AS 4678—2002
(Incorporating Amendment Nos 1 and 2)

AS 4678—2002

Australian Standard®

Earth-retaining structures

This Australian Standard® was prepared by Committee CE-032, Reinforced Soils and Retaining Structures. It was approved on behalf of the Council of Standards Australia on 16 November 2001.
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The following are represented on Committee CE-032:

- Association of Consulting Engineers, Australia
- Australian Industry Group
- Australian Geomechanics Society
- AUSTROADS
- Cement and Concrete Association of Australia
- Concrete Institute of Australia
- Concrete Masonry Association of Australia
- Construction Industry Advisory Council
- Institution of Engineers Australia
- Master Builders Australia
- University of New South Wales
- University of Technology, Sydney

This Standard was issued in draft form for comment as DR 99405.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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PREFACE

This Standard was prepared by the Standards Australia Committee, CE-032, Reinforced Soils and Retaining Structures, in response to a call from the building industry for the establishment of a Standard on earth-retaining systems, including reinforced soils.

This Standard incorporates Amendment No. 1 (July 2003) and Amendment No. 2 (August 2008). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

The objective of this Standard is to provide designers of earth-retaining structures with design criteria and guidance for use in design applications.

The terms 'informative' has been used in this Standard to define the application of the appendix to which it applies. An 'informative' appendix is only for information and guidance.

As far as practicable, this Standard has been made consistent with the approach taken in the loading code for structures, AS 1170, *Minimum design loads on structures*. This enables the Standard to be used in combination with structure design Standards such as AS 1720, *Timber Structures*, AS 3600, *Concrete Structures*, AS 4100, *Steel Structures*, and AS 3700, *Masonry structures*. Some specific applications are covered by other Standards and documents. For example, HB 77, *Australian Bridge Design Code*, should be used to design earth-retaining structures associated with road bridges.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out requirements and recommendations relating to the design and construction of structures required to retain soil, rock and other materials. It also includes requirements and recommendations for the reinforcement of soil and rock materials.

This Standard does not prescribe specific methods of analysis.

NOTE: Various organizations and authorities may develop detailed guides and specifications based on the principles set out in this Standard.

This Standard is in limit state format.

This Standard does not provide requirements and recommendations for 'revetment type' structures, which are sometimes used to retain soil, rock and other materials at slopes steeper than that which the soil, rock or other material would naturally assume.

The retaining structures encompassed by this Standard are indicated in Figure 1.1.

A1 Facings constructed up to 800 mm high in a Type S structure application are not covered by this Standard.

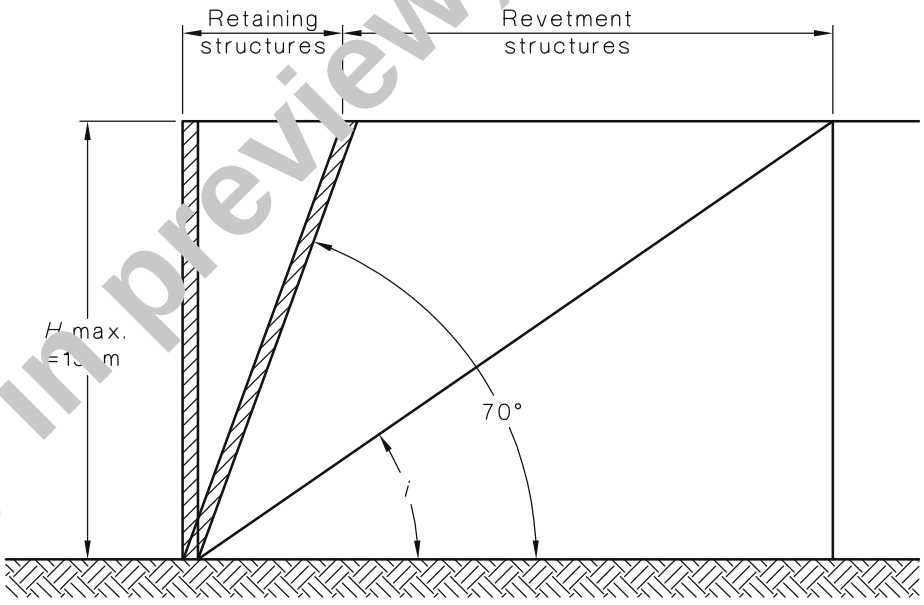

FIGURE 1.1 RETAINING AND REVETMENT STRUCTURES