STATUTORY RULES OF NORTHERN IRELAND

2009 No. 255

WATER AND SEWERAGE SERVICES

The Water Supply (Water Fittings) Regulations (Northern Ireland) 2009

Made - - - -	*2nd July 2009*
Coming into operation	*3rd August 2009*

The Department for Regional Development makes the following Regulations in exercise of the powers conferred by Articles 114 and 300(2) of the Water and Sewerage Services (Northern Ireland) Order 2006(**1**):

PART I

PRELIMINARY

Citation, commencement, and interpretation

1.—(1) These Regulations may be cited as the Water Supply (Water Fittings) Regulations (Northern Ireland) 2009 and shall come into operation on 3rd August 2009.

(2) In these Regulations—

"approved contractor" means a person who—

(a) has been approved by the water undertaker for the area where a water fitting is installed or used, or

(b) has been certified as an approved contractor by an organisation specified by the Secretary of State or the National Assembly of Wales under The Water Supply (Water Fittings) Regulations 1999(**2**);

"the Department" means the Department for Regional Development;

"the Directive" means Council Directive 89/106/EEC on the approximation of laws, regulations and administrative provisions of the member States relating to construction products(**3**);

(**1**) S.I. 2006/3336 (N.I. 21)
(**2**) S.I. 1999/1148
(**3**) OJNo. L40, 11.2.89, p. 12.

"EEA Agreement" means the agreement on the European Economic Area signed at Oporto on 2nd May 1992(**4**) together with the Protocol adjusting that Agreement signed at Brussels on 17th March 1993(**5**) as modified or supplemented at 3rd August 2009;

"EEA State" means a State which is a contracting party to the EEA Agreement;

"European technical approval" means a favourable technical assessment of the fitness for use of a construction product for an intended use, issued for the purposes of the Directive by a body authorised by an EEA State to issue European technical approvals for those purposes and notified by that State to the European Commission;

"fluid category" means a category of fluid described in Schedule 1;

"greywater" means waste water from baths, showers, wash basins and washing machines;

"harmonised standard" means a standard established as mentioned in the Directive by the European standards organisation on the basis of a mandate given by the Commission of the European Economic Community and published by the Commission in the Official Journal of the European Communities;

"material change of use" means a change in the purpose for which, or the circumstances in which, premises are used, such that after that change the premises are used (where previously they were not so used)—

(a) as a dwelling;

(b) as an institution;

(c) as a public building; or

(d) for the purposes of the storage or use of substances which if mixed with water result in a fluid which is classified as either fluid category 4 or 5;

"the Order" means The Water and Sewerage Services (Northern Ireland) Order 2006;

"reclaimed water" means greywater after treatment which can be used for non-wholesome applications;

"supply pipe" means so much of any service pipe as is not vested in a water undertaker; and

"water undertaker" means a company appointed under Article 13(1) of the Order.

Application of Regulations

2.—(1) Subject to paragraphs (2) to (4), these Regulations apply to any water fitting installed or used, or to be installed or used, in premises to which water is or is to be supplied by a water undertaker.

(2) These Regulations do not apply to a water fitting installed or used, or to be installed or used, in connection with water supplied for purposes other than domestic or food production purposes, provided that—

(a) the water is metered;

(b) the supply of the water is for a period not exceeding one month, or, with the written consent of the water undertaker, three months; and

(c) no water can return through the meter to any pipe vested in a water undertaker.

(3) Except for the purposes of paragraph 14 of Schedule 2 (Prevention of cross connection to unwholesome water), these Regulations do not apply to water fittings which are not connected or to be connected to water supplied by a water undertaker.

(**4**) Cmnd 2073
(**5**) Cmnd 2183.

(4) Nothing in these Regulations shall require any person to remove, replace, alter, disconnect or cease to use any water fitting which was lawfully installed or used, or capable of being used, before 3rd August 2009.

PART II

REQUIREMENTS

Restriction on installation etc. of water fittings

3.—(1) No person shall—

(a) install a water fitting to convey or receive water supplied by a water undertaker, or alter, disconnect or use such a water fitting; or

(b) cause or permit such a water fitting to be installed, altered, disconnected or used,

in contravention of the following provisions of this Part.

(2) No water fitting shall be installed, connected, arranged or used in such a manner that it causes or is likely to cause—

(a) waste, misuse, undue consumption or contamination of water supplied by a water undertaker; or

(b) the erroneous measurement of water supplied by a water undertaker.

(3) No water fitting shall be installed, connected, arranged or used which by reason of being damaged, worn or otherwise faulty, causes or is likely to cause—

(a) waste, misuse, undue consumption or contamination of water supplied by a water undertaker; or

(b) the erroneous measurement of water supplied by a water undertaker.

