BS EN 16907-1:2018

BSI Standards Publication

Earthworks

Part 1: Principles and general rules

National foreword

This British Standard is the UK implementation of EN 16907-1:2018.

Annex H is an informative annex which provides a summary of national practice within the United Kingdom. The UK committee draws users' attention to Table H.3, Design of earthworks, where some boxes are blank as text has been inadvertently omitted. In addition, Table H.4 contains two values which the UK committee suggests are incorrect: under class 6D, size 300 (microns), the range should be 5-48, and under class 6L, size 150 (microns), the range should be 0-15. The UK committee advises users of BS EN 16907-1:2018 that both tables are reproduced with the correct values in the *Specification for Highway Works (SHW), Series 0600 — Earthworks*, which can be obtained from the Highways England website: http://www.dft.gov.uk/ha/standards/mchw/

The UK participation in its preparation was entrusted to Technical Committee B/526/-/1, Earthworks.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Published by BSI Standards Limited 2018

ISBN 978 0 580 91419 5

ICS 93.020

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 December 2018.

Amendments/corrigenda issued since publication

Date	Text affected

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 16907-1

December 2018

ICS 93.020

English Version

Earthworks - Part 1: Principles and general rules

Terrassement - Partie 1 : Principes et règles générales

Erdarbeiten - Teil 1: Grundsätze und allgemeine Regeln

This European Standard was approved by CEN on 20 May 2018.

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Ref. No. EN 16907-1:2018 E

Contents

Page

European foreword

This document (EN 16907-1:2018) has been prepared by Technical Committee CEN/TC 396 "Earthworks", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2019, and conflicting national standards shall be withdrawn at the latest by June 2019.

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 is one of the European Standards within the framework series of EN 16907 on *Earthworks.* The set of standards prepared by CEN/TC 396 is divided into several parts, which correspond to different steps of the planning, execution and control of earthworks and should be considered collectively as a group of standards for executing earthworks. The full set of Parts is as follows:

— EN 16907-1 *Earthworks - Part 1: Principles and general rules* (this document);

— EN 16907-2 *Earthworks - Part 2: Classification of materials;*

— EN 16907-3 *Earthworks - Part 3: Construction procedures;*

— EN 16907-4 *Earthworks - Part 4: Soil treatment with lime and/or hydraulic binders;*

— EN 16907-5 *Earthworks - Part 5: Quality control;*

— EN 16907-6 *Earthworks - Part 6: Land reclamation earthworks using dredged hydraulic fill;*

— EN 16907-7 *Earthworks - Part 7: Hydraulic placement of extractive waste.*

Within this standard, references to specific parts of the standard are written by reference the full reference (e.g. "EN 16907-2").

These "Earthworks standards" do not apply to the environmental planning and geotechnical design that determines the required form and properties of the earth-structure that is to be constructed. They apply to the design of the earthworks materials, execution, monitoring and checking of earthworks construction processes to ensure that the completed earth-structure satisfies the geotechnical design.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard (Part 1) gives definitions, principles and general rules for the planning, design and specification of earthworks. It introduces the other parts of the standard, which will be used together with Part 1.

Earthworks are a civil engineering process aimed at creating earth-structures by changing the geometry of the earth surface for construction or other activities. Application fields of earthworks are associated with:

— transport infrastructures (road and motorways, railways, waterways, airports);

— platforms for industrial, commercial and residential buildings;

— water engineering, flood defence and coastal protection works;

— harbours and airport areas, including the construction of embankments in water;

— river dykes and marine embankments for land reclamation;

— earth and rock fill dams;

— onshore embankments made of hydraulically placed fill;

— noise barriers, visual barrier, and other non-load bearing earthworks:

— landscaping embankments;

— backfilling of open mines and quarries;

— tailings dams;

They are characterized by the need to use available natural or recycled materials and to handle them in a way appropriate to yield prescribed properties.

This standard is applicable to all types of earth-structures, except the cases listed below:

— some specific types of works such as the execution of trenches and small earthworks may be organized using simplified or specific rules;

— some structures, such as dykes and dams, need earthworks which have specific design and construction requirements: these may extend beyond the rules of this standard.

This standard does not cover ground improvement beneath an earth-structure by techniques such as piling, jet grouting, deep soil mixing, vertical drains or stone columns.

Due to the variable subsoil and climate conditions within Europe and to the different national contract conditions, national sets of rules have been established in several European countries which could not be harmonized within a short period by a European Standard. This European Standard gives therefore basic rules to reach the aims described above. Informative Annexes B to H of this document give examples of national practices following these rules.