



STATUTORY INSTRUMENTS.

S.I. No. 663 of 2021

EUROPEAN COMMUNITIES (ENVIRONMENTAL NOISE)
(AMENDMENT) REGULATIONS 2021

EUROPEAN COMMUNITIES (ENVIRONMENTAL NOISE)
(AMENDMENT) REGULATIONS 2021

I, EAMON RYAN, Minister for the Environment, Climate and Communications, in exercise of the powers conferred on me by section 3 of the European Communities Act 1972 (No.27 of 1972) and for the purpose of giving further effect to Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 relating to the assessment and management of environmental noise¹, as amended by Commission Directive (EU) 2020/367 establishing assessment methods for harmful effects of environmental noise² and Commission Delegated Directive (EU) 2021/1226 establishing common noise assessment methods³ and for the purposes of giving full effect to Directive 2002/49/EC as amended by EU Regulation 2019/1010⁴ and the associated Commission Implementing Decision (EU) 2021/1967⁵ establishing alignment of reporting obligations in the field of legislation related to the environment, hereby make the following regulations:

Citation

1. These Regulations may be cited as the European Communities (Environmental Noise) (Amendment) Regulations 2021.

Commencement

2. These Regulations shall come into operation on 31 December 2021.

Interpretation

3. In these Regulations –

“Principal Regulations” means the European Communities (Environmental Noise) Regulation 2018 (S.I. No. 549 of 2018).

Amendment of Regulation 2 “Interpretation” of the Principal Regulations

4. Regulation 2(1) is amended -

- (a) In the definition of “Annex” by substituting “Annex II to Commission Directive (EU) 2002/49/EC, as amended” for “Annex to Commission Directive (EU) 2015/996”, and
- (b) By adding: “data repository” means an information system, managed by the European Environment Agency, containing

¹ OJ L 189, 18.7.2002, p. 12-25.

² OJ L 067, 5.3.2020, p. 132-136.

³ OJ L 269, 28.7.2021, p. 65-142.

⁴ OJ L 170, 25.6.2019, p. 115-127.

⁵ OJ L 400, 12.11.2021, p.160-195

environmental noise information and data made available through national data reporting and exchange nodes under the control of the Member States.

Amendment of Regulation 9 “Assessment Methods” of the Principal Regulations

5. Regulation 9 (2) is replaced with the following: Noise-Mapping bodies shall calculate harmful effects in accordance with the Second Schedule. The Action Planning Authorities shall estimate the expected reduction in the harmful effects of noise exposure to the population as a result of the mitigation measures contained in their Noise Action Plans.

Amendment of Regulation 12 “Action Plans” of the Principal Regulations

6. Regulations 12(1) and 12(3)(a) are amended by the substitution of “2024” for “2023” in each place that it occurs.

Amendment of Regulation 13 “Access to Information” of the Principal Regulations

7. Regulation 13 is replaced with the following: Noise-mapping bodies and action planning authorities shall, in accordance with relevant Union legislative acts, in particular, Directives 2003/4/EC and 2007/2/EC of the European Parliament and of the Council, and in conformity with the Third and Fourth Schedule to the Principal Directive, the provisions of the European Communities (Access to Information on the Environment) Regulations 2007 (S.I. No. 133 of 2007), as amended, make strategic noise maps and revised strategic noise maps and, action plans and revised action plans available to the public and disseminate them by any appropriate means, including through the use of available information technologies.

Amendment of Regulation 14 “Reporting” of the Principal Regulations

8. Regulation 14 (1) is replaced with the following: The Agency shall furnish the Commission with information from strategic noise maps and summaries of action plans as referred to in the Fifth Schedule and in the Annex to Commission Implementing Decision (EU) 2021/1967, within six months of the dates set out in Regulation 11 and 12. For that purpose, the Agency shall only report the information by electronic means to a mandatory data repository. In the event that the Agency wants to update information, it shall describe the differences between the updated and original information and the reasons for the update when making the updated information available to the data repository.

Amendment of Second Schedule “Assessment Methods for Harmful Effects” to the Principal Regulations

9. The Second Schedule to the Principal Regulations is replaced with the following:

ASSESSMENT METHODS FOR HARMFUL EFFECTS

1. Set of harmful effects

For the purposes of the assessment of harmful effects the following shall be considered:

- ischaemic heart disease (IHD) corresponding to codes BA40 to BA6Z of the international classification ICD-11 established by the World Health Organisation;
- high annoyance (HA);
- high sleep disturbance (HSD).

