

## Division 22 – Water Sustainability

### 7.82 Water Sustainability Code

The provisions of this Division comprise the Water Sustainability Code. They are:

- Compliance with the Water Sustainability Code (section 7.83);
- Overall outcomes of the Water Sustainability Code (section 7.84);
- Specific outcomes, acceptable solutions and probable solutions for the Water Sustainability Code (section 7.85).

### 7.83 Compliance with the Water Sustainability Code

Development that is consistent with the specific outcomes in section 7.85 complies with the Water Sustainability Code.

### 7.84 Overall Outcomes of the Water Sustainability Code

- (a) The overall outcomes are the purpose of the Water Sustainability Code.
- (b) The overall outcome sought for the Water Sustainability Code is:
  - (i) Development is designed to ensure the efficient use of water and to reduce the demand on water supply sources and treatment facilities.

### 7.85 Specific Outcomes, Acceptable Solutions and Probable Solutions for the Water Sustainability Code

The specific outcomes sought for the Water Sustainability Code are included in column 1 of Table 7.28. Acceptable solutions for self-assessable development and probable solutions for code assessable development are included in column 2 of Table 7.28.

<b>Table 7.28</b>	
<b>Water Sustainability Code (Part 7 Division 22)</b>	
<b>Column 1</b>	<b>Column 2</b>
<b>Specific Outcomes</b>	<b>Acceptable Solutions (if self-assessable)</b> <b>Probable Solutions (if code assessable)</b>
<b>Rainwater Tanks and Measures</b>	
<p><b>SO1</b> Uses supplied directly with water from a reticulated town water supply system, by a water service provider registered under the <i>Water Act 2000</i>, provide water sourced by means other than the reticulated water supply system that:</p> <ol style="list-style-type: none"> <li>(a) has sufficient storage capacity to provide an acceptable contribution to meet water use demand having regard to:           <ol style="list-style-type: none"> <li>(i) local rainfall pattern;</li> <li>(ii) roof catchment area; and</li> <li>(iii) the area available to site the rainwater tank.</li> </ol> </li> <li>(b) is provided through measures such as a rainwater tank, communal rainwater tanks, water storage tanks, dual reticulation or stormwater reuse , or a greywater treatment plant.</li> </ol>	<p><b>S1.1</b> For extensions to class 1 buildings:</p> <ol style="list-style-type: none"> <li>(a) a rainwater tank is provided with a minimum rainwater storage capacity of at least 3000 litres;</li> <li>(b) the rainwater tank is installed to receive rainwater from a minimum roof catchment area that is at least one half of the total roof area or 100m<sup>2</sup>, whichever is the lesser;</li> <li>(c) a rainwater tank is connected for external use to at least one outdoor tap and a swimming pool where it is installed.</li> </ol> <p>Or</p> <p><b>S1.2</b> For class 2 buildings and class 10 buildings associated with or ancillary to those buildings:</p> <ol style="list-style-type: none"> <li>(a) a rainwater tank is provided with a capacity of:           <ol style="list-style-type: none"> <li>(i) 1500 litres per required pedestal; and</li> <li>(ii) any additional capacity as specified in Appendix B of QDC Part MP4.3.</li> </ol> </li> <li>(b) a rainwater tank is connected to:           <ol style="list-style-type: none"> <li>(i) swimming pools on the lot;</li> <li>(ii) each required pedestal;</li> <li>(iii) an external use;</li> <li>(iv) washing machine cold water taps.</li> </ol> </li> <li>(c) a rainwater tank is installed to receive rainwater from the lesser of:           <ol style="list-style-type: none"> <li>(i) the available roof area; or</li> <li>(ii) 50m<sup>2</sup> of roof area for each connected required pedestal;</li> </ol> </li> <li>(d) a rainwater tank which supplies water to a swimming pool is installed to receive rainwater from an additional roof catchment area being the lesser of:           <ol style="list-style-type: none"> <li>(i) the available roof area; or</li> <li>(ii) the additional area specified in Appendix B of QDC Part MP4.3.</li> </ol> </li> </ol>

