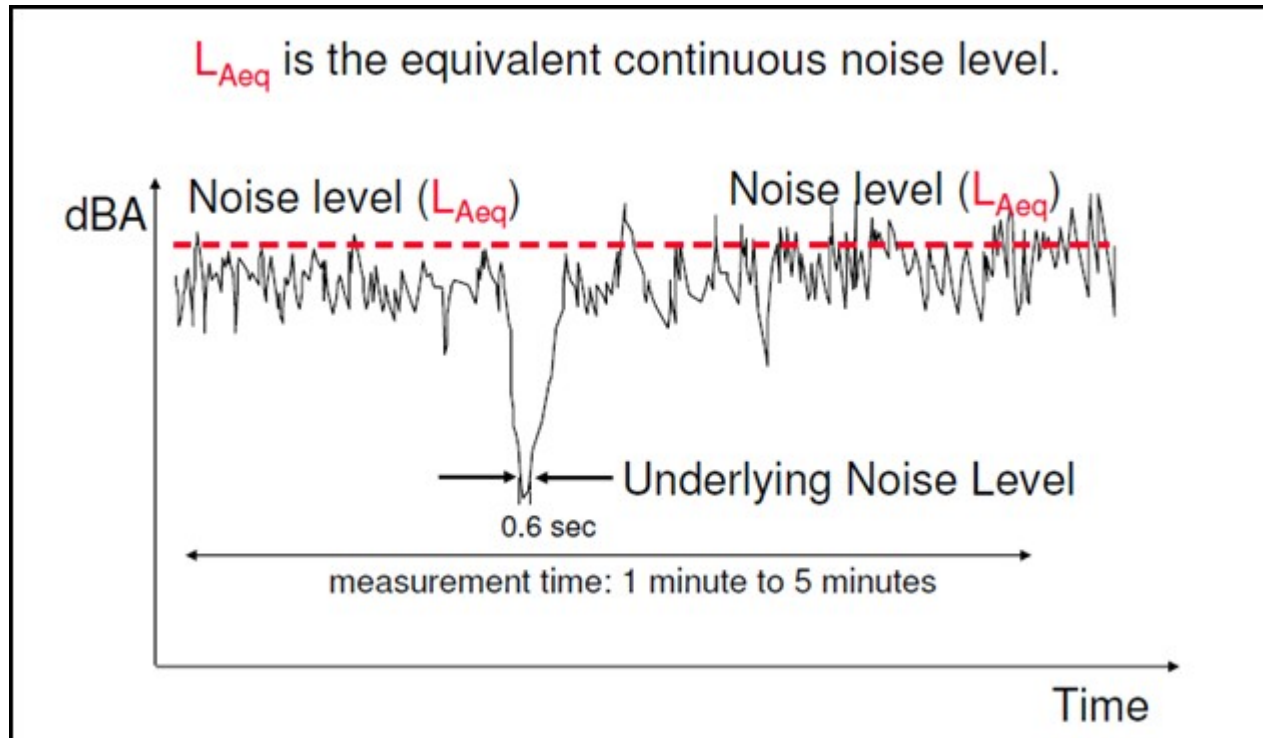
Noise Act 1996

- Applies to night hours only - 11pm and ending with the following 7am
- Offence is committed if a person fails to ensure that any noise emitted from their premises does not exceed the **permitted level** after the service of a Warning Notice
- District council may issue a fixed penalty notice - fixed penalty for night noise from “offending premises” is set at £500 for licenced premises
- **Permitted Level**
 - (a) In any case where the **underlying level** of noise does not exceed 21 dB, the permitted level shall be 31 dB; or
 - (b) In any case where the **underlying level** of noise exceeds 21 dB, the permitted level of noise shall be 10 dB in excess of that underlying level of noise

Noise Act 1996 Underlying Noise



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Noise Act 1996

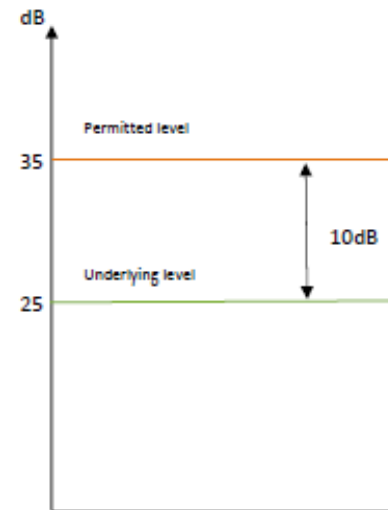
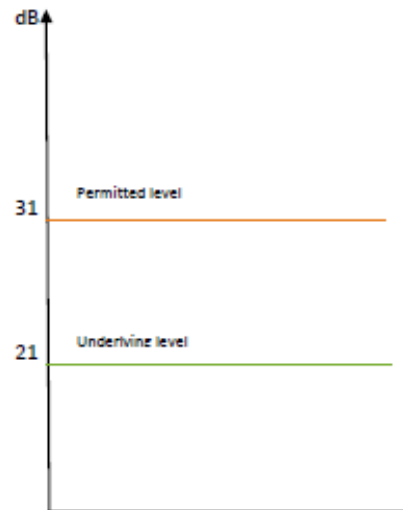