Requirements for water fittings etc.

4.—(1) Every water fitting shall—

(a) be of an appropriate quality and standard; and

(b) be suitable for the circumstances in which it is used.

(2) For the purposes of this regulation, a water fitting is of an appropriate quality or standard only if—

(a) it bears an appropriate CE marking in accordance with the Directive;

(b) it conforms to an appropriate harmonised standard or European technical approval;

(c) it conforms to an appropriate British Standard or some other national specification of an EEA State which provides an equivalent level of protection and performance; or

(d) it conforms with the terms of a specification approved by the Secretary of State or the National Assembly of Wales under The Water Supply (Water Fittings) Regulations 1999.

(3) Every water fitting shall comply with the requirements of Schedule 2 as it applies to that fitting.

(4) Where any requirement of Schedule 2 relates to a water system, every water fitting which forms part of that system shall be fitted or, as the case may be, altered or replaced so as to comply with that requirement.

(5) Every water fitting shall be installed, connected, altered, repaired or disconnected in a workmanlike manner.

(6) For the purposes of this regulation, a water fitting is installed, connected, altered, repaired or disconnected in a workmanlike manner only if the work is carried out so as to conform—

(a) to an appropriate British Standard, a European technical approval or some other national specification of an EEA State which provides an equivalent level of protection and performance;

(b) to a specification approved by the Secretary of State or the National Assembly of Wales under The Water Supply (Water Fittings) Regulations 1999; or

(c) to a method of installation approved by the water undertaker.

Notification

5.—(1) Subject to paragraph (2), any person who proposes to install a water fitting in connection with any of the operations listed in the Table below—

(a) shall give notice to the water undertaker that he proposes to begin work;

(b) shall not begin that work without the consent of the water undertaker which shall not be withheld unreasonably; and

(c) shall comply with any conditions to which the water undertaker's consent is subject.

Table

1. The erection of a building or other structure, not being a pond or swimming pool.
2. The extension or alteration of a water system on any premises other than a house.
3. A material change of use of any premises.
4. The installation of—
   - (a) a bath having a capacity, as measured to the centre line of overflow, of more than 230 litres;
   - (b) a bidet or WC with an ascending spray or flexible hose;
   - (c) a single shower unit (which may consist of one or more shower heads within a single unit) which is of a type which conforms to a specification approved by the Secretary of State or the National Assembly of Wales under The Water Supply (Water Fittings) Regulations 1999, not being a drench shower installed for reasons of safety or health, connected directly or indirectly to a supply pipe;
   - (d) a pump or booster drawing more than 12 litres per minute, connected directly or indirectly to a supply pipe; or a pump delivery pipe drawing water from a supply pipe;
   - (e) a unit which incorporates reverse osmosis;
   - (f) a water treatment unit which produces a waste water discharge or which requires the use of water for regeneration or cleaning;
   - (g) a type BA device or other mechanical device for protection against a fluid which is in fluid category 4;
   - (h) a garden watering system unless designed to be operated by hand;
   - (i) any water system laid outside a building and either less than 750mm or more than 1350mm below ground level;
   - (j) greywater, recycled water, reclaimed water and rainwater harvesting systems;
   - (k) water systems for fire fighting, including domestic sprinklers;
   - (l) a flexible shower hose or other flexible outlet for use in conjunction with a WC; or
   - (m) a 'shower-toilet' or 'bidet- toilet' where, either as part of the WC itself or as an addition or adaptation of it, a stream of water is provided from below the spillover level of the WC pan for personal cleansing.

Table	
5.	The construction of ponds or swimming pools with a capacity, individually or together, greater than 10,000 litres which are designed to be replenished by automatic means and are to be filled with water supplied by a water undertaker.

(2) This regulation does not apply to the installation by an approved contractor of a water fitting falling within paragraph 2, 4(b), 4(l) or 4(m) in the Table.

(3) The notice required by paragraph (1) shall include or be accompanied by—

(a) the name and address of the person giving the notice, and (if different) the name and address of the person on whom notice may be served under paragraph (4);

(b) a description of the proposed work or material change of use; and

(c) particulars of the location of the premises to which the proposal relates, and the use or intended use of those premises;

(d) except in the case of a fitting falling within paragraph 4(a), (c), (h) or 5 in the table—

(i) a plan of those parts of the premises to which the proposal relates, and

(ii) a diagram showing the pipework and fitting to be installed; and

(e) where the work is to be carried out by an approved contractor, the name of the contractor.