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<b>Water Sustainability Code (Part 7 Division 22)</b>	
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<b>Specific Outcomes</b>	<b>Acceptable Solutions (if self-assessable)</b> <b>Probable Solutions (if code assessable)</b>
	<p>Or</p> <p><b>S1.3</b> For extensions to class 2 to 9 buildings:</p> <p>(a) a rainwater tank is provided with a capacity of:</p> <p style="padding-left: 20px;">(i) 1500 litres per required pedestal; and</p> <p style="padding-left: 20px;">(ii) any additional capacity as specified in Appendix B of ODC Part MP4.3.</p> <p>(b) a rainwater tank is connected to:</p> <p style="padding-left: 20px;">(i) swimming pools on the lot;</p> <p style="padding-left: 20px;">(ii) an external use.</p> <p>(c) a rainwater tank is installed to receive rainwater from the lesser of:</p> <p style="padding-left: 20px;">(i) the available roof area; or</p> <p style="padding-left: 20px;">(ii) 50m<sup>2</sup> of roof area for each connected required pedestal;</p> <p>(d) a rainwater tank which supplies water to a swimming pool is installed to receive rainwater from an additional roof catchment area being the lesser of:</p> <p style="padding-left: 20px;">(i) the available roof area; or</p> <p style="padding-left: 20px;">(ii) the additional area specified in Appendix B of ODC Part MP4.3.</p>
<p><b>SO2</b> A rainwater tank must have suitable measures to prevent contaminants from entering the rainwater tank having regard to the nature and level of contaminants within the locality.</p>	<p><b>S2.1</b> A rainwater tank has:</p> <p>(a) a screened downpipe rainhead, having a screen mesh 4 – 6 mm and designed to prevent leaves from entering each down pipe; and</p> <p>(b) a minimum of 20 litres of the first flush of roof catchment diverted/discarded before entering the rainwater tank where connected to showers, wash basins, kitchen or hot water services.</p>
<p><b>SO3</b> A rainwater tank must have suitable measures to prevent mosquitoes breeding in the tank and vermin entering the tank.</p>	<p><b>S3.1</b> A rainwater tank is provided with:</p> <p>(a) either</p> <p style="padding-left: 20px;">(i) mosquito-proof screens of brass, copper, aluminium or stainless steel gauze, having a mesh size of not more than 1 mm aperture mesh; or</p> <p style="padding-left: 20px;">(ii) flap valves at every opening of the rainwater tank; and</p> <p>(b) a vermin trap;</p> <p>(c) where a wet system is used to harvest rainwater, mosquito-proofing in accordance with HBO230-2006.</p>
<p><b>SO4</b> Internal fixtures supplied from a rainwater tank must have a continuous supply of water.</p>	<p><b>S4.1</b> A rainwater tank has:</p> <p>(a) an automatic switching device providing supplementary water from the reticulated town water supply; or</p> <p>(b) A trickle top up system, providing supplementary water from the reticulated town water supply with:</p> <p style="padding-left: 20px;">(i) a minimum flow rate of</p> <p style="padding-left: 40px;">(A) for a tank size of 0-5000 litres – 2 litres per minute;</p> <p style="padding-left: 40px;">(B) for a tank size of 5001-10000 litres – 8 litres per minute;</p> <p style="padding-left: 40px;">(C) for a tank size of 10001-30000 litres – 16 litres per minute;</p> <p style="padding-left: 40px;">(D) for a tank size of 30001-999999 – 32 litres per minute; and</p> <p style="padding-left: 20px;">(ii) top up valves installed in an accessible location; and</p> <p style="padding-left: 20px;">(iii) For class 1a and 10a buildings – a minimum storage volume of the reticulated town water supply top up not exceeding 1,000 litres or</p> <p style="padding-left: 20px;">(iv) for all other building classes – a minimum storage volume, at</p>