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Permitted Noise Level

If the underlying level does not exceed 21dB the permitted level is 31dB

If the underlying level exceeds 21dB the permitted level is 10dB above the underlying level



WHO Guidelines for Community Noise



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Absolute noise limits can be found in World Health Organisation (WHO) publication Guidelines for Community Noise, 1999:

“To protect the majority of people from being seriously annoyed during the **daytime**, the sound pressure level on balconies, terraces and outdoor living areas **should not exceed 55 dB LAeq for a steady, continuous noise.**”

and

“For a **good night’s sleep**, the equivalent sound level **should not exceed 30dB(A)** for continuous background noise, **and individual noise events exceeding 45dB(A) should be avoided.**”

“When the noise is composed of a large proportion of low frequency sounds a still lower **guideline value** is recommended, because low frequency noise can disturb rest and sleep even at low sound pressure levels.”

IOA Good Practice Guide Pubs + Clubs



The Institute of Acoustics (IOA) established a working group to produce guidance for noise from pubs and clubs. Although no Code of Practice was produced by the group, a Good Practice Guide was published in 2003. Within it, criteria were recommended in which noise from pubs and clubs is compared with existing background (LA90) sound pressure levels. The criteria are defined by how often entertainment takes place at a venue and whether or not it continues beyond 23:00hrs.

“The LAeq of the entertainment noise should not exceed the representative background noise level L90 (without entertainment noise)”.

Noise Rating Curves

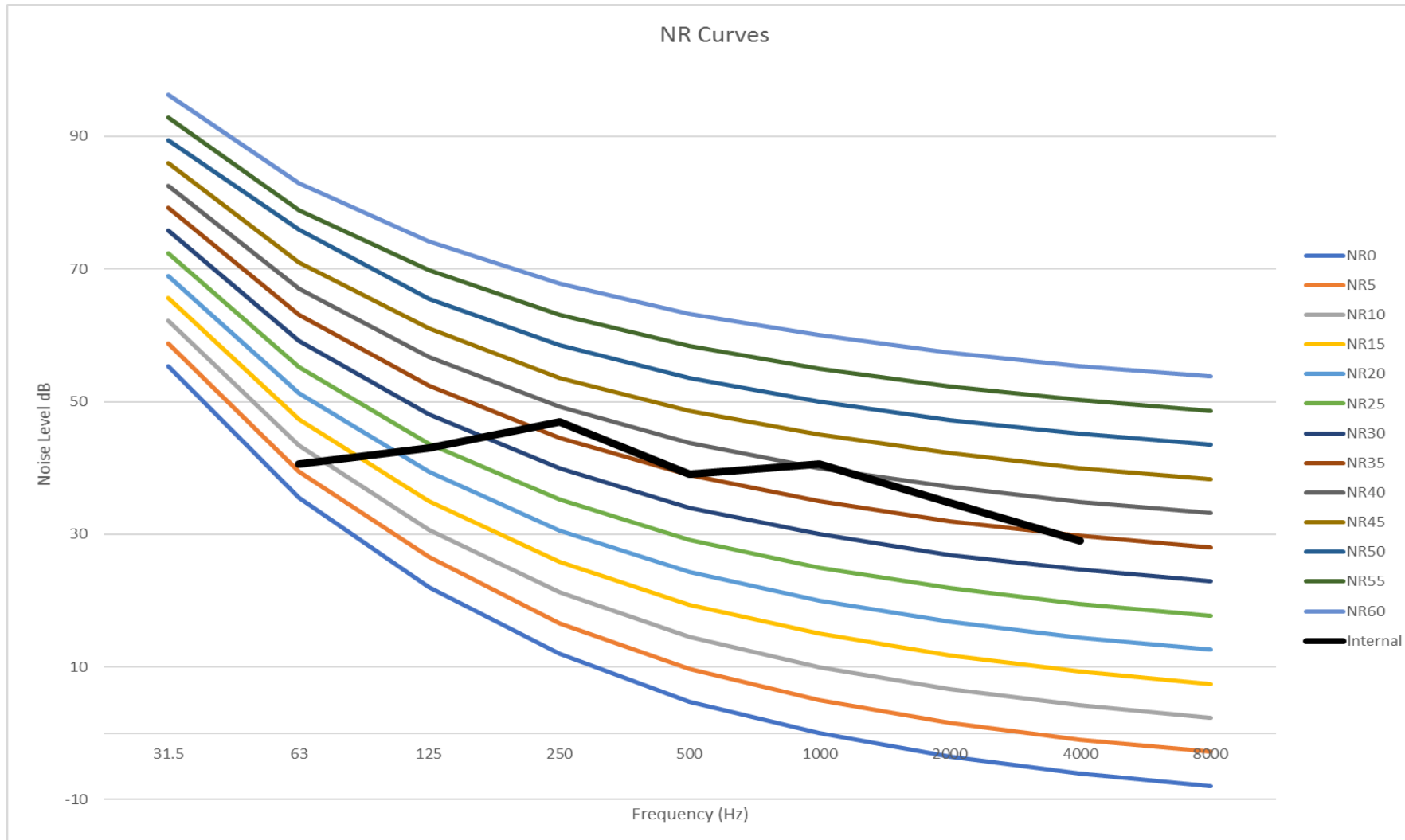
Noise Rating (NR) curves as defined in ISO 1996:1971 are commonly applied in defining impacts from a variety of sources, **as NR curves give due consideration to low frequency content from certain noise sources.**