(4) The water undertaker may withhold consent required under paragraph (1), or grant it subject to conditions, by a notice given before the expiry of the period of ten working days commencing with the day on which notice under that paragraph was given.

(5) If no notice is given by the water undertaker within the period mentioned in paragraph (4), the consent required under paragraph (1) shall be deemed to have been granted unconditionally.

Contractor's certificate

6.—(1) Where a water fitting is installed, altered, connected or disconnected by an approved contractor, the contractor shall upon completion of the work furnish a signed certificate stating whether the water fitting complies with the requirements of these Regulations to the person who commissioned the work.

(2) In the case of a fitting for which notice is required under regulation 5(1), the contractor shall send a copy of the certificate to the water undertaker.

PART III

ENFORCEMENT ETC.

Penalties for contravening Regulations

7.—(1) Subject to paragraph (2), a person who—

(a) contravenes any of the provisions of regulation 3(1), (2) or (3) or 6(1) or (2);

(b) commences an operation listed in the Table in regulation 5(1) without giving the notice required by that paragraph;

(c) commences an operation listed in the Table in regulation 5(1) without the consent required by that paragraph; or

(d) carries out an operation listed in the Table in regulation 5(1) in breach of a condition imposed under regulation 5(4);

is guilty of an offence and liable on summary conviction to a fine not exceeding £1000.

(2) In any proceedings against an owner or occupier for an offence under paragraph (1) which is based on the installation, alteration, repair, connection or disconnection of a water fitting, it shall be a defence to prove—

(a) that the work in question was carried out by or under the direction of an approved contractor, and

(b) that the contractor certified to the person who commissioned that work that the water fitting complied with the requirements of these Regulations.

Inspections, measurements and tests

8. Any person designated in writing—

(a) for the purposes of Article 114(4) or 231(3) of the Order, by a water undertaker, or

(b) for the purposes of Article 124(2) by the Department of the Environment;

may carry out such inspections, measurements and tests on premises entered by that person or on water fittings or other articles found on any such premises, and take away such samples of water or of any land, and such water fittings and other articles, as that person may consider necessary for the purposes of securing compliance with the requirements of Schedule 2.

Enforcement

9.—(1) A water undertaker shall enforce the requirements of these Regulations in relation to the area for which it holds an appointment under Part III of the Order.

(2) The duty of a water undertaker under this regulation shall be enforceable under Article 30 of the Order by the Department.

Relaxation of requirements

10.—(1) Where a water undertaker considers that any requirement of Schedule 2 to these Regulations would be inappropriate in relation to a particular case, the undertaker may apply to the Department to authorise a relaxation of that requirement.

(2) The Department shall not grant any authorisation applied for unless—

(a) the water undertaker has made to the Department a written application;

(b) the Department is satisfied that a copy of the application has been served by the water undertaker on any persons or bodies likely to be affected by the relaxation; and

(c) the Department is satisfied that the authorisation does not constitute a potential danger to human health.

(3) The water undertaker shall provide with its application a statement—

(a) of the grounds on which the authorisation is sought; and

(b) of the requirements of Schedule 2 which are considered inappropriate.

(4) The Department may grant the authorisation applied for with such modifications as it sees fit.

(5) Any authorisation granted shall specify—

(a) the grounds on which it is granted; and

(b) the extent to which a departure from the requirements of Schedule 2 is authorised.

(6) The Department shall not grant an authorisation before the expiration of one month from the giving of the notice, and shall take into consideration any objection which may have been received by it.

(7) A water undertaker to whom an authorisation is granted in a particular case may relax the requirements of Schedule 2 in that case in accordance with the terms of that authorisation.

(8) The Department may at any time modify or revoke an authorisation granted.

(a) The Department shall not revoke or modify an authorisation without giving at least one months notice of its intention to do so to the water undertaker unless it appears to it that immediate revocation or modification is required in the interests of public health.

Approval by the water undertaker

11.—(1) Where the water undertaker approves a method of installation under regulation 4, the undertaker shall give notice of the approval to the Department and shall publish it in such manner as the undertaker considers appropriate.

(2) This regulation applies to the revocation or modification of an approval as it applies to the giving of that approval.

Disputes

12. Any dispute between a water undertaker and a person who has installed or proposes to install a water fitting—

(a) as to whether the water undertaker has unreasonably withheld consent, or attached unreasonable conditions, under regulation 5; or

(b) as to whether the water undertaker has unreasonably refused to apply to the Department for a relaxation of the requirements of these Regulations,

shall be referred to arbitration by a single arbitrator to be appointed by agreement between the parties or, in default of agreement, by the Department.

