

Building Regulations 2008

Technical Guidance Document



Hygiene



Comhshaol, Oidhreacht agus Rialtas Áitiúil
Environment, Heritage and Local Government



Building Regulations 2008

Technical Guidance Document G

Hygiene

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Introduction

This document has been published by the Minister for the Environment, Heritage and Local Government under article 7 of the Building Regulations, 1997. It provides guidance in relation to Part G of the Second Schedule to the Regulations. The document should be read in conjunction with the Building Regulations, 1997 - 2008, and other documents published under these Regulations.

In general, Building Regulations apply to the construction of new buildings and to extensions and material alterations to buildings. In addition, certain parts of the Regulations apply to existing buildings where a material change of use takes place or where new or replacement services, fittings and equipment are installed. Otherwise, Building Regulations do not apply to buildings constructed prior to 1 June, 1992.

Transitional Arrangements

In general, this document applies to works, or buildings in which a material alteration or change of use takes place, where the works, material alteration or the change of use commences or takes place, as the case may be, on or after 1 November, 2008. Technical Guidance Document G - HYGIENE dated 1997, also ceases to have effect from that date.

The Guidance

The materials, methods of construction, standards and other specifications (including technical specifications) which are referred to in this document are those which are likely to be suitable for the purposes of the Regulations. Where works are carried out in accordance with the guidance in this document, this will, prima facie, indicate compliance with Part G of the Second Schedule to the Building Regulations. However, the adoption of an approach other than that outlined in the guidance is not precluded provided that the relevant requirements of the Regulations are complied with. Those involved in the design and construction of a building may be required by the relevant building control authority to provide such evidence as is necessary to establish that the requirements of the Building Regulations are being complied with.

Existing Buildings

In the case of material alterations or changes of use of existing buildings, the adoption without modification of the guidance in this document may not, in all circumstances, be appropriate. In particular, the adherence to guidance, including codes, standards or technical specifications, intended for application to new work may be unduly restrictive or impracticable. Buildings of architectural or historical interest are especially likely to give rise to such circumstances. In these situations, alternative approaches based on the principles contained in the document may be more relevant and should be considered.

Technical Specifications

Building Regulations are made for specific purposes, e.g. to provide, in relation to buildings, for the health, safety and welfare of persons, the conservation of energy and access for people with disabilities. Technical specifications (including harmonised European Standards, European Technical Approvals, National Standards and Agrément Certificates) are relevant to the extent that they relate to these considerations. Any reference to a technical specification is a reference to so much of the specification as is relevant in the context in which it arises. Technical specifications may also address other aspects not covered by the Regulations.

A reference to a technical specification is to the latest edition (including any amendments, supplements or addenda) current at the date of publication of this Technical Guidance Document. However, if this version of the technical specification is subsequently revised or updated by the issuing body, the new version may be used as a source of guidance provided that it continues to address the relevant requirements of the Regulations.

A list of other standards and publications that deal with matters relating to this Part of the Building Regulations is included at the end of the document. These standards and publications may be used as a source of further information but do not form part of the guidance.

Materials and Workmanship

Under Part D of the Second Schedule to the Building Regulations, building work to which the Regulations apply must be carried out with proper materials and in a workmanlike manner. Guidance in relation to compliance with Part D is contained in Technical Guidance Document D.

Interpretation

In this document, a reference to a section, sub-section, part, paragraph or diagram is, unless otherwise stated, a reference to a section, sub-section, part, paragraph or diagram, as the case may be, of this document. A reference to another Technical Guidance Document is a reference to the latest edition of a document published by the Minister for the Environment, Heritage and Local Government under article 7 of the Building Regulations, 1997.

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Building Regulations - The Requirements

Part G of the Second Schedule to the Building Regulations, 2008, provides as follows:

Bathrooms and kitchens.	G1	A dwelling shall be provided with - (a) a bathroom containing either a fixed bath or a shower bath, and a washbasin, and (b) a kitchen containing a sink of adequate size and a draining board, and (c) a suitable installation for the provision of hot and cold water to the bath or shower bath, washbasin and sink.
Sanitary conveniences and washing facilities.	G2	(1) Adequate sanitary conveniences shall be provided in a building in rooms provided for that purpose, or in bathrooms, and every room or bathroom which contains a sanitary convenience shall be adequately separated from any place where food is prepared or cooked. (2) Adequate washbasins shall be provided in - (a) rooms containing sanitary conveniences; or (b) rooms or spaces adjacent to rooms containing sanitary conveniences. (3) There shall be a suitable installation for the provision of hot and cold water to washbasins provided in accordance with subparagraph (2). (4) Sanitary conveniences shall be of such design as to facilitate efficient use of water for flushing. (5) Sanitary conveniences and washbasins shall be of such design and be so installed as to allow for effective cleaning.
Definition for this Part.	G3	In this Part, "sanitary convenience" means a water closet or a urinal.

