

ÄRAVOOLU- JA KANALISATSIOONISÜSTEEMID
VÄLJASPOOL HOONEID. KÄITUSTEGEVUSTE
HALDAMINE JA KONTROLL. OSA 2: REHABILITATSIOON

Drain and sewer systems outside buildings -
Management and control of activities - Part 2:
Rehabilitation

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 14654-2:2021 sisaldab Euroopa standardi EN 14654-2:2021 ingliskeelset teksti.	This Estonian standard EVS-EN 14654-2:2021 consists of the English text of the European standard EN 14654-2:2021.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 20.01.2021.	Date of Availability of the European standard is 20.01.2021.
Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 93.030

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardimis- ja Akrediteerimiskeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardimis- ja Akrediteerimiskeskuse kirjaliku loata on keelatud

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardimis- ja Akrediteerimiskeskusega: Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation and Accreditation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation and Accreditation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation and Accreditation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

Drain and sewer systems outside buildings - Management and control of activities - Part 2: Rehabilitation

Réseaux d'évacuation et d'assainissement à l'extérieur
des bâtiments - Gestion et contrôle des activités
opérationnelles - Partie 2: Réhabilitation

Entwässerungssysteme außerhalb von Gebäuden -
Management und Überwachung von Maßnahmen - Teil
2: Sanierung

This European Standard was approved by CEN on 6 December 2020.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists 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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

Page

European foreword.....	3
1 Scope.....	4
2 Normative references.....	4
3 Terms and definitions	4
4 General.....	6
5 Integrated sewer system management planning	6
6 Preparation of rehabilitation programme.....	6
6.1 Introduction	6
6.2 Review of the rehabilitation plan.....	6
6.3 Investigation	7
6.4 Assessment.....	7
6.5 Development of the programme.....	8
7 Preparation of the project specification.....	14
7.1 Introduction	14
7.2 Review of the project description and project objectives.....	14
7.3 Investigation	14
7.4 Assessment.....	14
7.5 Drafting the project specification.....	15
7.6 Performance indicators	18
8 Implementation of projects.....	19
8.1 Introduction	19
8.2 Rehabilitation report.....	19
9 Measurement of conformity.....	19
9.1 Measuring conformity with the project specification.....	19
9.2 Non-conformities	20
9.3 Post project appraisal.....	20
10 Review of plan and programme.....	20
Bibliography.....	21

European foreword

This document (EN 14654-2:2021) 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 July 2021, and conflicting national standards shall be withdrawn at the latest by July 2021.

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 EN 14654-2:2013.

The changes to the text in this document are largely editorial and relate to the separation of the duplicated text. Annex A has also been deleted as this is now incorporated into EN 752:2017. The technical changes made is the addition of 7.5.5 on detailed design of the optimal solution.

EN 14654 consists of the following parts, under the general title *Drain and sewer systems outside buildings — Management and control of activities*:

- *Part 1: General*
- *Part 2: Rehabilitation*; (the present document)
- *Part 3: Drain and sewer cleaning*
- *Part 4: Control of inputs from users*

Other parts, dealing with other activities, may be added later.

In drafting this part of EN 14654, account has been taken of other available standards, in particular EN 752, *Drain and sewer systems outside buildings* and EN 13508 *Investigation and assessment of drain and sewer systems outside buildings*.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This document establishes requirements for the management and control of activities in drain and sewer systems outside buildings and specifies requirements for development and implementation of work programmes, and the selection of techniques.

This document covers the management and control of rehabilitation activities.

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

Drains and sewers below buildings are included provided that they do not form part of the drainage system of the building.

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 13508-1:2012, *Investigation and assessment of drain and sewer systems outside buildings — Part 1: General Requirements*

EN 14654-1:2021, *Drain and sewer systems outside buildings - Management and control of activities — Part 1: General*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 16323:2014, EN 14654-1:2021 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 <http://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.

- drain
- sewer
- receiving water body
- surface receiving water body
- sewer system
- wastewater treatment plant

3.1

extraneous water

unwanted flow in a drain or sewer system

[SOURCE: EN 16323:2014, definition 2.1.4.7]