2. Calculation of harmful effects

The harmful effects shall be calculated by either of the following:

- the relative risk (RR) of a harmful effect defined as

$$RR = \left(\frac{\begin{matrix} \text{Probability of occurrence of the harmful effect} \\ \text{in a population exposed} \\ \text{to a specific level of environmental noise} \end{matrix}}{\begin{matrix} \text{Probability of occurrence of the harmful effect} \\ \text{in a population non exposed} \\ \text{to environmental noise} \end{matrix}} \right) \quad (\text{Formula 1})$$

- the absolute risk (AR) of a harmful effect defined as

$$AR = \left(\frac{\begin{matrix} \text{Occurrence of the harmful effect} \\ \text{in a population exposed} \\ \text{to a specific level of environmental noise} \end{matrix}}{\begin{matrix} \text{to a specific level of environmental noise} \end{matrix}} \right) \quad (\text{Formula 2})$$

2.1. Ischaemic Heart Disease (IHD)

For the calculation of the RR, with respect to the harmful effect of IHD and concerning the incidence rate (i), the following dose-effect relations shall be used:

$$RR_{IHD,i,road} = \begin{cases} e^{[(\ln(1.08)/10)*(L_{den}-53)]} & \text{for } L_{den} \text{ greater than } 53 \text{ dB} \\ 1 & \text{for } L_{den} \text{ equal or smaller than } 53 \text{ dB} \end{cases}$$

(Formula 3)

for road noise.

2.2. High Annoyance (HA)

For the calculation of the AR, with respect to the harmful effect of HA the following dose-effect relations shall be used:

$$AR_{HA,road} = \frac{(78.9270 - 3.1162 * L_{den} + 0.0342 * L_{den}^2)}{100} \quad (\text{Formula 4})$$

for road noise;

$$AR_{HA,rail} = \frac{(38.1596 - 2.05538 * L_{den} + 0.0285 * L_{den}^2)}{100} \quad (\text{Formula 5})$$

for railway noise;

$$AR_{HA,air} = \frac{(-50.9693 + 1.0168 * L_{den} + 0.0072 * L_{den}^2)}{100} \quad (\text{Formula 6})$$

for aircraft noise.

2.3. High Sleep Disturbance (HSD)

For the calculation of the AR, with respect to the harmful effect of HSD the following dose-effect relations shall be used:

$$AR_{HSD,road} = \frac{(19.4312 - 0.9336 * L_{night} + 0.0126 * L_{night}^2)}{100} \quad (\text{Formula 7})$$

for road noise;

$$AR_{HSD,rail} = \frac{(67.5406 - 3.1852 * L_{night} + 0.0391 * L_{night}^2)}{100} \quad (\text{Formula 8})$$

for railway noise;

$$AR_{HSD,air} = \frac{(16.7885 - 0.9293 * L_{night} + 0.0198 * L_{night}^2)}{100} \quad (\text{Formula 9})$$

for aircraft noise.

3. Assessment of harmful effects

3.1. The exposure of the population shall be assessed independently for each noise source and harmful effect. Where the same people are simultaneously exposed to different noise sources, the harmful effects may -in general- not be cumulated. However, those effects may be compared to assess the relative importance of each noise.

3.2. Assessment for IHD

3.2.1. **For IHD in the case of railway and aircraft noise**, the population exposed above adequate L_{den} levels is estimated as subject to an increased risk of IHD, while the exact number N of cases of IHD cannot be calculated.

3.2.2. **For IHD in the case of road noise**, the proportion of cases of the specific harmful effect in the population exposed to a RR that is calculated to be caused by environmental noise is derived, for the noise source x (road), harmful effect y (IHD) and for the incidence i by:

$$PAF_{x,y} = \left(\frac{\sum_j [p_j \cdot (RR_{j,x,y} - 1)]}{\sum_j [p_j \cdot (RR_{j,x,y} - 1)] + 1} \right) \text{ (Formula 10)}$$

Where:

- $PAF_{x,y}$ is the population attributable fraction,
- the set of j noise bands is made up of single bands spanning over a maximum of 5 dB (e.g.: 50-51 dB, 51-52 dB, 52-53 dB, etc. or 50-54 dB, 55-59 dB, 60-64 dB, etc.),
- p_j is the proportion of the overall population P in the area assessed that is exposed to the j -th exposure band, which is associated with a given RR of a specific harmful effect $RR_{j,x,y}$. The $RR_{j,x,y}$ is calculated using the formulas described in point 2 of this Schedule, calculated at the central value of each noise band (e.g.: depending on availability of data, at 50,5 dB for the noise band defined between 50-51 dB, or 52 dB for the noise band 50-54 dB).

