CONTENTS AND FEATURES

INTRODUCTION

General Table of Contents

Introduction
## CONTENTS AND FEATURES INTRODUCTION

### Introduction

### SECTION A GENERAL PROVISIONS

#### Part A0 Application
- A0.1 Adoption
- A0.2 BCA Volumes
- A0.3 BCA Structure
- A0.4 Compliance with the BCA
- A0.5 Meeting the Performance Requirements
- A0.6 Objectives and Functional Statements
- A0.7 Deemed-to-Satisfy Provisions
- A0.8 Alternative Solutions
- A0.9 Assessment Methods
- A0.10 Relevant Performance Requirements

#### Part A1 Interpretation
- A1.1 Definitions
- A1.2 Adoption of Standards and other references
- A1.3 Referenced Standards, etc
- A1.4 Differences between referenced documents and the BCA
- A1.5 Compliance with all Sections of BCA
- A1.6 Application of the BCA to a particular State or Territory
- A1.7 Language

#### Part A2 Acceptance of Design and Construction
- A2.1 Suitability of materials
- A2.2 Evidence of suitability
- A2.3 Fire-resistance of building elements
- A2.4 Fire hazard properties
- A2.5 Resistance to the incipient spread of fire

#### Part A3 Classification of Buildings and Structures
- A3.1 Principles of classification
- A3.2 Classifications
- A3.3 Multiple classification
- A3.4 Parts with more than one classification

#### Part A4 United Buildings
- A4.1 When buildings are united
- A4.2 Alterations in a united building

### Specifications

---

SUPERSEDED

CONTENTS AND FEATURES INTRODUCTION

---

GENERAL TABLE OF CONTENTS

---

SUPERSEDED

BCA 2004 Volume One Australian Building Codes Board Page 4
CONTENTS AND FEATURES

ACT Appendix (Additional provisions - refer to ACT Contents for full details)

SECTION B STRUCTURE

B1 STRUCTURAL PROVISIONS

Objective BO1
Functional Statement BF1.1 - BF1.2
Performance Requirement BP1.1 - BP1.3
B1.0 Deemed-to-Satisfy Provisions
B1.1 Resistance to actions
B1.2 Determination of individual actions
B1.3 Loads
B1.4 Determination of structural resistance of materials and forms of construction

NT Appendix (Additional provisions - refer to NT Contents for full details)

SECTION C FIRE RESISTANCE

C Fire Resistance

Objective CO1
Functional Statements CF1 - CF2
Performance Requirements CP1 - CP9
Verification Methods CV1 - CV2

Part C1 Fire Resistance and Stability

C1.0 Deemed-to-Satisfy Provisions
C1.1 Type of construction required
C1.2 Calculation of rise in storeys
C1.3 Buildings of multiple classification
C1.4 Mixed types of construction
C1.5 Two storey Class 2, 3 or 9c buildings
C1.6 Class 4 parts of buildings
C1.7 Open spectator stands and indoor sports stadiums
C1.8 Lightweight construction
C1.9 * * * * *
C1.10 Fire hazard properties
C1.11 Performance of external walls in fire
C1.12 Non-combustible materials

Part C2 Compartmentation and Separation

C2.0 Deemed-to-Satisfy Provisions
C2.1 Application of Part
C2.2 General floor area and volume limitations
C2.3 Large Isolated Buildings
C2.4 Requirements for open spaces and vehicular access
C2.5 Class 9a and 9c buildings
C2.6 Vertical separation of openings in external walls
C2.7 Separation by fire walls
CONTENTS AND FEATURES

INTRODUCTION

C2.8 Separation of classifications in the same storey
C2.9 Separation of classifications in different storeys
C2.10 Separation of lift shafts
C2.11 Stairways and lifts in one shaft
C2.12 Separation of equipment
C2.13 Electricity supply system
C2.14 Public corridors in Class 2 and 3 buildings

Part C3 Protection of Openings

C3.0 Deemed-to-Satisfy Provisions
C3.1 Application of Part
C3.2 Protection of openings in external walls
C3.3 Separation of external walls and associated openings in different fire compartments
C3.4 Acceptable methods of protection
C3.5 Doorways in fire walls
C3.6 Sliding fire doors
C3.7 Protection of doorways in horizontal exits
C3.8 Openings in fire-isolated exits
C3.9 Service penetrations in fire-isolated exits
C3.10 Openings in fire-isolated lift shafts
C3.11 Bounding construction: Class 2, 3 and 4 buildings
C3.12 Openings in floors and ceilings for services
C3.13 Openings in shafts
C3.14
C3.15 Openings for service installations
C3.16 Construction joints
C3.17 Columns protected with lightweight construction to achieve an FRL

Specifications

Specification C1.1 Fire-Resisting Construction
Specification C1.8 Structural Tests for Lightweight Construction
Specification C1.10 Fire Hazard Properties - General
Specification C1.10a Fire Hazard Properties - Floors, Walls and Ceilings
Specification C1.11 Performance of External Walls in Fire
Specification C2.5 Smoke-Proof Walls in Health-Care and Aged Care Buildings
Specification C3.4 Fire Doors, Smoke Doors, Fire Windows and Shutters
Specification C3.15 Penetration of Walls, Floors and Ceilings by Services

SECTION D ACCESS AND EGRESS

Section D Access and Egress

Objective DO1
Functional Statements DF1 - DF2
Performance Requirements DP1 - DP9

Part D1 Provision for Escape

D1.0 Deemed-to-Satisfy Provisions
D1.1 Application of Part
D1.2 Number of exits required
D1.3 When fire-isolated exits are required
D1.4 Exit travel distances
D1.5 Distance between alternative exits  
D1.6 Dimensions of exits and paths of travel to exits  
D1.7 Travel via fire-isolated exits  
D1.8 External stairways or ramps in lieu of fire-isolated exits  
D1.9 Travel by non-fire-isolated stairways or ramps  
D1.10 Discharge from exits  
D1.11 Horizontal exits  
D1.12 Non-required stairways, ramps or escalators  
D1.13 Number of persons accommodated  
D1.14 Measurement of distances  
D1.15 Method of measurement  
D1.16 Plant rooms and lift motor rooms: Concession

Part D2 Construction of Exits

D2.0 Deemed-to-Satisfy Provisions  
D2.1 Application of Part  
D2.2 Fire-isolated stairways and ramps  
D2.3 Non-fire-isolated stairways and ramps  
D2.4 Separation of rising and descending stair flights  
D2.5 Open access ramps and balconies  
D2.6 Smoke lobbies  
D2.7 Installations in exits and paths of travel  
D2.8 Enclosure of space under stairs and ramps  
D2.9 Width of stairways  
D2.10 Pedestrian ramps  
D2.11 Fire-isolated passageways  
D2.12 Roof as open space  
D2.13 Goings and risers  
D2.14 Landings  
D2.15 Thresholds  
D2.16 Balustrades or other barriers  
D2.17 Handrails  
D2.18 Fixed platforms, walkways, stairways and ladders  
D2.19 Doorways and doors  
D2.20 Swinging doors  
D2.21 Operation of latch  
D2.22 Re-entry from fire-isolated exits  
D2.23 Signs on doors

Part D3 Access for People with Disabilities

D3.0 Deemed-to-Satisfy Provisions  
D3.1 Application of Part  
D3.2 General building access requirements  
D3.3 Parts of buildings to be accessible  
D3.4 Concessions  
D3.5 Carparking  
D3.6 Identification of accessible facilities, services and features  
D3.7 Hearing augmentation  
D3.8 Tactile indicators

Specifications

Specification D1.12 Non-Required Stairways, Ramps and Escalators  
Specification D3.6 Braille and Tactile Signs
ACT Appendix (Additional provisions — refer to ACT Contents for full details)

NSW Appendix (Additional provisions — refer to NSW Contents for full details)

SECTION E SERVICES AND EQUIPMENT

Part E1 Fire Fighting Equipment

Objective EO1
Functional Statement EF1.1
Performance Requirements EP1.1 - EP1.6
E1.0 Deemed-to-Satisfy Provisions
E1.1 * * * * * *
E1.2 * * * * * *
E1.3 Fire hydrants
E1.4 Fire hose reels
E1.5 Sprinklers
E1.6 Portable fire extinguishers
E1.7 * * * * * *
E1.8 Fire control centres
E1.9 Fire precautions during construction
E1.10 Provision for special hazards
Specification E1.5 Fire Sprinkler Systems
Specification E1.8 Fire Control Centres

Part E2 Smoke Hazard Management

Objective EO2
Functional Statement EF2.1
Performance Requirements EP2.1 - EP2.2
E2.0 Deemed-to-Satisfy Provisions
E2.1 Application of Part
E2.2 General requirements
E2.3 Provision for special hazards
Specification E2.2a Smoke Detection and Alarm Systems
Specification E2.2b Smoke Exhaust Systems
Specification E2.2c Smoke-and-Heat Vents

Part E3 Lift Installations

Objective EO3
Functional Statements EF3.1 - EF3.3
Performance Requirements EP3.1 - EP3.4
E3.0 Deemed-to-Satisfy Provisions
E3.1 * * * * * *
E3.2 Stretcher facility in lifts
E3.3 Warning against use of lifts in fire
E3.4 Emergency lifts
E3.5 Landings
E3.6 Facilities for people with disabilities
E3.7 Fire service controls
E3.8 Aged care buildings

Part E4 Emergency Lighting, Exit Signs and Warning Systems

Objective EO4
Functional Statement EF4.1
E4.0 Deemed-to-Satisfy Provisions
E4.1 * * * * *
E4.2 Emergency lighting requirements
E4.3 Measurement of distance
E4.4 Design and operation of emergency lighting
E4.5 Exit signs
E4.6 Direction signs
E4.7 Class 2 and 3 buildings and Class 4 parts: Exemptions
E4.8 Design and operation of exit signs
E4.9 Emergency warning and intercommunication system

Tas Appendix (Additional provisions - refer to Tas Contents for full details)

SECTION F HEALTH AND AMENITY

Part F1  Damp and Weatherproofing

Objective FO1
Functional Statements FF1.1 - FF1.3
Performance Requirements FP1.1 - FP1.7
F1.0 Deemed-to-Satisfy Provisions
F1.1 Stormwater drainage
F1.2 * * * * *
F1.3 * * * * *
F1.4 * * * * *
F1.5 Roof coverings
F1.6 Sarking
F1.7 Water proofing of wet areas in buildings
F1.8 * * * * *
F1.9 Damp-proofing
F1.10 Damp-proofing of floors on the ground
F1.11 Provision of floor wastes
F1.12 Sub-floor ventilation
F1.13 Glazed assemblies

Part F2  Sanitary and Other Facilities

Objective FO2
Functional Statements FF2.1 - FF2.4
Performance Requirements FP2.1 - FP2.6
F2.0 Deemed-to-Satisfy Provisions
F2.1 Facilities in residential buildings
F2.2 Calculation of number of occupants and fixtures
F2.3 Facilities in Class 3 to 9 buildings
F2.4 Facilities for people with disabilities
F2.5 Construction of sanitary compartments
F2.6 Interpretation: Urinals and washbasins
F2.7 Microbial (legionella) control
F2.8 Waste management

Part F3  Room Sizes

Objective FO3
CONTENTS AND FEATURES INTRODUCTION

Functional Statement FF3.1
Performance Requirement FP3.1
F3.0 Deemed-to-Satisfy Provisions
F3.1 Height of rooms and other spaces

Part F4 Light and Ventilation

Objective FO4
Functional Statements FF4.1 - FF4.3
Performance Requirements FP4.1 - FP4.5
F4.0 Deemed-to-Satisfy Provisions
F4.1 Provision of natural light
F4.2 Methods and extent of natural lighting
F4.3 Natural light borrowed from adjoining room
F4.4 Artificial lighting
F4.5 Ventilation of rooms
F4.6 Natural ventilation
F4.7 Ventilation borrowed from adjoining room
F4.8 Restriction on position of water closets and urinals
F4.9 Airlocks
F4.10 * * * * * *
F4.11 Carparks
F4.12 Kitchen local exhaust ventilation

Part F5 Sound Transmission and Insulation

Objective FO5
Functional Statement FF5.1
Performance Requirements FP5.1 - FP5.6
Verification Methods FV5.1 and FV5.2
F5.0 Deemed-to-Satisfy Provisions
F5.1 Application of Part
F5.2 Determination of airborne sound insulation ratings
F5.3 Determination of impact sound insulation ratings
F5.4 Sound insulation rating of floors
F5.5 Sound insulation rating of walls
F5.6 Sound insulation rating of services
F5.7 Sound isolation of pumps
Specification F5.2 Sound Insulation for Building Elements
Specification F5.5 Impact Sound - Test of Equivalence

ACT Appendix (Additional provisions - refer to ACT Contents for full details)

Qld Appendix (Additional provisions - refer to Qld Contents for full details)

Tas Appendix (Additional provisions - refer to Tas Contents for full details)

Vic Appendix (Additional provisions - refer to Vic Contents for full details)

SECTION G ANCILLARY PROVISIONS

Part G1 Minor Structures and Components

Objective GO1
Functional Statements GF1.1 - GF1.3
Performance Requirements GP1.1 - GP1.4
G1.0 Deemed-to-Satisfy Provisions
G1.1 Swimming pools
G1.2 Refrigerated chambers, strong-rooms and vaults

Part G2  Heating Appliances, Fireplaces, Chimneys and Flues
Objective GO2
Functional Statements GF2.1 - GF2.2
Performance Requirements GP2.1 - GP2.2
G2.0 Deemed-to-Satisfy Provisions
G2.1 * * * * *
G2.2 Installation of appliances
G2.3 Open fireplaces
G2.4 Incinerator rooms

Part G3  Atrium Construction
G3.1 Atriums affected by this Part
G3.2 Dimensions of atrium well
G3.3 Separation of atrium by bounding walls
G3.4 Construction of bounding walls
G3.5 Construction at balconies
G3.6 Separation at roof
G3.7 Means of egress
G3.8 Fire and smoke control systems
Specification G3.8 Fire and Smoke Control Systems in Buildings Containing Atriums

Part G4  Construction in Alpine Areas
Objective GO4
Functional Statement GF4.1
Performance Requirements GP4.1 - GP4.4
G4.0 Deemed-to-Satisfy Provisions
G4.1 Application of Part
G4.2 * * * * *
G4.3 External doorways
G4.4 Emergency lighting
G4.5 External ramps
G4.6 Discharge of exits
G4.7 External trafficable structures
G4.8 Fire-fighting services and equipment
G4.9 Fire orders

Part G5  Construction in Bushfire Prone Areas
Objective GO5
Functional Statement GF5.1
Performance Requirement GP5.1
G5.0 Deemed-to-Satisfy Provisions
G5.1 Application of Part
G5.2 Protection
ACT Appendix (Additional provisions - refer to ACT Contents for full details)

NSW Appendix (Additional provisions - refer to NSW Contents for full details)

Qld Appendix (Additional provisions - refer to Qld Contents for full details)