Publication of information

13.—(1) The water undertaker shall, not later than 30th June in each year, publish a report relating to the preceding year containing—

(a) a statement of the number of staff involved in the enforcement of these regulations;

(b) a statement of the number of inspections carried out during the year;

(c) a statement of the number of notifications received during the year and consents granted;

(d) a statement of the number of infringements;

(e) a statement of the number of infringements rectified to comply with regulation requirements;

(f) a statement of the number of enforcement actions taken; and

(g) a statement of the number of disputes.

(2) At the same time as it publishes a report in accordance with paragraph (1) the water undertaker shall send a copy of it to the Department.

Contamination incidents; remedial works and recovery of expenses

14. Where a person has caused or permitted contamination of the public drinking water supply by contravening a provision of these Regulations, the water undertaker may—

(a) carry out such works and take other steps as necessary for remedying the contravention; and

(b) recover any expenses reasonably incurred in remedying the contravention from that person.

Revocation of Regulations

15. The Water Regulations (Northern Ireland) 1991 are revoked(**6**).

Sealed with the Official Seal of the Department for Regional Development on 2nd July 2009

John Mills
A senior officer of the
Department for Regional Development

(**6**) S.R. 1991/50

SCHEDULE 1

Regulation 1(2)

FLUID CATEGORIES

Fluid category 1

Wholesome water supplied by a water undertaker and complying with the requirements of The Water Supply (Water Quality) Regulations (Northern Ireland) 2007(**7**).

Fluid category 2

Water which would be in fluid category 1 except whose aesthetic quality is impaired owing to—

(a) a change in its temperature, or

(b) the presence of substances or organisms causing a change in its taste, odour or appearance, including water in a hot water distribution system.

Fluid category 3

Fluid which represents a slight health hazard because of the concentration of substances of low toxicity, including any fluid which contains—

(a) ethylene glycol, copper sulphate solution or similar chemical additives, or

(b) sodium hypochlorite (chloros and common disinfectants).

Fluid category 4

Fluid which represents a significant health hazard because of the concentration of toxic substances, including any fluid which contains—

(a) chemical, carcinogenic substances or pesticides (including insecticides and herbicides), or

(b) environmental organisms of potential health significance.

Fluid category 5

Fluid representing a serious health hazard because of the concentration of pathogenic organisms, radioactive or very toxic substances, including any fluid which contains—

(a) faecal material or other human waste;

(b) butchery or other animal waste; or

(c) pathogens from any other source.

SCHEDULE 2

Regulation 4(3)

REQUIREMENTS FOR WATER FITTINGS

Interpretation

1. In this Schedule—

(**7**) S.R. 2007/147 as amended by S.R. 2009/246

“backflow” means flow upstream, that is in a direction contrary to the intended normal direction of flow, within or from a water fitting;

“cistern” means a fixed container for holding water at atmospheric pressure;

“combined feed and expansion cistern” means a cistern for supplying cold water to a hot water system without a separate expansion cistern;

“combined temperature and pressure relief valve” means a valve capable of performing the function of both a temperature relief valve and a pressure relief valve;

“contamination” includes any reduction in chemical or biological quality of water due to a change in temperature or the introduction of polluting substances;

“distributing pipe” means any pipe (other than a warning, overflow or flushing pipe) conveying water from a storage cistern, or from hot water apparatus supplied from a cistern and under pressure from that cistern;

“expansion cistern” or “expansion vessel” means a cistern or vessel connected to a water heating system which accommodates the increase in volume of water in the system when the water is heated from cold;

“expansion valve” means a pressure-activated valve designed to release expansion water from an unvented water heating system;

“flushing cistern” means a cistern provided with valve or device for controlling the discharge of the stored water into a water closet pan or urinal;

“overflow pipe” means a pipe from a cistern in which water flows only when the water level in the cistern exceeds a predetermined level;

“pressure relief valve” means a pressure-activated valve which opens automatically at a specified pressure to discharge fluid;

“primary circuit” means an assembly of water fittings in which water circulates between a boiler or other source of heat and a primary heat exchange inside a hot water storage vessel, and includes any space heating system;

“secondary circuit” means an assembly of water fittings in which water circulates in supply pipes or distributing pipes of a hot water storage system;

“secondary system” means an assembly of water fittings comprising the cold feed pipe, any hot water storage vessel, water heater and pipework from which hot water is conveyed to all points of draw-off;

“servicing valve” means a valve for shutting off for the purpose of maintenance or service the flow of water in a pipe connected to a water fitting;

“stopvalve” means a valve, other than a servicing valve, used for shutting off the flow of water in a pipe;

“storage cistern” means a cistern for storing water for subsequent use, not being a flushing cistern;

“temperature relief valve” means a valve which opens automatically at a specified temperature to discharge fluid;

“terminal fitting” means a water outlet device; and

“vent pipe” means a pipe open to the atmosphere which exposes the system to atmospheric pressure at its boundary.