It is considered that a noise rating curve of NR15 within bedrooms, should protect occupants **against noise arising from entertainment sources**, and should **result in virtual inaudibility** of entertainment noise within the receptor property for the majority of people. As people have a wide range of hearing ability it may be possible that more sensitive receptors in low background noise environments will be able to hear a faint beat at noise levels compliant with NR15



Noise Rating Curves

NR 41





Noise Rating Curves

All mitigation should be assessed spectrally

	Octave Band Centre Frequency							Hz
	63	125	250	500	1k	2k	4k	
Internal noise criteria (NR 15)	47	35	26	19	15	12	9	
Predicted external SPL	60.6	57.0	60.9	55.1	54.6	51.7	48.0	
Assumed R_w (open window)	20	14	14	16	14	17	19	dB
Predicted internal SPL	40.6	43.0	46.9	39.1	40.6	34.7	29.0	
Require additional attenuation of venue external facade	-	8.0	20.9	20.1	25.6	22.7	20.0	

WHO Environmental Noise Guidelines for the European Region

- Provides recommendations for protecting human health from exposure to leisure noise
- Among young people aged 12–35 years 40% are exposed to potentially damaging levels of sound at nightclubs, bars and sporting events
- Recommends reducing the yearly average from all leisure noise sources combined to 70 dB LAeq,24h

Table 49. Combination of hourly exposure and number of hours per week to arrive at a yearly average L_{Aeq}

Hours of exposure per week	One-hour exposure level (L_{Aeq})						
	70	75	80	85	90	95	100
1	48	53	58	63	68	73	78
2	51	56	61	66	71	76	81
4	54	59	64	69	74	79	84
14 (2 hours per day, 7 days per week)	59	64	69	74	79	84	89
28 (4 hours per day, 7 days per week)	62	67	72	77	82	87	92
40 (8 hours per day, 5 days per week)	64	69	74	79	84	89	94
168 (24 hours per day, 7 days per week)	70	75	80	85	90	95	100

Indoor Mitigation - Structure

- Upgraded glazing – unopenable/linked to cut off device
- Upgraded roof – suspended heavy ceiling, no opening
- Acoustic silencers on ventilation
- Lobby buffer between entertainment spaces and external areas
- Upgraded doors with good seals/self closers
- Place quieter areas of building towards residents – buffer
- Install noise limiting device

Noise Mitigation



Before carrying out any internal or external alterations to the building, you should consult the Council's Planning and Building Control departments to find out whether permission is required



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Mitigation - Management

- Not allow noise limiters to be bypassed –reduce bass
- Not allow lobby doors to be propped open – poor ventilation
- Position of loudspeakers/No external PA systems
- Keep windows and doors closed
- Do Not allow rowdy external behaviour
- Community Engagement
- Train Staff



Noise Limiting Devices



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Traffic Light – microphone feed back, cuts power
Compression – keeps noise at set level but not allow above

Other Noise Sources

- Refrigeration and ventilation systems
- Beer Gardens/Smoking Shelters



Other Noise Sources



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- Bottle Sorting
- Deliveries
- Car Parking



Useful Links



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- Institute of Acoustics www.ioa.org.uk/
- Association of Noise Consultants www.association-of-noise-consultants.co.uk/
- DAERA - Noise www.daera-ni.gov.uk/articles/noise
- Derry City and Strabane District Council www.derrystrabane.com
- British Beer and Pub Association - Effective Management of Noise from Licensed Premises www.beerandpub.com