Unofficial translation.
Legally binding only in Finnish and Swedish

Decree of the Ministry of the Environment

on the Acoustic Environment of Buildings

By decision of the Ministry of the Environment, the following is enacted under section 117f, subsection 3 of the Land Use and Building Act (132/1999), as amended by Act 958/2012:

Section 1

Scope of application

This Decree lays down provisions on sound insulation, noise and vibration abatement and acoustic conditions of buildings, as well as on noise abatement and acoustic conditions of yards, spaces intended for use by residents and balconies used by residents.

This Decree applies to buildings with dwellings or accommodation or patient rooms, facilities for teaching, meeting, eating, treatment, recreation or physical exercise, or office spaces.

This Decree applies to the construction of a new building, repair and alteration work of a building, and alteration of the intended use of a building in building planning, building permit procedure and building supervision under the Land Use and Building Act (132/1999).

Section 2

Definitions

In this Decree,

1) *weighted standardised level difference* ($D_{nT,w}$) means the measure describing the airborne sound insulation between room spaces;

2) *weighted standardised impact sound pressure level* ($L'_{nT,w} + C_{1,50\text{-}2500}$) means the measure describing the impact sound insulation between room spaces;

3) *A-weighted equivalent continuous sound level* ($L_{Aeq,T}$) means the measure describing the level of non-temporary noise in a room or outdoor space;

4) *maximum sound pressure level* ($L_{AFmax,T}$) means the measure describing the intermittent short-term noise level of non-temporary sound in a room or outdoor space;

5) *reverberation time* (T) means the measure describing the reverberance in a room space;

6) *structure-borne noise* means the noise-inducing mechanical vibration in a structure or other solid object;

7) *vibration* means the annoying mechanical vibration observed by humans.

Section 3

Design and construction of the acoustic environment of a building

The noise and vibration at the site of the building shall be taken into account in the design and construction of the building.

The essential technical characteristics concerning the acoustic environment of a building are fulfilled if in the design and implementation of the sound insulation and noise and vibration abatement of the building and the acoustic conditions consideration is given to the intended use of the space as laid down in this Decree.

If it is not practicable to apply the procedure referred to in subsection 2 on account of the special characteristics of the building or the acoustic environment outside it, special use of the space or user group or some other special reason, the party initiating the building project shall in connection with the building permit procedure demonstrate that, considering the intended use of the space, the design process will lead to the fulfilment of the essential technical characteristics with regard to the sound insulation, noise and vibration abatement and acoustic conditions.

Section 4

Requirements for the sound insulation of a new building

In the design and implementation of airborne sound insulation and impact sound insulation of dwellings and accommodation and patient rooms, the following numerical values shall be observed:

Room space	Minimum permitted weighted standardised level difference ($D_{nT,w}$), in dB	Maximum permitted weighted standardised impact sound pressure level ($L'_{nT,w} + C_{1,50\text{-}2500}$), in dB
Between dwellings or accommodation or patient rooms	55	53
From the exit route to a residential, accommodation or patient room	39	63

If the dwelling or accommodation or patient room is structurally connected with spaces where intense, particularly annoying or low-frequency noise is generated, in the design and implementation process special consideration shall be given to the implementation of sufficient sound insulation. In rooms used for sleeping or rest, the one-hour A-weighted equivalent continuous sound level of impulsive, narrowband or low-frequency noise may not exceed 25 decibels.

Considering the intended use of the space, the sound insulation of facilities for teaching, meeting, eating, treatment, recreation or physical exercise or office spaces shall be designed and implemented so that the acoustic environment achieved adequately meets the requirements for the activities carried out in the space. The sound insulation of recessed balconies, conservatories and roof terraces shall be designed and implemented so that the acoustic environment does not cause any inconvenience to the residents.

Section 5

Requirements for noise and vibration abatement in a new building

The sound insulation of the envelope of a building with dwellings or accommodation or patient rooms shall be designed and implemented so that the sound insulation is at least 30 decibels and the A-weighted equivalent continuous sound level of impulsive, narrowband or low-frequency noise in rooms used for sleeping or rest does not exceed 25 decibels.

The installation of lifts in a building and technical building systems shall be designed and implemented so that the noise level generated by them in residential or other spaces in dwellings, accommodation or patient rooms, outside openable windows or air vents of the same building or adjacent residential buildings, on balconies used by residents, or in yards or other spaces intended for use by residents does not exceed the following numerical values:

Room and outdoor space	Continuous broadband noise		Impulsive or narrowband noise	
	A-weighted equivalent continuous sound level ($L_{Aeq,T}$), in dB	Maximum sound pressure level ($L_{AFmax,T}$), in dB	A-weighted equivalent continuous sound level ($L_{Aeq,T}$), in dB	Maximum sound pressure level ($L_{AFmax,T}$), in dB
Residential room or accommodation or patient room	28	33	25	30
Residential kitchen or recreational room in a building	33	38	30	35
Staircase or exit route	38	43	35	40
Outdoor space	45	50	40	45

Considering the intended use of the space, the structure-borne noise and vibration insulation of a building with dwellings or accommodation or patient rooms and the noise and vibration abatement of facilities for teaching, meeting, eating, treatment, recreation or physical exercise and office spaces shall be designed and implemented so that the acoustic environment achieved adequately meets the requirements for the activities carried out in the space.

Section 6

Requirements for the acoustic conditions of a new building

The acoustic conditions of a building with patient rooms and facilities for teaching, meeting, eating, treatment, recreation or physical exercise and office spaces shall be designed and implemented so that the speech discrimination achieved in the space is adequate considering the intended use of the space.

A building with dwellings or accommodation or patient rooms shall be designed and implemented so that the reverberation time of the staircase and exit route is no more than 1.3 seconds. Yards and spaces intended for use by residents of a building and balconies used by residents shall be designed and implemented so that the A-weighted equivalent continuous sound level between 7.00 and 22.00 does not exceed 55 decibels and, similarly, conservatories so that the A-weighted equivalent continuous sound level does not exceed 45 decibels.

Section 7

Repair construction, alteration work and change in the intended use of a building

Repair or alteration work of a building shall not weaken the sound insulation, noise and vibration abatement or acoustic conditions of the building or the noise abatement or acoustic conditions of yards, spaces intended for use by residents and balconies used by residents.

When the intended use of the building is altered, the sound insulation, noise and vibration abatement and acoustic conditions of the building as well as the noise abatement and acoustic conditions of yards, spaces intended for use by residents and balconies used by residents shall be designed and implemented so that the acoustic environment does not cause any inconvenience to the residents.

Section 8

Entry into force

This Decree enters into force on 1 January 2018.

Upon the entry into force of this Decree, pending projects shall be subject to the rules valid at the time of entry into force of this Decree.

Helsinki, 24 November 2017

Kimmo Tiilikainen, Minister for Housing, Energy and the Environment

Ari Saarinen, Environment Counsellor