Materials and substances in contact with water

2.—(1) Subject to sub-paragraph (2) below, no material or substance, either alone or in combination with any other material or substance or with the contents of any water fitting of which it forms a part, which causes or is likely to cause contamination of water shall be used in the construction, installation, renewal, repair or replacement of any water fitting which conveys or receives, or may convey or receive, water supplied for domestic or food production purposes.

(2) This requirement does not apply to a water fitting downstream of a terminal fitting supplying wholesome water where—

(a) the use to which the water downstream is put does not require wholesome water; and

(b) a suitable arrangement or device to prevent backflow is installed.

Requirements for water fittings

3. Every water fitting shall—

(a) be immune to or protected from corrosion by galvanic action or by any other process which is likely to result in contamination or waste of water; and

(b) be constructed of materials of such strength and thickness as to resist damage from any external load, vibration, stress or settlement, pressure surges, or temperature fluctuation to which it is likely to be subjected.

4. Every water fitting shall—

(a) be watertight;

(b) be so constructed and installed as to—

(i) prevent ingress by contaminants, and

(ii) inhibit damage by freezing or any other cause;

(c) be so installed as to minimise the risk of permeation by, or deterioration from contact with, any substance which may cause contamination; and

(d) be adequately supported.

5. Every water fitting shall be capable of withstanding an internal water pressure not less than 1½ times the maximum pressure to which that fitting is designed to be subjected in operation.

6. No water fitting shall be installed, connected or used which is likely to have a detrimental effect on the quality or pressure of water in a water main or other pipe of a water undertaker.

7.—(1) No water fitting shall be embedded in any wall or solid floor.

(2) No fitting which is designed to be operated or maintained, whether manually or electronically, or which consists of a joint, shall be a concealed water fitting.

(3) Any concealed water fitting or mechanical backflow prevention device, not being a terminal fitting, shall be made of gunmetal, or another material resistant to dezincification.

(4) Any water fitting laid below ground level shall have a depth of cover sufficient to prevent water freezing in the fitting.

(5) In this paragraph "concealed water fitting" means a water fitting which—

(a) is installed below ground;

(b) passes through or under any wall, footing or foundation;

(c) is enclosed in any chase or duct; or

(d) is in any other position which is inaccessible or renders access difficult.

Water system design and installation

8. No water fitting shall be installed in such a position, or pass through such surroundings, that it is likely to cause contamination or damage to the material of the fitting or the contamination of water supplied by the water undertaker.

9. Any pipe supplying cold water for domestic purposes to any tap shall be so installed that, so far as is reasonably practicable, the water is not warmed above 20°C.

10.—(1) Every supply pipe or distributing pipe providing water to separate premises shall be fitted with a stopvalve conveniently located to enable the supply to those premises to be shut off without shutting off the supply to any other premises.

(2) Where a supply pipe or distributing pipe provides water in common to two or more premises, it shall be fitted with a stopvalve to which each occupier of those premises has access.

11. Water systems shall be capable of being drained down and be fitted with an adequate number of servicing valves and drain taps so as to minimize the discharge of water when water fittings are maintained or replaced. A sufficient number of stopvalves shall be installed for isolating parts of the pipework.

12.—(1) The water system shall be capable of withstanding an internal water pressure not less than 1½ times the maximum pressure to which the installation or relevant part is designed to be subjected in operation ("the test pressure").

(2) This requirement shall be deemed to be satisfied—

(a) in the case of a water system that does not include a pipe made of plastics, where—

(i) the whole system is subjected to the test pressure by pumping, after which the test continues for one hour without further pumping;

(ii) the pressure in the system is maintained for one hour; and

(iii) there is no visible leakage throughout the test;

(b) in any other case, where either of the following tests is satisfied—

TEST A	*TEST B*
(i) the whole system is subjected to the test pressure by pumping for 30 minutes, after which the test continues for 90 minutes without further pumping;	(i) the whole system is subjected to the test pressure by pumping for 30 minutes, after which the pressure is noted and the test continues for 150 minutes without further pumping;
(ii) the pressure is reduced to one third of the test pressure after 30 minutes;	(ii) the drop in pressure is less than 0.6 bar (60kPa) after the following 30 minutes, or 0.8 bar (80kPa) after the following 150 minutes; and
(iii) the pressure does not drop below one third of the test pressure over the following 90 minutes; and	(iii) there is no visible leakage throughout the test.
(iv) there is no visible leakage throughout the test.	