3.2.3. **For IHD in the case of road noise, the total number N of cases of IHD** (people affected by the harmful effect y ; number of attributable cases) due to the source x is then:

$$N_{x,y} = PAF_{x,y,i} * I_y * P \text{ (Formula 11)}$$

for road.

Where:

- $PAF_{x,y,i}$ is calculated for the incidence i ,
- I_y is the incidence rate of IHD in the area under assessment, that can be obtained from statistics on health for the region or country where the area is,
- P is the total population of the area under assessment (the sum of the population in the different noise bands).

3.3. **For HA and HSD in the case of road, railway and aircraft noise, the total number N of people affected by the harmful effect y** (number of attributable cases) due to the source x , for each combination of noise source x (road, railway or aircraft source) and harmful effect y (HA, HSD), is then:

$$N_{x,y} = \sum_j [n_j * AR_{j,x,y}] \text{ (Formula 12)}$$

Where:

- $AR_{x,y}$ is the AR of the relevant harmful effect (HA, HSD), and is calculated using the formulas set out in point 2 of this Schedule, calculated at the central value of each noise band (e.g.: depending on availability of data, at 50,5 dB for the noise band defined between 50-51 dB, or 52 dB for the noise band 50-54 dB),
- n_j is the number of people that is exposed to the j -th exposure band.

4. Future revisions

The dose-effect relations introduced by future revisions of this Schedule will concern in particular:

- the relation between annoyance and L_{den} for industrial noise,
- the relation between sleep disturbance and L_{night} for industrial noise.

If necessary, specific dose-effect relations could be presented for:

- dwellings with special insulation against noise as defined in the Fifth Schedule,
- dwellings with a quiet façade as defined in the Fifth Schedule,
- different climates/different cultures,
- vulnerable groups of the population,
- tonal industrial noise,
- impulsive industrial noise and other special cases.

Amendment of Sixth Schedule “Agglomerations” to the Principal Regulations

10. The Sixth Schedule to the Principal Regulations is replaced with the following:

The “agglomeration of Cork” means the city of Cork together with the included areas of the administrative county of Cork.

The included areas of the administrative county of Cork are:-

The Electoral Divisions of:-

Ballincollig

Douglas

Inishkenny
Monkstown Urban
Monkstown Rural
Rathcooney

The excluded areas of the administrative county of Cork are:-

In the Electoral Division of Monkstown Rural, the townlands of:-

Ballyhemiken
Carrigaline
Raffeen

The “agglomeration of Dublin” means

- The city of Dublin.
- The county of Dún Laoghaire-Rathdown.
- The county of Fingal.
- The county of South Dublin.

The excluded area of Dún Laoghaire-Rathdown is as follows:

The Electoral Division of Tibradden

The included areas in the county of Kildare are:

The Electoral Division of: Leixlip

In the Electoral Division of Celbridge, the townlands of:

Aghards, Ballymakealy Lowe
Castletown, Celbridge
Celbridge Abbey, Oakleypark
Oldtown, Parsonstown
Rinawade Lower, Rinawade Upper
Thornill.

In the Electoral Division of Donaghcumper, the townlands of:

Backweston Park, Ballymadeer
Ballyoulster, Balscott
Celbridge Abbey, Commons
Commons Lower, Conetburrow
Coolfitch, Dangan
Donaghcumper, Elmhall

Kearneystown Lowe, Loughlinstown
Newtown, Simmonstown
St Wolstans, Stacumny
Stacumny Cottage, Straleek

The included areas in the county of Wicklow are:

The Electoral Divisions of:

Bray No. 1, Bray No. 2
Bray No. 3, Rathmichael (Bray)

In the Electoral Division of Kilmacanoge, the townlands of:

Ballymorros, Ballynamuddagh
Ballywaltrin, Bray Commons
Carrigoona Commons East, Fassaroe
Giltspur, Glencormick North
Glencormick South, Hollybrook
Irishtown, Kilbride
Kilcroney, Killarney
Kilmacanoge North,
Kilruddery Demesne East
Kilruddery Demesne West, Oldcourt
Springfield, Wingfield

The “agglomeration of Limerick” means the included areas in the county of Limerick and the included areas in the county of Clare.

