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Interested committees:

Title: Draft BS EN 14388 Road traffic noise reducing devices - Specifications.

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- i) has any issues related to 3rd party IPR, patent or copyright
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## Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

## UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

## Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

## Template for comments and secretariat observations

|                  |                        |
|------------------|------------------------|
| Date: xx/xx/20xx | Document: ISO/DIS xxxx |
|------------------|------------------------|

| 1  | 2                                          | (3)                          | 4               | 5                                                                                                                                  | (6)                                                                      | 7                                                  |
|----|--------------------------------------------|------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------|
| MB | Clause No./ Subclause No./Annex (e.g. 3.1) | Paragraph/Figure/ Table/Note | Type of comment | Commend (justification for change) by the MB                                                                                       | Proposed change by the MB                                                | Secretariat observations on each comment submitted |
|    | 3.1                                        | Definition 1                 | ed              | Definition is ambiguous and needs clarifying.                                                                                      | Amend to read '...so that the mains connector to which no connection...' |                                                    |
|    | 6.4                                        | Paragraph 2                  | te              | The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK. | Delete reference to UV photometer.                                       |                                                    |

English Version

## Road traffic noise reducing devices - Specifications

Dispositifs de réduction du bruit du trafic routier -  
Spécifications

Lärmschutzvorrichtungen an Straßen - Vorschriften

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 226.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

**Warning :** This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

| <b>Contents</b>                                                                                                       | <b>Page</b> |
|-----------------------------------------------------------------------------------------------------------------------|-------------|
| European foreword.....                                                                                                | 3           |
| 1 Scope .....                                                                                                         | 4           |
| 2 Normative references .....                                                                                          | 4           |
| 3 Terms and definitions .....                                                                                         | 5           |
| 4 Requirements .....                                                                                                  | 6           |
| 4.1 General .....                                                                                                     | 6           |
| 4.2 Dangerous substances .....                                                                                        | 10          |
| 4.3 Manuals .....                                                                                                     | 10          |
| 5 Testing and assessment methods .....                                                                                | 10          |
| 6 Assessment and verification of constancy of performance – AVCP .....                                                | 10          |
| 6.1 General .....                                                                                                     | 10          |
| 6.2 Type testing .....                                                                                                | 11          |
| 6.2.1 General .....                                                                                                   | 11          |
| 6.2.2 Test samples, testing and compliance criteria .....                                                             | 11          |
| 6.2.3 Test reports .....                                                                                              | 12          |
| 6.2.4 Shared other party results .....                                                                                | 12          |
| 6.2.5 Cascading determination of the product type results .....                                                       | 13          |
| 6.3 Factory production control (FPC) .....                                                                            | 14          |
| 6.3.1 General .....                                                                                                   | 14          |
| 6.3.2 Requirements .....                                                                                              | 14          |
| 6.3.3 Product specific requirements .....                                                                             | 17          |
| 6.3.4 Initial inspection of factory and of FPC .....                                                                  | 18          |
| 6.3.5 Procedure for modifications .....                                                                               | 18          |
| 6.3.6 One-off products, pre-production products (e.g. prototypes) and products produced<br>in very low quantity ..... | 18          |
| Annex ZA (informative) Relationship of this European Standard with Regulation (EU) No.<br>305/2011 .....              | 20          |
| ZA.1 Scope and relevant characteristics .....                                                                         | 20          |
| ZA.2 System of Assessment and Verification of Constancy of Performance (AVCP) .....                                   | 22          |
| ZA.3 Assignment of AVCP tasks .....                                                                                   | 22          |

## European foreword

This document (prEN 14388:2017) has been prepared by Technical Committee CEN/TC 226 “Road equipment”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document supersedes EN 14388:2015.

The main changes compared to the previous edition are:

- an improved definition of a Noise Reducing Device;
- two standards EN 1793-1 and EN 1793-5 are now specified for the measurement of sound absorption / sound reflection, each with a specific field of application;
- this version integrates the revised version of EN 1794-1;
- revision of Annex ZA according to Regulation EU 305/2011, following TF N 687rev1 (2015-06-02).

For information, the main changes between EN 14388:2015 and hEN 14388:2005 were:

- two standards EN 1793-2 and EN 1793-6 were specified for the measurement of airborne sound insulation, each with a specific field of application;
- revision of Annex ZA according to Regulation EU 305/2011.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of the EU Construction Products Regulation.

For relationship with the EU Construction Products Regulation, see informative Annex ZA, which is an integral part of this document.

## 1 Scope

This European Standard specifies requirements for the following road traffic noise reducing devices (as defined in 3.1):

- noise barriers (as defined in 3.4),
- claddings (as defined in 3.5),
- covers (as defined in 3.6), and
- added devices (as defined in 3.7).

These devices may include both acoustic and structural elements, where:

- an acoustic element is an element whose primary function is to provide a noise reducing device with sound insulation, diffraction and/or sound absorption, it is a part of noise reducing device to be used along roads, and
- a structural element is an element whose primary function is to support or hold in place acoustic elements, it is a part of noise reducing device to be used along roads. Depending upon the design of the noise reducing device, structural elements may potentially be tested separately from acoustic elements.