SA Appendix (Additional provisions - refer to SA Contents for full details)

Tas Appendix (Additional provisions - refer to Tas Contents for full details)

SECTION H SPECIAL USE BUILDINGS

Part H1 Theatres, Stages and Public Halls

H1.1 Application of Part
H1.2 Separation
H1.3 Proscenium wall construction
H1.4 Seating area
H1.5 Exits from theatre stages
H1.6 Access to platforms and lofts
H1.7 Aisle lights in theatres
Specification H1.3 Construction of Theatres with Proscenium Walls

NSW Appendix (Additional provisions - refer to NSW Contents for full details)

NT Appendix (Additional provisions - refer to NT Contents for full details)

Qld Appendix (Additional provisions - refer to Qld Contents for full details)

SA Appendix (Additional provisions - refer to SA Contents for full details)

Tas Appendix (Additional provisions - refer to Tas Contents for full details)

Vic Appendix (Additional provisions - refer to Vic Contents for full details)

SECTION I MAINTENANCE

Part I1 Equipment and Safety Installations

Objective I01
Functional Statement IF1.1
Performance requirement IP1.1
I1.0 Deemed-to-Satisfy Provisions
I1.1 Safety measures
I1.2 Mechanical ventilation and hot water, warm water and cooling water systems

APPENDIX AUSTRALIAN CAPITAL TERRITORY

Australian Capital Territory

A GENERAL PROVISIONS

ACT Specification A1.3 Standards Adopted by Reference
ACT AO2 Objective
ACT AF2.1 - AF2.3 Functional Statements
CONTENTS AND FEATURES INTRODUCTION

ACT AP2.1 - ACT AP2.3 Performance Requirements
ACT A2.0 Deemed-to-Satisfy Provisions
ACT A2.101 Hazardous materials
ACT A2.102 Control of litter on building sites
ACT A2.103 Waste management

D ACCESS AND EGRESS
ACT D1.101 Notices on fire-isolated stairs

F HEALTH AND AMENITY
ACT FO3 Objective
ACT FF3.2 Functional Statements
ACT FP3.2 Performance Requirements
ACT F3.0 Deemed-to-Satisfy Provisions
ACT F3.101 Carparking facilities

ACT PART F6 ENERGY EFFICIENCY
ACT FO6 Objective
ACT FF6.1 Functional Statement
ACT FP6.1 Performance Requirement
ACT F6.0 Deemed-to-Satisfy Provisions
ACT F6.1 Energy efficient design
ACT F6.2 Exemptions
ACT F6.3 Fire resistance

G ANCILLARY PROVISIONS
ACT G1.1 Swimming Pools
ACT G1.103 Awnings and projections
ACT G2.2 Installation of appliances

APPENDIX NEW SOUTH WALES
New South Wales

A GENERAL PROVISIONS
NSW A1.1 Definitions
NSW Specification A1.3 Standards Adopted by Reference

C FIRE RESISTANCE
NSW C1.10 Fire hazard properties
NSW C2.3 Large isolated buildings
NSW C2.5 Class 9a and 9c buildings
NSW C3.2 Protection of openings in external walls
NSW C3.11 Bounding construction: Class 2, 3, 4 and 9b buildings
NSW Specification C1.10 Fire Hazard Properties

D ACCESS AND EGRESS
NSW D1.2 Number of exits required
NSW D1.6 Dimensions of exits
NSW D1.10 Discharge from exits
NSW D2.1 Application of Part
NSW D2.13 Treads and risers
NSW D2.15 Thresholds
NSW D2.16 Balustrades or other barriers
NSW D2.19 Doorways and doors
NSW D2.21 Operation of latch
NSW D2.101 Doors in path of travel in a place of public entertainment

E SERVICES AND EQUIPMENT
Table E2.2b Specific Provisions
NSW Specification E2.2a Smoke Detectors and Alarm Systems
NSW E4.6 Direction signs

F HEALTH AND AMENITY
NSW FF2.1 Functional Statements
NSW FP2.6 Performance Requirements
NSW F2.7 Microbial (legionella) control
NSW F4.5 Ventilation of rooms

G ANCILLARY PROVISIONS
NSW GF1.4 Functional Statement
NSW GP1.5 Performance Requirement
NSW G1.0 Deemed-to-Satisfy Provisions
NSW G1.1 Swimming pools
NSW G1.101 Provision for cleaning windows
NSW G5.2 Protection

H SPECIAL USE BUILDINGS
NSW H1.1 Application of Part

NSW Part H101 PLACES OF PUBLIC ENTERTAINMENT OTHER THAN TEMPORARY STRUCTURES AND DRIVE-IN THEATRES
NSW H101.1 Application of Part
NSW H101.2 Fire separation
NSW H101.3 Foyer space
NSW H101.4 Sprinkler systems for common foyers
NSW H101.5 Conventional stages
NSW H101.6 Non-conventional stages
NSW H101.7 Flying scenery
NSW H101.8 Load notice
NSW H101.9 ***
NSW H101.10 Safety curtains
NSW H101.11 Seating in rows
NSW H101.12 Continental seating
NSW H101.13 Provision of guardrails
NSW H101.14 Guardrails
NSW H101.15 Dressing rooms
NSW H101.16 Storerooms
NSW H101.17 Projection suites
NSW H101.18 Basement storeys
NSW H101.19 Electric mains installation
NSW H101.20 Lighting
NSW H101.21 Smoke control systems for small stages
NSW H101.22 Solid fuel burning stoves and open fire places
NSW H101.24 Fuel gas cylinders

NSW Part H102 TEMPORARY STRUCTURES
NSW H102.1 Application of Part
NSW H102.2 Exits—Exclusions
NSW H102.3 Location of exits
NSW H102.4 Exits to be provided
NSW H102.5 Vertical clearances for exits
NSW H102.6 Curtains across exits
NSW H102.7 Curtains and blinds
NSW H102.8 Fabrics
NSW H102.9 Guardrails
NSW H102.10 Seating
NSW H102.11 Sanitary accommodation
NSW H102.12 Projection suites
NSW H102.13 Fireplaces and heating
NSW H102.14 Electrical services
NSW H102.15 Artificial lighting
NSW H102.16 Exit signs
NSW H102.17 Fire-fighting services

NSW Part H103 DRIVE-IN THEATRES
NSW H103.1 Application of Part
NSW H103.2 Speaker standards
NSW H103.3 Electrical services
NSW H103.4 Vehicular entrances
NSW H103.5 Lighting

I MAINTENANCE
NSW I1.1 Essential fire safety measures
NSW I1.2 Mechanical ventilation and hot water, warm water and cooling water systems

J ENERGY EFFICIENCY
NSW JO1 Objective
NSW JF1 Functional Statement
NSW JP1 Performance Requirement
NSW J1.0 Deemed-to-Satisfy Provisions
NSW J1.1 Application of Part
NSW J1.2 Insulation
NSW J2.0 Deemed-to-Satisfy Provisions
NSW J2.1 Application of Part
NSW J2.2 Chimneys and flues
NSW J2.3 Roof lights
NSW J2.4 External windows and doors
NSW J2.5 Exhaust fans
NSW J2.6 Construction of roofs, walls and floors
NSW J3.0 Deemed-to-Satisfy Provisions
NSW J3.1 Application of Part
NSW J3.2 Hot water supply system
NSW J3.3 Air-conditioning ductwork
NSW J3.4 Heating and cooling water system piping
NSW Specification J3.3 Ductwork insulation and sealing
NSW Specification J3.4 Ductwork insulation and sealing

NSW ABBREVIATIONS AND SYMBOLS

NSW Abbreviations and Symbols

APPENDIX NORTHERN TERRITORY

Northern Territory

A GENERAL PROVISIONS

NT Specification A1.3 Standards Adopted by Reference

B STRUCTURE

NT B1.2 Determination of individual actions
NT B1.3 Loads
NT B1.4 Determination of structural resistance of materials and forms of construction
NT Specification B1.2 Design of Buildings in Cyclonic Areas

E SERVICES AND EQUIPMENT

NT E1.5 Sprinklers

F HEALTH AND AMENITY

NT F05 Objective
NT FF5.1 Functional Statement
NT FP5.1 - NT FP5.4 Performance Requirements
NT F5.0 Deemed-to-Satisfy Provisions
NT F5.1 Application of Part
NT F5.2 Weighted sound reduction index: Interpretation
NT F5.3 Sound insulation of floors between units
NT F5.4 Sound insulation of walls between units
NT F5.5 Walls between a bathroom, sanitary compartment, laundry or kitchen and a habitable room in adjoining unit
NT F5.6 Soil and waste pipes to be separated
NT F5.7 Isolation of pumps
NT F5.8 Walls between a bedroom and kitchen or laundry in a Class 9c building
NT Specification F5.2 Sound Insulation for Building Elements
NT Specification F5.5 Impact Sound - Test of Equivalence

H SPECIAL USE BUILDINGS

NT Part H101 Food Premises

NT H101.1 Application of Part
NT H101.2 Floors, walls and ceilings
NT H101.3 Pests and contaminants
NT H101.4 Washbasins
NT H101.5 Sinks
NT H101.6 Installation of equipment and fittings
NT H101.7 Drains
NT H101.8 Concealment of pipes
NT H101.9 Storage of materials and equipment
NT H101.10 Separation of work place
NT H101.11 Offensive material and trade waste
NT H101.12 Mechanical ventilation of kitchens

NT Part H102 Premises to be used for Activities Involving Skin Penetration
   NT H102.1 Application of Part
   NT H102.2 Sanitary facilities
   NT H102.3 Washbasins

NT Part H103 Mortuaries
   NT H103.1 Application of Part
   NT H103.2 Layout of mortuary
   NT H103.3 Construction of body preparation room
   NT H103.4 Water supply and sewerage

I MAINTENANCE
   NT I1.1 Safety installations

APPENDIX QUEENSLAND

Queensland

A GENERAL PROVISIONS
   Qld Specification A1.3 Standards Adopted by Reference

B STRUCTURE
   Qld B1.4 Determination of structural resistance of materials and forms of construction

F HEALTH AND AMENITY
   Qld F1.101 Flashings to narrow spaces
   Qld FO5 Objective
   Qld FF5.1 Functional Statement
   Qld FP5.1 Performance Requirements
   Qld F5.0 Deemed-to-Satisfy Provisions
   Qld F5.1 Application of Part
   Qld F5.2 Weighted sound reduction index: Interpretation
   Qld F5.3 Sound insulation of floors between units
   Qld F5.4 Sound insulation of walls between units
   Qld F5.5 Walls between a bathroom, sanitary compartment, laundry or kitchen and a habitable room in adjoining unit
   Qld F5.6 Soil and waste pipes to be separated
   Qld-F5.7 Isolation of pumps
   Qld F5.8 Walls between a bedroom and kitchen or laundry in a Class 9c building
   Qld Specification F5.2 Sound Insulation for Building Elements
   Qld Specification F5.5 Impact Sound - Test of Equivalence
QLD PART F101  VERMIN CONTROL
Qld F101.1 Control of vermin

G  ANCILLARY PROVISIONS

Qld Part G101  CERTAIN ATTACHMENTS
Qld G101.1 Prevention of falls from buildings or structures

H  SPECIAL USE BUILDINGS

QLD Part H101  ** ** **

QLD Part H102  STABLES
Qld H102.1 Construction of stables

QLD Part H103  KIOSKS
Qld H103.1 Construction of kiosks

QLD Part H104  ** ** **

QLD Part H105  ** ** **

QLD Part H106  ** ** **

QLD Part-H107  ** ** **

QLD Part H108  ** ** **

QLD Part H109  ** ** **

QLD Part H110  PRIVATE HEALTH FACILITIES
Objective Qld H110 O1
Performance Requirement Qld H110 P1
Qld H110.0 Application of Part
Qld H110.1 Deemed-to-Satisfy Provision

APPENDIX SOUTH AUSTRALIA

INTRODUCTION

A  GENERAL PROVISIONS
SA Specification A1.3 Standards Adopted by Reference

D  ACCESS AND EGRESS
SA DP1 - SA DP7 Performance Requirements
SA D3.1 Application of Part
SA Table D3.2 Requirements for Access for People with Disabilities
SA D3.4 Concessions

E  SERVICES AND EQUIPMENT
CONTENTS AND FEATURES

INTRODUCTION

SA E1.3 Fire hydrants
SA E1.4 * * * * *

F HEALTH AND AMENITY

SA FP1.5, SA FP 1.6 and SA FP1.8 Performance Requirements
SA F1.0 Deemed-to-Satisfy Provisions
SA F1.7 Water proofing of wet areas in buildings
SA F1.9 Damp-proofing
SA F1.10 Damp-proofing of floors on the ground
SA F1.11 Provision of floor wastes
SA F2.3 Facilities for Class 3 to 9 buildings
SA Table F2.3 Sanitary Facilities in Class 3,5,6,7,8 and 9 Buildings
SA F2.4 Facilities for people with disabilities
SA Table F2.4 Sanitary Facilities for people with disabilities

G ANCILLARY PROVISIONS

SA GF1.4 Functional Statement
SA GP1.5 Performance Requirement
SA G1.0 Deemed-to-Satisfy Provisions
SA G1.1 Swimming pools
SA G5.3 Additional Protection

SA Part G7 ACCESS FOR MAINTENANCE

SA GO7 Objective
SA GF7.1 and SA GF7.2 Functional Statements
SA GP7.1 and SA GP7.2 Performance Requirements
SA G7.0 Deemed-to-Satisfy Provisions
SA G7.1 Application of Part
SA G7.2 Access for window cleaning
SA G7.3 Access for inspection and maintenance between buildings

SA Part G8 MISCELLANEOUS PROVISIONS

SA GO8 Objective
SA GF8.1 Functional Statement
SA GP8.1 Performance Requirement
SA G8.0 Deemed-to-Satisfy Provisions
SA G8.1 Application of Part
SA G8.2 Attachments to buildings

H SPECIAL USE BUILDINGS

SA Part H2 BULK GRAIN STORAGE FACILITIES

SA H3.1 Application of Part
SA H3.2 Concessions and additions for farm buildings

SA Part H3 FARM BUILDINGS

SA H3.1 Application of Part
SA H3.2 Concessions and additions for farm buildings

I MAINTENANCE
SA I1.1 Safety installations
SA I1.2 Mechanical ventilation and hot water, warm water and cooling water systems

APPENDIX TASMANIA

Tasmania

A GENERAL PROVISIONS
Tas A1.1 Definitions
Tas Specification A1.3 Standards Adopted By Reference

E SERVICES AND EQUIPMENT
Tas EO1 Objectives
Tas EF1.2 Functional Statements
Tas EP1.7 Performance Requirements
Tas E1.0 Deemed-to-Satisfy Provisions
Tas E1.101 Fire detection and alarm system

F HEALTH AND AMENITY
Tas F2.101 Non-flushed Urinals
Tas F2.102 Installation of Closet Fixtures
Tas F4.101 Fixed Natural Ventilation