General

This Technical Guidance Document is divided into two sections.

Section 1 relates to the requirement in G1.

Section 2 relates to the requirement in G2.

Section I

Bathrooms and Kitchens in Dwellings

Bathrooms and kitchens.	GI	A dwelling shall be provided with -
		(a) a bathroom containing either a fixed bath or a shower bath, and a washbasin, and
		(b) a kitchen containing a sink of adequate size and a draining board, and
		(c) a suitable installation for the provision of hot and cold water to the bath or shower bath, washbasin and sink.

1.1 Every dwelling (house or flat) should have at least one bathroom, with a fixed bath or shower, and a washbasin.

1.2 Every dwelling (house or flat) should have a kitchen which is adequately fitted for the installation and use of cooking equipment. The kitchen should contain a sink of adequate size and a draining board.

1.3 The cold water supply to the kitchen sink should be taken directly from the service pipe supplying water to the dwelling; the cold water supply to the bath or shower and the washbasin and to other appliances in the dwelling should be from a cold water storage cistern. The bath, shower, washbasin, and sink should also have a piped supply of hot water, which may be from a central source or from a unit water heater.

1.4 The bath, shower, washbasin and sink should discharge through a trap and branch pipe to a discharge stack, or may, if it is on the ground floor, discharge into a gully. See Technical Guidance Document H for guidance regarding drainage.

1.5 Guidance on sinks is given in I.S. 132 : Part I : 1975, I.S. 132 : 1964 and I.S. EN13310 : 2003.

1.6 The cold water storage cistern should have an actual capacity of not less than 212 litres in the case of a dwelling containing up to three bedrooms and an actual capacity of not less than 340 litres in the case of a dwelling containing four or more bedrooms.

1.7 The cistern should be properly covered but not airtight, accessible for cleaning and replacement,

and fitted with an overflow pipe so located as to discharge in a manner that will give ready warning of the occurrence of overflow without causing any nuisance or any dampness in the dwelling.

1.8 The service pipe to each dwelling should be provided with a stopcock or sluice valve fitted with a crutch wheel for manual operation in a convenient position within the dwelling and near to the point of entry of the pipe to the dwelling.

1.9 The cistern, service pipe and fittings and any associated cold water pipes should be adequately protected against damage by frost,

1.10 The guidance given in par. 1.1 - 1.9 relates generally to dwelling houses. For other types of dwellings, e.g. apartments in apartment blocks or multi-occupancy buildings, alternative arrangements or ways of achieving compliance may be appropriate, subject to the approval of the local Water and Building Control Authorities.

Section 2

Sanitary Conveniences and Washing Facilities

Sanitary conveniences and washing facilities.	G2	(1)	Adequate sanitary conveniences shall be provided in a building in rooms provided for that purpose, or in bathrooms, and every room or bathroom which contains a sanitary convenience shall be adequately separated from any place where food is prepared or cooked.
		(2)	Adequate washbasins shall be provided in -
		(a)	rooms containing sanitary conveniences; or
		(b)	rooms or spaces adjacent to rooms containing sanitary conveniences.
		(3)	There shall be a suitable installation for the provision of hot and cold water to washbasins provided in accordance with sub-paragraph (2).
(4)	Sanitary conveniences shall be of such design as to facilitate efficient use of water for flushing.		
(5)	Sanitary conveniences and washbasins shall be of such design and be so installed as to allow for effective cleaning.		

Definitions

2.1 The following definitions apply to this Section:

Flushing device - A device fitted to a cistern to provide controlled measured volume(s) of water to a WC pan or suite for flushing.

Pressure Flush Valve - A valve directly connected to a stored water supply, which delivers a pre-determined volume of flushing water for removal of excrement from a WC pan.

Number, Type and Siting of Appliances

2.2 Guidance on the scale of provision, selection, installation, and special requirements of sanitary appliances in domestic, commercial and public buildings is contained in BS 6465 Sanitary installations, Part 1; Part 2 and Part 3 : 2006.

2.3 Technical Guidance Document M should be consulted for guidance in relation to the provision of accessible sanitary conveniences. Certain types of buildings, offices, shops, factories, etc., may also be subject to specific legislative requirements. The relevant legislation should be consulted.

