



## INFORMATION NOTICE

### BEST PRACTICE FITTINGS AND WATER DEMAND MANAGEMENT SPECIFICATIONS ON THE MOD ESTATE

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Strategy & Policy Directorate Sponsor: John Oliver	Date of issue: 27 January 2011
Contact if different from above Sponsor: Chris Boulton, DE Ops South- Aqua PMO Ops1, (9)4421 3236/0121 311 3236, Chris.boulton@de.mod.uk	
Who Should Read this: All those responsible for the installation of water fittings and conservation measures within buildings (new build and existing).	
When it takes effect: Immediately	When it is due to expire: 28 January 2012

Sustainable Development

### INTRODUCTION

Water use and awareness play a significant role in the total water and energy use of a building and across the site. An improved understanding of water use and subsequent behaviours will also influence the way we install and use water fittings. The combination of the installation and maintenance of best practice water fittings, together with consumption monitoring and the right usage behaviours will therefore provide the best opportunity to deliver more significant and sustainable cost savings and reduce water demand, energy and carbon. The advice below is consistent with that offered by the Waste and Resources Action Programme (WRAP) who are a government funded but independent advisory body set up to advise on all aspects of waste management.

Table A outlines some simple water efficiency tips that can be used by facilities managers and companies to help educate staff and save water.

Table B outlines the water efficiency of common fittings and appliances

**Table A:** Simple generic water use tips for facilities managers and building occupants.

Faulty Equipment	<ul style="list-style-type: none"> <li>• Report any water fittings which appear faulty such as constantly running urinal cisterns, WC overflows, storage tank or warning pipe overflows, dripping taps and showers or any potential source of waste observed throughout the site.</li> </ul>
Shower	<ul style="list-style-type: none"> <li>• Just one minute less in the shower each day can save up to £10 a year on gas bills and a further £15 on water bills, for each person.</li> </ul>
WC	<ul style="list-style-type: none"> <li>• Ensure that staff understand how a dual flush toilet works, and understand the difference in flush volumes.</li> </ul>
Taps	<ul style="list-style-type: none"> <li>• Don't leave taps running overnight to prepare vegetables for the following morning.</li> <li>• Don't leave the taps running when you're cleaning the kitchen area or when using the bathroom such as brushing your teeth.</li> <li>• Use cold water wherever possible – for example, rinse plates in cold water instead of hot water, as this helps to save energy bills.</li> <li>• A dripping tap wastes around 5,500litres of water a year. Turning off the tap to stop the drips, could save a further £10 a year.</li> </ul>
Washing Machine	<ul style="list-style-type: none"> <li>• Choose the eco setting or lowest temperature setting when using the washing machine. Washing clothes at 30 degrees rather than higher temperatures will save around £10 on energy bills and around 45kg of CO2.</li> </ul>
Dishwasher	<ul style="list-style-type: none"> <li>• Wait until you have a full load before turning on the dishwasher. This saves water and energy by doing fewer loads.</li> <li>• Scrape all food wastes into the bin instead of rinsing the dishes</li> </ul>
General	<ul style="list-style-type: none"> <li>• Include simple water efficiency policies and procedures in staff induction and training programs</li> <li>• Display charts/information about water and energy savings related to specific measures in the toilets and kitchen</li> <li>• Provide staff with water usage updates once a year (possibly including other updates of savings in areas such as waste, energy, paper and carbon emissions)</li> <li>• Send water saving ideas and progress reports to staff in newsletters, emails and bulletins</li> <li>• Establish an ideas box to share water saving and general sustainability ideas across the workplace</li> </ul>

**Table B:** Indicative practice levels for water efficiency of common fittings and appliances (Nov 2010)

Fitting / appliance	Baseline practice	Efficient practice	Highly efficient practice
<b>Shower</b>	<b>12 l/min<sup>3</sup></b>	<b>10 l/min</b>	<b>6 l/min</b>
	An aeration device or advanced spray pattern may increase user satisfaction at a given flow rate	This flow rate allows a house to achieve levels 3 & 4 in the Code for Sustainable Homes	This flow rate may be unacceptable in household use, but acceptable in commercial property
<b>WC</b>	<b>6 l/flush</b>	<b>4.5 l/flush (effective flush<sup>4</sup>)</b>	<b>3.5 l/flush (effective flush)</b>
	6 l single flush is appropriate for male public WCs	Either 6/4 l dual flush or 4.5 l single flush. A low volume single flush may be more appropriate in Public buildings.	e.g. 4.5/2.6 l dual flush May be inappropriate for plumbing Systems requiring higher flow. A low volume single flush may be more appropriate in public Buildings.
<b>Urinal</b>	<b>1.5 l/bowl/use</b> <b>7.5 l/bowl/hour</b> During building occupancy period <b>0 l/hour</b> otherwise with minimal water use in maintenance	<b>3 l/bowl/hour</b> maximum during building occupancy with user-presence activated flush <b>0 l/hour</b> outside of occupancy and activation period, with minimal water use in maintenance	<b>0 l/hour</b> with minimal water use in maintenance
		Flush within the hour if one person activates the sensor	May be inappropriate for high frequency of use (e.g. schools, sports venues)
<b>Tap (basin)</b>	<b>Up to 12 l/min</b>	<b>6 l/min</b>	<b>4 l/min</b>
		Two-stage taps may help to reduce the effective flow rate	Sensor-actuated taps help to reduce consumption in public buildings
<b>Tap (kitchen)</b>	<b>12 l/min</b>	<b>8 l/min</b>	<b>6 l/min</b>
		A higher flow rate is typically required for kitchen use than for basins, since kitchen demand is related more to volume than duration of flow	User acceptability would need to be considered Two-stage taps may help to reduce the effective flow rate
<b>Bath</b>	<b>200 l capacity</b> excluding body mass within the bath	<b>185 l capacity</b> excluding body mass within the bath	<b>155 l capacity</b> excluding body mass within the bath
			User acceptability would need to be considered; ergonomically shaped tubs may be preferable to shorter shallow tubs
<b>Washing Machine</b>	<b>11 l/kg dry load</b>	<b>9 l/kg dry load</b>	<b>7 l/kg dry load</b>
	<b>1.2 l/place setting</b>	<b>1.0 l/place setting</b>	<b>0.7 l/place setting</b>
	Older domestic models may use 20 l/cycle	Equivalent to 12 l/cycle in a domestic dishwasher	

Communities and Local Government, 2007, <http://www.communities.gov.uk/publications/corporate/analysis-consultation> responses. For housing in England and Wales, building regulations require that total water consumption is less than 125 l per person per day (120 lppd internal and 5 lppd external). Achieving this standard requires the use of least some efficient practice components. <sup>3</sup>For showers and taps, flow rate refers to the maximum value measured at operating pressures up to 5 bar. <sup>4</sup>The Government's Enhanced Capital Allowances scheme defines the effective flush<sup>4</sup> of a dual-flush action WC as the mean consumption of one full flush and three reduced flushes.