G ANCILLARY PROVISIONS
Tas GO1 Objectives
Tas GF1.4 to GF1.6 Functional Statements
Tas GP1.5 to GP1.9 Performance Requirements
Tas G1.0 Deemed-to-Satisfy Provisions
Tas G1.1 Swimming Pools

TAS PART G101 PROJECTIONS OVER WAYS
Tas G101.1 Construction and location of projections over ways
Tas G101.2 Protection of Ways

H SPECIAL USE BUILDINGS
Objectives

TAS PART H101 WORKPLACES
Tas H101.1 Application of Part
Tas H101.2 Floor area
Tas H101.3 Floor surfaces
Tas H101.4 Floor drainage
Tas H101.5 Floor covering
Tas H101.6 Overhead clearance
Tas H101.7 Lighting
Tas H101.8 Ventilation
Tas H101.9 Toilet facilities
Tas H101.10 Hand washing facilities
Tas H101.11 Shower facilities
Tas H101.12 Change rooms
Tas H101.13 Dining rooms
Tas H101.14 Rest rooms
Tas H101.15 First aid rooms and health centres
Tas H101.16 Doors

**TAS PART H102 FOOD PREMISES**

- Tas H102 O1 Objective
- Tas H102 F1 Functional Statement
- Tas H102 P1 to H102 P12 Performance Requirements
- Tas H102.0 Application of Part
- Tas H102.1 Deemed-to-Satisfy Provisions
- Tas H102.2 General Requirements
- Tas H102.3 Pests and contaminants
- Tas H102.4 Drains and Pipes
- Tas H102.5 Offensive material and trade waste
- Tas H102.6 Ventilation
- Tas H102.7 Lighting
- Tas H102.8 Floors, walls and ceilings
- Tas H102.9 Separation of work place
- Tas H102.10 Washbasins
- Tas H102.11 Sinks
- Tas H102.12 Installation of equipment and fittings
- Tas H102.13 Storage of materials and equipment
- Tas H102.14 Food store
- Tas H102.15 Meat Premises
- Tas H102.16 Dairy produce
- Tas H102.17 Refrigerated and cooling chambers

**TAS PART H103 DINING ROOMS AND BAR ROOMS**

- Tas H103.1 Application of Part
- Tas H103.2 Sanitary facilities
- Tas H103.3 Separation from other areas

**TAS PART H104 BOTTLE SHOPS AT LICENSED PREMISES**

- Tas H104.1 *

**TAS PART H105 ACCOMMODATION FACILITIES**

- Tas H105.1 Application of Part
- Tas H105.2 Definitions
- Tas H105.3 Floor area of bedrooms and dormitories
- Tas H105.4 General Requirements for bedrooms and dormitories
- Tas H105.5 Eating areas
- Tas H105.6 Cooking areas
- Tas H105.7 Communal common rooms and dining rooms
- Tas H105.8 Sanitary facilities
- Tas H105.9 Communal sanitary facilities
- Tas H105.10 General requirements for communal bathing and toilet facilities
- Tas H105.11 Location of communal facilities
- Tas H105.12 Doors and windows on communal facilities
- Tas H105.13 Laundry facilities
- Tas H105.14 Insect proofing
- Tas H105.15 Doors on accommodation facilities
<table>
<thead>
<tr>
<th>PART</th>
<th>CONTENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>H105</td>
<td>Lighting</td>
</tr>
<tr>
<td>H105</td>
<td>Caravan Parks</td>
</tr>
<tr>
<td>H105</td>
<td>Dump points in caravan parks</td>
</tr>
<tr>
<td>H105</td>
<td>Unregisterable relocatable dwellings</td>
</tr>
<tr>
<td>H106</td>
<td>MEAT PREMISES</td>
</tr>
<tr>
<td>H106.1</td>
<td>Application of Part</td>
</tr>
<tr>
<td>H106.2</td>
<td>Premises Processing Meat</td>
</tr>
<tr>
<td>H107</td>
<td>FARM DAIRY PREMISES</td>
</tr>
<tr>
<td>H107.1</td>
<td>Application of this Part</td>
</tr>
<tr>
<td>H107.2</td>
<td>Milking Sheds and Holding Yards</td>
</tr>
<tr>
<td>H107.3</td>
<td>Milk Receiving Area and Milk Storage Room</td>
</tr>
<tr>
<td>H107.4</td>
<td>Water supply</td>
</tr>
<tr>
<td>H108</td>
<td>PHARMACIES</td>
</tr>
<tr>
<td>H108.1</td>
<td>Application of Part</td>
</tr>
<tr>
<td>H108.2</td>
<td>Definition</td>
</tr>
<tr>
<td>H108.3</td>
<td>Pharmacy premises</td>
</tr>
<tr>
<td>H108.4</td>
<td>Dispensary</td>
</tr>
<tr>
<td>H108.5</td>
<td>Security of dispensary</td>
</tr>
<tr>
<td>H109</td>
<td>HOSPITALS AND NURSING HOMES</td>
</tr>
<tr>
<td>H109.1</td>
<td>Application of Part</td>
</tr>
<tr>
<td>H109.2</td>
<td>Floor area of wards and bedrooms</td>
</tr>
<tr>
<td>H109.3</td>
<td>Floor and walls</td>
</tr>
<tr>
<td>H109.4</td>
<td>Grab rails and handrails</td>
</tr>
<tr>
<td>H109.5</td>
<td>Insect proofing</td>
</tr>
<tr>
<td>H109.6</td>
<td>Water temperature</td>
</tr>
<tr>
<td>H110</td>
<td>PREMISES USED FOR ACTIVITIES INVOLVING SKIN PENETRATION</td>
</tr>
<tr>
<td>H110.1</td>
<td>Application of Part</td>
</tr>
<tr>
<td>H110.2</td>
<td>Sanitary facilities</td>
</tr>
<tr>
<td>H110.3</td>
<td>Washbasins</td>
</tr>
<tr>
<td>H111</td>
<td>DENTAL SURGERIES AND CHIROPRACTORS</td>
</tr>
<tr>
<td>H111.1</td>
<td>Application of Part</td>
</tr>
<tr>
<td>H111.2</td>
<td>Waiting room</td>
</tr>
<tr>
<td>H111.3</td>
<td>Floor, walls and ceiling</td>
</tr>
<tr>
<td>H111.4</td>
<td>Disposal of liquid wastes</td>
</tr>
<tr>
<td>H112</td>
<td>MORTUARIES</td>
</tr>
<tr>
<td>H112.1</td>
<td>Application of Part</td>
</tr>
<tr>
<td>H112.2</td>
<td>Layout of mortuary</td>
</tr>
<tr>
<td>H112.3</td>
<td>Construction of body preparation room</td>
</tr>
<tr>
<td>H112.4</td>
<td>Water supply and sewerage</td>
</tr>
<tr>
<td>H113</td>
<td>FOUNDRIES</td>
</tr>
<tr>
<td>H113.1</td>
<td>Application of Part</td>
</tr>
<tr>
<td>H113.2</td>
<td>General</td>
</tr>
</tbody>
</table>
Tas H113.3 Cupola charging platform
Tas H113.4 Deep moulds and pits
Tas H113.5 Pot furnaces

TAS PART H114 PREMISES FOR MANUFACTURE OR PROCESSING OF GLASS REINFORCED PLASTICS
Tas H114.1 Application of Part
Tas H114.2 Separation from other buildings
Tas H114.3 Rise in storeys
Tas H114.4 Maximum floor areas
Tas H114.5 Required exits
Tas H114.6 Hand laminating and spray depositing
Tas H114.7 Ventilation
Tas H114.8 Smoke and heat roof vents

TAS PART H115 PREMISES FOR PRODUCTION OR PROCESSING OF ISOCYANATES
Tas H115.1 Application of Part
Tas H115.2 Areas of work places
Tas H115.3 Separation from other areas and buildings
Tas H115.4 Rise in storeys
Tas H115.5 Maximum floor areas
Tas H115.6 Required exits
Tas H115.7 Bulk stores for polyols and isocyanates
Tas H115.8 Curing room

TAS PART H116 PREMISES FOR ELECTRO-PLATING ELECTRO-POLISHING, ANODISING OR ETCHING
Tas H116.1 Application of Part
Tas H116.2 Floors
Tas H116.3 Height of plating area
Tas H116.4 Air space
Tas H116.5 Ceiling construction

TAS PART H117 PREMISES FOR LEAD PROCESSING
Tas H117.1 Application of Part
Tas H117.2 Floors
Tas H117.3 Height of lead processing areas
Tas H117.4 Air space and floor space
Tas H117.5 Interior of lead processing areas
Tas H117.6 Dust collection
Tas H117.7 Isolation of certain processes
Tas H117.8 Drying room shelves
Tas H117.9 Washing facilities
Tas H117.10 Change rooms

TAS PART H118 BOOTHS FOR SPRAY PAINTING OR SPRAY COATING
Tas H118.1 Application of Part
Tas H118.2 Design and construction of booths

TAS PART H119 ELECTRICITY DISTRIBUTION SUBSTATIONS
Tas H119.1 Application of Part
Tas H119.2 Building-type substations

TAS PART H120 PREMISES FOR STORAGE OF DANGEROUS GOODS

Tas H120.1 Application of Part
Tas H120.2 Interpretation
Tas H120.3 Class of dangerous goods
Tas H120.4 Premises for storage of dangerous goods
Tas H120.5 Workrooms
Tas H120.6 Exits
Tas H120.7 Explosion vents
Tas H120.8 Spill Collection Bunds
Tas H120.9 Electrical equipment

TAS PART H121 HAIRDRESSERS PREMISES

Tas H121.1 Application of Part
Tas H121.2 Size of operating section
Tas H121.3 Premises in a residence
Tas H121.4 Sanitary facilities

TAS PART H122 CENTRE-BASED CHILD CARE FACILITIES

Tas H122 O1 Objective
Tas H122 F1 Functional Statement
Tas H122 P1 to H122 P3 Performance Requirements
Tas H122.0 Application of Part
Tas H122.1 Deemed-to-Satisfy Provisions
Tas H122.2 Indoor play space
Tas H122.3 Outdoor play space
Tas H122.4 Sleep space
Tas H122.5 Sanitary facilities
Tas H122.6 Nappy changing facilities
Tas H122.7 Laundry facilities
Tas H122.8 Floor surfaces
Tas H122.9 Food preparation facilities
Tas H122.10 Reception, administration and staff respite areas
Tas H122.11 Storage facilities
Tas H122.12 Lighting and ventilation
Tas H122.13 Fire safety
Tas H122.14 Glazing and windows
Tas H122.15 Heating and Cooling
Tas H122.16 Fences and barriers

TAS PART H123 TEMPORARY STRUCTURES

Tas H123 O1 Objective
Tas H123 F1 Functional Statement
Tas H123 P1 to H123 P14 Performance Requirements
Tas H123.0 Application of Part
Tas H123.1 Deemed-to-Satisfy Provisions
Tas H123.2 Structure
Tas H123.3 Fire resisting material
Tas H123.4 Access
Tas H123.5 Exits and entrances
Tas H123.6 Barriers
Tas H123.7 Emergency lighting
Tas H123.8 Exit signs
Tas H123.9 Fire fighting equipment
Tas H123.10 Sanitary facilities
Tas H123.11 Lighting
Tas H123.12 Ventilation
Tas H123.13 Electrical
Tas H123.14 Heating appliances
Tas H123.15 Seating

APPENDIX VICTORIA

Victoria

A GENERAL PROVISIONS
Vic A1.1 Definitions
VIC Specification A1.3 Standards Adopted by Reference

D ACCESS AND EGRESS
Vic D1.4 Exit travel distances
Vic D1.6 Dimensions of exits and paths of travel to exits
Vic D2.21 Operation of latch

E SERVICES AND EQUIPMENT
Vic Table E1.5 Requirements for Sprinklers
Vic Specification E1.5 Fire Sprinkler Systems
Vic Specification E2.2a Smoke Detection and Alarm Systems

F HEALTH AND AMENITY
Vic FF2.2 Functional Statements
Vic FP2.2 Performance Requirements
Vic FP2.3 Performance Requirements
Vic F2.0 Deemed-to-Satisfy Provisions
Vic F2.3 Facilities in Class 3 to 9 buildings
Vic Table F2.3 Sanitary Facilities in Class 3, 5, 6, 7, 8 and 9 Buildings
Vic F2.5 Construction of sanitary compartments
Vic F2.101 First aid rooms
Vic FO3 Objective
Vic FF3.1 Functional Statement
Vic FP3.1 Performance Requirement
Vic F3.0 Deemed-to-Satisfy provisions
Vic F3.101 Childrens services - size of rooms
Vic F3.102 Class 3 buildings - size of rooms
Vic F3.103 Class 3 and Class 9a residential aged care buildings - size of rooms
Vic F4.1 Provision of natural light
Vic F4.2 Methods and extent of natural lighting
Vic Part F6 Energy Efficiency

G ANCILLARY PROVISIONS
Vic G1.1 Swimming pools
H SPECIAL USE BUILDINGS

Vic Part H102 Places of Public Entertainment
Vic Part H103 Fire Safety in Class 2 and Class 3 Buildings
Vic Part H104 Class 9b Childrens Services

Footnote: Special Requirements For Certain Buildings And Components

APPENDIX WESTERN AUSTRALIA

Western Australia

F HEALTH AND AMENITY

WA FO5 Objective
WA FF5.1 Functional Statement
WA FP5.1 Performance Requirements
WA F5.0 Deemed-to-Satisfy Provisions
WA F5.1 Application of Part
WA F5.2 Weighted sound reduction index: Interpretation
WA F5.3 Sound insulation of floors between units
WA F5.4 Sound insulation of walls between units
WA F5.5 Walls between a bathroom, sanitary compartment, laundry or kitchen and a habitable room in adjoining unit
WA F5.6 Soil and waste pipes to be separated
WA F5.7 Isolation of pumps
WA F5.8 Walls between a bedroom and kitchen or laundry in a Class 9c building
WA Specification F5.2 Sound Insulation for Building Elements
WA Specification F5.5 Impact Sound - Test of Equivalence

I MAINTENANCE

WA I01 Objective
WA IF1 Functional Statement
WA IP1 Performance Requirement
WA II.0 Deemed-to-Satisfy Provisions
WA II.1 Safety installations
WA II.2 Mechanical ventilation and hot water, warm water and cooling water systems

INDEX ABBREVIATIONS AND SYMBOLS

Index

Abbreviations and Symbols

HISTORY OF AMENDMENTS

History of BCA Adoption

1.0 Adoption of BCA96
1.1 Amendment No. 1
1.2 Amendment No. 2
1.3 Amendment No. 3
1.4 Amendment No. 4
1.5 Amendment No. 5
1.6 Amendment No. 6
<table>
<thead>
<tr>
<th>Amendment No. 7</th>
<th>Amendment No. 8</th>
<th>Amendment No. 9</th>
<th>Amendment No. 10</th>
<th>Amendment No. 11</th>
<th>Amendment No. 12</th>
<th>Amendment No. 13</th>
<th>Adoption of BCA 2004</th>
</tr>
</thead>
</table>

**LIST OF AMENDMENTS**

List of Amendments Volume One
INTRODUCTION

THE BUILDING CODE OF AUSTRALIA

The Building Code of Australia (BCA) is produced and maintained by the Australian Building Codes Board (ABCB) on behalf of the Australian Government and each State and Territory Government.

