



BSI Standards Publication

**Road restraint system —  
Pedestrian restraint system —  
Pedestrian parapets**

**National foreword**

This Published Document is the UK implementation of CEN/TR 16949:2016. It supersedes PD CEN/TR 1317-6:2012 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/509/1, Road restraint systems.

A list of organizations represented on this committee can be obtained on request to its secretary.

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TECHNICAL REPORT

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English Version

## Road restraint system - Pedestrian restraint system - Pedestrian parapets

Dispositifs de retenue routiers - Dispositifs de retenue  
pour piétons - Garde-corps

Rückhaltesysteme an Straßen -  
Fußgängerrückhaltesysteme - Brückengeländer

This Technical Report was approved by CEN on 2 March 2016. It has been drawn up by the Technical Committee CEN/TC 226.

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## European foreword

This document (CEN/TR 16949:2016) has been prepared by Technical Committee CEN/TC 226 "Road equipment", the secretariat of which is held by AFNOR.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes CEN/TR 1317-6:2012.

CEN/TR 16949:2016 includes editorial changes with respect to CEN/TR 1317-6:2012 for correcting mistakes which could lead to an incorrect or unsafe application of the document.

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## Introduction

The safety considerations of pedestrians using road bridges, footbridges and similar elevated structures require the installation of special road restraint systems, so called pedestrian restraint systems or pedestrian parapets.

Pedestrian parapets are used to prevent people from falling off a bridge or other type of elevated structure.

Aspects included in the Technical Report are:

- a) safety in use for pedestrians and other highway users (excluding motor vehicles);
- b) the safety considerations of pedestrians using road bridges and footbridges and similar structures;
- c) analysis and test methods;
- d) durability;
- e) labelling and marking.

## 1 Scope

This Technical Report specifies geometrical and technical requirements for the design and manufacture for pedestrian parapets on road bridges, on footbridges, on top of retaining walls and on similar elevated structures.

This Technical Report also specifies test methods and provision for the labelling and marking of these products.

This Technical Report does not cover:

- vehicle restraint systems;
- pedestrian restraint systems in residential, commercial or industrial buildings and within their perimeter;
- non-rigid rails i.e. rope, cables.

This Technical Report may be used for pedestrian parapets on structures which cross over railways, rivers and canals.

## 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 1317-1:2010, *Road restraint systems - Part 1: Terminology and general criteria for test methods*

EN 1990:2002, *Eurocode - Basis of structural design*

EN 10204, *Metallic products - Types of inspection documents*

EN 12767, *Passive safety of support structures for road equipment - Requirements, classification and test methods*

## 3 Terms, definitions, symbols and abbreviations

### 3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1317-1:2010 and the following apply.