13. Every water system shall be tested, flushed and where necessary disinfected before it is first used.

Prevention of cross connection to unwholesome water

14.—(1) Any water fitting conveying—

(a) rain water, greywater, reclaimed water, recycled water or any fluid other than water supplied by a water undertaker; or

(b) any fluid that is not wholesome water;

shall be clearly identified so as to be easily distinguished from any supply pipe or distributing pipe.

(2) No supply pipe, distributing pipe or pump delivery pipe drawing water from a supply pipe or distributing pipe shall convey, or be connected so that it can convey, any fluid falling within sub-paragraph (1) unless a device for preventing backflow is installed in accordance with paragraph 15.

Backflow prevention

15.—(1) Subject to the following provisions of this paragraph, every water system shall contain an adequate device or devices for preventing backflow of fluid from any appliance, fitting or process from occurring.

(2) Paragraph (1) does not apply to—

(a) a water heater where the expanded water is permitted to flow back into a supply pipe, or

(b) a vented water storage vessel supplied from a storage cistern,

where the temperature of the water in the supply pipe or the cistern does not exceed 20°C.

(3) The device used to prevent backflow shall be appropriate to the highest applicable fluid category to which the fitting is subject downstream before the next such device.

(4) Backflow prevention shall be provided on any supply pipe or distributing pipe—

(a) where it is necessary to prevent backflow between separately occupied premises, or

(b) where the water undertaker has given notice for the purposes of this Schedule that such prevention is needed for the whole or part of any premises.

(5) A backflow prevention device is adequate for the purposes of paragraph (1) if it is in accordance with a specification approved by the Secretary of State or the National Assembly of Wales under The Water Supply (Water Fittings) Regulations 1999.

Cold water services

16.—(1) Every pipe supplying water connected to a storage cistern shall be fitted with an effective adjustable valve capable of shutting off the inflow of water at a suitable level below the overflowing level of the cistern.

(2) Every inlet to a storage cistern, combined feed and expansion cistern, WC flushing cistern or urinal flushing cistern shall be fitted with a servicing valve on the inlet pipe adjacent to the cistern.

(3) Every storage cistern, except one supplying water to the primary circuit of a heating system, shall be fitted with a servicing valve on the outlet pipe.

(4) Every storage cistern shall be fitted with—

(a) an overflow pipe, with a suitable means of warning of an impending overflow, which excludes insects;

(b) a cover positioned so as to exclude light and insects; and

(c) thermal insulation to minimize freezing or undue warming.

(5) Every storage cistern shall be so installed as to minimize the risk of contamination of stored water. The cistern shall be of an appropriate size, and the pipe connections to the cistern shall be so positioned, as to allow free circulation and to prevent areas of stagnant water from developing.

Hot water services

17.—(1) Every unvented water heater, not being an instantaneous water heater with a capacity not greater than 15 litres, and every secondary coil contained in a primary system shall—

(a) be fitted with a temperature control device and either a temperature relief valve or combined temperature and pressure relief valve; and

(b) be capable of accommodating expansion within the secondary hot water system.

(2) An expansion valve shall be fitted with provision to ensure that water is discharged in a correct manner in the event of a malfunction of the expansion vessel or system.

18. Appropriate vent pipes, temperature control devices and combined temperature pressure and relief valves shall be provided to prevent the temperature of the water within a secondary hot water system from exceeding 100°C.

19. Discharges from temperature relief valves, combined temperature pressure and relief valves and expansion valves shall be made in a safe and conspicuous manner.

20.—(1) No vent pipe from a primary circuit shall terminate over a storage cistern containing wholesome water for domestic supply or for supplying water to a secondary system.

(2) No vent pipe from a secondary circuit shall terminate over any combined feed and expansion cistern connection to a primary circuit.

21. Every expansion cistern or expansion vessel, and every cold water combined feed and expansion cistern connected to a primary circuit, shall be such as to accommodate any expansion water from that circuit during normal operation.

22.—(1) Every expansion valve, temperature relief valve or combined temperature and pressure relief valve connected to any fitting or appliance shall close automatically after a discharge of water.

(2) Every expansion valve shall—

(a) be fitted on the supply pipe close to the hot water vessel and without any intervening valves; and

(b) only discharge water when subjected to a water pressure of not less than 0.5 bar (50 kPa) above the pressure to which the hot water vessel is, or is likely to be, subjected in normal operation.

23.—(1) A temperature relief valve or combined temperature and pressure relief valve shall be provided on every unvented hot water storage vessel with a capacity greater than 15 litres.

