
PART 25 – WATER SAVINGS TARGETS

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Purpose

To specify water savings targets for *Class 1* buildings.

Commencement

This version of part 25 –

- (a) commences on 1 January 2007: and
- (b) replaces the version of part 25 published on 1 September 2006.

Application

- (1) This part applies where a building development application is made in a local government area listed in Appendix A for the construction of a *Class 1* building on or after 1 January 2007.
- (2) This part applies where a building development application is made in a local government area not listed in Appendix A for the construction of a *Class 1* building on or after 1 July 2007.
- (3) Despite (1) and (2), this part does not apply if the building application is for a building in a local government area or part thereof for which the Minister has given an exemption. The local government may apply for an exemption in the approved form.

Minister means the Minister responsible for the *Building Act 1975*.

- (4) This part does not apply to alterations and additions to an existing *Class 1* building.

Referral Agency

The local government is the concurrence agency for any alternative solutions used to comply with performance criteria under this part (see the *Integrated Planning Regulation 1998*, schedule 2).

Associated Requirements

- *Plumbing and Drainage Act 2002*
- *Standard Plumbing and Drainage Regulation 2003*
- *Integrated Planning Act 1997*
- *Integrated Planning Regulation 1998*
- *Building Act 1975*
- *Building Regulation 2006*
- *Water Act 2002*
- *Health Regulation 1996*
- Local government planning schemes

Referenced Standards

AS/NZS 3500:2003 – Plumbing and Drainage

AS/NZS4766(Int):2002 – Polyethylene storage tanks for water and chemicals

AS1397:2001 – Steel sheet and strip - Hot-dipped zinc-coated or aluminium/zinc-coated

ASTM A240/A240M-05 – Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications

AS3735:2001 – Concrete structures retaining liquids

AS/NZS1546.1:1998 – On-site domestic wastewater treatment units – Septic Tanks

AS/NZS1170.1:2002 – Structural design actions – Permanent, imposed and other actions

AS/NZS1170.2:2002 – Structural design actions – Wind actions

Definitions

Note: *Italicised* words within the body of the text, other than legislation titles, are defined below.

Rainwater tank – means a covered tank or combination of covered tanks used to collect rainwater from a building roof.

External use – means the use of collected rainwater for outdoor application, such as gardening, irrigation, ponds, filling swimming pools and outdoor cleaning.

Reticulated town water supply system – means a pipe network managed by a water service provider registered under the *Water Act 2000* for delivering drinking water directly to premises.

Class 1 – means one or more buildings which in association constitute –

(a) **Class 1a** – a single dwelling being –

(i) a detached house; or

(ii) one of a group of two or more attached dwellings, each being a building, separated by a fire-resisting wall, including a row house, terrace house, town house or villa unit; or

(b) **Class 1b** – a boarding house, guest house, hostel or the like –

(i) with a total area of all floors not exceeding 300 m² measured over the enclosing walls of the Class 1b; and

(ii) in which not more than 12 persons would ordinarily be resident,

which is not located above or below another dwelling or another Class of building other than a private garage.

**PERFORMANCE
CRITERIA**
ACCEPTABLE SOLUTIONS
Water savings targets

P1 *Class 1* buildings supplied directly with water from the *reticulated town water supply system*, by a water service provider registered under the *Water Act 2000*, must achieve targets listed in Appendix B. To achieve the targets in Appendix B, water must be sourced by means other than the use of the *reticulated town water supply system*.

A1 *Class 1* buildings connected to a *reticulated town water supply system* provided by a water service provider registered under the *Water Act 2000* use –

- (a) a *rainwater tank*; or
- (b) alternative water substitution measures, such as communal *rainwater tanks*, dual reticulation or storm water reuse; or
- (c) a combination of (a) and (b) as specified in a local planning instrument, State Code or State Planning Policy.

**Rainwater tank installation,
capacity and water quality
protection measures**

P2 A *rainwater tank* must have sufficient storage capacity to provide an acceptable contribution to meet water savings targets listed in Appendix B having regard to –

- (a) local rainfall pattern;
- (b) roof catchment area; and
- (c) area available to site the *rainwater tank*.

