

## **CONDITIONS FOR THE PROVISION, USE AND MAINTENANCE IN MARINAS OF QUAYSIDE TAPS WITH CHECK VALVES AND HOSES FOR FILLING BOATS WITH WATER FOR DOMESTIC PURPOSES**

### **1 Introduction**

- 1.1 Water supply systems in marinas would be at risk of backflow if hoses fed directly from the supply pipes without backflow protection were left immersed in natural waters, fresh or saline, which are classified as fluid category five contamination risks by the Water Fittings Regulations. In general, in all non-domestic premises hose union taps require fluid category five backflow protection, usually achieved by them being supplied with water from a storage cistern which includes a type AA, AB or AD air gap arrangement.
- 1.2 In marinas, where hose union taps on quays or floating pontoons (referred to here as “quayside” taps) are used solely for filling boats with water for domestic purposes and for washing down, and marina operators fully comply with these conditions, the Water Supplier can accept that the backflow risk requires protection using a device of less than fluid category five. In such circumstances, at the discretion of the Water Supplier, backflow protection using an in-line double check valve (type EC or ED device) will be accepted for quayside hose union taps, in accordance with paragraph 6.3 of the WRAS Information and Guidance Note 9-06-02: (Information for Operating Plumbing Systems for the Supply of Water for Domestic Purposes to Boats in Marinas) and diagram R15.30h in the WRAS Water Regulations Guide (page 6.52, Second Edition).
- 1.3 The conditions of use set out below have resulted from consultation and cooperation between marina operators through the British Marine Federation and the Yacht Harbour Association and UK Water Suppliers through WRAS. The conditions have been accepted by the WRAS Technical Committee on behalf of all the UK Water Suppliers, who will adopt these alternative arrangements at their discretion where they consider the circumstances to be appropriate.
- 1.4 Marina operators should consult their local Water Suppliers regarding proposals for quayside taps before making any alterations for compliance. Where the Water Supplier intends to accept these conditions, the marina operator will be asked to undertake any necessary alterations within a given timescale and may be asked to give an undertaking to comply with the conditions in future. If at any time the conditions are not complied with, the Water Supplier may consider that the backflow risk is greater than fluid category three and will withdraw its consent and in accordance with the Regulations, will require backflow protection arrangements which comply with fluid category five.

### **2 REQUIREMENTS FOR THE INSTALLATION OF QUAYSIDE HOSE UNION TAPS**

- 2.1 The Water Supplier and the marina operator shall agree which quayside hose union taps are to be included under these conditions of acceptance and the marina operator shall make available to the Water Supplier a plan showing the location of these taps. Any hose union taps in the marina which are not designated ‘quayside taps’ on the plan are not included under these conditions of acceptance and must be provided with fluid category five backflow protection in accordance with the Regulations.
- 2.2 Where possible, the supply pipes feeding hose taps shall be buried in compliance with the Regulations. This normally requires a minimum depth of 750 mm below ground level. If pipes are to be installed at lesser depths, the Water Fittings Regulations require that consent from the Water Supplier is obtained in advance and any consent conditions are complied with.
- 2.3 Where supply pipes cannot be buried, they shall be fixed where they cannot be immersed in seawater or other natural water and shall be supported and clipped according to the requirements of the Regulations (see the Water Regulations Guide Section G4.18 and Table

