

**Water Regulations Advisory Committee  
Technical Working Group (TWG)  
2<sup>nd</sup> September 2002  
Room 5, 2<sup>nd</sup> Floor, Ashdown House**

**Those Present:**

**Members**

Professor Swaffield (Chair)	WRAC
Richard Clayton	WRAC
Mike Rymill	WRAC
Andrew Hutchinson	WRAC
David Hodges	WRAC
Roger Emmet	WRAC
Steve Tuckwell	Water Regulations Advisory Scheme (WRAS)
Mike Johnson	ODPM/Building Regulations Division
Kevin English	Caroma UK
Ed Smith	Anglian Water/Water UK

**Secretariat**

Peter Jiggins	Martin Macdonald	Nicola Clarke	Grant Gahagan
---------------	------------------	---------------	---------------

**Apologies**

David Gibson  
Rob Mynard

**1) Introductions**

- a) The Chair opened the meeting and asked all members to refer back to recommendations 6, 7 & 8 from WRAC's Enforcement Report to focus the Working Group on completing its original objectives.

**2) Matters arising from minutes of 2 July 2002**

- a) One anomaly in the minutes was identified which the Secretariat would amend.

**Action: Secretariat**

**3) Evolution of Specifications (Rec. 6) (WRAC TWG2002(04) See Annex 1)**

- a) The Secretariat gave the Group an overview of paper TWG2002(04). It was agreed that a strategy should be identified to enable the Regulations to remain effective in the light of continued technical development. The Group was reminded of recommendation 6 from the Enforcement Report, which states that WRAC, Defra and WRAS should work together to establish a suitable evolutionary mechanism for the Regulations. It was agreed that a group comprising Defra, its advisors and WRAS should meet periodically, for example to consider future updates of the Regulator's Specifications and test criteria for new products.
- b) A member pointed out that there was currently no framework for testing new products. The Group were informed of how this situation worked in Australia, where the manufacturer of a new product would need to produce a specification for that product based on their familiarity with the regulatory requirements.

- c) The discussion then moved on to the Regulator's Specifications. The issues of the dye test, and the paper test for the smaller flush volume on dual flush toilets were discussed. There was agreement that any test should reflect real life usage. A member mentioned that as well as laboratory tests, customer acceptability was also an issue with new products, although this was hard to assess.

#### 4) Relaxation Requests

- a) Members discussed the retrofitting of dual flush devices. The Group was informed that the purpose of the Southern/Anglian Water trials of dual flush devices was to investigate the potential for water savings, rather than to gain a general relaxation of the Regulations. It was acknowledged that further testing would be necessary to get conclusive results. A member informed the Group that the reason retrofitting of dual flush was prohibited was the issue of matching the cistern volume to the performance of the pan, as an incorrectly paired system would not work efficiently. Any change in the Regulations to allow dual flush retrofits may also need to include a procedure to change the flushing device from a siphon to a drop valve.
- b) Members moved on to discuss the formal application to relax the Regulations to allow a trial of an interruptible flushing syphon. The Group raised a number of concerns about the trial methodology and the robustness of the technology, in particular related to consumer acceptability and the lack of trailing volume of any flush event. Members were unanimous in their concern that the trailing volume would be insufficient for solids to clear standard domestic pipes and as such would cause blockages. Any trial would need to address these concerns, which was not the case at present. In order to test for blockages the trial would need to assess whether solids could clear a horizontal pipe of about 10m in length before the sewer. The current proposed location of the trial might not be appropriate. Concerns about water being wasted due to double flushing would also need to be addressed. The use of a door counter should give a figure of average flushes per visit. The inventor of the device was funding the trial himself and so should be made aware of the limitations of this trial, which would not be sufficiently robust to justify a change in the Regulations.

#### 5) Self Certification (Rec. 7)

- a) It was made clear that manufacturers would not support any changes to the current situation regarding self-certification unless it was in their interests to do so.