2.4 Every dwelling (house or flat) should have at least one water closet and one washbasin. The washbasin should be located in, or adjacent to, the room containing the water closet.

2.5 A room or space containing a water closet should be separated from a place used for the preparation or cooking of food by means of -

- (a) in the case of a building used solely as a dwelling, a door, and
- (b) in any other case, a properly ventilated passage or lobby.

Design and Installation

2.6 Any sanitary convenience (water closet or urinal) should be of such design as to facilitate efficient use of water for flushing. Any flushing device should be capable of cleansing the water closet pan effectively.

2.7 All water closets should have a maximum flush volume of 6 litres or less and comply with the requirements for class 2 products in IS EN 997:2003 regardless of the type of flushing device employed.

The type of flushing activator e.g. handle, button, sensor etc., will be dependent on particular design situations.

For all manually activated flushing devices (except pressure flushing valves) a dual flush facility combining a maximum flush volume of 6 litres and a reduced flush volume no greater than two thirds of the maximum should be used.

The method of activation of the dual flush should be readily discernible e.g. separate buttons or pads of different sizes, segmented buttons (two-thirds, one third) etc.

In non-domestic buildings, consideration should be given to displaying clear and permanent operating instructions for users.

Technical Guidance Document M should be consulted for guidance in relation to accessible WCs.

2.8 Guidance on Drainage and Waste Water disposal given TGD H is based on a maximum flush volume of 5 litres or more. Where WCs with maximum flush volumes of less than 5 litres are used, consideration should be given to the increased risk of blockages. Guidance on the design of sanitary pipework suitable for use with WCs with maximum flush volumes as low as 4 litres can be found in IS EN 12056.

2.9 When an existing WC suite, comprising of WC pan and flushing cistern is to be replaced by a suite incorporating a manual flushing device (except a pressure flushing valve), a dual flush facility as described in par. 2.7 should be installed. Alternatively, a single flush WC suite of maximum flush volume 6 litres may be used when replacing existing WC suites of flush volumes greater than 6 litres, for example 7.5, 9 or 13 litres. However, if the flushing cistern alone is to be changed, without changing the WC pan, the replacement should be of the same size as the one it replaces. A single flush cistern should not be replaced with a dual flush cistern, when the WC pan is remaining.

2.10 Every sanitary appliance should have a surface which is smooth and non-absorbent and capable of being easily cleaned.

2.11 A washbasin provided in, or adjacent to, a room containing a water closet should have a supply of hot water, which may be from a central source or from a unit water heater, and a piped supply of cold water from a storage cistern.

2.12 A cold water storage system should be designed and installed in accordance with the recommendations set out in BS 6700: 2006.

2.13 A water closet should discharge through a trap and branch pipe into a discharge stack or a foul drain. No part of the water closet pan should be connected to any pipe other than a flush pipe or branch pipe. See Technical Guidance Document H for guidance regarding drainage.

2.14 A washbasin should discharge through a trap and branch pipe to a discharge stack or may, where the washbasin is located on the ground floor, discharge into a gully.

Referenced Standards and Publications

I.S. 132 : 1964 Metal Sinks for Domestic Purposes
AMD No. 1 1975.

I.S. 132 : Part 1 : 1975 Stainless Steel Sinks for
Domestic Purposes (Metric) AMD No. 1 1977.

I.S.EN 997:2003 WC pans and WC suites with
integral trap AMD 1 2006.

I.S. EN 12056-1: 2000 Gravity drainage systems
inside buildings - Part 1: General and performance
requirements.

I.S. EN 12056-2:2000 Gravity drainage systems inside
buildings. Sanitary pipework, layout and calculation.

I.S. EN 12056-5: 2000 Gravity drainage systems
inside buildings - Part 5: Installation and testing,
instructions for operation, maintenance and use.

I.S. EN 13310: 2003 Kitchen sinks - functional
requirements and test methods.

BS 6465-1:2006 Sanitary installations. Code of
practice for the design of sanitary facilities and scales
of provision of sanitary and associated appliances.

BS 6465 Sanitary installations Part 2 : 1996 Code of
practice for space requirements for sanitary
appliances.

BS6465 - 3:2006 Sanitary Installations. Code of
Practice for the selection, installation and
maintenance of sanitary and associated appliances.

BS 6700:2006 Design, installation, testing and
maintenance of services supplying water for
domestic use within buildings and their curtilages.

Other Standards and Publications

I.S. 9 : 1976 Galvanised Cisterns for Domestic Water Supply.

I.S. 123 : 1964 Unplasticised PVC Pipe for Cold Water Supply.