- R4.18 and BS 6700:2006, Paragraph 6.1.7.2). Pipes or conduits used for drainage or sewerage must not be used as ducts for pipes conveying water supplied by a water undertaker.
- 2.4 Water supply pipe work which passes from solid ground to moveable pontoons must be designed and installed to prevent stress or wear to the pipework.
- 2.5 Supply pipes which are above ground shall be protected against damage caused by mechanical means or by freezing, insulated to prevent undue warming where necessary and, for plastic pipes, shall be protected against deterioration due to the effects of sunlight.
- 2.6 Where pipework is to be protected against damage by freezing by means of draining down in cold weather, an isolating valve and drain point shall be provided for each tap or group of taps. Adequate alternative means of preventing freezing will be accepted (e.g. insulation and trace heating).
- 2.7 Supply pipes should not be installed in places where they are exposed to hydrocarbons such as diesel, petrol or lubricating oils. If it is unavoidable that pipes are placed where this is a potential risk, suitable measure must be taken to protect against permeation of the pipe by the hydrocarbons. In the case of plastic pipes, this may be by the use of approved aluminium/plastic barrier pipe.
- 2.8 Secondary backflow protection shall be provided either by means of zone protection to groups of quayside taps or by means of wholesale backflow protection in accordance with the advice in the WRAS Information and Guidance Note 9-04-05 Report of the Expert Group on the Risk of Contamination of the Public Water Supply by Backflow. The secondary backflow device for zone protection shall be no less than a fluid category three device (e.g. a double check valve). For wholesale protection the device shall be in accordance with Water Supplier's assessment of the degree of risk from the whole site, following the guidance in the IGN.
- 2.9 Hose union taps shall be rigidly fixed in positions where they cannot become immersed, for example in natural waters (river or seawater). Taps intended for drawing water for drinking purposes should be labelled accordingly as drinking water taps.
- 2.10 An approved<sup>1</sup> type EC or ED backflow preventer (double check valve) shall be fitted in-line close to each hose union tap. Suitable measures must be taken to prevent the check valve freezing.
- 2.11 Marina operators have the legal responsibility to ensure that all water fittings are maintained in a satisfactory operating condition to comply with the Regulations. This extends to the check valves, which should be tested or replaced annually to ensure they remain fully operative. For this reason, *verifiable* check valves which can be tested in situ may be preferred. Records of the maintenance of the check valves shall be kept for a minimum of two years by the marina operator and shall be made available for inspection on request by the Water Supplier.
- 3 USE OF HOSES WITH QUAYSIDE HOSE UNION TAPS FOR FILLING SMALL CRAFT WITH FRESH WATER FOR DRINKING ETC.**
- 3.1 This use refers to intermittent and temporary use of hoses for filling the storage tanks on small craft. It does not apply to longer-term connection of quayside taps to provide water supplies to moored craft.
- 3.2 The use of hose union taps and hoses should be restricted to authorised users by means of locked cabinets or other restrictions on access to them. Additional measures should be considered where vandalism is likely to result in interference with the equipment.

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<sup>1</sup> Approved by WRAS and listed in the Water Fittings and Materials Directory ([www.wras.co.uk/Directory](http://www.wras.co.uk/Directory)) or approved by another body recognised by UK Water Suppliers.

- 3.3 Hoses shall not exceed 22 mm in internal diameter and, to avoid drinking water picking up unpleasant taints, they should be made of materials which are suitable for use with drinking water.
- 3.4 Hoses used by marina staff should be of a self-retracting lay-flat type where practicable, and must be removed from hose taps and securely stored after use.
- 3.5 Berth holders and users of visiting craft must provide their own hoses, preferably of the lay-flat type, to encourage removal after use.
- 3.6 All hoses left unattended on quaysides and pontoons must be removed by marina staff.
- 3.7 All users of hoses must be instructed by means of BMF and WRAS approved written and pictorial warning signs that they must not leave hoses with their outlets immersed in dock water, puddles or in any other liquids, in water tanks, drains, buckets or other containers, nor place the outlets in sewage tanks or sluices for sewage disposal.
- 3.8 Hose union taps to which these conditions apply will not be permitted to be used for other purposes than filling freshwater tanks or washing down craft or quayside areas.
- 3.9 In compliance with the Regulations, hoses used for washing down must be hand-held and be operated by means of a self-closing flow control (trigger gun) to minimise undue consumption of water.
- 3.10 If hose union taps are to supply pressure washers, the pressure washers must be of the type which includes an integral break-tank and air gap providing fluid category five backflow protection.
- 3.11 Marina operators should ensure that quayside taps which have not been used for two weeks or longer are flushed adequately to draw fresh water to them before users are permitted to draw water from them for drinking.

#### **4 DEFINITIONS**

- 4.1 Hose Union tap - whether located inside or outside buildings, a tap with a thread on the spout able to accept a screwed connection to a hose pipe. Any other taps to which hosepipes are connected are also included in this definition for the purpose of these conditions.

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