A2 A *rainwater tank* –

- (a) has a minimum storage capacity –
 - (i) of at least 5000 litres for a detached *Class 1* building; or
 - (ii) at least 3000 litres for a *Class 1* building other than a detached *Class 1* building; or
 - (iii) greater than (a) (i) or (a) (ii) as specified by the local government in a local planning instrument; and
- (b) is installed to receive rainfall from –
 - (i) a minimum roof catchment area that is at least one half of the total roof area or 100 m², whichever is the lesser; or
 - (ii) a minimum roof catchment area that is greater than (b) (i), as specified by the local government in a local planning instrument; and
- (c) is connected for *external use* and *internal use* for –
 - (i) toilet cisterns and washing machine cold water taps; or
 - (ii) toilet cisterns, washing machine

PERFORMANCE CRITERIA	ACCEPTABLE SOLUTIONS
<p>P3 A <i>rainwater tank</i> must have suitable measures to prevent contaminants from entering the <i>rainwater tank</i> having regard to the nature and level of contaminants within the locality.</p>	<p>A3 A <i>rainwater tank</i> has –</p> <ul style="list-style-type: none"> (a) a screened downpipe rainhead, having screen mesh 4 – 6mm and designed to shed leaves, installed on each downpipe; and (b) a minimum of 15 litres of the first flush of roof catchment diverted/discarded before entering the <i>rainwater tank</i>.
<p>P4 A <i>rainwater tank</i> must have suitable measures to prevent mosquitos breeding in the tank and vermin entering the tank.</p>	<p>A4 A <i>rainwater tank</i> is provided with –</p> <ul style="list-style-type: none"> (a) either – <ul style="list-style-type: none"> (i) mosquito-proof screens of brass, copper, aluminum or stainless steel gauze not coarser than 1 mm aperture mesh; or (ii) flap valves at every opening of the <i>rainwater tank</i>; and (b) a vermin trap.
<p>P5 Internal fixtures supplied from a <i>rainwater tank</i> must have a continuous supply of water.</p>	<p>A5 A <i>rainwater tank</i> has –</p> <ul style="list-style-type: none"> (a) an automatic switching device providing supplementary water from the reticulated town water supply; or (b) a trickle top up system, providing supplementary water from the reticulated town water supply with – <ul style="list-style-type: none"> (i) a minimum flow rate of 2 litres per minute and a maximum flow rate of 4 litres per minute; and (ii) top up valves installed in an accessible location; and (iii) a minimum storage volume of the reticulated town water supply top up not exceeding 1,000 litres or as specified by the local government in a local planning instrument.

**PERFORMANCE
CRITERIA**

P6 Water from a *rainwater tank* must not contaminate the potable water within a *reticulated town water supply system*.

ACCEPTABLE SOLUTIONS

A6 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.

System materials

P7 Materials used in a *rainwater tank* must be suitable for its intended use.

A7

- (a) Polyethylene tanks comply with AS/NZS4766(Int):2002 polyethylene storage tanks for water and chemicals.
- (b) Galvanised steel sheet complies with AS1397:2001 steel sheet and strip – hot-dipped zinc-coated or aluminium/zinc-coated, and have a minimum coating of 550 g/m².
- (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.
- (d) Concrete tanks comply with AS3735:2001 concrete structures containing liquids.
- (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.

Rainwater tank stands

P8 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.

A8 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.

**PERFORMANCE
CRITERIA**
Rainwater tank openings

P9 *Rainwater tank* openings are constructed to prevent ingress of surface stormwater and groundwater.

***Rainwater tank overflow –
point of discharge***

P10 *Rainwater tank* placement and tank overflow is designed to ensure stormwater does not pond under building floors or flood around foundations of buildings.

ACCEPTABLE SOLUTIONS

A9

- (a) All *rainwater tanks* are sealed to prevent surface stormwater and groundwater entering the *rainwater tank*.
- (b) Non water-tight access lids are sealed, or terminate a minimum 150 mm above finished ground level stormwater flows with the ground sloped away from the tank and access lid.
- (c) Water tight access lids are permitted to finish flush with the finished surface level.

A10

- (a) The *rainwater tank* overflow is connected to the existing stormwater system or kerb and channel, or inter-allotment stormwater pit.
- (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. The local government must approve on-site stormwater dispersion systems before installation.
- (c) The water from the overflow is considered to be stormwater and the requirements of AS/NZS 3500:2003 apply.
- (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.
- (e) All plumbing and stormwater connections comply with local government requirements.

