

Drain and sewer systems outside buildings - Design -
Part 1: Layout principles

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Drain and sewer systems outside buildings - Design - Part 1: Layout principles

Réseaux d'évacuation et d'assainissement à l'extérieur
des bâtiments - Conception - Partie 1 : Principes
d'implantation

Entwässerungssysteme außerhalb von Gebäuden -
Planung - Teil 1: Planungsgrundsätze

This European Standard was approved by CEN on 17 January 2022.

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Contents

Page

European foreword	3
Introduction	4
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions	6
4 General.....	8
4.1 Introduction.....	8
4.2 The design process	8
5 Preliminary investigations.....	10
5.1 General.....	10
5.2 Topography.....	10
5.3 Geotechnical survey.....	10
5.4 Groundwater	11
5.5 Existing drainage services	11
5.6 Other existing utility services	11
5.7 Nature and quality of inputs	11
6 Layout.....	12
6.1 General.....	12
6.2 Access locations.....	14
6.3 Provision of pumping	16
6.4 Drains and sewers near water abstraction areas	17
7 Sources of additional information	17
Bibliography	18

European foreword

This document (EN 16933-1:2022) has been prepared by Technical Committee CEN/TC 165 “Wastewater engineering”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by September 2022, and conflicting national standards shall be withdrawn at the latest by September 2022.

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Introduction

Drain and sewer systems are part of the overall wastewater system that provides a service to the community. This can be briefly described as:

- removal of wastewater from premises for public health and hygienic reasons;
- prevention of flooding in urbanised areas;
- protection of the environment.

The overall wastewater system has four successive functions:

- collection;
- transport;
- treatment;
- discharge.

Drain and sewer systems provide for the collection and transport of wastewater.

EN 752:2017 provides a framework for the design, construction, rehabilitation, maintenance and operation of drain and sewer systems outside buildings. This is illustrated in the upper part of the diagram in Figure 1. EN 752:2017 is supported by more detailed standards for the investigation, design, construction, management and control of drain and sewer systems.

Investigation and assessment standards include:

- EN 13508 (all parts), *Investigation and assessment of drain and sewer systems outside buildings*

Design and construction standards include:

- EN 16932 (all parts), *Drain and sewer systems outside buildings - Pumping systems*
- EN 16933, *Drain, sewer systems outside buildings - Design*
- EN 1295, *Structural design of buried pipelines under various conditions of loading*
- EN 1610, *Construction and testing of drains and sewers*
- EN 12889, *Trenchless construction and testing of drains and sewers*
- EN 15885, *Classification and characteristics of techniques for renovation, repair and replacement of drains and sewers*

Management and control standards include:

- EN 14654 (all parts), *Drain and sewer systems outside buildings - Management and control of activities*

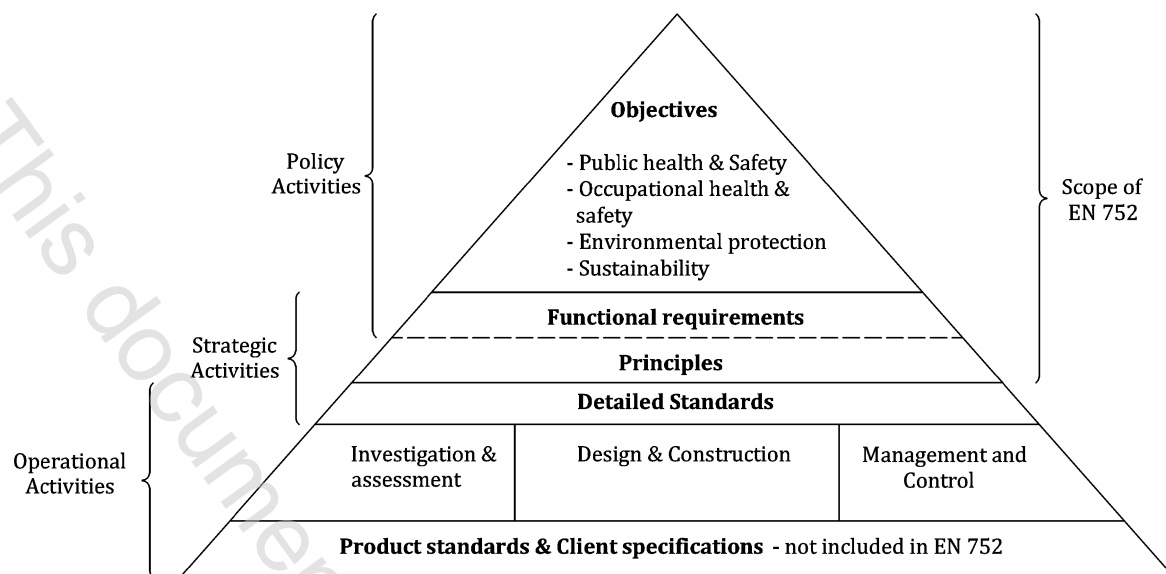


Figure 1 — Relationship to EN 752:2017 and other drain and sewer standards¹

¹ Source: EN 752:2017.

1 Scope

This document specifies requirements for the design of drain and sewer systems outside buildings.

It is applicable to drain and sewer systems from the point where the wastewater leaves a building, roof drainage system, or paved area, to a point where it is discharged into a wastewater treatment plant or receiving water body.

This document specifies requirements for the layout of drain and sewer systems.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 752:2017, *Drain and sewer systems outside buildings - Sewer system management*

EN 14654 (all parts), *Drain and sewer systems outside buildings - Management and control of activities*

EN 16323:2014, *Glossary of wastewater engineering terms*

EN 16932 (all parts), *Drain and sewer systems outside buildings - Pumping systems*

EN 16933-2:2017, *Drain and sewer systems outside buildings - Design - Part 2: Hydraulic design*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 16323 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <https://www.iso.org/obp>

— IEC Electropedia: available at <https://www.electropedia.org/>

NOTE Certain key definitions from EN 16323:2014 have been repeated below for clarity. The following additional terms used in this document are defined in EN 16323:2014:

combined sewer overflow,	jetting,	runoff,
combined system,	maintenance,	separate system,
detention tank,	manhole,	sewer,
drain,	outfall,	sewer system,
dry weather flow,	pumping station,	surcharge,
foul wastewater,	receiving water body,	surface receiving water body,
gradient,	rehabilitation,	surface water,
gravity system,	relevant authority,	wastewater,
infiltration,	repair,	wastewater treatment plant.
inspection chamber,	rising main,	
inverted syphon,	rodding,	