The BCA is a uniform set of technical provisions for the design and construction of buildings and other structures throughout Australia whilst allowing for variations in climate and geological or geographic conditions.

THE AUSTRALIAN BUILDING CODES BOARD

The ABCB is established by agreement between the Australian Government and each State and Territory Government. It is a co-operative arrangement between the signatories, Local Government and the building industry.

The ABCB's mission is to achieve community expectations of safety, health and amenity in the design, construction and use of buildings through nationally consistent, efficient and cost effective technical building requirements and regulatory systems.

The Board comprises—
(a) the Australian, State and Territory Governments' principal officer responsible for building regulatory matters; and
(b) a representative of the Australian Local Government Association (ALGA); and
(c) industry representatives.

The Building Codes Committee (BCC) is the peak technical advisory body to the ABCB, with responsibility for technical matters associated with the BCA.

The BCC comprises—
(a) the Executive Director of the ABCB; and
(b) one nominee each of the Australian, State, Territory and ALGA members of the ABCB; and
(c) industry members appointed by the ABCB.

THE BCA—CONTENT

GOALS

The goals of the BCA are to enable the achievement and maintenance of acceptable standards of structural sufficiency, safety (including safety from fire), health and amenity for the benefit of the community now and in the future.

These goals are applied so that the BCA extends no further than is necessary in the public interest, is cost effective, easily understood, and is not needlessly onerous in its application.

FORMAT

The BCA is published in two volumes:

Volume One
pertains primarily to Class 2 to 9 buildings

Volume Two
pertains primarily to Class 1 and 10 buildings (houses, sheds, carports, etc)

Both volumes are drafted in a performance format to provide greater flexibility for the use of new and innovative building products, systems and designs.

A user may choose to comply with the Deemed-to-Satisfy Provisions or may use an Alternative Solution that satisfies the Performance Requirements.

The provisions in this edition are the same as those contained in the preceding edition of the BCA, plus changes as detailed in the list located at the back of the document.

STATE AND TERRITORY VARIATIONS AND ADDITIONS

Each State's and Territory's legislation adopts the BCA subject to the variation or deletion of some of its provisions, or the addition of extra provisions. These variations, deletions and additions are contained in Appendices to the BCA.

Flags identifying variations are located within relevant Clauses and at the beginning of relevant Tables. Additional clauses to a Part of the BCA are identified at the end of that Part.

DEFINITIONS

Words with special meanings are printed in italics and are defined in A1.1.

LEGISLATIVE ARRANGEMENTS

GENERAL

The BCA is given legal effect by building regulatory legislation in each State and Territory. This legislation consists of an Act of Parliament and subordinate legislation which empowers the regulation of certain aspects of buildings and structures, and contains the administrative provisions necessary to give effect to the legislation.

Any provision of the BCA may be overridden by, or subject to, State or Territory legislation. The BCA must therefore be read in conjunction with that legislation. Any queries on such matters should be referred to the State or Territory authority responsible for building regulatory matters.

BCA ADOPTION

The adoption of the BCA is addressed in Part A0 of Volume One.

DOCUMENTATION OF DECISIONS

Decisions made under the BCA should be fully documented and copies of all relevant documentation should be retained.

Examples of the kind of documentation which should be prepared and retained include:

(a) Details of the Building Solution including all relevant plans and other supporting documentation.

(b) In cases where an Alternative Solution has been proposed—

(i) details of the relevant Performance Requirements; and

(ii) the Assessment Method or methods used to establish compliance with the relevant Performance Requirements; and

(iii) details of any Expert Judgement relied upon including the extent to which the judgement was relied upon and the qualifications and experience of the expert; and
(iv) details of any tests or calculations used to determine compliance with the relevant Performance Requirements; and
(v) details of any Standards or other information which were relied upon.

STRUCTURE
The BCA has been structured as set out in A0.3 and shown in Figure A0.3. It is the ABCB’s intent that the Objectives and Functional Statements be used as an aid to the interpretation of the BCA and not for determining compliance with the BCA.

FURTHER DEVELOPMENT OF THE BCA
Regular changes are planned to the BCA to improve clarity of provisions, upgrade referenced documents and to reflect the results of research and improved technology.

COMMENTS
Comments in writing on any matter concerning the text, presentation or further development of the BCA are invited from building and other authorities, industry organisations, professional operatives and the public generally. These comments should be addressed to:

Executive Director
Australian Building Codes Board
GPO Box 9839
CANBERRA ACT 2601
GENERAL PROVISIONS

A0 Application

A1 Interpretation

A2 Acceptance of Design and Construction

A3 Classifications of Buildings and Structures

A4 United Buildings
SECTION A GENERAL PROVISIONS

Part A0 Application
A0.1 Adoption
A0.2 BCA Volumes
A0.3 BCA Structure
A0.4 Compliance with the BCA
A0.5 Meeting the Performance Requirements
A0.6 Objectives and Functional Statements
A0.7 Deemed-to-Satisfy Provisions
A0.8 Alternative Solutions
A0.9 Assessment Methods
A0.10 Relevant Performance Requirements

Part A1 Interpretation
A1.1 Definitions
A1.2 Adoption of Standards and other references
A1.3 Referenced Standards, etc
A1.4 Differences between referenced documents and the BCA
A1.5 Compliance with all Sections of BCA
A1.6 Application of the BCA to a particular State or Territory
A1.7 Language

Part A2 Acceptance of Design and Construction
A2.1 Suitability of materials
A2.2 Evidence of suitability
A2.3 Fire-resistance of building elements
A2.4 Fire hazard properties
A2.5 Resistance to the incipient spread of fire

Part A3 Classification of Buildings and Structures
A3.1 Principles of classification
A3.2 Classifications
A3.3 Multiple classification
A3.4 Parts with more than one classification

Part A4 United Buildings
A4.1 When buildings are united
A4.2 Alterations in a united building

Specifications
Specification A1.3 Documents Adopted By Reference
Specification A2.3 Fire-Resistance of Building Elements
Specification A2.4 Fire Hazard Properties
### GENERAL PROVISIONS

**ACT Appendix (Additional provisions - refer to ACT Contents for full details)**

- ACT AO2 Objective
- ACT AF2.1 - AF2.3 Functional Statements
- ACT A2.0 Deemed-to-Satisfy Provisions
- ACT A2.101 Hazardous materials
A0.1 Adoption

The dates of adoption of the Building Code of Australia (Volume One) are shown in the “History of Adoption” division at the end of this Volume.

A0.2 BCA Volumes

(a) This is Volume One of the Building Code of Australia which contains the requirements for—
   (i) all Class 2 to 9 buildings; and
   (ii) access requirements for people with disabilities in Class 10 buildings; and
   (iii) certain Class 10 structures.

(b) Volume Two contains the requirements for—
   (i) Class 1 and 10 buildings (other than access requirements for people with
disabilities in Class 10 buildings); and
   (ii) certain Class 10 structures.

A0.3 BCA Structure

The structure of the BCA comprises the following as shown in Figure A0.3:

(a) The Objectives.

(b) The Functional Statements.

(c) The Performance Requirements with which all Building Solutions must comply.

(d) The Building Solutions.
A0.4 Compliance with the BCA

A Building Solution will comply with the BCA if it satisfies the Performance Requirements.

A0.5 Meeting the Performance Requirements

Compliance with the Performance Requirements can only be achieved by—
(a) complying with the Deemed-to-Satisfy Provisions; or
(b) formulating an Alternative Solution which—
   (i) complies with the Performance Requirements; or
   (ii) is shown to be at least equivalent to the Deemed-to-Satisfy Provisions or
(c) a combination of (a) and (b).

A0.6 Objectives and Functional Statements

The Objectives and Functional Statements may be used as an aid to interpretation.
A0.7 Deemed-to-Satisfy Provisions

A Building Solution which complies with the Deemed-to-Satisfy Provisions is deemed to comply with the Performance Requirements.

A0.8 Alternative Solutions

(a) An Alternative Solution must be assessed according to one or more of the Assessment Methods.

(b) An Alternative Solution will only comply with the BCA if the Assessment Methods used to determine compliance with the Performance Requirements have been satisfied.

(c) The Performance Requirements relevant to an Alternative Solution must be determined in accordance with A0.10.

A0.9 Assessment Methods

The following Assessment Methods, or any combination of them, can be used to determine that a Building Solution complies with the Performance Requirements:

(a) Evidence to support that the use of a material, form of construction or design meets a Performance Requirement or a Deemed-to-Satisfy Provision as described in A2.2.

(b) Verification Methods such as—
   (i) the Verification Methods in the BCA; or
   (ii) such other Verification Methods as the appropriate authority accepts for determining compliance with the Performance Requirements.

(c) Comparison with the Deemed-to-Satisfy Provisions.

(d) Expert Judgement.

A0.10 Relevant Performance Requirements

In order to comply with the provisions of A1.5 (to comply with Sections A to I inclusive) the following method must be used to determine the Performance Requirement or Performance Requirements relevant to the Alternative Solution:

(a) Identify the relevant Deemed-to-Satisfy Provision of each Section or Part that is to be the subject of the Alternative Solution.

(b) Identify the Performance Requirements from the same Sections or Parts that are directly relevant to the identified Deemed-to-Satisfy Provisions.

(c) Identify Performance Requirements from other Sections and Parts that are relevant to any aspects of the Alternative Solution proposed or that are affected by the application of the Deemed-to-Satisfy Provisions, that are the subject of the Alternative Solution.
PART A1  INTERPRETATION

A1.1 Definitions

In Volume One of the BCA unless the contrary intention appears—

**Accessible** means having features to permit use by people with disabilities.

**Accessway** means a continuous accessible path of travel to or within a building suitable for people with disabilities as defined in AS 1428.1.

**Aged care building** means a Class 9c building for residential accommodation of aged persons who, due to varying degrees of incapacity associated with the ageing process, are provided with personal care services and 24 hour staff assistance to evacuate the building during an emergency.

**Alpine area** means land—

(a) likely to be subject to significant snowfalls;
(b) in New South Wales, A.C.T. or Victoria more than 1200 m above the Australian Height Datum; and
(c) in Tasmania more than 900 m above the Australian Height Datum.

**Alteration**, in relation to a building, includes an addition or extension to a building.

**Alternative Solution** means a Building Solution which complies with the Performance Requirements other than by reason of satisfying the Deemed-to-Satisfy Provisions.

**Assembly building** means a building where people may assemble for—

(a) civic, theatrical, social, political or religious purposes; or
(b) educational purposes in a school, early childhood centre, preschool, or the like; or
(c) entertainment, recreational or sporting purposes; or
(d) transit purposes.

**Assessment Method** means a method used for determining that a Building Solution complies with the Performance Requirements.

**Atrium** means a space within a building that connects 2 or more storeys, and—

(a) is wholly or substantially enclosed at the top by a floor or roof (including a glazed roof structure); and
(b) includes any adjacent part of the building not separated by an appropriate barrier to fire; but
(c) does not include a stairwell, rampwell or the space within a shaft.

**Atrium well** means a space in an atrium bounded by the perimeter of the openings in the floors or by the perimeter of the floors and the external walls.

**Automatic** means designed to operate when activated by a heat, smoke or fire sensing device.

**Average recurrence interval**, applied to rainfall, means the expected or average interval between exceedances of a given intensity.

**Average specific extinction area** means the average specific extinction area for smoke as determined by AS/NZS 3837.
**Backstage** means a space associated with, and adjacent to, a _stage_ in a Class 9b building for scenery, props, equipment, dressing rooms, or the like.

**Building Solution** means a solution which complies with the _Performance Requirements_ and is—

(a) an _Alternative Solution_; or
(b) a solution which complies with the _Deemed-to-Satisfy Provisions_; or
(c) a combination of (a) and (b).

**Carpark** means a building that is used for the parking of motor vehicles but is neither a _private garage_ nor used for the servicing of vehicles, other than washing, cleaning or polishing.

**Certificate of Accreditation** means a certificate issued by a State or Territory accreditation authority stating that the properties and performance of a building material or method of construction or design fulfil specific requirements of the BCA.

**Certificate of Conformity** means a certificate issued under the ABCB scheme for products and systems certification stating that the properties and performance of a building material or method of construction or design fulfil specific requirements of the BCA.

**Combustible** means—

(a) Applied to a material—*combustible* as determined by AS 1530.1.
(b) Applied to construction or part of a building—constructed wholly or in part of *combustible* materials.

**Common wall** means a wall that is common to adjoining buildings.

**Construction activity actions** Construction activity actions means actions due to stacking of building materials or the use of equipment, including cranes and trucks, during construction or actions which may be induced by floor to floor propping.

**Critical radiant flux** means the critical heat flux at extinguishment as determined by AS ISO 9239.1.

**Curtain wall** means a non-*loadbearing external wall* that is not a *panel wall*.

**Deemed-to-Satisfy Provisions** means provisions which are deemed to satisfy the _Performance Requirements_.

(NSW, Designated bushfire prone area)

**Designated bushfire prone area** means land which has been designated under a power of legislation as being subject, or likely to be subject, to bushfires.

**Detention centre** means a building in which persons are securely detained by means of the built structure including a prison, remand centre, juvenile _detention centre_, holding cells or psychiatric _detention centre_.

(NSW, Early childhood centre)

(Vic, Early childhood centre)

**Early childhood centre** means a preschool, kindergarten or child-minding centre.

**Effective height** means the height to the floor of the topmost _storey_ (excluding the topmost _storey_ if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units) from the floor of the lowest _storey_ providing direct egress to a road or _open space_.

**Equivalent** means equivalent to the level of health, safety and amenity provided by the **Deemed-to-Satisfy Provisions**.
Evacuation route means the continuous path of travel (including exits, public corridors and the like) from any part of a building, including within a sole-occupancy unit in a Class 2 or 3 building or Class 4 part, to a safe place.

Evacuation time means the time calculated from when the emergency starts for the occupants of the building to evacuate to a safe place.

Exit means—
(a) Any, or any combination of the following if they provide egress to a road or open space—
   (i) An internal or external stairway.
   (ii) A ramp.
   (iii) A fire-isolated passageway.
   (iv) A doorway opening to a road or open space.
(b) A horizontal exit or a fire-isolated passageway leading to a horizontal exit.

Expert Judgement means the judgement of an expert who has the qualifications and experience to determine whether a Building Solution complies with the Performance Requirements.

External wall means an outer wall of a building which is not a common wall.

Fire brigade means a statutory authority constituted under an Act of Parliament having as one of its functions, the protection of life and property from fire and other emergencies.

