



ADVISORY NOTICE BUILDING

09/06

Advisory Notices are issued to assist in the interpretation of the Development Act 1993

June 2006

TECHNICAL:

Building Code of Australia : Mandatory plumbed rainwater tanks for Class 1 buildings

PURPOSE

The purpose of this Advisory Notice is to provide advice about the implementation on 1 July 2006 of the State Government's mandatory plumbed rainwater tank requirements for Class 1 buildings.

BACKGROUND

In March 2004 the State Government announced several initiatives aimed at making our State a leader in environmental reform. A number of these initiatives aim to improve the sustainability of new housing. These initiatives include:

- the installation of plumbed rainwater tanks
- increasing the current energy efficiency requirement from 4-stars to 5-stars and;
- installing high efficiency heated water services.

The implementation of these requirements will assist South Australia in *Attaining Sustainability*, one of the 6 key objectives of South Australia's State Strategic Plan.

IMPLEMENTATION

The State Government's plumbed rainwater tank policy is implemented through the existing development approval system in accordance with the *Development Act and Regulations 1993*. The plumbing aspects of the policy are regulated by the South Australian Water Corporation (SA Water) in accordance with the *Waterworks Act 1932* and *Waterworks Regulations 1996*.

The requirement for plumbed rainwater tanks is mandatory from **1 July 2006**. All applications lodged for Building Rules Consent on or after this date are required to comply with the new requirements.

The technical requirements are contained in:

- **The Building Code of Australia (Volume 2) – BCA 2006**
Part SA 2 - Water efficiency has been inserted in the South Australian Appendix.
- **The South Australian Housing Code – Amendment 13**
Clause D.11 – Water efficiency has been inserted in *Appendix D – Health and Amenity*.



Notice of the alterations to both the *Building Code of Australia* (BCA) and the *South Australian Housing Code* (SAHC) were gazetted on 16 February 2006 (Government Gazette Notice 09/06).

BUILDING RULES REQUIREMENTS

The requirement for plumbed rainwater tanks does not apply to Class 1 buildings or additions/extensions to Class 1 buildings located in Out of Council Areas, the Municipal Council of Roxby Downs or the District Council of Coober Pedy.

In all other areas, plumbed rainwater tanks are required for:

- All new Class 1 buildings.
- Extensions/additions to Class 1 buildings where the roof area of the extension/addition is not less than 50m² and where the addition incorporates a water closet, water heater or a laundry cold water outlet.

Performance provisions

The performance provisions in the BCA require Class 1 buildings to provide an **additional** water supply other than the mains reticulated supply. This supply must be plumbed to at least a water closet or a water heater or all the cold water laundry outlets.

Dual reticulated (fixed pipe) water supply systems, such as those used at Mawson Lakes, are considered to comply with the performance provisions and as such rainwater tanks are not required to be installed where such a system has been installed. Water from an approved bore, connected to a water closet, water heater or laundry cold water outlet is also considered to be an acceptable additional water supply.

Acceptable construction practice

Documentation designed and submitted for development approval must demonstrate that not less than 50m² of roof catchment area will be collected by the rainwater tank and must indicate whether the tank will be plumbed to a water closet, a water heater or all the laundry cold water outlets.

The exception to this is where the roof area of a Class 1 building, other than an addition or extension to an existing Class 1 building, is less than 50m². In this case, the entire roof catchment area must be collected by the rainwater tank and plumbed to the selected fitting.

There are three additional technical requirements.

1. The rainwater tank must be fitted with an overflow device that disposes of overflow from the rainwater tank.
2. The inlet and overflow of the rainwater tank must be fitted with mosquito proof, non-degradable screens to ensure continual rainwater tank water quality.
3. Appropriate consideration needs to be given to the adequacy of the structure supporting the plumbed rainwater tank.

The connection of the rainwater tank to both the mains reticulated supply (for top-up purposes) and the

selected fitting (WC, heated water service or laundry outlets) means that it is imperative that the rainwater tank remain stable. This will prevent the possible collapse of the tank and the dislodgement or rupturing of the supply pipework.

