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Code of practice for the selection of water reuse systems

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Contents

Foreword *ii*

Introduction *1*

1	Scope	<i>1</i>
2	Normative references	<i>2</i>
3	Terms and definitions	<i>2</i>
4	Assessment process	<i>4</i>
5	Step 1: Initial appraisal of project	<i>4</i>
6	System selection	<i>8</i>
7	Step 2: Assessing physical constraints	<i>9</i>
8	Step 3: Sources and end uses	<i>11</i>
9	Step 4: Supply and demand balance	<i>11</i>
10	Step 5: Assessment and management of risks	<i>14</i>
11	Step 6: Evaluation of system performance	<i>18</i>
12	Comparison of options	<i>22</i>

Annexes

Annex A (informative)	System scale and design complexity	<i>23</i>
Annex B (informative)	Geology and ground conditions	<i>24</i>
Annex C (informative)	Rainwater harvesting for storm attenuation	<i>25</i>
Annex D (informative)	Water safety plan	<i>27</i>
Annex E (informative)	Energy and carbon implications	<i>28</i>

Bibliography *31*

List of figures

Figure 1	– Steps in the selection of a water reuse system	<i>4</i>
Figure 2	– Initial appraisal	<i>5</i>
Figure 3	– Water stress at abstraction catchment scale for the UK	<i>7</i>
Figure 4	– Assessing the scale of a system installation	<i>9</i>
Figure 5	– Water quality and treatment considerations	<i>15</i>

List of tables

Table 1	– System type and scale	<i>10</i>
Table 2	– Water quality criteria for greywater and rainwater systems	<i>11</i>
Table 3	– Estimated daily non-potable water demand	<i>12</i>
Table 4	– Treatment methods for reclaimed water	<i>16</i>
Table 5	– Template of table to compare options	<i>19</i>
Table A.1	– Classification of the scale and complexity of a project	<i>23</i>

Summary of pages

This document comprises a front cover, an inside front cover, pages *i* to *ii*, pages 1 to 32, an inside back cover and a back cover.

Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 30 September 2013. It was prepared by Technical Committee CB/506, *Water reuse*. A list of organizations represented on this committee can be obtained on request to its secretary.

The initial drafting of this British Standard was produced in association with BIS as part of their ongoing programme of support for standardization.

Use of this document

As a code of practice, this British Standard takes the form of guidance and recommendations. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is "should".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Contractual and legal considerations

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

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

Particular attention is drawn to the following regulations:

- The Private Water Supplies Regulations [1], comprising The Private Water Supplies Regulations 2009; The Private Water Supplies (Wales) Regulations 2010 as amended; The Private Water Supplies (Scotland) Regulations 2006 as amended; The Private Water Supplies Regulations (Northern Ireland) 2009 as amended;
- The Workplace (Health, Safety and Welfare) Regulations 1992 [2];
- The Confined Spaces Regulations 1997 [3];
- The Work at Height Regulations 2005 [4].

In this document, the following national regulations, which apply to plumbing systems in premises to which a supply of public mains water has been provided, are referred to collectively as the "Water Fittings Regulations [5]":

- The Water Supply (Water Fittings) Regulations 1999, in England and Wales;
- The Water Byelaws 2004 (Scotland), in Scotland;
- The Water Supply (Water Fittings) Regulations (Northern Ireland) 2009, in Northern Ireland.

Introduction

Water reuse refers to the collection and utilization of previously used water and rainwater. The collection and reuse of water is an alternative or supplement to the public mains water supply for a variety of non-potable water uses. In addition, for rainwater harvesting systems, it may also provide benefits for the attenuation of surface water run-off.

The term “water reuse systems” is not to be confused with the more comprehensive term “alternative water supply systems”, which applies to all non-potable water supply, sanitation and sustainable drainage systems (SuDS). For example, private borehole water supplies are an alternative water supply system but are not considered to be water reuse.

The suitability of water reuse systems at any particular location is in part dependent on the needs and constraints of the local environment and infrastructure. For example, rainwater harvesting systems could be selected to help manage the surface water run-off with the additional benefit of reducing mains water use. Similarly, water reuse systems might not be deemed appropriate in areas where water scarcity, pollution from combined sewer overflows or other such environmental constraints are not of concern.

This British Standard has been written:

- to assist developers, designers and specifiers in taking into account local needs and constraints when evaluating the suitability of specific water reuse systems;
- to aid the development of evidence-based policies on water reuse by water and wastewater service suppliers, lead local flood authorities (LLFAs), local planning authorities (LPAs), internal drainage boards (IDBs) and the Environment Agency;
- to complement BS 8515, BS 8525-1 and BS 8525-2, which deal in detail with rainwater harvesting systems and greywater systems.

1 Scope

This British Standard gives recommendations on how to select water reuse system(s), taking into account water resources, surface water management, water supply and sewage infrastructure. It applies to both new and existing developments in residential and non-residential premises.

This British Standard covers the following water reuse systems: rainwater harvesting, stormwater harvesting and greywater reuse. It covers the supply of water for domestic water uses that do not require potable water quality, such as laundry, toilet flushing and garden watering. It does not cover systems supplying potable water for drinking, food preparation and cooking, dishwashing and personal hygiene.

This British Standard does not cover other sources of non-potable water, such as treated effluent, reclaimed industrial process water and water abstracted from wells and boreholes.

NOTE 1 Although this British Standard does not give specific recommendations relating to the use of rainwater, stormwater or greywater for fire suppression or commercial irrigation, these applications are not excluded.

It does not cover water butts or direct reuse systems for external use. It also does not cover product design for specific system components or the design and installation of water reuse systems.

NOTE 2 Further information on the design and installation of water reuse systems can be found in BS 8515, BS 8525-1 and BS 8525-2.