Fire compartment means—
(a) the total space of a building; or
(b) when referred to in—
   (i) the Objective, Functional Statement or Performance Requirements—any part of a building separated from the remainder by barriers to fire such as walls and/or floors having an appropriate resistance to the spread of fire with any openings adequately protected; or
   (ii) the Deemed-to-Satisfy Provisions—any part of a building separated from the remainder by walls and/or floors each having an FRL not less than that required for a fire wall for that type of construction and where all openings in the separating construction are protected in accordance with the Deemed-to-Satisfy Provisions of the relevant Part.

Fire hazard means the danger in terms of potential harm and degree of exposure arising from the start and spread of fire and the smoke and gases that are thereby generated.

Fire hazard properties means the average specific extinction area, critical radiant flux, Flammability Index, Smoke-Developed Index, smoke growth rate index, smoke development rate or Spread-of-Flame Index of a material or assembly that indicate how they behave under specific fire test conditions.

Fire intensity means the rate release of calorific energy in watts, determined either theoretically or empirically, as applicable.

Fire-isolated passageway means a corridor, hallway or the like, of fire-resisting construction, which provides egress to or from a fire-isolated stairway or fire-isolated ramp or to a road or open space.

Fire-isolated ramp means a ramp within a fire-resisting enclosure which provides egress from a storey.
**Fire-isolated stairway** means a stairway within a *fire-resisting shaft* and includes the floor and roof or top enclosing structure.

**Fire load** means the sum of the net calorific values of the combustible contents which can reasonably be expected to burn within a *fire compartment*, including furnishings, built-in and removable materials, and building elements. The calorific values must be determined at the ambient moisture content or humidity. (The unit of measurement is MJ.)

**Fire-protective covering** means—

(a) 13 mm fire-protective grade plasterboard; or

(b) 12 mm cellulose cement flat sheeting complying with AS/NZS 2908.2 or ISO 8336; or

(c) 12 mm fibrous plaster reinforced with 13 mm x 13 mm x 0.7 mm galvanised steel wire mesh located not more than 6 mm from the exposed face; or

(d) other material not less fire-protective than 13 mm fire-protective grade plasterboard, fixed in accordance with the normal trade practice for a *fire-protective covering*.

**Fire-resistance level (FRL)** means the grading periods in minutes determined in accordance with Specification A2.3, for the following criteria—

(a) *structural adequacy*; and

(b) *integrity*; and

(c) *insulation*,

and expressed in that order.

**Note:**

A dash means that there is no requirement for that criterion. For example, 90/–/– means there is no requirement for an FRL for integrity and insulation, and –/–/– means there is no requirement for an FRL.

**Fire-resisting**, applied to a building element, means having an FRL appropriate for that element.

**Fire-resisting construction** means one of the Types of construction referred to in Part C1.

**Fire safety system** means one or any combination of the methods used in a building to—

(a) warn people of an emergency; or

(b) provide for safe evacuation; or

(c) restrict the spread of fire; or

(d) extinguish a fire,

and includes both active and passive systems.

**Fire-source feature** means—

(a) the far boundary of a road adjoining the allotment; or

(b) a side or rear boundary of the allotment; or

(c) an *external wall* of another building on the allotment which is not a Class 10 building.

**Fire wall** means a wall with an appropriate resistance to the spread of fire that divides a storey or building into *fire compartments*.

**Flashover**, in relation to *fire hazard properties*, means a heat release rate of 1 MW.

**Flammability Index** means the index number as determined by AS 1530.2.
Flight means that part of a stairway that has a continuous series of risers, including risers of winders, not interrupted by a landing or floor.

Floor area means—

(a) in relation to a building—the total area of all storeys; and

(b) in relation to a storey—the area of all floors of that storey measured over the enclosing walls, and includes

(i) the area of a mezzanine within the storey, measured within the finished surfaces of any external walls; and

(ii) the area occupied by any internal walls or partitions, any cupboard, or other built-in furniture, fixture or fitting; and

(iii) if there is no enclosing wall, an area which has a use that—

(A) contributes to the fire load; or

(B) impacts on the safety, health or amenity of the occupants in relation to the provisions of the BCA; and

(c) in relation to a room—the area of the room measured within the finished surfaces of the walls, and includes the area occupied by any cupboard or other built-in furniture, fixture or fitting; and

(d) in relation to a fire compartment—the total area of all floors within the fire compartment measured within the finished surfaces of the bounding construction, and if there is no bounding construction, includes an area which has a use which contributes to the fire load; and

(e) in relation to an atrium—the total area of all floors within the atrium measured within the finished surfaces of the bounding construction and if no bounding construction, within the external walls.

Functional Statement means a statement which describes how a building achieves the Objective.

Group number means the number of one of 4 groups of materials used in the regulation of fire hazard properties and applied to materials used as a finish, surface, lining, or attachment to a wall or ceiling.

Habitable room means a room used for normal domestic activities, and—

(a) includes a bedroom, living room, lounge room, music room, television room, kitchen, dining room, sewing room, study, playroom, family room and sunroom; but

(b) excludes a bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, photographic darkroom, clothes-drying room, and other spaces of a specialised nature occupied neither frequently nor for extended periods.

Health-care building means a building whose occupants or patients undergoing medical treatment generally need physical assistance to evacuate the building during an emergency and includes—

(a) a public or private hospital; or

(b) a nursing home or similar facility for sick or disabled persons needing full-time care; or

(c) a clinic, day surgery or procedure unit where the effects of the predominant treatment administered involve patients becoming non-ambulatory and requiring supervised medical care on the premises for some time after the treatment.

Horizontal exit means a required doorway between 2 parts of a building separated from each other by a fire wall.
Illuminance means the luminous flux falling onto a unit area of surface.

Insulation, in relation to an FRL, means the ability to maintain a temperature on the surface not exposed to the furnace below the limits specified in AS 1530.4.

Integrity, in relation to an FRL, means the ability to resist the passage of flames and hot gases specified in AS 1530.4.

Internal wall excludes a common wall or a party wall.

Lightweight construction means construction which incorporates or comprises—
   (a) sheet or board material, plaster, render, sprayed application, or other material similarly susceptible to damage by impact, pressure or abrasion; or
   (b) concrete and concrete products containing pumice, perlite, vermiculite, or other soft material similarly susceptible to damage by impact, pressure or abrasion; or
   (c) masonry having a thickness less than 70 mm.

Loadbearing means intended to resist vertical forces additional to those due to its own weight.

Mezzanine means an intermediate floor within a room.

Non-combustible means—
   (a) Applied to a material—not deemed combustible as determined by AS 1530.1—Combustibility Tests for Materials.
   (b) Applied to construction or part of a building—constructed wholly of materials that are not deemed combustible.

Objective means a statement contained in the BCA which is considered to reflect community expectations.

Open-deck carpark means a carpark in which all parts of the parking storeys are cross-ventilated by permanent unobstructed openings in not fewer than 2 opposite or approximately opposite sides, and—
   (a) each side that provides ventilation is not less than 1/6 of the area of any other side; and
   (b) the openings are not less than 1/2 of the wall area of the side concerned.

Open space means a space on the allotment, or a roof or similar part of a building adequately protected from fire, open to the sky and connected directly with a public road.

Open spectator stand means a tiered stand substantially open at the front.

Other property means all or any of the following—
   (a) any building on the same or an adjoining allotment; and
   (b) any adjoining allotment; and
   (c) a road.

Outdoor air means air outside the building.

Outfall means that part of the disposal system receiving surface water from the drainage system and may include a natural water course, kerb and channel, or soakage system.

Panel wall means a non-loadbearing external wall, in frame or similar construction, that is wholly supported at each storey.

Patient care area means a part of a health-care building normally used for the treatment, care, accommodation, recreation, dining and holding of patients including a ward area and treatment area.
Performance Requirement means a requirement which states the level of performance which a Building Solution must meet.

Personal care services means any of the following:
   (a) The provision of nursing care.
   (b) Assistance or supervision in—
       (i) bathing, showering or personal hygiene; or
       (ii) toileting or continence management; or
       (iii) dressing or undressing; or
       (iv) consuming food.
   (c) The provision of direct physical assistance to a person with mobility problems.
   (d) The management of medication.
   (e) The provision of substantial rehabilitative or development assistance.

Primary building element means a member of a building designed specifically to take part of the loads specified in B1.2 or B1.3 and includes roof, ceiling, floor, stairway or ramp and wall framing members including bracing members designed for the specific purpose of acting as a brace to those members.

Private garage means—
   (a) any garage associated with a Class 1 building; or
   (b) any single storey of a building of another Class capable of accommodating not more than 3 vehicles, if there is only one such storey in the building; or
   (c) any separate single storey garage associated with another building where such garage is capable of accommodating not more than 3 vehicles.

Professional engineer means a person who is—
   (a) if legislation is applicable—a registered professional engineer in the relevant discipline who has appropriate experience and competence in the relevant field; or
   (b) if legislation is not applicable—
       (i) a Corporate Member of the Institution of Engineers, Australia; or
       (ii) eligible to become a Corporate Member of the Institution of Engineers, Australia, and has appropriate experience and competence in the relevant field.

Public corridor means an enclosed corridor, hallway or the like which—
   (a) serves as a means of egress from 2 or more sole-occupancy units to a required exit from the storey concerned; or
   (b) is required to be provided as a means of egress from any part of a storey to a required exit.

Registered Testing Authority means—
   (a) the National Building Technology Centre (NBTC); or
   (b) the CSIRO Division of Building, Construction and Engineering (CSIRO–DBC&E); or
   (c) the CSIRO Division of Manufacturing and Infrastructure Technology (CSIRO–MIT); or
   (d) an authority registered by the National Association of Testing Authorities (NATA) to test in the relevant field; or
   (e) an organisation outside Australia recognised by NATA through a mutual recognition agreement.
**Required** means required to satisfy a *Performance Requirement* or a *Deemed-to-Satisfy Provision* of the BCA as appropriate.

**General provisions**

**Residential aged care building** means a building whose residents, due to their incapacity associated with the ageing process, are provided with physical assistance in conducting their daily activities and to evacuate the building during an emergency.

**Resident use area** means part of a Class 9c *aged care building* normally used by residents, and—

(a) includes *sole-occupancy units*, lounges, dining areas, activity rooms and the like; but
(b) excludes offices, storage areas, commercial kitchens, commercial laundries and other spaces not for the use of residents.

**Resistance to the incipient spread of fire**, in relation to a ceiling membrane, means the ability of the membrane to insulate the space between the ceiling and roof, or ceiling and floor above, so as to limit the temperature rise of materials in this space to a level which will not permit the rapid and general spread of fire throughout the space.

**Rise in storeys** means the greatest number of storeys calculated in accordance with C1.2.

**Safe place** means—

(a) a place of safety within a building—

(i) which is not under threat from a fire; and
(ii) from which people must be able to safely disperse after escaping the effects of an emergency to a road or open space; or

(b) a road or open space.

**Safety measure** means any measure (including an item of equipment, form of construction or safety strategy) *required* to ensure the safety of persons using the building.

**Sanitary compartment** means a room or space containing a closet pan or urinal.

**Sarking-type material** means a material such as a reflective foil or other flexible membrane of a type normally used for a purpose such as water proofing, vapour proofing or thermal reflectance.

**School** includes a primary or secondary school, college, university or similar educational establishment.

**Self-closing**, applied to a door, means equipped with a device which returns the door to the fully closed position immediately after each opening.

**Service station** means a garage which is not a *private garage* and is for the servicing of vehicles, other than only washing, cleaning or polishing.

**Shaft** means the walls and other parts of a building bounding—

(a) a well, other than an *atrium well*; or
(b) a vertical chute, duct or similar passage, but not a chimney or flue.

**Site** means the part of the allotment of land on which a building stands or is to be erected.

**Sitingwork** means work on or around a *site*, including earthworks, preparatory to or associated with the construction, *alteration*, demolition or removal of a building.

**Smoke-and-heat vent** means a vent, located in or near the roof for smoke and hot gases to escape if there is a fire in the building.

**Smoke-Developed Index** means the index number for smoke as determined by AS/NZS 1530.3.
Smoke development rate means the development rate for smoke as determined by testing flooring materials in accordance with AS ISO 9239.1.

Smoke growth rate index (SMOGRA\textsubscript{RC}) means the index number for smoke used in the regulation of fire hazard properties and applied to materials used as a finish, surface, lining or attachment to a wall or ceiling.

Sole-occupancy unit means a room or other part of a building for occupation by one or joint owner, lessee, tenant, or other occupier to the exclusion of any other owner, lessee, tenant, or other occupier and includes—

(a) a dwelling; or
(b) a room or suite of rooms in a Class 3 building which includes sleeping facilities; or
(c) a room or suite of associated rooms in a Class 5, 6, 7, 8 or 9 building; or
(d) a room or suite of associated rooms in a Class 9c aged care building, which includes sleeping facilities and any area for the exclusive use of a resident.

Spread-of-Flame Index means the index number for spread of flame as determined by AS/NZS 1530.3.

NSW (Stage)

Stage means a floor or platform in a Class 9b building on which performances are presented before an audience.

Standard Fire Test means the Fire-resistance Tests of Elements of Building Construction as described in AS 1530.4.

Storey means a space within a building which is situated between one floor level and the floor level next above, or if there is no floor above, the ceiling or roof above, but not—

(a) a space that contains only—

(i) a lift shaft, stairway or meter room; or
(ii) a bathroom, shower room, laundry, water closet, or other sanitary compartment;

(iii) accommodation intended for not more than 3 vehicles; or
(iv) a combination of the above; or

(b) a mezzanine.

Structural adequacy, in relation to an FRL means the ability to maintain stability and adequate loadbearing capacity as determined by AS 1530.4.

Surface water means all naturally occurring water, other than sub-surface water, which results from rainfall on or around the site or water flowing onto the site, including that flowing from a drain, stream, river, lake or sea.

Swimming pool means any excavation or structure containing water and used primarily for swimming, wading, paddling, or the like, including a bathing or wading pool, or spa.

Treatment area means an area within a patient care area such as an operating theatre and rooms used for recovery, minor procedures, resuscitation, intensive care and coronary care from which a patient may not be readily moved.

Verification Method means a test, inspection, calculation or other method that determines whether a Building Solution complies with the relevant Performance Requirements.

Ward area means that part of a patient care area for resident patients and may contain areas for accommodation, sleeping, associated living and nursing facilities.
Window includes a roof light, glass panel, glass block or brick, glass louvre, glazed sash, glazed door, or other device which transmits natural light directly from outside a building to the room concerned when in the closed position.

A1.2 Adoption of Standards and other references

Where a Deemed-to-Satisfy Provision adopts a Standard, rule, specification or provision included in any document issued by Standards Australia or other body, that adoption does not include a provision—

(a) specifying or defining the respective rights, responsibilities or obligations as between themselves of any manufacturer, supplier or purchaser; or

(b) specifying the responsibilities of any trades person or other building operative, architect, engineer, authority, or other person or body; or

(c) requiring the submission for approval of any material, building component, form or method of construction, to any person, authority or body other than a person or body empowered under State or Territory legislation to give that approval; or

(d) specifying that a material, building component, form or method of construction must be submitted to Standards Australia or a committee of Standards Australia for expression of opinion; or

(e) permitting a departure from the code, rule, specification or provision at the sole discretion of the manufacturer or purchaser, or by arrangement or agreement between the manufacturer and purchaser.