#### 6) Product Labelling (Paper WRAC TWG2002(05) See Annex 2)

- a) As discussed at the last TWG meeting, point of sale control was not feasible at this time, so other means would have to be considered. The introduction of product labelling was agreed to be a good way forward. The use of labelling would reduce the need for point of sale control, as it would enable consumers to make informed purchases. A member pointed out the current existence of a labelling system for WCs, but it was suggested by another that the consumer is unfamiliar with these labels. It was proposed that the labelling of white goods should be investigated further to determine what contribution it could make to promoting water efficient products. The Secretariat agreed to establish how much progress had been made on product labelling by the National Water Conservation Group/Market Transformation Programme. Another member agreed that commonality across products would be a good idea, as this would improve familiarity for consumers. Any scheme to label WCs would be promoted by the water industry.

**Action: Secretariat**

#### 7) Any other business

- a) No other business was reported.

#### 8) Date of next meeting

- a) The next meeting of the Technical Working Group will be held on 29 October 2002 in room 8b, Ashdown House, Victoria.

**WRAC Secretariat  
September 2002**

Annex 1

## Water Regulations Advisory Committee

## Technical Working Group

**Mechanism for changing the Regulations and Regulator's Specifications****Overview**

1. This paper provides further consideration on how to address recommendation 6 from WRAC's report on enforcement of the Water Supply (Water Fittings) Regulations. This was concerned with establishing 'evolutionary mechanisms' to ensure that the Regulations and Specifications do not pose a barrier to innovation or trade.
2. Paper WRAC TWG2002(01) asked members to provide specific examples of anomalies with the Regulations or Specifications and/or details of any innovative products whose acceptance is unnecessarily restricted by the Regulations. This paper sets out some of the issues raised and consideration of how these might be addressed, with a view to establishing the feasibility of developing a mechanism to change the Regulations on a more regular basis.

**Amending the Regulations or Specifications**

3. In considering any proposal to amend the Regulations or Specifications, the Department needs to consider the imperative for change based on the objectives of the Regulations. It will also want to consider the balance of opinion on the proposed change from those likely to be impacted by it.
4. The DTI has advised that any change to the Regulations or Specifications would be likely to be subject to European notification under 98/34 EC (the Technical Standards and Regulations Directive). This process enables other Member States to comment on or object to proposed Regulations or technical standards that might impose a barrier to trade. While previously this has only delayed implementing changes, it can also result in the European Commission rejecting the proposed requirements.
5. In the case of the WC Specification, this was previously notified to the Commission in advance of its introduction. It received a fair amount of criticism from other Member States, making it likely that any re-notification would be met with further objections. The possible exception would be if the changes moved the Specification closer to the requirements of EN 997, although there would remain the possibility of Member States objecting to existing clauses (even those not put forward for amendment). Furthermore, since its introduction a significant amount of work has been directed towards gaining the inclusion of the WC Specification as one class of EN 997. This is now close to agreement and publication, so the implications of changing the requirements of the Specification now would need careful consideration.

**Innovative products**

6. Should the Regulations unnecessarily restrict the acceptance of an innovative device this might be addressed by a product relaxation, as was previously the case with the Microfill backflow prevention device. There are currently two such cases under consideration:

**Retrofitted dual flush devices**

7. As identified at the meeting on 2 July 2002, WRAS intends to seek a formal relaxation request from DEFRA to allow the retrofitting of dual flush devices that passed a suitable performance specification (to be developed).

**Interruptible siphon flushing device**

8. The Department is due to be approached by a water company, on behalf of the inventor of an interruptible flushing device, seeking a relaxation to allow a trial of this device. Members' views are sought on this proposal. Although in previous discussions the conclusion was that these devices did not work, there would be merit in allowing a limited trial to provide improved information on which to base future decisions.

**Anomalies with the Regulations or Specifications****WC Specification – Paper discharge for reduced-flush volume test**

9. Proposal: to amend the Specification to require 6 joined up sheets of toilet tissue (as originally intended), rather than 6 individual sheets (the current wording), to be dropped into the WC pan.
10. Consideration: this amendment would make the Specification easier to pass, which might be questioned by some parties. The principle of separate sheets is well established in the European full flush paper test. It is doubtful whether the CEN committee (for EN 997) would accept joined up sheets, on the grounds that this would not represent actual use and any flush test procedure should be more searching than that (hence single sheets).