(2) The valve shall—

(a) be located directly on the vessel in an appropriate location, and have a sufficient discharge capacity, to ensure that the temperature of the stored water does not exceed 100°C; and

(b) only discharge water at below its operating temperature when subjected to a pressure of not less than 0.5 bar (50 kPa) in excess of the greater of the following—

(i) the maximum working pressure in the vessel in which it is fitted, or

(ii) the operating pressure of the expansion valve.

(3) In this paragraph "unvented hot water storage vessel" means a hot water storage vessel that does not have a vent pipe to the atmosphere.

24. No supply pipe or secondary circuit shall be permanently connected to a closed circuit for filling a heating system unless it incorporates a backflow prevention device in accordance with a

specification approved by the Secretary of State or the National Assembly of Wales under the Water Supply (Water Fittings) Regulations 1999.

WC's, flushing devices and urinals

25.—(1) Subject to the following provisions of this paragraph—

(a) every water closet pan shall be supplied with water from a flushing cistern, pressure flushing cistern or pressure flushing valve, and shall be so made and installed that after normal use its contents can be cleared effectively by a single flush of water, or, where the installation is designed to receive flushes of different volumes, by the largest of those flushes;

(b) no pressure flushing valve shall be installed—

(i) in a house, or

(ii) in any building not being a house where a minimum flow rate of 1.2 litres per second cannot be achieved at the appliance;

(c) where a pressure flushing valve is connected to a supply pipe or distributing pipe, the flushing arrangement shall incorporate a backflow prevention device consisting of a permanently vented pipe interrupter located not less than 300mm above the spillover level of the WC pan or urinal;

(d) no pressure flushing cistern shall be installed unless it incorporates a method of installation approved by the water undertaker or a backflow prevention device approved by the Secretary of State or the National Assembly of Wales under The Water Supply (Water Fittings) Regulations 1999;

(e) no flushing device installed for use with a WC pan shall give a single flush exceeding 6 litres;

(f) no flushing device designed to give flushes of different volumes shall have a lesser flush exceeding two-thirds of the largest flush volume;

(g) every flushing cistern, other than a pressure flushing cistern, shall be clearly marked internally with an indelible line to show the intended volume of flush, together with an indication of that volume;

(h) a flushing device designed to give flushes of different volumes shall have a readily discernible method of actuating the flush at different volumes;

(i) every flushing cistern, not being a pressure flushing cistern or a urinal cistern, shall be fitted with a warning pipe or with a no less effective warning device;

(j) every urinal that is cleared by water after use shall be supplied with water from a flushing device which—

(i) in the case of a flushing cistern, is filled at a rate suitable for the installation;

(ii) in all cases, is designed or adapted to supply no more water than is necessary for effective flow over the internal surface of the urinal and for replacement of the fluid in the trap; and

(k) except in the case of a urinal which is flushed manually, or which is flushed automatically by electronic means after use, every pipe which supplies water to a flushing cistern or trough used for flushing a urinal shall be fitted with an isolating valve controlled by a time switch and a lockable isolating valve, or with some other equally effective automatic device for regulating the periods during which the cistern may fill.

(2) Every water closet, and every flushing device designed for use with a water closet, shall comply with a specification approved by the Secretary of State or the National Assembly of Wales under The Water Supply (Water Fittings) Regulations 1999.

(3) The requirements of sub-paragraphs (1) and (2) do not apply where faeces or urine are disposed of through an appliance that does not solely use fluid to remove the contents.

(4) The requirement in sub-paragraph (1)(j) shall be deemed to be satisfied—

(a) in the case of an automatically operated flushing cistern servicing urinals which is filled with water at a rate not exceeding—

(i) 10 litres per hour for a cistern serving a single urinal;

(ii) 7.5 litres per hour per urinal bowl or stall, or, as the case may be, for each 700mm width of urinal slab, for a cistern serving two or more urinals;

(b) in the case of a manually or automatically operated pressure flushing valve used for flushing urinals which delivers not more than 1.5 litres per bowl or position each time the device is operated.

(5) Notwithstanding sub-paragraph (1)(e) a flushing cistern installed before 3rd August 2009 may be replaced by a cistern which delivers a similar volume and which may be either single flush or dual flush.

(6) In this paragraph—

"pressure flushing cistern" means a WC flushing device that utilises the pressure of water within the cistern supply pipe to compress air and increase the pressure of water available for flushing a WC pan;

"pressure flushing valve" means a self-closing valve supplied with water directly from a supply pipe or a distributing pipe which when activated will discharge a pre-determined flush volume;

"trap" means a pipe fitting, or part of a sanitary appliance, that retains liquid to prevent the passage of foul air; and

"warning pipe" means an overflow pipe whose outlet is located in a position where the discharge of water can readily be seen.