A1.3 Referenced Standards, etc

(a) A reference in a Deemed-to-Satisfy Provision to a document under A1.2 refers to the edition or issue, together with any amendment, listed in Specification A1.3 and only so much as is relevant in the context in which the document is quoted.

(b) Any—

(i) reference in a document listed in Specification A1.3 (primary document) to another document (secondary document); and

(ii) subsequent references to other documents in secondary documents and those other documents,

is a reference to the secondary and other documents as they existed at the time of publication of the primary document listed in Specification A1.3.

A1.4 Differences between referenced documents and the BCA

The BCA overrules in any difference arising between it and any Standard, rule, specification or provision in a document listed in Specification A1.3.

A1.5 Compliance with all Sections of BCA

Subject to A1.6, Class 2–9 buildings must be so designed and constructed that they comply with the relevant provisions of Sections A to I (inclusive) of the BCA.

A1.6 Application of the BCA to a particular State or Territory

For application within a particular State or Territory, the BCA comprises—
(a) Sections A to I (inclusive); and

(b) the variations, deletions and additions to Sections A to I applicable to that State or Territory specified in the relevant Appendix.

A1.7 Language

(a) A reference to a building in the BCA is a reference to an entire building or part of a building, as the case requires.

(b) A reference in a Performance Requirement of the BCA to “the degree necessary” means that consideration of all the criteria referred to in the Performance Requirement will determine the outcome appropriate to the circumstances. These words have been inserted to indicate that in certain situations it may not be necessary to incorporate any specific measures to meet the Performance Requirement.

(c) A reference to “BCA” in this volume, other than in the Introduction, means “Volume One of the Building Code of Australia 2004”.
PART A2 ACCEPTANCE OF DESIGN AND CONSTRUCTION

A2.1 Suitability of materials

Every part of a building must be constructed in an appropriate manner to achieve the requirements of the BCA, using materials that are fit for the purpose for which they are intended.

A2.2 Evidence of suitability

(a) Subject to A2.3 and A2.4, evidence to support that the use of a material, form of construction or design meets a Performance Requirement or a Deemed-to-Satisfy Provision may be in the form of one or a combination of the following:

(i) A report issued by a Registered Testing Authority, showing that the material or form of construction has been submitted to the tests listed in the report, and setting out the results of those tests and any other relevant information that demonstrates its suitability for use in the building.

(ii) A current Certificate of Conformity or a current Certificate of Accreditation.

(iii) A certificate from a professional engineer or other appropriately qualified person which—

(A) certifies that a material, design or form of construction complies with the requirements of the BCA; and

(B) sets out the basis on which it is given and the extent to which relevant specifications, rules, codes of practice or other publications have been relied upon.

(iv) A current certificate issued by a product certification body that has been accredited by the Joint Accreditation System of Australia and New Zealand (JAS-ANZ).

(v) A current Product Listing Data Sheet and listing entry in the Register of Fire Protection Equipment, as issued by Scientific Services Laboratory under its ActivFire Scheme.

(vi) Any other form of documentary evidence that correctly describes the properties and performance of the material or form of construction and adequately demonstrates its suitability for use in the building.

(b) Any copy of documentary evidence submitted, must be a complete copy of the original report or document.

A2.3 Fire-resistance of building elements

Where a Deemed-to-Satisfy Provision requires a building element to have an FRL, it must be determined in accordance with Specification A2.3.

A2.4 Fire hazard properties

Where a Deemed-to-Satisfy Provision requires a building component or assembly to have a Smoke-Developed Index, Spread-of-Flame Index, or Flammability Index, or a material's group
number or smoke growth rate index (SMOGRAR) to be predicted, it must be determined in accordance with Specification A2.4.

A2.5  Resistance to the incipient spread of fire

A ceiling is deemed to have the resistance to the incipient spread of fire to the space above itself if—

(a) it is identical with a prototype that has been submitted to the Standard Fire Test and the resistance to the incipient spread of fire achieved by the prototype is confirmed in a report from a Registered Testing Authority which—

(i) describes the method and conditions of the test and form of construction of the tested prototype in full; and

(ii) certifies that the application of restraint to the prototype complies with the Standard Fire Test; or

(b) it differs in only a minor degree from a prototype tested under (a) and the resistance to the incipient spread of fire attributed to the ceiling is confirmed in a report from a Registered Testing Authority which—

(i) certifies that the ceiling is capable of achieving the resistance to the incipient spread of fire despite the minor departures from the tested prototype; and

(ii) describes the materials, construction and conditions of restraint which are necessary to achieve the resistance to the incipient spread of fire.
A3.1 Principles of classification

The classification of a building or part of a building is determined by the purpose for which it is designed, constructed or adapted to be used.

A3.2 Classifications

Buildings are classified as follows:

Class 1: one or more buildings which in association constitute—

(a) Class 1a—a single dwelling being—
   (i) a detached house; or
   (ii) one or more attached dwellings, each being a building, separated by a fire-resisting wall, including a row house, terrace house, town house or villa unit; or

(b) Class 1b—a boarding house, guest house, hostel or the like with a total floor area not exceeding 300 m² and in which not more than 12 persons would ordinarily be resident, which is not located above or below another dwelling or another Class of building other than a private garage.

Class 2: a building containing 2 or more sole-occupancy units each being a separate dwelling.

Class 3: a residential building, other than a building of Class 1 or 2, which is a common place of long term or transient living for a number of unrelated persons, including—

(a) a boarding-house, guest house, hostel, lodging-house or backpackers accommodation; or

(b) a residential part of a hotel or motel; or

(c) a residential part of a school; or

(d) accommodation for the aged, children or people with disabilities; or

(e) a residential part of a health-care building which accommodates members of staff; or

(f) a residential part of a detention centre.

Class 4: a dwelling in a building that is Class 5, 6, 7, 8 or 9 if it is the only dwelling in the building.

Class 5: an office building used for professional or commercial purposes, excluding buildings of Class 6, 7, 8 or 9.

Class 6: a shop or other building for the sale of goods by retail or the supply of services direct to the public, including—

(a) an eating room, cafe, restaurant, milk or soft-drink bar; or

(b) a dining room, bar, shop or kiosk part of a hotel or motel; or
(c) a hairdresser’s or barber’s shop, public laundry, or undertaker’s establishment; or
(d) market or sale room, showroom, or service station.

Class 7: a building which is—
(a) Class 7a—a carpark; or
(b) Class 7b—for storage, or display of goods or produce for sale by wholesale.

Class 8: a laboratory, or a building in which a handicraft or process for the production, assembling, altering, repairing, packing, finishing, or cleaning of goods or produce is carried on for trade, sale, or gain.

Class 9: a building of a public nature—
(a) Class 9a—a health-care building; including those parts of the building set aside as a laboratory; or
(b) Class 9b—an assembly building, including a trade workshop, laboratory or the like in a primary or secondary school, but excluding any other parts of the building that are of another Class; or
(c) Class 9c—an aged care building.

Class 10: a non-habitable building or structure—
(a) Class 10a—a non-habitable building being a private garage, carport, shed, or the like; or
(b) Class 10b—a structure being a fence, mast, antenna, retaining or free-standing wall, swimming pool, or the like.

### A3.3 Multiple classification

Each part of a building must be classified separately, and—

(a) where parts have different purposes—

(i) if not more than 10% of the floor area of a storey, being the minor use, is used for a purpose which is a different classification, the classification applying to the major use may apply to the whole storey; and

(ii) the provisions of (i) do not apply when the minor use is a laboratory or Class 2, 3 or 4 part; and

(b) Classes 1a, 1b, 7a, 7b, 9a, 9b, 9c, 10a and 10b are separate classifications; and

(c) a reference to—

(i) Class 1—is to Class 1a and 1b; and

(ii) Class 7—is to Class 7a and 7b; and

(iii) Class 9—is to Class 9a, 9b and 9c; and

(iv) Class 10—is to Class 10a and 10b; and

(d) A plant room, machinery room, lift motor room, boiler room or the like must have the same classification as the part of the building in which it is situated.
A3.4 Parts with more than one classification

(a) Notwithstanding A3.3, a building or part of a building may have more than one classification applying to the whole building or to the whole of that part of the building.

(b) If a building or part of a building has more than one classification applying to the whole building or part in accordance with (a), that building or part must comply with all the relevant provisions of the BCA for each classification.
A4.1 When buildings are united

Two or more buildings adjoining each other form one united building if they—

(a) are connected through openings in the walls dividing them; and
(b) together comply with all the requirements of the BCA as though they are a single building.

A4.2 Alterations in a united building

If, after alterations or any other building work, two or more of the buildings in A4.1 cease to be connected through openings in the dividing walls, each of those buildings not now connected must comply with all the requirements for a single building.
1. Schedule of referenced documents

ACT, NSW, NT, QLD, SA, Tas, Vic Spec A1.3 Table 1

The Standards and other documents listed in Table 1 are referred to in Volume One of the BCA.

Table 1: SCHEDULE OF REFERENCED DOCUMENTS

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Title</th>
<th>BCA Clause(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS/ISO 717</td>
<td></td>
<td>Acoustics—Rating of sound insulation in buildings and building elements</td>
<td></td>
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<tr>
<td>BCA 2004</td>
<td>Part 2</td>
<td>2004 Impact sound insulation</td>
<td>F5.2</td>
</tr>
<tr>
<td>AS 1038</td>
<td></td>
<td>Coal and coke—Analysis and testing</td>
<td></td>
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<td>Amdt No. 1</td>
<td>Part 15</td>
<td>1995 Higher rank coal ash and coke ash—Ash fusibility</td>
<td>Spec C3.15</td>
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<tr>
<td>AS/NZS 1170</td>
<td></td>
<td>Structural design actions</td>
<td></td>
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<tr>
<td>Amdt No. 12</td>
<td>Part 0</td>
<td>2002 General principles</td>
<td>B1.1, B1.2</td>
</tr>
<tr>
<td>Amdt No. 11</td>
<td>Part 1</td>
<td>2002 Permanent, imposed and other actions</td>
<td>B1.2</td>
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<td>Amdt No. 11</td>
<td>Part 2</td>
<td>2002 Wind actions</td>
<td>B1.2</td>
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<td>AS 1170</td>
<td></td>
<td>Minimum design loads on structures</td>
<td></td>
</tr>
<tr>
<td>Amdt No. 12</td>
<td>Part 1</td>
<td>1989 Dead and live loads and load combinations Amdt 1, Jan 1993</td>
<td>B1.3</td>
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<td>Amdt No. 12</td>
<td>Part 3</td>
<td>1990 Snow loads</td>
<td>B1.2, B1.3</td>
</tr>
<tr>
<td>Amdt No. 11</td>
<td>AS 1191</td>
<td>2002 Acoustics—Method for laboratory measurement of airborne sound insulation of building elements</td>
<td>Spec F5.5</td>
</tr>
<tr>
<td>Amdt No. 8</td>
<td>AS/NZS 1200</td>
<td>2000 Pressure equipment</td>
<td>G2.2</td>
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<td>Amdt No. 9</td>
<td>AS/NZS 1276</td>
<td>Acoustics—Rating of sound insulation in buildings and of building elements</td>
<td>F5.2</td>
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<td>1999 Airborne sound insulation</td>
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<td>Amdt No. 12</td>
<td>AS 1288</td>
<td>1994 Glass in buildings—Selection and Installation</td>
<td>B1.4, C2.5, Spec C3.4</td>
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<td></td>
<td>Ammdt 1, Sept 1997</td>
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<td>AS 1428</td>
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<td>Design for Access and Mobility</td>
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<td>Amdt No. 4</td>
<td>Part 4</td>
<td>1992 Tactile ground surface indicators for orientation of people with vision impairment</td>
<td>D3.8</td>
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<td>AS 1530</td>
<td></td>
<td>Methods for fire tests on building materials, components and structures</td>
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<td>Part 1</td>
<td>1994 Combustibility test for materials</td>
<td>A1.1</td>
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<td>Part 2</td>
<td>1993 Test for flammability of materials</td>
<td>A1.1</td>
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<td></td>
<td>Ammdt 1, July 1993</td>
</tr>
<tr>
<td>Amdt No. 12</td>
<td>Part 4</td>
<td>1997 Fire-resistance tests on elements of building construction</td>
<td>A1.1, C3.15, C3.16, Spec A2.4, Spec C3.15</td>
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</table>
### GENERAL PROVISIONS

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Title</th>
<th>BCA Clause(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>[Note: Subject to the note to AS 4072.1, reports relating to tests carried out under earlier editions of AS 1530 Parts 1 to 4 remain valid. Reports relating to tests carried out after the date of an amendment to a Standard must relate to the amended Standard]</td>
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<td>AS/NZS 1530</td>
<td>Methods for fire tests on building materials, components and structures</td>
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<td>Part 3</td>
<td>Simultaneous determination of ignitability, flame propagation, heat release and smoke release</td>
<td>Spec A2.4</td>
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<td>* * * *</td>
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<td>Design and installation of sheet roof and wall cladding</td>
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<td>Part 1</td>
<td>Metal</td>
<td>B1.4, F1.5</td>
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<td>Design and installation of sheet roof and wall cladding</td>
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<td>Part 2</td>
<td>Corrugated fibre-reinforced cement</td>
<td>F1.5</td>
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<td>Amdt No. 12</td>
<td>Part 3</td>
<td>Plastics</td>
<td>B1.4, F1.5</td>
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<td>Amdt No. 4</td>
<td>* * * *</td>
<td>AS 1657</td>
<td>Fixed platforms, walkways, stairways and ladders—Design, construction and installation (SAA Code for Fixed Platforms, Walkways, Stairways and Ladders)</td>
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<td>D1.16, D2.18, H1.6</td>
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<td>AS/NZS 1664</td>
<td>Aluminium structures</td>
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<td>Part 1</td>
<td>Limit state design</td>
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<td>Part 2</td>
<td>Allowable stress design</td>
<td>B1.4</td>
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<td>AS/NZS 1668</td>
<td>The use of ventilation and air-conditioning in buildings</td>
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<td>Fire detection, warning, control and intercom systems—Systems design, installation and commissioning</td>
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<td>Part 1</td>
<td>2004</td>
<td>Fire</td>
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<td>Fire alarm monitoring</td>
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<td>Sound systems and intercom systems for emergency purposes</td>
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<td>Part 0</td>
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<td>Safe Movement</td>
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<td>Residential timber-framed construction</td>
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<td>Part 2</td>
<td>1999</td>
<td>Non-cyclonic areas</td>
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<td></td>
<td></td>
<td>Amdt 1, April 2000</td>
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<td></td>
<td>Amdt 2, Oct 2000</td>
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<tr>
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<td>Simplified—non-cyclonic areas</td>
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### GENERAL PROVISIONS