Appendix A

From 1 January 2007 water savings targets as specified in Appendix B apply to the following local government areas

Beaudesert Shire
Boonah Shire
Brisbane City
Caboolture Shire
Caloundra City
Cooloola Shire
Crows Nest Shire
Esk Shire
Gatton Shire
Gold Coast City
Ipswich City
Jondaryan Shire
Kilcoy Shire
Laidley Shire
Logan City
Maroochy Shire
Maryborough City
Nanango Shire
Noosa Shire
Pine Rivers Shire
Redcliffe City
Redland Shire
Rosalie Shire
Toowoomba City

Appendix B

Water savings targets for Queensland local government areas

<p>Group 1: Water savings targets of 16 kL per year for new detached houses and 10 kL per year for other new <i>Class 1</i> dwellings apply in the following local government areas:</p>
<p>Barcoo Shire, Boulia Shire, Diamantina Shire, Isisford Shire, Longreach Shire, Quilpie Shire.</p>
<p>Group 2: Water savings targets of 24 kL per year for new detached houses and 14 kL per year for other new <i>Class 1</i> dwellings apply in the following local government areas:</p>
<p>Aramac Shire, Barcaldine Shire, Belyando Shire, Blackall Shire, Bulloo Shire, Burke Shire, Carpentaria Shire, Cloncurry Shire, Cook Shire, Croydon Shire, Dalrymple Shire, Doomadgee Shire, Etheridge Shire, Flinders Shire, Ilfracombe Shire, Jericho Shire, Kowanyama Shire, Mareeba Shire, McKinlay Shire, Mornington Shire, Mount Isa City, Paroo Shire, Pormpuraaw Shire, Richmond Shire, Winton Shire.</p>
<p>Group 3: Water savings targets of 36 kL per year for new detached houses and 22 kL per year for other new <i>Class 1</i> dwellings apply in the following local government areas:</p>
<p>Balonne Shire, Booringa Shire, Bowen Shire, Broadsound Shire, Charters Towers City, Duaringa Shire, Fitzroy Shire, Livingstone Shire, Murweh Shire, Nebo Shire, Peak Downs Shire, Tambo Shire, Warroo Shire, Woorabinda Shire.</p>
<p>Group 4: Water savings targets of 44 kL per year for new detached houses and 26 kL per year for other new <i>Class 1</i> dwellings apply in the following local government areas:</p>
<p>Banana Shire, Bauhinia Shire, Bendemere Shire, Bungil Shire, Cairns City, Cardwell Shire, Chinchilla Shire, Eacham Shire, Eidsvold Shire, Emerald Shire, Herberton Shire, Hinchinbrook Shire, Johnstone Shire, Murilla Shire, Palm Island Aboriginal Shire, Roma Town, Taroom Shire, Thuringowa Shire, Townsville City.</p>
<p>Group 5: Water savings targets of 51 kL per year for new detached houses and 31 kL per year for other new <i>Class 1</i> dwellings apply in the following local government areas:</p>
<p>Aurukun Shire, Badu Island, Bamaga island, Biggenden Shire, Boigu Island, Bundaberg City, Burnett Shire, Calliope Shire, Cambooya Shire, Clifton Shire, Dalby Town, Dauan Island, Erub Island, Gayndah Shire, Gladstone City, Goondiwindi Town, Hammond Island, Hervey Bay City, Iama Island, Inglewood Shire, Injinoo Shire, Isis Shire, Kingaroy Shire, Kolan Shire, Kubin Island, Lockhart River Shire, Mabuiag Island, Mapoon Shire, Mer Island, Millmerran Shire, Miriam Vale Shire, Monto Shire, Mount Morgan Shire, Mundubbera Shire, Napranum Shire, New Mapoon Shire, Perry Shire, Pittsworth Shire, Poruma Island, Rockhampton City, Saibai Island, Seisia Island, St Pauls Island, Stanthorpe Shire,</p>

Tara Shire, Torres Shire, Ugar Island, Umagico Shire, Waggamba Shire, Wambo Shire, Warraber Island, Warwick Shire, Weipa Town, Wondai Shire, Yorke Island.

Group 6: Water savings targets of 59 kL per year for new detached houses and 35 kL per year for other *Class 1* dwellings apply in the following local government areas:

Atherton Shire, Burdekin Shire, Cherbourg Shire, Douglas Shire, Hope Vale Shire, Kilkivan Shire, Mackay City, Mirani Shire, Murgon Shire, Sarina Shire, Tiaro Shire, Whitsunday Shire, Woocoo Shire, Wujal Wujal Shire, Yarrabah Shire.

Group 7: Water savings targets of 70 kL per year for new detached houses and 42 kL per year for other new *Class 1* dwellings apply in the following local government areas:

Councils listed in Appendix A.