**WC Specification – Liquid contaminant dye retention test**

11. Proposal: to add 'mixing' to the post-flush procedure for clarity. The test could also be simplified by allowing the initial dry trap to be filled with a pre-prepared dye solution each time, rather than adding a sample of high concentration dye and mixing in the bowl prior to flushing. WC trap volumes vary considerably, perhaps from 0.8 to 1.8 litres, and so this would ensure a constant pre-flush contamination level for all bowls.
12. Consideration: this clarification might be achievable with advice/guidance, rather than needing to amend the Specification. It would be useful to establish the extent to which uncertainty about these procedures is causing manufacturers a problem.

**Regulation 5, Table 4(d) – requirement for a pump or booster drawing more than 12l/min**

13. Proposal: to clarify the meaning of 'connected indirectly' (see Annex A).
14. Consideration: again, any clarification should be possible through advice/guidance, rather than needing to amend the Regulations. In seeking to establish the cause of any uncertainty, members should consider the role of the Department's guidance and the WRAS recommendations.

**Regulation (25(1)(c)) – backflow prevention at urinals**

15. Proposal: to review the backflow risk arising from urinals.
16. Consideration: it has been suggested that the requirement for "*a permanently vented pipe interrupter located not less than 300 mm above the spillover level*" effectively precludes the use of pressure flushing valves, which have good water saving potential (see Annex A).

**Other anomalies**

17. In its submission to WRAC of June 2001, one water company listed what it considered to be 40 anomalies with the Regulations and Guidance. This has since been revised to 37 and is contained in Annex B. David Hodges has also supplied a number of anomalies in Annex C. While it is outside the scope of this paper to consider each of these items individually it demonstrates the number of concerns different parties have about the Regulations, each of which warrants careful consideration at an appropriate time.

**Conclusions**

18. A mechanism to change the Regulations already exists, but it is a lengthy and potentially complex process involving consultation at national and European level. Innovative products have been and could continue to be accommodated through the relaxation procedure where this was considered appropriate. In seeking to establish 'evolutionary mechanisms' the Committee should also consider the need for consistency in the Regulations. A series of small amendments over a period of time would tend to cause confusion about the regulatory requirements, in contrast to the objective of improving the operation of the Regulations. One approach would be to conduct a more complete review/amendment of the Regulations and Specifications at a suitable time to encompass all necessary changes. The timescale for this would depend on the urgency of addressing the issues put forward, which would be balanced by other factors such as the need to give the Regulations and guidance sufficient time to bed in.

**WRAC Secretariat**

August 2002

## Annex A

### Issues raised by Roger Emmet

#### **1 Notification (5, Table – 4(d); Guidance G6.1; Recommendation R6.1))**

A pump or booster drawing more than 12 L/min, connected directly or indirectly to a supply pipe requires Notification.

There is uncertainty over the meaning of the expression “connected indirectly”. It would have been reasonable to assume this meant that e.g. some sort of valve was interposed between the supply connection and the pump. However, exactly the same phrase is used in respect of a notifiable shower (Table – 4(c)). Here it is quite apparent that “connected indirectly” must include a supply taken via a cistern since the intention is to promote water economy.

The Guidance (G 6.1) speaks only of a “pump or booster connected to a supply pipe”, but the WRAS Recommendation (R 6.1) clearly interprets “connected indirectly” as including supply via a cistern.

I have always understood that the purpose of the Regulation was to reduce the risk of producing a vacuum in the water main. There is no such risk when the supply to a pump is taken via a cistern: The rate of supply is governed by the rate at which the cistern is filled, this being a function of the positive pressure in the supply pipe and the hydraulic resistance of the filling valve.

Possibly, if Notification procedures had been fully upheld by Water Suppliers, the need to notify such installations would already have been questioned. The Regulation is commonly considered in relation to pump assisted showers, but would apply equally to a vast number of industrial applications with mains make-up to process tanks etc.

I know of one manufacturer who sought from WRAS a “blanket presumption of notification” for their product. Had this been granted it would have removed the element of uncertainty for customers/installers and eliminated countless “illegal” installations.

#### **2 Backflow prevention at urinals (25 (1)(c))**

The use of pressure flushing valves at urinals has been shown to provide significant water savings. However, the regulatory requirement for “a permanently vented pipe interrupter located not less than 300 mm above the spillover level” effectively precludes their use. To achieve effective cleaning a certain flow rate of the flushing water is required and with some velocity through the sparge. This in turn demands that the head of water above the sparge when the flushing valve is operated has to be significant, typically 1m or more. The position of a permanently vented pipe interrupter effectively sets this head of water.

