

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

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**Amendment No. 1**  
**to**  
**AS/NZS 3500.1:2003**  
**Plumbing and drainage**  
**Part 1: Water services**

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**REVISED TEXT**

The 2003 edition of AS/NZS 3500.1 is amended as follows; the amendment(s) should be inserted in the appropriate place(s).

SUMMARY: This Amendment applies to Clauses 2.3, 2.4.1, 2.4.2, 3.2.1, 3.3.4, 4.2.5, 6.6, 9.5.2, 9.5.4, 9.5.5, 9.6, 10.4.1, 14.3.2, 14.3.3, 14.4, 14.5, 16.2, Section 10A (new), Table 14.1 (new), Figures 9.1 and 14.2, and Appendices A and F.

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Approved for publication in New Zealand on behalf of the Standards Council of New Zealand on 14 October 2005.

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**Page 10 Clause 2.3**

*Delete* first and second paragraphs and *replace* with the following:

Materials and products in contact with drinking water, rainwater, recycled water, or any

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**Page 11 Clause 2.4.2 Item (d)**

*Delete* Item (d) and replace with the following:

- (d) Copper and copper alloy pipes and fittings shall be installed in accordance with installation requirements of AS 4809.
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**Page 12 Clause 2.5**

*Delete* Clause 2.5 and *replace* with the following:

‘Not applicable’.

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**Page 15 Clause 3.2.1**

*Delete* Clause 3.2.1 and *replace* with the following:

**3.2.1 Flow rates**

The flow rates of taps, valves and cisterns shall be not less than the flow rates specified in Table 3.1.

The maximum flow rate from a shower, basin, and kitchen sink or laundry trough outlet shall not exceed 9 L/min.

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**Page 16 Clause 3.3.4, first paragraph**

*Delete* the word ‘operating’ and *replace* with the word ‘static’.

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**Page 20 Clause 4.2.5 Item (b)**

*Delete* Item (b) and *replace* with the following:

- (b) Where an alternative supply is non-drinking water, piping shall be clearly and