Situations requiring assessment against the structural provisions of the BCA may include the use of non-proprietary stands and the bracketing of the rainwater tank off external walls. Designers and manufacturers of proprietary rainwater tank stands should also be able to verify compliance with the structural requirements of the BCA if requested to do so.

A number of Class 1 buildings may contribute to a communal plumbed rainwater tank. In this situation each Class 1 building must contribute rainwater from 50m² of its roof catchment area to the communal rainwater tank, which must be plumbed to a water closet or water heater or cold water laundry outlets in **each** Class 1 building. The minimum rainwater tank size required in this situation must be determined by multiplying the number of Class 1 buildings that contribute to the rainwater tank by a minimum volume of 1 kilolitre (1000 litres) of rainwater as required for each dwelling.

Additional information is available from:

- Building Policy Branch, Planning SA, telephone (08) 8303 0602.
- <http://www.planning.sa.gov.au/go/building/community-information/sustainability-and-efficiency/rainwater-tanks/rainwater-tanks>
- Department for Water Land and Biodiversity, www.dwlbc.sa.gov.au, telephone (08) 8463 6800.
- http://www.dwlbc.sa.gov.au/files/SP_RWTPolicyQuickReferenceSummary.pdf

PLUMBING REQUIREMENTS

There are several aspects of the State Government's plumbed rainwater tank policy that are regulated by SA Water and therefore do not form part of the assessment or inspection responsibilities of the relevant authority under the *Development Act 1993*.

SA Water requires all plumbing work to comply with AS/NZS 3500:2003, the *National Plumbing and Drainage Code* and any South Australian variations published by SA Water. The technical requirements for seamless automatic switching, backflow prevention devices, pumps, pipes and fittings, marking and labelling and the requirements for buried and partly buried rainwater tanks are contained in *Section 14* of AS/NZS 3500:2003 Part 1 and the SA Water variations.

A licensed plumber must:

- install the piping system delivering the rainwater to the water closet, water heater or cold water laundry outlets and
- complete a Certificate of Compliance certifying that the installation has been installed in accordance with AS/NZS 3500 and the South Australian variations. The Certificate of Compliance must be provided to both SA Water and the home owner within 7 days of completion of the work.

Additional information is available from:

- <http://www.sawater.com.au/SAWater/DevelopersBuilders/ForPlumbers/>
- Development Services Branch, SA Water, telephone (08) 8207 1400.
- *Rainwater Installation Handbook* available from SA Water.
- *Schedule to the Directions under the Waterworks Act 1932 & the Sewerage Act 1929 (SA Variations and Additions)* - November 2005 available from SA Water.

HEALTH AND ENVIRONMENTAL ISSUES

The Department of Health aided in the development of the provisions. Concerns relating to the maintenance of rainwater tanks and the quality of rainwater tank water (microbial and chemical hazards) should be directed to Public Health SA. Applicants located in areas of high industrial activity where roof run-off contains pollutants that may cause discolouration of laundry should elect to plumb their rainwater tank to the WC or laundry cold water outlets.

The Environment Protection Agency also provide fact sheets that address the issue of noise that may be produced by pumps fitted to the rainwater tank and the need to prevent 'bleed' produced by evaporative coolers and the like from entering the roof catchment area and being collected by the rainwater tank.

Additional information is available from:

- www.dh.sa.gov.au/pehs/environ-health-index.htm
- Public Health SA, Department of Health, telephone (08) 8226 7107.
- *Use of Rainwater Tanks* fact sheet available from Public Health SA
<http://www.dh.sa.gov.au/pehs/publications/rainwater-tanks.pdf>
- *Guidance on Use of Rainwater Tanks* (2nd Edition) available from Public Health SA
http://enhealth.nphp.gov.au/council/pubs/documents/rainwater_tanks.pdf
- *Rainwater tanks – their selection, use and maintenance* available from the Department of Water, Land and Biodiversity Conservation <http://www.dwlbc.sa.gov.au/files/rainwater.pdf>
- www.epa.sa.gov.au
- http://www.epa.sa.gov.au/pdfs/guide_aircon.pdf
- http://www.epa.sa.gov.au/pdfs/info_noise.pdf

Further information

Department of Primary Industries and Resources

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www.planning.sa.gov.au/go/building_policy/

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ISSN: 1443-8038