Consequently, where a manually operated valve is used, or an automatic valve with built-in sensor, the flush pipe has to rise from the valve to the pipe interrupter, and then fall to the urinal sparge. If the pipe work is exposed this is aesthetically unacceptable and subject to vandalism. If the pipe interrupter is also concealed, then arrangements have to be made (a) to enable it to vent to atmosphere and (b) to drain off any fluid (water) discharged from its vent apertures.

Further, vandalism in the form of blocking of the sparge outlet is likely to cause overflow from the pipe interrupter vents, and if the pipe interrupter is exposed then blocking of its vent apertures will make the device ineffective.

All of the above contribute to making the adoption of this method of urinal flushing commercially unacceptable and the potential for water saving is negated.

The remedy requires a review of the backflow prevention risk. In mainland Europe the air gap existing at the urinal bowl is deemed adequate protection. It has been found possible for contamination to occur at the urinal sparge, but in order for this to be drawn into the supply there have to be three simultaneous occurrences: The contamination has to be present, the flushing valve has to be open and there has to be a vacuum in the supply. Pending the existence of a suitable new type of backflow prevention device evidently suitable for a fluid category 5 risk it is suggested that an existing mechanical type of device might be upgraded by Relaxation for use in this particular application.

## Annex B

### Anomalies Found In The Regulations & Guidance

The following observations have been made following the day to day application of the Regulations.

- 1 Regulation 4 – (2) taken in the context in which it is written and similarly applied this Regulation would be prohibitive in the extreme rendering many thousands of fittings used throughout the plumbing industry illegal.
- 2 Regulation 5 – Failure to notify under this Regulation is a criminal offence now validated by the successful prosecution of Lorne Stewart by South West Water. However, this Regulation has already criminalised every plumber who has similarly failed to submit notices and undertaken work as specified in the table. These requirements urgently need review.
- 3 Regulation 5 – The notification requirements are inconsistent with the risk posed to water supplies. The elements in the table requiring notification by an approved contractor should include:
  - 1.
  2. Only if there is an increased demand on the water companies distribution system
  - 3.
  - 4.(d) (the first element) and
  - 4.(g).
- 4 Regulation 5 - The exemptions for approved contractors should apply to all notifiable works not mentioned in 3 above.
- 5 Regulation 5 – Item 5 in the table refers to ponds or pools with a capacity greater than 10,000 litres. What is the significance of this capacity? The risk of contamination exists at any capacity!
- 6 Regulation 5 - It is unclear as to the purpose of the notification requirement in 4(d) i.e. a pump drawing water indirectly etc. i.e. as shown in fig R6.1(b) in the WRAS Guide.
- 7 Regulation 5 – Probably not considered at the time there now appears to be a proliferation of domestic fire sprinkler installations which pose a significant contamination threat to supplies as they are essentially a dead leg that could also be open to abuse. These installations should be added to the notification list.
- 8 Schedule 1 – Is Fluid Category 2 water classified as wholesome or not or are the permissible levels of ‘impairment’ meant to be within those set in current Water Supply (Water Quality) Regulations? And, if FC2 is wholesome will the parameters change as the lower prescribed limits for some elements in the Regulations take effect in 2003 and 2010.
- 9 Schedule 1: Definitions of fluid categories:  
Fluid category 3 examples include hand held fertiliser applications in domestic gardens. Fluid 4 definition mentions insecticides and pesticides specifically, but this is contradicted by the examples given of fluid category 4 which refer to mini-irrigation

systems such as pop-up sprinklers and permeable hoses *without fertiliser or insecticide applications* and in the examples of fluid category 5 which include *insecticide applications*. Are insecticides and pesticides fluid 4 or 5 risks? Are fertilisers fluid 3, 4 or 5 risks?