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	<p>which top up is triggered, greater than the total of any required fire fighting capacity and:</p> <p>(A) for a tank size of 0-5000 litres – 1000 litres; or</p> <p>(B) for a tank size of 5001-10000 litres – 2000 litres; or</p> <p>(C) for a tank size of 10001-30000 litres – 8000 litres; or</p> <p>(D) for a tank size of 30001-999999 – 16000 litres.</p> <p>(c) the outlet for the internal fixtures is located above the point at which the tank still contains any required fire-fighting capacity.</p>
<p><b>S05</b> Water from a rainwater tank must not contaminate the potable water within a reticulated town water supply system.</p>	<p><b>5.1</b> A backflow prevention device is installed to protect the potable water within the reticulated town water supply system in accordance with AS/NZS 3500:2003 Plumbing and Drainage.</p>
<b>System Materials</b>	
<p><b>S06</b> Materials used in a rainwater tank must be suitable for its intended use.</p>	<p><b>S6.1</b></p> <p>(a) Polyethylene tanks comply with AS/NZS4766(Int): 2006 polyethylene storage tanks for water and chemicals;</p> <p>(b) Galvanised steel sheet shall comply with AS1397: 2001 steel sheet and strip – hot-dipped zinc-coated or aluminium/zinc-coated, and have a minimum coating of 550g/m<sup>2</sup>;</p> <p>(c) Stainless steel sheet complies with ASTM A240/A240M-05 standard specification for chromium and chromium-nickel stainless steel plate, sheet, and strip for pressure vessels and for general applications;</p> <p>(d) Concrete tanks comply with AS3735-2001 concrete structures containing liquids;</p> <p>(e) Collection well/underground water cell (non potable) complies with Vertical Axis Type Section 10 of AS/NZS 1546.1:1998 on-site domestic wastewater treatment units – Septic Tanks.</p>
<b>Rainwater tank stands</b>	
<p><b>S07</b> Where a rainwater tank is supported on a stand or other structure, the supporting structure must be capable of withstanding any loads likely to be imposed on it.</p>	<p><b>S7.1</b> A rainwater tank stand or other supporting structure complies with AS/NZS1170.1:2002 permanent, imposed and other actions and AS/NZS1170.2:2002 wind actions.</p>
<b>Rainwater tank openings</b>	
<p><b>S08</b> Rainwater tank openings are constructed to prevent ingress of surface stormwater and groundwater.</p>	<p><b>S8.1</b></p> <p>(a) All rainwater tanks are sealed to prevent surface stormwater and groundwater entering the rainwater tank;</p> <p>(b) Non water-tight access lids are sealed, or terminate a minimum 150mm above finished ground level stormwater flows with the ground sloped away from the tank and access lid;</p> <p>(c) Water tight access lids are permitted to finish flush with the finished surface level.</p>
<b>Rainwater tank overflow – point of discharge</b>	
<p><b>S09</b> Rainwater tank placement and tank overflow is designed to ensure stormwater does not pond under building floors or flood around foundations of buildings.</p>	<p><b>S9.1</b></p> <p>(a) The rainwater tank overflow is connected to the existing stormwater system or kerb and channel, or inter-allotment stormwater pit;</p> <p>(b) If no stormwater system exists and the property falls away from the street the rainwater tank overflow may have to be drained to an on-site stormwater dispersion system. Council must approve on-site water dispersion systems before installation.</p> <p>(c) The water from the overflow is considered to be stormwater and the</p>

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	<p>requirements of AS/NZS 3500:2003 apply.</p> <p>(d) A physical air break or non-return valve on the outlet from the rainwater tank overflow is provided before connecting to the stormwater drainage system.</p>
<b>Greywater treatment plants</b>	
<p><b>SO10</b> Greywater treatment plants provide water for suitable uses on the lot and must have sufficient storage and processing capacity to provide an alternative water source having regard to:</p> <p>(a) the amount of available greywater; and (b) the suitable uses for treated greywater.</p>	<p><b>S10.1</b> Greywater treatment plants (all building classes):</p> <p>(a) have a minimum processing capacity to treat total greywater input vessel volume in 24 hours;</p> <p>(b) are connected to:</p> <p style="margin-left: 20px;">(i) all toilet cisterns;</p> <p style="margin-left: 20px;">(ii) washing machine cold water taps;</p> <p style="margin-left: 20px;">(iii) an external use.</p> <p>(c) comply with Table T1 of the Queensland Plumbing and Wastewater Code for the effluent compliance value for end uses with a high level of human contact;</p> <p>(d) dispose of untreated greywater to the sewer.</p> <p><b>S10.2</b> Greywater treatment plants (class 1 buildings):</p> <p>(a) are installed to receive greywater from all bathroom sanitary outlets in the building;</p> <p>(b) has a storage capacity not exceeding 2000 litres;</p> <p>(c) supplies the treated water separate to the reticulated town water supply system:</p> <p style="margin-left: 20px;">(i) to toilet cisterns using a dual float system; and</p> <p style="margin-left: 20px;">(ii) for cold water to washing machines using a separate tap directly connected from the greywater treatment plant.</p> <p><b>S10.3</b> Greywater treatment plants (class 2 to 9 buildings):</p> <p>(a) are installed to receive all greywater from within the building;</p> <p>(b) have a minimum storage capacity to hold:</p> <p style="margin-left: 20px;">(i) in an accommodation building (as described in QDC Part MP4.3), 30 litres of greywater required per pedestal; or</p> <p style="margin-left: 20px;">(ii) in other buildings and small buildings, 15 litres of greywater per required pedestal</p> <p>(c) have an automatic switching device providing supplementary water from the reticulated town water supply system.</p>