Baths, sinks, showers and taps

26. All premises supplied with water for domestic purposes shall have at least one tap conveniently situated for the drawing of drinking water.

27. A drinking water tap shall be supplied with wholesome water from—

(a) a supply pipe;

(b) a pump delivery pipe drawing water from a supply pipe; or

(c) a distributing pipe drawing water exclusively from a storage cistern supplying wholesome water.

28.—(1) Subject to paragraph (2), every bath, wash basin, sink or similar appliance shall be provided with a watertight and readily accessible plug or other device capable of closing the waste outlet.

(2) This requirement does not apply to—

(a) an appliance where the only taps provided are spray taps;

(b) a washing trough or wash basin whose waste outlet is incapable of accepting a plug and to which water is delivered at a rate not exceeding 0.06 litres per second exclusively from a fitting designed or adapted for that purpose;

(c) a wash basin or washing trough fitted with self-closing taps;

(d) a shower bath or shower tray;

(e) a drinking water fountain or similar facility; or

(f) an appliance which is used in medical, dental or veterinary premises and is designed or adapted for use with an unplugged outlet.

Washing machines, dishwashers and other appliances

29.—(1) Subject to paragraph (2), clothes washing machines, clothes washer-driers and dishwashers shall be economical in the use of water.

(2) The requirements of this paragraph shall be deemed to be satisfied in the case of machines having a water consumption per cycle of not greater than the following—

(a) for domestic horizontal axis washing machines, 27 litres per kilogram of washload for a standard 60°C cotton cycle;

(b) for domestic washer-driers, 48 litres per kilogram of washload for a standard 60°C cotton cycle;

(c) for domestic dishwashers, 4.5 litres per place setting.

Water for outside use

30. Every pipe which conveys water to a drinking vessel for animals or poultry shall be fitted with—

(a) a float-operated valve, or some other no less effective device to control the inflow of water, which is—

(i) protected from damage and contamination; and

(ii) prevents contamination of the water supply; and

(b) a stopvalve or servicing valve as appropriate.

31. Every pond, fountain or pool shall have an impervious lining or membrane to prevent the leakage or seepage of water.

EXPLANATORY NOTE

(This note is not part of the Order)

These Regulations make provision for preventing contamination and waste of water supplied by a water undertaker. They do not apply to certain water fittings in connection with water supplied for non-domestic purposes, or to water fittings lawfully installed before 3rd August 2009: regulation 2.

Part II of the Regulations deals with the principal requirements.

Regulations 3 and 4 impose general requirements in relation to water fittings. Water fittings must not be installed, connected, arranged or used in such a manner that they are likely to cause waste, misuse, undue consumption or contamination, or erroneous measurement, of the water supplied.

They must be of an appropriate quality or standard, and be suitable for the circumstances in which they are used; and they must be installed, connected or disconnected in a workmanlike manner.

Regulation 5 requires a person who proposes to install certain water fittings to notify the undertaker, and not to commence installation without the undertaker's consent. The undertaker may withhold consent or grant it on certain conditions. This requirement does not apply to some fittings which are installed by a contractor who is approved by the water undertaker or certified by an organisation specified by the Secretary of State or National Assembly of Wales under The Water Supply (Water Fittings) 1999. Where an approved contractor installs, alters, connects or disconnects a water fitting, he must provide a certificate stating whether it complies with the Regulations: regulation 6.

Part III of the Regulations deals with enforcement etc.

Regulation 7 provides for a fine not exceeding £1000 for contravening the Regulations. It is a defence to show that the work on a water fitting was done by or under the direction of an approved contractor, and that the contractor certified that it complied with the Regulations.

Regulation 8 enables water undertakers and persons acting on behalf of the Department of the Environment who enter premises to carry out inspections, measurements and tests for the purposes of the Regulations.

Regulation 9 requires the water undertaker to enforce the requirements of the Regulations; this duty is enforceable by the Department.

Regulation 10 enables the Department to relax the requirements of these Regulations on the application of the water undertaker.

Regulation 11 requires the water undertaker to publicise any method of installation that it may approve for the purpose of the Regulations.

Regulation 12 provides for disputes arising under the Regulations between a water undertaker and a person who has installed or proposes to install a water fitting to be referred to arbitration.

Regulation 13 requires the water undertaker to publish an annual report detailing levels of enforcement activities.

Regulation 14 provides for the water undertaker to carry out works and recover costs in respect of contamination incidents from the person responsible.

Regulation 15 revokes The Water Regulations (Northern Ireland) 1991.

These regulations were notified in draft to the European Commission in accordance with Directive 98/34/EC, as amended by Directive 98/48/EC.