Australian Standard®

Guidelines on earthworks for commercial and residential developments



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.

The following are represented on Committee CE-027:

- AUSTROADS
- 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 05390.

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.

Keeping Standards up-to-date

Australian Standards® are living documents that reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued.

Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments that may have been published since the Standard was published.

Detailed information about Australian Standards, drafts, amendments and new projects can be found by visiting **www.standards.org.au**

Standards Australia welcomes suggestions for improvements, and encourages readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at **mail@standards.org.au**, or write to Standards Australia, GPO Box 476, Sydney, NSW 2001.

AS 3798—2007 (Incorporating Amendment No. 1)

Australian Standard®

Guidelines on earthworks for commercial and residential developments

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

COPYRIGHT

© Standards Australia

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

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.

A1

CONTENTS

Page

SECTIC	ON 1 SCOPE AND GENERAL	
1.1	SCOPE	5
1.2	TERMS AND DEFINITIONS	5
1.3	DESIGNATION OF PERSONNEL	7
SECTIC	ON 2 INVESTIGATION, PLANNING AND DESIGN	8
SECTIC	ON 3 DOCUMENTATION	
3.1	GENERAL	
3.2	INVESTIGATION AND PLANNING	
3.3	DESIGN AND SPECIFICATION	
3.4	CONSTRUCTION	
3.5	SITE RECORDS	. 14
SECTIC	ON 4 MATERIALS	
4.1	GENERAL	
4.2	MATERIALS SOURCED ON SITE	
4.3	UNSUITABLE MATERIALS	15
4.4	SUITABLE MATERIALS	. 16
SECTIC	ON 5 COMPACTION CRITERIA	
5.1	GENERAL	
5.2	COMPACTION OF SOILS	
5.3	PLACEMENT MOISTURE CONTENT	
5.4	COARSE MATERIAL	. 19
5.5	TEST ROLLING	. 20
5.6	OTHER MATERIALS	. 20
5.7	TRENCHES	. 20
SECTIC	ON 6 CONSTRUCTION	
6.1	SITE PREPARATION	
6.2	FILL CONSTRUCTION	. 23
SECTIC	ON 7 METHODS OF TESTING	
7.1	GENERAL	. 26
7.2	FIELD DENSITY	. 26
7.3	ESTABLISHMENT OF A REFERENCE DENSITY FOR CALCULATION OF	
	RELATIVE COMPACTION	
7.4	SAMPLE SELECTION FOR REFERENCE DENSITY	
7.5	USE OF DIFFERENT TEST PROCEDURE	
7.6	PERMISSIBLE OVERSIZE	
7.7	PREPARATION OF LABORATORY REFERENCE DENSITY SAMPLES	.27
SECTIC	ON 8 INSPECTION AND TESTING	
8.1	GENERAL	
8.2	LEVEL 1 INSPECTION AND TESTING	
8.3	LEVEL 2 SAMPLING AND TESTING	
8.4	GEOTECHNICAL INSPECTION AND TESTING AUTHORITY (GITA)	
8.5	GEOTECHNICAL TESTING AUTHORITY (GTA)	
8.6	STATEMENTS OF COMPLIANCE	
8.7	FREQUENCY OF TESTING	. 30