- 10 Schedule 2 Paragraph 7. – With regard to the section on ‘Location of water fittings’ there are contradictions in the DETR Guide, repeated in the WRAS Guide, both in text and drawings that are already leading to disputes as to what is and is not reasonably accessible. This guidance needs to be clarified!
- 11 Schedule 2 Paragraph 8 – The associated guidance and recommendations for this requirement is particularly lengthy and appears to drift away from the requirement itself. The comment in G8.4 / R8.4 for example was initially aimed at the failure of instantaneous water heaters to achieve prescribed temperatures. A combination boiler properly sized for the premises in which it is installed will meet the criteria set in the table.  
The comment should therefore be removed as it suggests that it is acceptable to fit inadequately sized combination boiler in larger premises, which it clearly is not. (see also comment on Schedule 2 Paragraph 18 below).
- 12 Schedule 2 Paragraph 11 – G11.5 is too prescriptive regarding the type of valve.
- 13 Schedule 2 Paragraph 15 - G15.7e – asks for the fitting of a line strainer and servicing valves to FC4 backflow prevention devices. As set out the guidance is too prescriptive and does not take into account the fact that e.g. type DB devices cannot be valved downstream. In practice line strainers may be fitted anywhere in the supply so long as they perform their intended function.
- 14 Schedule 2 Paragraph 15 - Diagram R15.10.3 - Why should a bidet be at a lower level than any other fitting when: - the cold is by an independent distributing pipe from the storage cistern and the hot is the highest take off on the vent pipe?
- 15 Schedule 2 Paragraph 15 - G15.11 and R15.11 – indicates that an AUK2 air gap (FC 3) is suitable for use with an over the rim bidet. Table G6.1e and fluid categories recommendations have bidets in fluid category 5 which would mean that the air gap should be AUK3.
- 16 Schedule 2 Paragraph 15 - Diagrams G15.31.1: G15.31.2: & G15.31.4: - these should also show their respective warning pipes?
- 17 Schedule 2 Paragraph 15 - Why do some drawings in the G15.31 series in Regulations and BS EN 1717 show tundishes and others not?  
There is no description or explanation as to why in either!
- 18 Schedule 2 Paragraph 15 – The type AB air Gap is described in Regulations as an air gap with weir overflow. In BS-EN1717: 2000 it is described as an air gap with overflow non-circular (Unrestricted). If the weir overflow has a corrosion resistant mesh to stop ingress of insect's etc., even with increased dimensions the weir is still restricted!

- 19 Schedule 2 Paragraph 15 – The drawing of the type AF air gap G1531.5 in the WRAS Guide is not compatible with the drawing of the type AF air gap in BS-EN1717: 2000. The description of the air gap in BS-EN1717: 2000 is that of an air gap with circular overflow (restricted) but the drawing shows an unrestricted overflow similar to the weir overflow but circular. The comparable Regulations drawing show an overflow discharging into a tundish.
- 20 Schedule 2 Paragraph 15 - Drawings of Type AC, AF,AG and AUK1 should also show the critical water level which would be above the invert level.
- 21 Schedule 2 Paragraph 15 - As the size of the air gap in AB, AC, AF, AG and the AUK1 arrangements are the same, the only difference is the overflow arrangement. Theses should be fully described as the differences affect the level of protection each arrangement gives.
- 22 Schedule 2 Paragraph 15 - Reference to AUK1 should be removed, as there is apparently no meaningful logic to its inclusion as a backflow prevention arrangement.
- 23 Schedule 2 Paragraph 15 - The drawing of the type AG air gap in Regulations is not compatible with the type AG air gap drawing in BS-EN1717:2000. The description of the Type AG air gap in S15.2 states that the size of the overflow is determined by measure or vacuum test. As the vacuum test is not practicable on site the measure test would have to be done. This test is not described in the Regulations. If the test to determine the size of the overflow is similar to that applied in the Old Byelaws Guide but substituting the new meaning of the Critical Water Level interpretation from S15.1 in the regulations, then there is no real difference between the AG and the AF air gaps other than the classification. (The only apparent difference is the size of the overflow that in any event should not compromise the air gap).
- The inconsistencies in dimensions and descriptions regarding the air gaps mentioned above need to be rectified! (There are possibly others).
- 24 Schedule 2 Paragraph 15 - What is the significance of the 300mm measurement from the spillover level of the WC pan to the invert level of the warning pipe/overflow in the description of the type AUK1 air gap? (If this is a valid requirement then most close coupled WC suites being installed now do not comply with the Regulators Backflow Specifications).
- 25 Schedule 2 Paragraph 24 – With reference to Schedule 2 paragraph 15, re: backflow protection for the filling of primary circuits via single feed indirect hot water storage vessels (primatic cylinders). The method of backflow protection between the secondary (F2) and the primary (F3) waters in self-priming systems is not specified in the Regulators Backflow Protection Specifications. Therefore a relaxation of the Specification or an addition to the Specification is required.
- 26 Schedule 2 Paragraph 17 - R17.1.3b - this illustrates a method of accommodating the expansion of water in an unvented cylinder but it does not properly highlight the dangers associated with the fitting of check valves e.g. at meter installations, or the closure of line valves. It does not incorporate reference to the fitting of other safety devices.