I.S. 134 : 1977 Polyethylene Pipe Type 32.

I.S. 135 : 1975 Polyethylene Pipe Type 50.

I.S. 156 : 1984 Cast Iron Baths.

I.S. 161 : 1975 Copper Direct Cylinders for Domestic Purposes.

I.S. 262 : 1984 Grey Iron and Ductile Iron Pipe Fittings.

I.S. 263 : 1984 Baths made from Acrylic Sheet.

I.S. 287 : 1986 Traditional-Style Rising Spindle Type Taps and Above Ground Stopvalves.

I.S. 292 : 1986 Acrylic Shower Trays.

I.S. EN 31:1999 Pedestal wash basins. Connecting dimensions.

I.S. EN 32:1999 Wall-hung wash basins. Connecting dimensions.

I.S. EN 33:2003 Pedestal W.C. pans with close-coupled flushing cistern. Connecting dimensions AMD 16151.

I.S. EN 34:1992/ Wall hung WC pan. Wall hung WC pan with close coupled cistern. Connecting dimensions AMD 7317.

I.S. EN 37: 1999 Pedestal W.C. pans with independent water supply. Connecting dimensions.

I.S. EN 38: 1992 Wall hung WC pan. Wall hung WC pan with independent water supply. Connecting dimensions.

I.S. EN 80: 2001 Wall hung urinals - connecting dimensions.

I.S. EN 111: 2003 Wall-hung hand rinse basins. Connecting dimensions.

I.S. EN 232: Baths - Connecting dimensions.

I.S. EN 251: 2003 Shower trays - Connecting dimensions.

I.S. EN 263 Crosslinked cast acrylic sheets for baths and shower trays for domestic purposes.

I.S. EN 274-1:2002 Waste fittings for sanitary appliances. Requirements.

I.S. EN 274-2:2002 Waste fitting for sanitary appliances. Test methods.

I.S. EN 274-3:2002 Waste fittings for sanitary appliances. Quality control.

I.S. EN 545:2006 Ductile iron pipes, fittings, accessories and their joints for water pipelines. Requirements and test methods.

I.S. EN 695: 2005 Kitchen sinks - connecting dimensions.

I.S. EN 806-1: 2000 Specifications for installations inside buildings conveying water for human consumption – General AMD I 2001.

I.S. EN 806-2:2005 Specifications for installations inside buildings conveying water for human consumption - Design.

I.S. EN 806-3:2006 Specifications for installations inside buildings conveying water for human consumption. Pipe sizing. Simplified method.

I.S. EN 1254-1:1998 Copper and copper alloys - plumbing fittings - fittings with ends for capillary soldering or capillary brazing to copper tubes.

I.S. EN 1254-2: 1998 Copper and copper alloys - plumbing fittings - fittings with compression ends for use with copper tubes.

I.S. EN 1254-3:1998 Copper and copper alloys. plumbing fittings - fittings with compression ends for use with plastics pipes.

I.S. EN 1254-4:1998 Copper and copper alloys - plumbing fittings - fittings combining other end connections with capillary or compression ends.

I.S. EN 1254-5:1998 Copper and copper alloys - plumbing fittings - fittings with short ends for capillary brazing to copper tubes.

I.S. EN 1329-1:2000 Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure. Unplasticized poly(vinyl chloride) (PVC-U). Specifications for pipes, fittings and the system.

I.S. EN 1451-1:2000 Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Polypropylene (PP). Specifications for pipes, fittings and the system.

I.S. EN 1452-1:2000 Plastics piping systems for water supply. Unplasticized poly(vinyl chloride) (PVC-U). General.

I.S. EN 1452-2:2000 Plastics piping systems for water supply. Unplasticized poly(vinyl chloride) (PVC-U). Pipes.

I.S. EN 1452-3:2000 Plastics piping systems for water supply. Unplasticized poly(vinyl chloride) (PVC-U). Fittings.

I.S. EN 1452-4:2000 Plastics piping systems for water supply. Unplasticized poly(vinyl chloride) (PVC-U). Valves and ancillary equipment.

I.S. EN 1452-5:2000 Plastics piping systems for water supply. Unplasticized poly(vinyl chloride) (PVC-U). Fitness for purpose of the system.

I.S. EN 1455-1:2000 Plastics piping systems for soil and waste (low and high temperature) within the building structure. Acrylonitrile-butadiene-styrene (ABS). Specifications for pipes, fittings and the system.

I.S. EN 1508: 1998 Water supply - Requirements for systems and components for the storage of water.

