

Australian Standard[®]

**Guidelines on earthworks for commercial
and residential developments**

STANDARDS
Australia



This Australian Standard® was prepared by Committee CE-027, Earthworks. It was approved on behalf of the Council of Standards Australia on 11 December 2006.
This Standard was published on 12 March 2007.

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 - Association of Consulting Engineers Australia
 - Association of Geotechnical Testing Authorities (Qld)
 - Australian Building Codes Board
 - Australian Geomechanics Society
 - Institute of Public Works Engineering Australia
 - National Association of Testing Authorities Australia
 - University of New South Wales
-

This Standard was issued in draft form for comment as DR 25390.

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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**Guidelines on earthworks for commercial
and residential developments**

Originates as AS 3798—1990.
Third edition 2007.
Revised incorporating Amendment No. 1 (August 2008).

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Published by Standards Australia GPO Box 476, Sydney, NSW 2001, Australia

ISBN 0 7337 8096 2

PREFACE

This Standard was prepared by the Standards Australia Committee CE-027, Earthworks, to supersede AS 3798—1996.

This Standard incorporates Amendment No. 1 (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 guidance to those responsible for or involved in the design, specification, supervision and control testing of earthworks for commercial and residential developments.

This Standard is a guideline, which is an informative document only.

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STANDARDS AUSTRALIA

Australian Standard

Guidelines on earthworks for commercial and residential developments

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard provides guidance on the specification, execution, and control testing of earthworks and associated site preparation works for commercial and residential developments. This Standard does not in itself constitute a specification for earthworks and the specifier should consider the applicability of these guidelines to the project under consideration.

The Standard is not intended to be used for pavements, major roadworks, or water-retaining structures. Such works require special consideration.

Residential developments in the context of this Standard are intended to include single lot development up to broad acre subdivisional development for detached or semi-detached housing. The Standard is not intended to be sufficient for medium- or high-density residential development without due consideration by a suitably qualified professional.

Historically, previous editions of this Standard have been used to assist in the specification and execution of earthworks beyond the intended scope of the document. Whilst with due consideration some aspects of this Standard may be applicable to such works, designers and specification writers should be aware the guidance given herein may not be applicable. In such circumstances, appropriate advice should be sought from a suitably qualified professional before adopting this Standard.

Where the depth of filling required for works to which this Standard would otherwise be applicable exceeds 5 m, advice from a geotechnical professional should be sought.

1.2 TERMS AND DEFINITIONS

For the purpose of this standard, the definitions below apply.

1.2.1 Cohesionless soil

Poorly graded sand and gravel mixture, generally with less than 5% fines (i.e., particles finer than 75 μm diameter), which is non-plastic and which does not exhibit a well-defined moisture-density relationship when tested in accordance with AS 1289.5.1.1 or AS 1289.5.2.1.

1.2.2 Cohesive soil

Material that has a well-defined moisture-density relationship when tested in accordance with AS 1289.5.1.1 or AS 1289.5.2.1.

NOTE: This may include well-graded granular materials such as crushed rock.

1.2.3 Collapsing soil

Soil that may suffer a significant decrease in volume under load or when it becomes nearly saturated, which may have existed in this metastable state for a long period.