The included areas in the county of Limerick are:-

The Electoral Divisions of:-

Abbey A, Abbey B, Abbey C, Abbey D,
Ballinacurra A, Ballinacurra B, Ballycummin, Ballynancy,
Castle A, Castle B, Castle C, Castle D, Coolraine, Custom House,
Dock A, Dock B, Dock C, Dock D
Farranshone,
Galvone A, Galvone B, Glentworth A, Glentworth B, Glentworth C

John's A, John's B, John's C
Killeely A, Killeely B
Limerick North Rural, Limerick South Rural
Market
Prospect A, Prospect B
Rathbane,
Shannon A, Shannon B, Singland A, Singland B
St. Laurence

In the Electoral Division of Ballysimon, the townlands of:-

Ballybrennan, Ballysimon, Ballysimon (Dickson)
Ballysimon (Staunton), Ballysimon Commons Coolyhenan
Drombanny, Dromroe
Garryglass,
Kilbane , Killonan, Knockananty
Milltown, Newcastle, Newtown
Peafield,
Sreelane,
Towlerton

In the Electoral Division of Ballyvarra, the townlands of:-

Ballyclogh
Casteltroy
Garraun, Garraunykee
Rivers, Woodstown

In the Electoral Division of Roxborough, the townlands of:-

Bohereen, Ballyclogh, Ballysheedy West
Derrybeg, Derryknockane
Rathurd, Rootiagh, Routagh, Roxborough

The included areas in the county of Clare are:-

The Electoral Division of Ballyglass.

In the Electoral Division of Cappavilla, the townlands of:-
Clooncarhy

Derryfada
Garraun, Gillogue
Strawickeen



GIVEN under my Official Seal,
1 December 2021.

EAMON RYAN
Minister for the Environment, Climate and
Communications.

EXPLANATORY NOTE

(This note is not part of the instrument and does not purport to be a legal interpretation)

The purpose of these amending Regulations is to give further effect to the implementation of Directive 2002/49/EC of the European Parliament and of the Council of 25 June 2002 establishing a common framework to avoid, prevent or reduce, on a prioritised basis, the harmful effects of exposure to environmental noise.

The Regulations transpose EU Directive 2020/367 which amends Annex III to Directive 2002/49/EC as regards the establishment of dose-effect relations to be introduced by way of adaptations to technical and scientific progress. The Regulations also transpose Commission Delegated Directive (EU) 2021/1226, for the purposes of adapting to scientific and technical progress Annex II to Directive 2002/49/EC as regards the establishment of common noise assessment methods. The Regulations also transpose EU Regulation 2019/1010 and the associated Commission Implementing Decision (EU) 2021/1967, which develop a mandatory data repository and a mandatory digital information exchange mechanism to enable Member States to share information on strategic noise maps and noise action plans.

The Regulations also update agglomeration definitions in light of expansions in the urban landscape over the last 15 years.

The Regulations may be cited as the European Communities (Environmental Noise) (Amendment) Regulations 2021.

BAILE ÁTHA CLIATH
ARNA FHOILSIÚ AG OIFIG AN tSOLÁTHAIR
Le ceannach díreach ó
FOILSEACHÁIN RIALTAIS,
BÓTHAR BHAILE UÍ BHEOLÁIN,
CILL MHAIGHNEANN,
BAILE ÁTHA CLIATH 8,
D08 XAO6

Tel: 046 942 3100
r-phost: publications@opw.ie

DUBLIN
PUBLISHED BY THE STATIONERY OFFICE
To be purchased from
GOVERNMENT PUBLICATIONS,
MOUNTSHANNON ROAD,
KILMAINHAM, DUBLIN 8,
D08 XAO6

Tel: 046 942 3100
E-mail: publications@opw.ie

€3.50