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<th>No.</th>
<th>Date</th>
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<th>No.</th>
<th>Date</th>
<th>Title</th>
<th>BCA Clause(s)</th>
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<tbody>
<tr>
<td>AS/NZS 1905</td>
<td>Part 1 1997</td>
<td>Fire-resistant doorsets</td>
<td>C3.6, Spec C3.4</td>
</tr>
<tr>
<td>Amdt No. 5 AS 1905</td>
<td>Part 2 1989</td>
<td>Fire-resistant roller shutters</td>
<td>Spec C3.4</td>
</tr>
<tr>
<td>Amdt No. 7 AS 1926</td>
<td>Part 1 1993</td>
<td>Fencing for swimming pools</td>
<td>Amdt 1, June 2000</td>
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<tr>
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<td>Amdt 2, June 2000</td>
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<td>Amdt 1, Jan 2001</td>
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<tr>
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<td>Amdt 2, June 2001</td>
</tr>
<tr>
<td>Amdt No. 13 AS 2049</td>
<td>2002</td>
<td>Roof tiles</td>
<td>B1.4, F1.5</td>
</tr>
<tr>
<td>Amdt No. 13 AS 2050</td>
<td>2002</td>
<td>Installation of roof tiles</td>
<td>B1.4, F1.5</td>
</tr>
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<td>AS 2118</td>
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<td>Automatic fire sprinkler systems</td>
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<td>Amdt No. 7</td>
<td>Part 1 1999</td>
<td>General requirements</td>
<td>Spec E1.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Amdt 1, June 2000</td>
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<tr>
<td></td>
<td>Part 4 1995</td>
<td>Residential</td>
<td>Spec E1.5</td>
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<td></td>
<td>Part 6 1995</td>
<td>Combined sprinkler and hydrant</td>
<td>Spec E1.5</td>
</tr>
<tr>
<td>Amdt No. 12 AS 2159</td>
<td>1995</td>
<td>Piling—Design and installation</td>
<td>B1.4</td>
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<td></td>
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<td>Amdt 1, April 1996</td>
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<td>BCA 2004</td>
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<td>AS/NZS 2293</td>
<td></td>
<td></td>
<td>Emergency evacuation lighting in buildings</td>
</tr>
<tr>
<td>Amdt No. 5 AS 2327</td>
<td>Part 1 1998</td>
<td>System design, installation and operation</td>
<td>E4.4, E4.8</td>
</tr>
<tr>
<td>Amdt No. 12 AS 2419</td>
<td>Part 1 2003</td>
<td>Simply supported beams</td>
<td>Spec A2.3, B1.4</td>
</tr>
<tr>
<td>Amdt No. 1 AS 2419</td>
<td>Part 1 1994</td>
<td>System design, installation and commissioning</td>
<td>E1.3</td>
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<td>Amdt 1, Oct 1996</td>
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<td>Date</td>
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<td>AS 2441</td>
<td>1988</td>
<td>Installation of fire hose reels</td>
<td>E1.4</td>
</tr>
<tr>
<td>Amdt No. 10</td>
<td>AS 2444</td>
<td>2001 Portable fire extinguishers and fire blankets—Selection and location</td>
<td>E1.6</td>
</tr>
<tr>
<td>Amdt No. 10</td>
<td>AS 2665</td>
<td>2001 Smoke/heat venting systems—Design, installation and commissioning</td>
<td>Spec E2.2c, Spec G3.8</td>
</tr>
<tr>
<td>Amdt No. 12</td>
<td>AS 2867</td>
<td>1986 Farm structures—General requirements for structural design</td>
<td>B1.4</td>
</tr>
<tr>
<td>Amdt No. 13</td>
<td>AS 2870</td>
<td>1996 Residential slabs and footings—Construction</td>
<td>F1.10</td>
</tr>
<tr>
<td>AS 2890</td>
<td></td>
<td>Parking facilities</td>
<td></td>
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<tr>
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<td>Part 1</td>
<td>1993 Off-street car parking</td>
<td>D3.5</td>
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<td>AS/NZS 2904</td>
<td></td>
<td>1995 Damp-proof courses and flashings</td>
<td>F1.9</td>
</tr>
<tr>
<td>Amdt No. 3</td>
<td></td>
<td>Amdt 1, March 1998</td>
<td></td>
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<td>AS/NZS 2908</td>
<td></td>
<td>Cellulose cement products</td>
<td></td>
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<td>Part 1</td>
<td>2000 Corrugated sheets</td>
<td>B1.4, F1.5</td>
</tr>
<tr>
<td>Amdt No. 7</td>
<td>Part 2</td>
<td>2000 Flat sheets</td>
<td>A1.1</td>
</tr>
<tr>
<td>Amdt No. 10</td>
<td>AS/NZS 2918</td>
<td>2001 Domestic solid-fuel burning appliances—Installation</td>
<td>G2.2</td>
</tr>
<tr>
<td>Amdt No. 5</td>
<td>AS/NZS 3013</td>
<td>1995 Electrical installations—Classification of the fire and mechanical performance of wiring systems</td>
<td>C2.13</td>
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<td>Smoke alarms</td>
<td>Spec E2.2a</td>
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<td>1999</td>
<td>Construction of buildings in bushfire-prone areas</td>
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<td>Amdt No. 13 AS/NZS 3837</td>
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<td>Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter</td>
<td>A1.1, Spec A2.4, Spec C1.10a</td>
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<td>AS 4072 Components for the protection of openings in fire-resistant separating elements</td>
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<td>Part 1 1992 Service penetrations and control joints</td>
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<td>[Note: Systems tested to AS 1530.4 prior to 1 January 1995 need not be retested to comply with the provisions in AS 4072.1]</td>
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<td>1998</td>
<td>Steel Structures</td>
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<td>AS/NZS 4200</td>
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## GENERAL PROVISIONS

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<td>Fire detection, warning, control and intercom systems—Control and indicating equipment</td>
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<td>Spec E2.2a</td>
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<td>Spec A2.4, Spec C1.10a</td>
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<td>Guidelines for assessment of fire resistance of structural steel members</td>
<td>Spec A2.3</td>
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<td>Amdt No. 12</td>
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<td>ASTM E72-80</td>
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<td>Standard method of conducting strength tests of panels for building construction</td>
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<td>1985</td>
<td>Standard method of measuring relative resistance of wall, floor and roof construction to impact loading</td>
<td>Spec C1.8</td>
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<td>ISO 140</td>
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<td>Acoustics—Measurement of sound insulation in buildings and of building elements</td>
<td>Spec F5.5</td>
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<td>Part 6</td>
<td>1998E Laboratory measurements of impact sound insulation of floors</td>
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### GENERAL PROVISIONS

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<td>Acoustics—Rating of sound insulation in buildings and of building elements</td>
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<td></td>
<td>Part 1 1996</td>
<td>Airborne sound insulation</td>
<td>F5.2</td>
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<td>Amdt No. 8</td>
<td>ISO 8336 1993E</td>
<td>Fibre cement flat sheets</td>
<td>A1.1</td>
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<tr>
<td>SSL</td>
<td></td>
<td>Register of Accredited Products—Fire Protection Equipment</td>
<td>A2.2</td>
</tr>
</tbody>
</table>
1. **Scope**

This Specification sets out the procedures for determining the FRL of building elements.

2. **Rating**

A building element meets the requirements of this Specification if—

(a) it is listed in, and complies with **Table 1** of this Specification; or

(b) it is identical with a prototype that has been submitted to the Standard Fire Test, or an equivalent or more severe test, and the FRL achieved by the prototype is confirmed in a report from a Registered Testing Authority which—

(i) describes the method and conditions of the test and the form of construction of the tested prototype in full; and

(ii) certifies that the application of restraint to the prototype complied with the Standard Fire Test; or

(c) it differs in only a minor degree from a prototype tested under (b) and the FRL attributed to the building element is confirmed in a report from a Registered Testing Authority which—

(i) certifies that the building element is capable of achieving the FRL despite the minor departures from the tested prototype; and

(ii) describes the materials, construction and conditions of restraint which are necessary to achieve the FRL; or

(d) it is designed to achieve the FRL in accordance with—

(i) AS 2327.1, AS 4100 and AISC Guidelines for Assessment of Fire Resistance of Structural Steel Members if it is a steel or composite structure; or

(ii) AS 3600 if it is a concrete structure; or

(iii) AS 1720.4 if it is a solid or glued-laminated timber structure; or

(iv) AS 3700 if it is a masonry structure; or

(e) the FRL is determined by calculation based on the performance of a prototype in the Standard Fire Test and confirmed in a report in accordance with **Clause 3**.

3. **FRLs determined by calculation**

If the FRL of a building element is determined by calculation based on a tested prototype—

(a) the building element may vary from the prototype in relation to—

(i) length and height if it is a wall; and
(ii) height if it is a column; and
(iii) span if it is a floor, roof or beam; and
(iv) conditions of support; and
(v) to a minor degree, cross-section and components.

(b) the report must demonstrate by calculation that the building element would achieve the FRL if it is subjected to the regime of the Standard Fire Test in relation to—
(i) structural adequacy (including deflection); and
(ii) integrity; and
(iii) insulation; and

(c) the calculations must take into account—
(i) the temperature reached by the components of the prototype and their effects on strength and modulus of elasticity; and
(ii) appropriate features of the building element such as support, restraint, cross-sectional shape, length, height, span, slenderness ratio, reinforcement, ratio of surface area to mass per unit length, and fire protection; and
(iii) features of the prototype that influenced its performance in the Standard Fire Test although these features may not have been taken into account in the design for dead and live load; and
(iv) features of the conditions of test, the manner of support and the position of the prototype during the test, that might not be reproduced in the building element if it is exposed to fire; and
(v) the design load of the building element in comparison with the tested prototype.

4. Interchangeable materials

(a) Concrete and plaster—An FRL achieved with any material of Group A, B, C, D or E as an ingredient in concrete or plaster, applies equally when any other material of the same group is used in the same proportions:

Group A: Any portland cement.

Group B: Any lime.

Group C: Any dense sand.

Group D: Any dense calcareous aggregate, including any limestone or any calcareous gravel.

Group E: Any dense siliceous aggregate, including any basalt, diorite, dolerite, granite, granodiorite or trachyte.

(b) Perlite and vermiculite—An FRL achieved with either gypsum-perlite plaster or gypsum-vermiculite plaster applies equally for each plaster.

5. Columns covered with lightweight construction

If the fire-resisting covering of a steel column is lightweight construction, the construction must comply with C1.8 and C3.17.
6. Non-loadbearing elements

If a non-loadbearing element is able to be used for a purpose where the Deemed-to-Satisfy Provisions prescribe an FRL for structural adequacy, integrity and insulation, that non-loadbearing element need not comply with the structural adequacy criteria.

Table 1 FRLs DEEMED TO BE ACHIEVED BY CERTAIN BUILDING ELEMENT

<table>
<thead>
<tr>
<th>Building element</th>
<th>Minimum thickness (mm) of principal material for FRL’s</th>
<th>Annexure reference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>60/60/60</td>
<td>90/90/90</td>
</tr>
<tr>
<td>WALL</td>
<td></td>
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</tr>
<tr>
<td>Masonry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ashlar</td>
<td>–</td>
<td>–</td>
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<tr>
<td>Calcium silicate</td>
<td>see 2(d)(iv) of this Specification</td>
<td></td>
</tr>
<tr>
<td>Concrete</td>
<td>see 2(d)(iv) of this Specification</td>
<td></td>
</tr>
<tr>
<td>Fired clay (inc terracotta)</td>
<td>see 2(d)(iv) of this Specification</td>
<td></td>
</tr>
<tr>
<td>Concrete</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No-fines</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Prestressed</td>
<td>see 2(d)(ii) of this Specification</td>
<td></td>
</tr>
<tr>
<td>Reinforced</td>
<td>see 2(d)(ii) of this Specification</td>
<td></td>
</tr>
<tr>
<td>Plain</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Solid gypsum blocks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>90</td>
<td>100</td>
</tr>
<tr>
<td>Gypsum—perlite or Gypsum vermiculite-plaster on metal lath and channel (non-loadbearing walls only)</td>
<td>50</td>
<td>50</td>
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<tr>
<td>CONCRETE COLUMN</td>
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<tr>
<td>Prestressed</td>
<td>see 2(d)(ii) of this Specification</td>
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<td>Reinforced</td>
<td>see 2(d)(ii) of this Specification</td>
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<tr>
<td>HOT-ROLLED STEEL COLUMN</td>
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<tr>
<td>(inc a fabricated column) exposed on no more than 3 sides:</td>
<td>8</td>
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<tr>
<td>Fire protection of Concrete—Cast in-situ—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loadbearing</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>Non-loadbearing</td>
<td></td>
<td></td>
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<tr>
<td>Unplastered</td>
<td>25</td>
<td>30</td>
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<tr>
<td>Plastered 13 mm—</td>
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### GENERAL PROVISIONS

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<th>Minimum thickness (mm) of principal material for FRL’s</th>
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<tr>
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<td>–</td>
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<tr>
<td>Gypsum—perlite or Gypsum-vermiculite plaster sprayed to contour</td>
<td>20</td>
<td>25</td>
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<tr>
<td>Gypsum—perlite or Gypsum-vermiculite plaster sprayed on metal lath</td>
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### HOT-ROLLED STEEL COLUMN

(inc a fabricated column) exposed on no more than 3 sides and with column spaces filled:

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<tr>
<td>Solid clay masonry</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Solid concrete masonry</td>
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<td>50</td>
</tr>
<tr>
<td>Solid gypsum blocks</td>
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<td>50</td>
</tr>
<tr>
<td>Hollow terracotta blocks plastered 13 mm</td>
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<td>50</td>
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### HOT-ROLLED STEEL COLUMN

(inc a fabricated column) exposed on no more than 3 sides and with column spaces unfilled:

<table>
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<td>90/90/90</td>
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<tr>
<td>Solid calcium-silicate masonry</td>
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<td>Solid clay masonry</td>
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<tr>
<td>Solid concrete masonry</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Solid gypsum blocks</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Hollow terracotta blocks plastered 13 mm</td>
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### Building element Minimum thickness (mm) of principal material for FRL’s

<table>
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<tr>
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<td>60/60/60 90/90/90 120/120/120 180/180/180 240/240/240</td>
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#### Concrete—Cast in-situ

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<tr>
<td>Loadbearing</td>
<td>25 40 45 65 90</td>
<td>9, 11, 12</td>
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<tr>
<td>Non-loadbearing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unplastered</td>
<td>25 30 40 50 65</td>
<td>9, 11, 12</td>
</tr>
<tr>
<td>Plastered 13 mm</td>
<td>25 25 30 40 50</td>
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#### Gypsum—Cast in-situ

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<td>60/–/– 90/–/– 120/–/– 180/–/– 240/–/–</td>
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### HOT-ROLLED STEEL COLUMN continued

(inc a fabricated column) exposed on 4 sides:

