



NSAI
Standards

Irish Standard
I.S. EN 16941-1:2018

On-site non-potable water systems - Part 1: Systems for the use of rainwater

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I.S. EN 16941-1:2018

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Údarás um Chaighdeáin Náisiúnta na hÉireann

National Foreword

I.S. EN 16941-1:2018 is the adopted Irish version of the European Document EN 16941-1:2018, On-site non-potable water systems - Part 1: Systems for the use of rainwater

On-site collection and use of rainwater is an alternative source to public mains water supply for a variety of non-potable water uses in the home, workplace and garden. It can also provide benefits for the attenuation of surface water run-off.

This Standard gives recommendations on the design, installation, commissioning and maintenance of rainwater harvesting systems supplying non-potable water.

This Standard covers systems supplying water for domestic water uses (in residential, commercial, industrial or public premises) that do not require potable water quality such as laundry, WC flushing and garden watering.

All installations are required to comply with the requirements specified in the Department of Housing, Planning and Local Government's Building Regulation Technical Guidance Document Part H - Drainage and Waste Water Disposal relating to rainwater recovery systems.

The design of the rainwater system should also take account of Irish meteorological conditions.

For guidance on the use of Annex A of this standard see Irish National Annex NA:2019 to I.S. EN 16941-1:2018 which is available from the NSAI webstore.

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

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Compliance with this document does not of itself confer immunity from legal obligations.

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EUROPEAN STANDARD

EN 16941-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2018

ICS 93.025

English Version

On-site non-potable water systems - Part 1: Systems for the use of rainwater

Réseaux d'eau non potable sur site - Partie 1 : Systèmes pour l'utilisation de l'eau de pluie

Vor-Ort-Anlagen für Nicht-Trinkwasser - Teil 1: Anlagen für die Verwendung von Regenwasser

This European Standard was approved by CEN on 28 August 2017.

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, 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 United Kingdom.



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EN 16941-1:2018 (E)

European foreword

This document (EN 16941-1:2018) 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 2018 and conflicting national standards shall be withdrawn at the latest by July 2018.

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

EN 16941, *On-site non-potable water systems* consists of the following parts:

- *Part 1: Systems for the use of rainwater*
- *Part 2: Systems for the use of greywater* (in preparation)

According to the CEN-CENELEC Internal Regulations, the national standards organizations 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.

Introduction

Ecological and sustainable water management is a goal of rainwater management. Herein rainwater harvesting and infiltration, as well as the decentralized detention of rainwater, are alternatives to the customary drainage of rainwater. Rainwater harvesting also reduces the potable water demand and the discharge of water.

In order to keep the natural cycle of water, excess water from the rainwater harvesting system can be infiltrated or otherwise evacuated in line with national or regional requirements.

On-site collection and use of rainwater covers a variety of applications like toilet flushing, laundry, irrigation, climate control of buildings, cleaning, etc. at private and rented properties, residential areas, community developments, industrial sites, hotels, streets, parks, golf courses, theme parks, car parks, stadia, etc.

A generic flow chart of rainwater use on-site is presented in Figure 1.

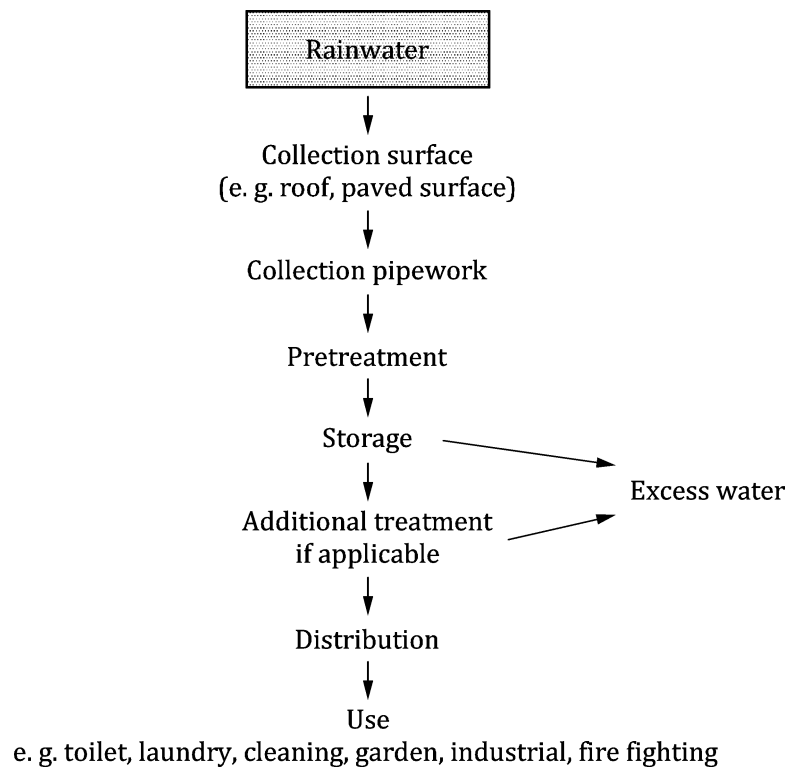


Figure 1 — Generic flow chart of rainwater use

EN 16941-1:2018 (E)**1 Scope**

This European Standard specifies the requirements and gives recommendations for the design, sizing, installation, identification, commissioning and maintenance of rainwater harvesting systems for the use of rainwater on-site as non-potable water. This European Standard also specifies the minimum requirements for these systems.

Excluded from the scope of this European Standard are:

- the use as drinking water and for food preparation;
- the use for personal hygiene purposes;
- decentralized attenuation;
- infiltration.

NOTE Conformity with the standard does not exempt from compliance with the obligations arising from local or national regulations.

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 476, *General requirements for components used in drains and sewers*

EN 805, *Water supply - Requirements for systems and components outside buildings*

EN 806-2, *Specification for installations inside buildings conveying water for human consumption - Part 2: Design*

EN 806-3, *Specifications for installations inside buildings conveying water for human consumption - Part 3: Pipe sizing - Simplified method*

EN 809, *Pumps and pump units for liquids - Common safety requirements*

EN 1295-1, *Structural design of buried pipelines under various conditions of loading - Part 1: General requirements*

EN 1610, *Construction and testing of drains and sewers*

EN 1717, *Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow*

EN 12050 (all parts), *Wastewater lifting plants for buildings and sites*

EN 12056-1, *Gravity drainage systems inside buildings - Part 1: General and performance requirements*

EN 12056-3, *Gravity drainage systems inside buildings - Part 3: Roof drainage, layout and calculation*

EN 12056-4, *Gravity drainage systems inside buildings - Part 4: Wastewater lifting plants - Layout and calculation*

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