They may be made of different materials for which specific standards are to be applied in accordance with the specifications prescribed hereafter. Some of the materials may contain dangerous substances, the reason why all the materials are declared.

This European Standard identifies the relevant characteristics of road traffic noise reducing devices, the corresponding methods of evaluation and specifies the provisions on evaluation of conformity and marking.

This European Standard covers acoustic, non-acoustic and long-term performance, but not aspects such as resistance to vandalism or requirements of visual appearance.

This European Standard provides Annex ZA for the declaration of performance of all types of Noise Reducing Devices and for their elements. When prepared for an element, the declaration of performance has to be included through a cascading process in the declaration of performance of the final / installed Noise Reducing Device.

This European Standard does not cover road surfaces or the airborne sound insulation of houses.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1317-2:2010, *Road restraint systems — Part 2: Performance classes, impact test acceptance criteria and test methods for safety barriers including vehicle parapets*

EN 1793-1:2017, *Road traffic noise reducing devices — Test method for determining the acoustic performance — Part 1: Intrinsic characteristics of sound absorption under diffuse sound field conditions*

EN 1793-2:2012, *Road traffic noise reducing devices — Test method for determining the acoustic performance — Part 2: Intrinsic characteristics of airborne sound insulation under diffuse sound field conditions*

EN 1793-4:2015, *Road traffic noise reducing devices — Test method for determining the acoustic performance — Part 4: Intrinsic characteristics — In situ values of sound diffraction*

EN 1793-5:2016, *Road traffic noise reducing devices — Test method for determining the acoustic performance — Part 5: Intrinsic characteristics — In situ values of sound reflection under direct sound field conditions*

EN 1793-6:2012, *Road traffic noise reducing devices — Test method for determining the acoustic performance - Part 6: Intrinsic characteristics — In situ values of airborne sound insulation under direct sound field conditions*

EN 1794-1:2017, *Road traffic noise reducing devices — Non-acoustic performance — Part 1: Mechanical performance and stability requirements*

EN 1794-2:2011, *Road traffic noise reducing devices — Non-acoustic performance — Part 2: General safety and environmental requirements*

EN 1794-3:2016, *Road traffic noise reducing devices — Non-acoustic performance — Part 3: Reaction to fire - Burning behaviour of noise reducing devices and classification*

EN 14389-1:2015, *Road traffic noise reducing devices — Procedures for assessing long term performance — Part 1: Acoustical characteristics*

EN 14389-2:2015, *Road traffic noise reducing devices — Procedures for assessing long term performance — Part 2: Non-acoustical characteristics*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1

##### **noise reducing device (NRD)**

system designed to reduce the propagation of traffic noise away from the road environment

Note 1 to entry: The NRD may comprise acoustic elements only or both structural and acoustic elements.

Note 2 to entry: Applications of NRD include noise barriers, claddings, covers and added devices.

#### 3.2

##### **acoustic element**

element whose primary function is to provide the acoustic performance of the device

#### 3.3

##### **structural element**

element whose primary function is to support or hold in place acoustic elements

#### 3.4

##### **noise barrier**

noise reducing device which obstructs the direct transmission of airborne sound emanating from road traffic

#### 3.5

##### **cladding**

noise-reducing device which is attached to a wall or other structure and reduces the amount of sound reflected

## 3.6

**cover**

noise-reducing device which either spans or overhangs the road

## 3.7

**added device**

additional component that influences the acoustic performance of the original noise-reducing device (acting primarily on the diffracted energy)

## 4 Requirements

### 4.1 General

Products covered by the standard, when required, shall be assessed in accordance with the supporting standards indicated in Table 1.

The test methods or calculation methods referred to in Table 1 generate declared performance only. On this basis, compliance criteria are not relevant.

The manufacturer shall be responsible for describing the application(s) of the NRD, including installation details. (see installation instructions manual in 4.3).

**Table 1 — Noise Reducing Devices (NRD): Required test methods and declared values**

| Characteristic                                                                             | Test method or calculation | Declared value                                     | Amount of samples | Notes                                    |
|--------------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------|-------------------|------------------------------------------|
| <b>Sound absorption / Sound reflection</b>                                                 |                            |                                                    |                   | Added devices not concerned              |
| $DL_{\alpha, \text{NRD}}$ <sup>a</sup> under diffuse sound field conditions <sup>b</sup>   | EN 1793-1 (test)           | dB, on specified absorptive side(s) of the barrier | 1                 |                                          |
| $DL_{\text{RI}}$ <sup>a</sup> under direct sound field conditions <sup>c</sup>             | EN 1793-5 (test)           | dB, on specified absorptive side(s) of the barrier | 1                 |                                          |
| <b>Airborne sound insulation</b>                                                           |                            |                                                    |                   | Added devices and cladding not concerned |
| $DL_{\text{R}}$ under diffuse sound field conditions <sup>b</sup>                          | EN 1793-2 (test)           | dB                                                 | 1                 |                                          |
| $DL_{\text{SI,E}}$ and $DL_{\text{SI,P}}$ under direct sound field conditions <sup>c</sup> | EN 1793-6 (test)           | dB                                                 | 1                 |                                          |