

Australian Standard™

**Acoustics—Aircraft noise intrusion—  
Building siting and construction**

This Australian Standard was prepared by Committee EV/11, Aircraft and Helicopter Noise. It was approved on behalf of the Council of Standards Australia on 7 July 2000 and published on 10 August 2000.

---

The following interests are represented on Committee EV/11:

Acoustics Consulting Interests, New Zealand  
AirServices Australia  
Association of Australian Acoustical Consultants  
Association of Consulting Engineers, Australia  
Australasian Faculty of Occupational Medicine  
Australian Acoustical Society  
Australian Air Transport Association  
Australian and New Zealand Environment and Conservation Council  
Australian Hearing  
Australian Mayoral Aviation Council  
Australian Window Association  
Building Industry Authority, New Zealand  
Community Advisory Committee on Aircraft Noise and Air Quality Management  
Department of Defence, Australia  
Environmental Noise Analysis and Advice Service, New Zealand  
Helicopter Association of Australia  
Institution of Engineers, Australia  
Local Government Association of N.S.W.  
Sydney Airports Corporation  
University of Sydney

---

#### **Keeping Standards up-to-date**

Standards are living documents which 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 Standards may also be withdrawn.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 which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Australia web site at [www.standards.com.au](http://www.standards.com.au) and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Australian Standard*, has a full listing of revisions and amendments published each month.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at [mail@standards.com.au](mailto:mail@standards.com.au), or write to the Chief Executive, Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001.

---

AS 2021—2000

Australian Standard™

# **Acoustics—Aircraft noise intrusion— Building siting and construction**

Originated as AS 2021—1977.  
Previous edition AS 2021—1994.  
Fourth edition 2000.

## **COPYRIGHT**

© Standards Australia International

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 International Ltd  
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 3515 0

## PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EV/11, Aircraft and Helicopter Noise to supersede AS 2021—1994. This Standard is the result of a consensus among representatives on the Joint Committee to produce it as an Australian Standard.

This Standard provides guidance on the siting and construction of buildings in the vicinity of airports to minimize aircraft noise intrusion. The assessment of potential aircraft noise exposure at a given site is based on the Australian Noise Exposure Forecast (ANEF) system (for details of this system refer to Appendix A).

This edition provides expanded aircraft noise tables and incorporates various associated amendments to the text.

The term ‘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.

## CONTENTS

	<i>Page</i>
FOREWORD .....	4
 SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE .....	5
1.2 OBJECTIVE .....	5
1.3 APPLICATION .....	6
1.4 REFERENCED DOCUMENTS .....	6
1.5 DEFINITIONS .....	7
 SECTION 2 BUILDING SITING AGAINST AIRCRAFT NOISE INTRUSION	
2.1 DETERMINATION OF NOISE EXPOSURE OF BUILDING SITE .....	10
2.2 DETERMINATION OF BUILDING SITE ACCEPTABILITY .....	10
2.3 ACTION RESULTING FROM ACCEPTABILITY DETERMINATION .....	10
 SECTION 3 BUILDING CONSTRUCTION AGAINST AIRCRAFT NOISE INTRUSION	
3.1 AIRCRAFT NOISE LEVEL .....	12
3.2 NOISE REDUCTION REQUIREMENTS .....	14
3.3 CONSTRUCTION GUIDELINES .....	14
3.4 COMPLIANCE TEST .....	15
 APPENDICES	
A AUSTRALIAN NOISE EXPOSURE FORECAST SYSTEM .....	41
B EXAMPLE OF APPLICATION OF THIS STANDARD .....	48
C METHOD FOR MEASURING AIRCRAFT NOISE REDUCTION (ANR) .....	50
D METHOD FOR DETERMINING BUILDING SITE ACCEPTABILITY FOR LIGHT GENERAL AVIATION AERODROMES WITHOUT ANEF CHARTS .....	53
E INSULATION AGAINST AIRCRAFT NOISE—DESIGN AND CONSTRUCTION CONSIDERATIONS .....	55
F SELECTION OF BUILDING COMPONENTS FOR REDUCTION OF AIRCRAFT NOISE .....	60
G DIRECT COMPUTATION OF $ANA_c$ .....	65

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- Looking for additional Standards? Visit Intertek Inform Infostore
  - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-