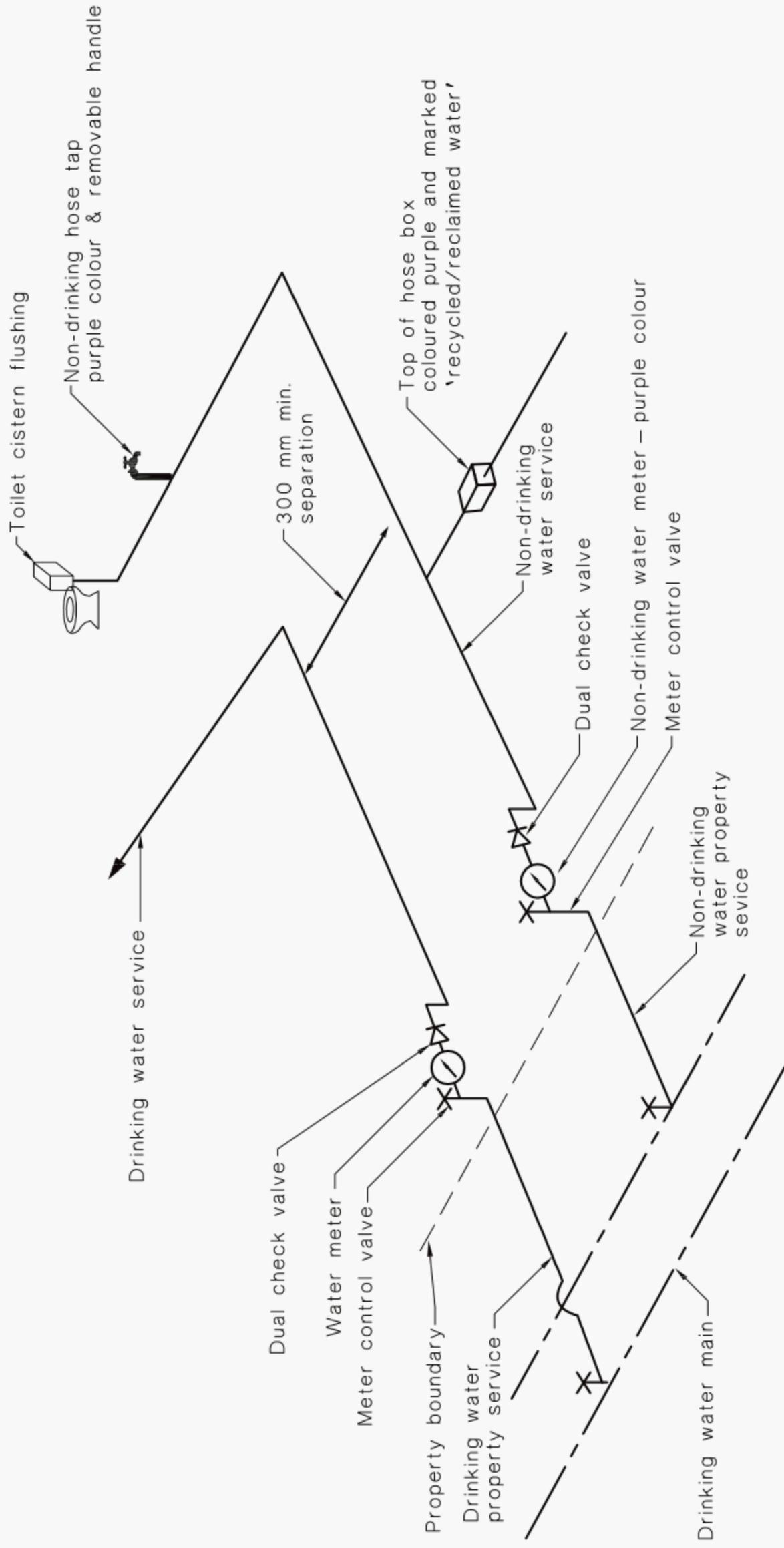


FIGURE 9.1 TYPICAL NON-DRINKING WATER INSTALLATION FROM A RETICULATED RECYCLED WATER SYSTEM

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**Page 67 Clause 9.5.2**

*Delete* Clause 9.5.2 and *replace* with the following:

**9.5.2 Non-drinking water services and outlets**

**9.5.2.1 Service pipes**

All pipes shall be identified by a purple colour in accordance with AS 2700 (NZS 7702) being no darker than P24 Jacaranda or P12 Purple and no lighter than P23 Lilac.

Where pipes are not integrally coloured purple, identification may be achieved by means of close fitting durable purple coloured sleeving, netting or spirally wrapped tape.

All buried pipes shall have an identification tape complying with AS 2648.1 and marked with the following:

- (a) Contrasting purple lettering installed on top of the pipe, running longitudinally, and fastened to the pipe at not more than 3 m intervals.
- (b) The following statement in accordance with AS 1345:  
RECYCLED OR RECLAIMED—WATER—DO NOT DRINK

In New Zealand, markings shall be in accordance with NZBC G12/AS1.

**9.5.2.2 Service fittings**

Fittings may be coloured purple in accordance with the colours specified in Clause 9.5.2.1.

NOTE: It is not necessary to use purple coloured fittings.

**9.5.2.3 External hose tap outlets other than those installed as part of a fire service**

External hose tap outlets shall comply with the following:

- (a) They shall be clearly marked with either a 'warning sign' in accordance with Figure 9.2 or 'prohibition sign' in accordance to AS 1319; or in New Zealand, the requirements of NZBC G12/AS1. The prohibition sign shall conform with sign number 404 of AS 1319.
- (b) They shall be of a type that has a removable handle except where the outlet is installed 1200 mm or more above the finished surface level.
- (c) They shall be coloured, powdered coated purple

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**Page 67 Clause 9.5.4**

*Delete* Clause 9.5.4.

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**Page 68 Figure 9.2**

*Delete* Figure 9.2 and *replace* with the following:



NOTE: The signs shall be coloured in accordance with AS 1319

FIGURE 9.2 TYPICAL WARNING SIGN AND PROHIBITION SIGN

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**Page 68 Clause 9.5.5 Item (a)**

*Delete* 'Lilac (P23)' and *replace* with 'purple'.

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**Page 68 Clause 9.6**

*Delete* the first paragraph and *replace* with the following:

The non-drinking water service shall be flushed and tested in accordance with Section 16. It shall also be tested for cross-connection, prior to commissioning, as follows:

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**Page 69 Clause 10.4.1, second line**

- 1 *Delete* 'and not less than 1.5 L'.
- 2 *Delete* Note.

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**Page 72 Table 10.3**

*Delete* Table 10.3 and *replace* with the following:

Designated type of flush valve	Maximum discharge capacity of a flush valve L	Maximum number of, or length of, urinal wall permitted to be served by a single flush valve
1 stall	2.5	1 stall or 600 mm of continuous wall
2 stalls	5.0	2 stalls or 1.2 m of continuous wall
3 stalls	7.5	3 stalls or 1.8 m of continuous wall

NOTE: A wall-hung urinal is equivalent to one stall.

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**Page 75 Section 10A**

*Insert* new Section 10A as follows:

**10A INSTALLATION OF WATER SUPPLY TO SPECIFIED FIXTURES**

**10A.1 SCOPE OF SECTION**

This Section specifies installation requirements for the connection of water supply to specified fixtures.

**10A.2 BIDET, BIDETTE AND TOILET SEAT DOUCHE**

**10A.2.1 Bidets**

A bidet shall be installed with a registered break tank or a testable device complying with AS/NZS 2845.1 or AS/NZS 2845.2.

