

Australian/New Zealand Standard™

**On-site domestic wastewater treatment
units**

**Part 3: Aerated wastewater treatment
systems**



AS/NZS 1546.3:2008

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee WS-013, On-site Domestic Wastewater Management. It was approved on behalf of the Council of Standards Australia on 7 May 2008 and on behalf of the Council of Standards New Zealand on 12 April 2008. This Standard was published on 30 May 2008.

The following are represented on Committee WS-013:

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Association of Rotational Moulders (Australasia)
Auckland Regional Council
Australian and New Zealand Clinical Waste Management Industry Group
Australian Industry Group
Australian Water Association, National On-site Systems Special Interest Group
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Australian/New Zealand Standard™

On-site domestic wastewater treatment units

Part 3: Aerated wastewater treatment systems

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FOREWORD

This Standard is one of a series revised by the Joint Standards Australia/Standards New Zealand Committee WS-013 on On-site Domestic Wastewater Management. It supersedes AS/NZS 1546.3:2001 *On-site domestic wastewater treatment units Part 3: Aerated wastewater treatment systems*. The other Standards revised by the committee are:

AS/NZS 1547:2000 On-site domestic-wastewater management;
AS/NZS 1546.1:1998 On-site domestic wastewater treatment units Part 1: Septic tanks; and
AS/NZS 1546.2:2001 On-site domestic-wastewater treatment units Part 2: Waterless composting toilets.

This revision has minor wording changes and has included some requirements for the disinfection of effluent by a UV disinfection unit.

Aerated wastewater treatment systems covered by this Standard include processes of aeration, typically followed by clarification to achieve biological treatment of wastewater. The principles of the Standard may be applied to alternative treatment technologies, where approved by the regulatory authority.

The next revision may include testing for response and recovery rates for systems under conditions of contemporary power loss and for no loading when the house is unoccupied.

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1 GENERAL

1.1 Objective

The objectives of this Standard are to provide:

- (a) A set of performance statements which define the requirements to be met by an aerated wastewater treatment system;
- (b) A basis against which an aerated wastewater treatment system (AWTS) may be assessed;
- (c) Basic specifications for manufacturers of aerated wastewater treatment systems that will enable the testing agency to check that a product conforms to the Standard; and
- (d) Confidence to purchasers of an AWTS that the system will perform as required.

1.2 Scope and interpretation

1.2.1 *Scope*

This Standard sets out performance requirements, design requirements, means of compliance, and specifications for testing aerated wastewater treatment systems and associated fittings. This Standard also provides guidance on installation, operation, and maintenance requirements.

Aerated wastewater treatment systems covered by this Standard treat wastewater by aeration, typically followed by clarification. Systems may include extended aeration activated sludge units, biofilters, and rotating biological contactors, and alternative treatment technologies which meet the performance requirements of this Standard.

The principles of this Standard may be applied to alternative treatment technologies, where approved by the regulatory authority.

1.2.2 *System size*

Aerated wastewater treatment systems covered by this Standard are those designed for wastewater flows up to a maximum of 14,000 litres/week, from a population equivalent to ten persons.

1.2.3 *Interpretation*

The word 'shall' identifies a mandatory requirement for compliance with the Standard. The word 'should' refers to practices, which are advised or recommended.

Clauses prefixed by 'C' and printed in italic and shaded are comments, explanations, and summaries of technical background, or recommended practice. They may also suggest approaches that satisfy the intent of the Standard, but are not to be taken as the only or complete interpretation.

The terms 'Normative' and 'Informative' have been used in this Standard to define the application of the Appendices to which they apply. A 'Normative' Appendix is an integral part of the Standard, whereas an 'Informative' Appendix is for information and guidance only.

1.3 Referenced documents

The following documents are referred to in this Standard:

JOINT AUSTRALIAN/NEW ZEALAND

AS/NZS 1546.1:2008	On-site domestic wastewater treatment units – Septic tanks
AS/NZS 1547:2008	On-site domestic wastewater management
AS/NZS 3000: 2007	Electrical installations (known as Australian/New Zealand wiring rules)