I.S. EN 1519-1:2000 Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure. Polyethylene (PE). Specifications for pipes, fittings and the system.

I.S. EN 1565-1:2000 Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure. Styrene copolymer blends (SAN + PVC). Specifications for pipes, fittings and the system.

I.S. EN 1566-1:2000 Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure. Chlorinated poly(vinyl chloride) (PVC-C). Specification for pipes, fittings and the system.

I.S. EN 12764: 2004 Sanitary appliances - Specification for whirlpool baths.

I.S. EN 13280: 2001 Specification for glass fibre reinforced cisterns of one-piece and sectional construction, for the storage, above ground, of cold water.

I.S. EN 13407:2006 Wall hung urinals - functional requirements and test methods.

I.S. EN 13558: 2003 Specifications for impact modified extruded acrylic sheets for shower trays for domestic purposes.

I.S. EN 13559: 2003 Specifications for impact modified coextruded ABS/Acrylic Sheets for baths and shower trays for domestic purposes.

I.S. EN 14296: 2005 Sanitary appliances - Communal washing troughs.

I.S. EN 14428: 2004 Shower enclosures - functional requirements and test methods.

I.S. EN 14516: 2006 Baths for domestic purposes.

I.S. EN 14527: 2006 Shower trays for domestic purposes.

I.S. EN 14688:2006 Sanitary Appliances - Wash basins - functional requirements and test methods.

I.S. EN 15334:2007 Sanitary Appliances - Methacrylic dispersions of high filler content.

BS 864 Capillary and compression tube fittings of copper and copper alloy Part 5 : 1990 Specification for compression fittings for polyethylene pipes with outside diameters to BS 5556.

BS 1125 : 1987 Specification for WC flushing cisterns (including dual flush cisterns and flush pipes).

BS 1188 : 1974 Specification for ceramic wash basins and pedestals AMD 2038; AMD 4093; AMD 4914.

BS 1329 : 1974 Specification for metal hand rinse basins AMD 2010; AMD 5375.

BS 1566 Copper indirect cylinders for domestic purposes Part 2 : 1984 (1990) Specification for single feed indirect cylinders AMD 5791; AMD 6601.

BS 2782-11:Method 1121B:1997, ISO 161-1:1996 (Identical) Methods of testing plastics. Metric Services.

Thermoplastics pipes, fittings and valves. Thermoplastics pipes for the conveyance of fluids. Nominal outside diameters and nominal pressures.

BS 3505 : 1986 Specification for unplasticized polyvinyl chloride (PVC-U) pressure pipes for cold potable water AMD 6130.

BS 4213:2004 Cisterns for domestic use. Cold water storage and combined feed and expansion (thermoplastic) cisterns up to 500 l. Specification.

BS 4514:2001 Unplasticized PVC soil and ventilating pipes of 82.4 mm minimum mean outside diameter, and fittings and accessories of 82.4 mm and of other sizes. Specification.

BS 5254 : 1976 Specification for polypropylene waste pipe and fittings (external diameter 34.6 mm, 41.0 mm and 54.1 mm) AMD 3588; AMD 4438.

BS 5255 : 1989 Specification for thermoplastics waste pipe and fittings.

BS 5506 Specification for wash basins Part 3 : 1977 Wash basins (one or three tap holes) Materials, quality, design and construction AMD 4915.

BS 5955-8:2001 Plastics pipework (thermoplastics

materials). Specification for the installation of thermoplastic pipes and associated fittings for use in domestic hot and cold services and heating systems in buildings.

BS 7181 : 1989 Specification for storage cisterns up to 500 L actual capacity for water supply for domestic purposes.

BS 7291-1 2006 Thermoplastic pipes and associated fittings for hot and cold water for domestic purposes and heating installations in buildings. General Requirements.

BS 7291-2:2006 Thermoplastics pipes and associated fittings for hot and cold water for domestic purposes and heating installations in buildings. Specification for polybutylene (PB) pipes and associated fittings.

BS 7291-3:2006 Thermoplastics pipes and associated fittings for hot and cold water for domestic purposes and heating installations in buildings. Specification for cross-linked polyethylene (PE-X) pipes and associated fittings.

BS 7291-4:1990 Thermoplastics pipes and associated fittings for hot and cold water for domestic purposes and heating installations in buildings. Specification for chlorinated polyvinyl chloride (PVC-C) pipes and associated fittings and solvent cement.

ISO 4065:1996 Thermoplastic pipe. Universal wall thickness table.

ISO 11922-1:1997 Thermoplastics pipes for the conveyance of fluids. Dimensions and tolerances. Metric series.



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