- 27 Schedule 2 Paragraph 18 – With regard to comment on temperatures at outlets supplied via combination boilers not necessarily being achieved it should be made clear here that the requirements for high water temperatures are based on legionella control recommendations set out in L8 (HSG70) and applies to commercial premises. Temperatures required at outlets in domestic dwellings where combination boilers are likely to be used should be subject to customer preference or choice.
- 28 Schedule 2 Paragraph 20 - Guidance 20.1 – Requires an air gap between the termination of the vent pipe and the overflow or warning pipe. In the Water Regulation s Guide guidance G20.1 "(or above any point of obstruction if elsewhere)" has been added to the script. Also Diagram R20.1 shows a sketch where it is stated, "that the vent pipe should terminate not less than twice the internal diameter of the vent pipe above the level of the top of the float operated valve". Is this regarded as "the obstruction"?
- 29 Schedule 2 Paragraph 20 - R20.4.3 & Drawings R20.4.3a & b - This type of installation does not include backflow prevention arrangements approved by the Regulator. As such any installation would require a relaxation of the backflow protection requirements to allow the self-priming arrangement to be used as a F1/2 F3 separation method.
- 30 Schedule 2 Paragraph 20 - Guidance 20.11 - the requirement for a vent to atmosphere on a self-priming cylinder is not in the Regulation. The Guidance would prohibit the use of self-priming arrangements on un-vented cylinders. (see also 29 above).
- 31 Schedule 2 Paragraph 21 - Guidance 21.1 & Drawing G21.1 - The reference to "(G21.1)" in the small script above the drawing relates to G20.1 & R20.1 not G21.1
- 32 Schedule 2 Paragraph 25 – G25.8 is no longer valid and should be removed.
- 33 Schedule 2 Paragraph 25 - The prohibition on the use of 'pressure flushing valves' (PFV) in domestic dwellings is too restrictive. There is no reason why a PFV should not be allowed within a domestic dwellings where the necessary flow of 1.2lps can be achieved using a storage cistern for single or multiple outlets.
- 34 Schedule 2 Paragraph 27 – G27.4 It would be better if drinking water taps were marked Drinking Water instead of the other way around. This would be in line with recommendations for the marking pipes and safer if labels were inadvertently removed or went missing.
- 35 The numbering of drawings in the DEFRA Guidance has not been carried through or referred to in the WRAS Guide. This makes cross-referencing difficult and confusing.
- 36 If the AA air gap requirements are deemed adequate for fluid 5-backflow protection why do we need the added complication of AUK3 which is the same?
- 37 With regard to the AUK2 requirements the dimensions for sizes greater than G $\frac{3}{4}$ " are more onerous than the AA or AUK3 requirements. Therefore G1" taps meeting the less stringent air gap requirement of 50.8mm would in my view be acceptable not only for FC3 applications but would also be acceptable for FC5 applications.

## Annex C

### Priority issues raised by David Hodges

1. Many of the current Regulator's Specifications make reference to the old Byelaws. What is the plan to remove the Byelaw references?
2. Because most of the Regulator's Specifications are the old Byelaws test criteria they relate to Byelaws issues i.e. waste, contamination, etc. and not to fitness for purpose. What should the basis now be for the Regulator's Specifications?
3. As the majority of the Specifications were written a number of years ago, they contain out of date references, some are incomplete, contain mistakes and contradictory requirements. What is the timescale for updating?
4. Materials requirements. Non compliance with UK materials requirements constitute by far the largest problem area for fittings manufacturers. The materials requirements are detailed in G2.1 and G2.2. There are no current approved test methods for determining metal leachate from metals even though a number of metals, particularly lead and nickel, are known to be highly toxic and can present problems in use. Non-metallic materials need to be approved to BS 6920 (Section G2.2). It is stated that no standard of any other EEA state provides an equivalent level of performance in all attributes. Can this statement be supported? The UK is the only known country to possess two approval regimes for non-metallic materials (BS 6920 and SoS approval). The implication is that BS 6920 is not considered totally satisfactory. Therefore should approvals from other countries such as KTW(Germany), ACS(France) be considered acceptable?