**10A.2.2 Bidette**

A bidette shall be installed with a non-testable device or a 25 mm air gap.

**10A.2.3 Toilet seat douches**

Where the douche outlet is, in all positions, at least 25 mm above the rim of the pan, no backflow prevention is required.

Where the outlet, in any position, is less than 25 mm above the rim of the pan, a backflow prevention device, complying with AS/NZS 2845.1 or AS/NZS 2845.2, shall be installed.

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**Page 79 Clause 14.3.2**

*Delete* Clause 14.3.2 and *replace* with the following:

**14.3.2 Additional marking and signage**

In addition to the marking requirements of Clause 2.2, the water supply system from a rainwater tank shall be clearly marked at intervals not exceeding 500 mm with the word 'RAINWATER' in contrasting colour, in accordance with AS 1345. Water outlets shall be identified as 'RAINWATER', or with a rainwater tap identified by a green coloured indicator with the letters 'RW'. A typical sign is shown in Figure 14.2.

NOTE: AS 1319 provides direction as to the appropriate layout, size and face materials for signs.

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**Page 79 Clause 14.3.3**

*Delete* Clause 14.3.3 and *replace* with the following:

**14.3.3 Connection between service pipes**

Where a water supply system from a rainwater tank is connected with the water service from a network utility operator's water supply, the following applies:

- (a) An appropriate backflow prevention device shall be provided to protect the network utility operator's water supply.
- (b) Where the rainwater is being used as a supply to a flushing device, either a backflow prevention device, as shown in Figure 14.1 (a), or an air gap within the cistern as shown in Figure 14.1 (b), shall be provided.
- (c) A suitable device (e.g., single check valve) shall be provided on the pipeline from the rainwater tank to prevent water from the network utility operator's water supply flowing into the rainwater tank.

**Page 80 Clause 14.4**

*Delete* Clause 14.4 and *replace* with the following:

**14.4 Provision for augmentation of supply**

Where provision is made for augmentation of the rainwater supply by either top-up of the rainwater tank with water from another supply, or by connection of another supply to any point downstream of the rainwater tank outlet, the installation shall include backflow protection in accordance with Section 4 and Table 14.1, to protect the other supply system.

NOTE: The other supply may be a drinking water supply or an alternative water supply.

**Page 80 Clause 14.5 (new)**

*Add* new Clause 14.5 after Clause 14.4:

**14.5 Connection to network utility operator's water supply**

Where provision is made for a rainwater tank to be connected to the network utility operator's water supply, the water service piping shall be fitted with an appropriate backflow prevention device in accordance with Section 4 and Table 14.1.

**Page 80 Figure 14.2 (new)**

*Insert new Figure 14.2 as follows:*



FIGURE 14.2 TYPICAL SIGN FOR RAINWATER OUTLETS

**Page 80 Table 14.1 (new)**

*Insert new Table 14.1, as follows:*

**TABLE 14.1  
BACKFLOW PREVENTION—MINIMUM REQUIREMENTS FOR ZONE  
PROTECTION**

<b>Rainwater tank location</b>	<b>Protection on supply line prior to tank for provision for top-up</b>	<b>Protection on the main supply line prior to connection to tank outlet line</b>	<b>No top-up or connection</b>
Buried	Testable device	Testable device	No backflow prevention device required
Partly buried	Non-testable device	Testable device	No backflow prevention device required
Above ground	Non-testable device	Non-testable device	No backflow prevention device required

NOTE: The selection of the backflow prevention device should be determined based on the level of hazard in the immediate environment (see Table 4.1).

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**Page 82 Clause 16.2**

*Delete* Clause 16.2 and *replace* with the following:

**16.2 FLUSHING**

At the completion of the water service installation and prior to hydrostatic testing, the system shall be thoroughly flushed to remove any foreign matter. The flushing shall be undertaken in accordance with Appendix I, Paragraph I3, and continue until the flushed water runs completely clear. The system shall then be pressure-tested in accordance with Clause 16.3.1.

The water service used to supply drinking water shall be protected against contamination in accordance with Appendix H and Appendix I.

NOTE: See also section 9 for testing and commissioning non-drinking water services.

**Page 84 Appendix A**

- 1 After 4441(Int) *add* the following reference:  
4809 Copper pipe and fittings—Installation and commissioning
- 2 After 4792 *add* the following reference:  
6400 Water efficient products—Rating and labelling

**Page 104 Table F1, line HOSE ATTACHMENT OUTLETS Item (c)**

*Delete* ‘but not connected downstream of the zone protection device’.

**Page 107 Table F3**

- 1 First line, after ‘Premises with alternative water supply’ *add* ‘excluding rainwater tanks’.
- 2 Last line, third column, *delete* ‘Non-testable device’ and *add* ‘See Table 14.1’.
- 3 *Add* new line as follows:

Premises with rainwater tanks (See Table 14.1)	Low	Non-testable device
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