#### Specific issues requiring changes to the Regulator's Specifications:

1. No endurance testing for bending of pressurised rubber hoses.
2. No endurance test for diaphragms of expansion vessels.
3. No endurance test for pressure reducing valves.
4. No endurance test for pressure or expansion relief valves.
5. No test for water consumption of reverse osmosis units.
6. No tensile test for crimped or push fit connections for cold water use above ground.
7. No thermal insulation tests for outside items such as meter boxes and stand pipes.

#### Known innovative products that will require Regulator's Specifications in the near future include:

1. Mikrofill and Arrow Valves automatic filling devices for central heating system.
2. Arrow Valves category 5 backflow prevention device.
3. Sloan Valve pressure flushing WC system.

**Annex 2****Water Regulations Advisory Committee****Technical Working Group****The Market Transformation Programme and the National Water Conservation Group.****Overview**

1. This paper outlines the roles of the NWCG and the MTP and the progress that has been made towards the introduction of water product labelling. This potentially goes some way to fulfilling Recommendations 7&8 of the WRAC report.

**Background****The MTP**

2. AEA Technology are contracted by DEFRA to manage the Market Transformation Programme (MTP), which aims “...to encourage products which do less harm to the environment, using less energy, water and other resources.” Essentially, it supports a sector review process to encourage public awareness and scrutiny. By the use of market projections and examining different policy scenarios, it provides an illustration of current industry trends and works to establish how these might best be influenced. The ‘Policy Brief’ is the main deliverable to date, outlining the issues for consideration, priorities and actions for different parties to take forward.

**The NWCG**

3. The National Water Conservation Group (NWCG) is a stakeholder group made up of manufacturers, academics, government, regulators and research organisations whose aim is to provide independent, authoritative advice that will encourage the uptake of water efficiency. The Building Research Establishment (BRE) currently provides the Secretariat for the NWCG, which is chaired by Martin Shouler.

**Application of the MTP to the Water Sector**

4. The MTP focuses mainly on improving the energy performance of both domestic and non-domestic products. However, the programme has now been extended to include household water consumption. BRE have been commissioned to produce a provisional Policy Brief for the domestic Water Sector of the MTP and members of the NWCG effectively act as consultants in this undertaking. The MTP also incorporates DEFRA’s work in support of Ecolabelling of products.

**Existing Product Labelling**

5. EU Energy Labels are familiarly found on certain ‘white goods’, displaying information as detailed in Appendix 1. These labels are a legal requirement and include a section on water consumption, associated with washing machines, dishwashers and washer/driers. DEFRA is currently considering the potential of amending the energy label so that the water section would use a similar ‘A-G’ rating as the ‘Energy’ and ‘Performance’ sections.

There is a second, voluntary type of label currently in use in the Energy Sector. The 'Energy Efficiency Recommended' label (Appendix 2), was developed by the Energy Saving Trust (EST) in association with the Energy Efficiency Recommended Database<sup>1</sup>, that lists all products that have been approved under this labelling scheme. The use of such labels enables consumers to make more informed purchases, and should provide a strong incentive for manufacturers to develop efficient products.

### **Water Product Labelling**

6. Although the current EU Energy Label has a restricted applicability to water using products (i.e. only washing machines, washer driers and dishwashers), there is no good reason why a label could not be developed for other domestic water appliances. There would be scope to include information such as average water consumption, maximum and minimum use and typical water cost for comparative purposes. Information might be presented as a product rating, or a database-backed 'Water Efficiency Recommended' approach could be adopted, similar to the approach used in Energy Efficiency (EST) labelling. Under the MTP, the Policy Brief<sup>2</sup> for WCs aims to "Investigate information content, design etc of labelling for WCs" with a target date for all WCs to be labelled for water consumption by 2006. Similar aspirational targets and actions have been set for a range of other domestic water appliances<sup>3</sup>.

### **Relevance to WRACs recommendations**

7. The TWG meeting of 2<sup>nd</sup> July 2002 established the Group's interest in examining product labelling as a potential method of improving Point of Sale control (Recommendation 8). The MTP and the NWCG are already seeking to address this issue as a general target underpinning all water products to "reduce water consumption via proliferation of 'point-of-sale' product information" on appliances and fittings. This would expand upon the TWG's initial objective of fulfilling Recommendation 8. The introduction of product labelling could also go a considerable way to fulfilling Recommendation 7, the third party testing of water fittings. For example, to show compliance with a requirement for a performance label could necessitate the verified testing of products.

The Group is invited to comment on this approach in fulfilling Recommendations 7&8 of the WRAC report.

**WRAC Secretariat  
August 2002**

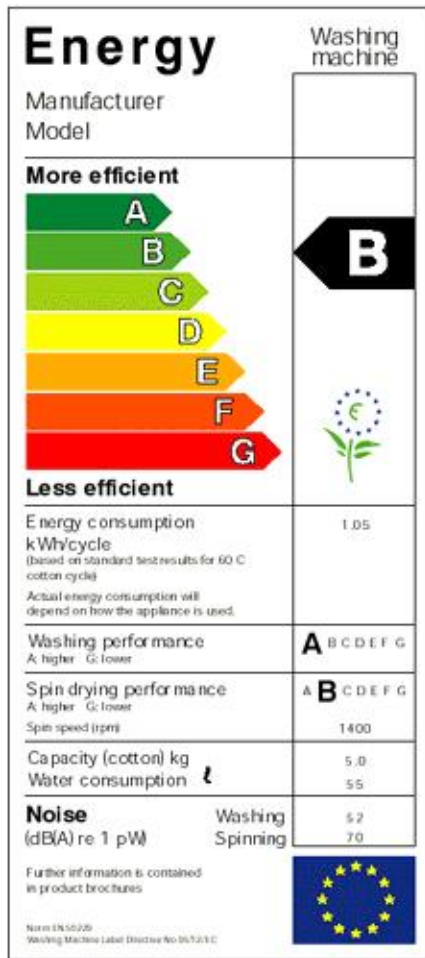
---

<sup>1</sup> Further information can be found at <http://www.saveenergy.co.uk/index.cfm?page=02091900>

<sup>2</sup> The Policy Brief for WCs can be found at [www.mtprog.com/policybriefs/water/toilets.htm](http://www.mtprog.com/policybriefs/water/toilets.htm)

<sup>3</sup> All Policy Briefs can be found at <http://www.mtprog.com/policybriefs/>

**Appendix 2: EU Energy Label**



By law, the European Community Energy Label must be displayed on all new household products of the following types displayed for sale, hire or hire-purchase:

- Refrigerators, freezers and fridge-freezer combinations
- Washing machines
- Electric tumble dryers
- Combined washer-dryers
- Dishwashers
- Lamps
- Electric ovens (after 1 July 2003)
- Air conditioners (after 1 July 2003)

**How to Use the Energy Label To Choose More Efficient Products and Save you Money**

**Water consumption, conservation and efficiency** (washing machines, combined washer-dryers and dishwashers)

**Water consumption** Some models use more water than others. All water comes at a cost, both to the environment and to you, the person who pays the bills.

**Water conservation** To help you choose a model that benefits the environment and your water bills, the table below shows roughly how much water typical appliances use.

Washing machine:	40-135 litres per wash (based on a wash load capacity of 5kg)
Washer-dryer:	60-240 litres per wash (based on a wash load capacity of 5kg)
Dishwasher:	12-36 litres per wash (based on an 8-place setting)
Dishwasher:	12-54 litres per wash (based on a 12-place setting)

**Water efficiency** Choose a model that uses water more efficiently. For example, a washing machine that is designed to use 40 litres per wash rather than 90 litres could reduce your household water bill by 10%, saving you £20 per year on an average metered water bill.

Appendix 2: Energy Efficiency Recommended Label