<table>
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<th>Gypsum-perlite or Gypsum-vermiculite plaster</th>
<th>Minimum thickness (mm) of principal material for FRL’s</th>
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<tbody>
<tr>
<td>Sprayed to contour</td>
<td>25 30 40 55 65</td>
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<td>Sprayed on metal lath</td>
<td>20 20 30 40 50</td>
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### HOT-ROLLED STEEL COLUMN

(inc. a fabricated column) exposed on 4 sides and with column spaces filled:

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<th>Minimum thickness (mm) of principal material for FRL’s</th>
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</thead>
<tbody>
<tr>
<td>Solid calcium-silicate masonry</td>
<td>50 50 50 65 75</td>
<td>1, 3, 11, 12,</td>
</tr>
<tr>
<td>Solid clay masonry</td>
<td>50 50 50 75 100</td>
<td>1, 3, 11, 12</td>
</tr>
<tr>
<td>Solid concrete masonry</td>
<td>50 50 50 75 100</td>
<td>1, 3, 11, 12</td>
</tr>
<tr>
<td>Solid gypsum blocks</td>
<td>50 50 50 65 75</td>
<td>1, 3, 11, 12</td>
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<tr>
<td>Hollow terracotta blocks-</td>
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</tr>
</tbody>
</table>

BCA 2004 Volume One Australian Building Codes Board Page 68 SUPERSEDED
## Building element

<table>
<thead>
<tr>
<th>Minimum thickness (mm) of principal material for FRL’s</th>
<th>Annexure reference</th>
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<td>60/60/60</td>
<td>90/90/90</td>
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</tbody>
</table>

### HOT-ROLLED STEEL COLUMN

(incl. a fabricated column) exposed on 4 sides and with column spaces unfilled

<table>
<thead>
<tr>
<th>Fire protection of—</th>
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<tbody>
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<td>Solid calcium-silicate masonry</td>
<td>50</td>
</tr>
<tr>
<td>Solid clay masonry</td>
<td>50</td>
</tr>
<tr>
<td>Solid concrete masonry</td>
<td>50</td>
</tr>
<tr>
<td>Solid gypsum blocks</td>
<td>50</td>
</tr>
<tr>
<td>Hollow terracotta blocks-</td>
<td></td>
</tr>
<tr>
<td>plastered 13 mm</td>
<td>50</td>
</tr>
</tbody>
</table>

### BEAM

<table>
<thead>
<tr>
<th>Building element</th>
<th>Minimum thickness (mm) of principal material for FRL’s</th>
<th>Annexure reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prestressed</td>
<td>see 2(d)(ii) of this Specification</td>
<td>1, 3, 11, 12</td>
</tr>
<tr>
<td>Reinforced</td>
<td>see 2(d)(ii) of this Specification</td>
<td>1, 3, 11, 12</td>
</tr>
</tbody>
</table>

### Hot-rolled Steel (incl. an open-web joist girder truss etc) exposed on no more than 3 sides:

<table>
<thead>
<tr>
<th>Fire protection of—</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete—Cast in-situ</td>
<td>25</td>
</tr>
<tr>
<td>Gypsum-perlite or Gypsum-vermiculite plaster</td>
<td></td>
</tr>
<tr>
<td>sprayed to contour</td>
<td>20</td>
</tr>
<tr>
<td>sprayed on metal lath</td>
<td>20</td>
</tr>
</tbody>
</table>

### Hot-rolled Steel (incl. an open-web joist girder truss etc) exposed on 4 sides:

<table>
<thead>
<tr>
<th>Fire protection of—</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete—Cast in-situ</td>
<td>25</td>
</tr>
</tbody>
</table>
## Spec A2.3 – GENERAL PROVISIONS

<table>
<thead>
<tr>
<th>Building element</th>
<th>Minimum thickness (mm) of principal material for FRL’s</th>
<th>Annexure reference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>60/60/60</td>
<td>90/90/90</td>
</tr>
<tr>
<td>sprayed to contour</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>sprayed on metal lath</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>60/60/60</td>
<td>90/90/90</td>
</tr>
</tbody>
</table>

**FLOOR, ROOF OR CEILING**

| Concrete— |  |
|-----------|  |
| Prestressed | see 2(d)(ii) of this Specification |
| Reinforced | see 2(d)(ii) of this Specification |
ANNEXURE TO TABLE 1

1. **MORTAR, PLASTER AND PLASTER REINFORCEMENT**

1.1 **Mortar for masonry**
Masonry units of ashlar, calcium silicate, concrete or fired clay (including terracotta blocks) must be laid in cement mortar or composition mortar complying with the relevant provisions of AS 3700.

1.2 **Gypsum blocks**
Gypsum blocks must be laid in gypsum-sand mortar or lime mortar.

1.3 **Gypsum-sand mortar and plaster**
Gypsum-sand mortar and gypsum-sand plaster must consist of either—
(a) not more than 3 parts by volume of sand to 1 part by volume of gypsum; or
(b) if lime putty is added, not more than 2.5 parts by volume of sand to 1 part by volume of gypsum and not more than 5% of lime putty by volume of the mixed ingredients.

1.4 **Gypsum-perlite and gypsum-vermiculite plaster**
Gypsum-perlite or gypsum-vermiculite plaster must be applied—
(a) in either one or 2 coats each in the proportions of 1 m$^3$ of perlite or vermiculite to 640 kg of gypsum if the *required* thickness of the plaster is not more than 25 mm; and
(b) in 2 coats if the *required* thickness is more than 25 mm, the first in the proportions of 1 m$^3$ of perlite or vermiculite to 800 kg of gypsum and the second in the proportions of 1 m$^3$ of perlite or vermiculite to 530 kg of gypsum.

1.5 **Plaster of cement and sand or cement, lime and sand**
Plaster prescribed in Table 1 must consist of—
(a) cement and sand or cement, lime and sand; and
(b) may be finished with gypsum, gypsum-sand, gypsum-perlite or gypsum-vermiculite plaster or with lime putty.

1.6 **Plaster reinforcement**
If plaster used as fire protection on walls is more than 19 mm thick—
(a) it must be reinforced with expanded metal lath that—
(i) has a mass per unit area of not less than 1.84 kg/m$^2$; and
(ii) has not fewer than 98 meshes per metre; and
(iii) is protected against corrosion by galvanising or other suitable method; or
(b) it must be reinforced with 13 mm x 13 mm x 0.7 mm galvanised steel wire mesh, and
with the reinforcement must be securely fixed at a distance from the face of the wall of not less than 1/3 of the total thickness of the plaster.
2. ASHLAR STONE MASONRY

Ashlar masonry must not be used in a part of the building containing more than 2 storeys, and must not be of—

(a) aplite, granite, granodiorite, quartz dacite, quartz diorite, quartz porphyrite or quartz porphyry; or
(b) conglomerate, quartzite or sandstone; or
(c) chert or flint; or
(d) limestone or marble.

3. DIMENSIONS OF MASONRY

The thicknesses of masonry of calcium-silicate, concrete and fired clay are calculated as follows:

3.1 Solid units

For masonry in which the amount of perforation or coring of the units does not exceed 25% by volume (based on the overall rectangular shape of the unit) the thickness of the wall must be calculated from the manufacturing dimensions of the units and the specified thickness of the joints between them as appropriate.

3.2 Hollow units

For masonry in which the amount of perforation or coring of the units exceeds 25% by volume (based on the overall rectangular shape of the unit) the thickness of the wall must be calculated from the equivalent thicknesses of the units and the specified thickness of the joints between them as appropriate.

3.3 Equivalent thickness

The equivalent thickness of a masonry unit is calculated by dividing the net volume by the area of one vertical face.

4. * * * * *

This Clause has deliberately been left blank.

5. HEIGHT-TO-THICKNESS RATIO OF CERTAIN WALLS

The ratio of height between lateral supports to overall thickness of a wall of ashlar, no-fines concrete, unreinforced concrete, solid gypsum blocks, gypsum-perlite or gypsum-vermiculite plaster on metal lath and channel, must not exceed—

(a) 20 for a loadbearing wall; or
(b) 27 for a non-loadbearing wall.
6. INCREASE IN THICKNESS BY PLASTERING

6.1 Walls

If a wall of ashlar, solid gypsum blocks or concrete is plastered on both sides to an equal thickness, the thickness of the wall for the purposes of Table 1 (but not for the purposes of Annexure Clause 5) may be increased by the thickness of the plaster on one side.

6.2 Columns

Where Table 1 indicates that column-protection is to be plastered, the tabulated thicknesses are those of the principal material. They do not include the thickness of plaster which must be additional to the listed thickness of the material to which it is applied.

7 GYPSUM-PERLITE OR GYPSUM-VERMICULITE PLASTER ON METAL LATH

7.1 Walls

In walls fabricated of gypsum-perlite or gypsum-vermiculite plaster on metal lath and channel—

(a) the lath must be securely wired to each side of 19 mm x 0.44 kg/m steel channels (used as studs) spaced at not more than 400 mm centres; and

(b) the gypsum-perlite or gypsum-vermiculite plaster must be applied symmetrically to each exposed side of the lath.

7.2 Columns

For the fire protection of steel columns with gypsum-perlite or gypsum-vermiculite on metal lath—

(a) the lath must be fixed at not more than 600 mm centres vertically to steel furring channels, and—

(i) if the plaster is to be 35 mm thick or more—at least 12 mm clear of the column; or

(ii) if the plaster is to be less than 35 mm thick—at least 6 mm clear of the column; or

(b) the plaster may be applied to self-furring lath with furring dimples to hold it not less than 10 mm clear of the column, and

the thickness of the plaster must be measured from the back of the lath.

7.3 Beams

For the fire protection of steel beams with gypsum-perlite or gypsum-vermiculite on metal lath—

(a) the lath must be fixed at not more than 600 mm centres to steel furring channels and at least 20 mm clear of the steel; and

(b) the thickness of the plaster must be measured from the back of the lath.
8. EXPOSURE OF COLUMNS AND BEAMS

8.1 Columns
A column incorporated in or in contact on one or more sides with a wall of solid masonry or concrete at least 100 mm thick may be considered to be exposed to fire on no more than 3 sides.

8.2 Beams
A beam, open-web joist, girder or truss in direct and continuous contact with a concrete slab or a hollow block floor or roof may be considered to be exposed to fire on no more than 3 sides.

9. FILLING OF COLUMN SPACES
(a) The spaces between the fire-protective material and the steel (and any re-entrant parts of the column itself) must be filled solid with a fire-protective material like concrete, gypsum or grout.
(b) The insides of hollow sections, including pipes, need not be filled.

10. HOLLOW TERRACOTTA BLOCKS
The proportion of cored holes or perforations in a hollow terracotta block (based on the overall rectangular volume of the unit) must not exceed the following:

<table>
<thead>
<tr>
<th></th>
<th>For blocks up to 75 mm thick</th>
<th>35%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>Fore blocks more than 75 mm but not more than 100 mm thick</td>
<td>40%</td>
</tr>
<tr>
<td>(b)</td>
<td>For blocks more than 100 mm thick</td>
<td>50%</td>
</tr>
</tbody>
</table>

11. REINFORCEMENT FOR COLUMN AND BEAM PROTECTION

11.1 Masonry
Masonry of calcium-silicate, fired clay and concrete for the protection of steel columns must have steel-wire or mesh reinforcement in every second course and lapped at the corners.

11.2 Gypsum blocks and hollow terracotta blocks
Gypsum blocks and hollow terracotta blocks for the protection of steel columns must have steel-wire or mesh reinforcement in every course and lapped at corners.
11.3 **Structural concrete and poured gypsum**

If a steel column or a steel beam is to be protected with structural concrete or poured gypsum—

(a) the concrete or gypsum must be reinforced with steel-wire mesh or steel-wire binding placed about 20 mm from its outer surface, and—

(i) for concrete or gypsum less than 50 mm thick, the steel wire must be—

(A) at least 3.15 mm in diameter; and

(B) spaced at not more than 100 mm vertically; or

(ii) for concrete or gypsum not less than 50 mm thick, the steel wire must be either—

(A) of a diameter and spacing in accordance with (i); or

(B) at least 5 mm in diameter and spaced at not more than 150 mm vertically.

11.4 **Gypsum-perlite or gypsum-vermiculite plaster sprayed to contour**

(a) If a steel column or steel beam is protected with either gypsum-perlite or gypsum-vermiculite plaster sprayed to contour and the construction falls within the limits of Table 11.4, the plaster must be reinforced with—

(i) expanded metal lath complying with Clause 1.6 of this Annexure; or

(ii) galvanised steel wire mesh complying with Clause 1.6 of this Annexure.

(b) The reinforcement must be placed at a distance from the face of the plaster of at least 1/3 of the thickness of the plaster and must be securely fixed to the column or beam at intervals of not more than the relevant listing in Table 11.4.

(c) For the purposes of Table 11.4—

(i) “vertical” includes a surface at not more than 10° to the vertical; and

(ii) “horizontal” includes a surface at not more than 10° to the horizontal; and

(iii) “underside” means the underside of any horizontal or non-vertical surface.

<table>
<thead>
<tr>
<th>Surface to be protected</th>
<th>Reinforcement required if smaller dimension of surface exceeds (mm)</th>
<th>Max spacing of fixings of the mesh to surface (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Members with H or I cross-section:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertical—</td>
<td>450</td>
<td>450</td>
</tr>
<tr>
<td>Non-vertical—</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Underside—</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Upper side of a horizontal surface—</td>
<td>Not required</td>
<td></td>
</tr>
<tr>
<td><strong>Members with other shapes:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertical—</td>
<td>Any size</td>
<td>450</td>
</tr>
<tr>
<td>Non-vertical—</td>
<td>Any size</td>
<td>300</td>
</tr>
</tbody>
</table>
12. THICKNESS OF COLUMN AND BEAM PROTECTION

12.1 Measurement of thickness

The thickness of the fire protection to steel columns and steel beams (other than fire protection of gypsum-perlite or gypsum-vermiculite plaster sprayed on metal lath or sprayed to contour) is to be measured from the face or edge of the steel, from the face of a splice plate or from the outer part of a rivet or bolt, whichever is the closest to the outside of the fire-protective construction, except that—

(a) if the thickness of the fire protection is 40 mm or more, rivet heads may be disregarded; and

(b) if the thickness of the fire protection is 50 mm or more—
   (i) any part of a bolt (other than a high-tensile bolt) may be disregarded; and
   (ii) a column splice plate within 900 mm of the floor may encroach upon the fire protection by up to a 1/4 of the thickness of the fire protection; and

(c) the flange of a column or beam may encroach by up to 12 mm upon the thickness of the fire protection at right angles to the web if—
   (i) the column or beam is intended to have an FRL of 240/240/240 or 240/--/--; and
   (ii) the flange projects 65 mm or more from the web; and
   (iii) the thickness of the edge of the flange (inclusive of any splice plate) is not more than 40 mm.
1. **Scope**

This Specification sets out the procedures for—

(a) determining the fire hazard properties of assemblies tested to AS/NZS 1530.3; and

(b) predicting a material’s group number and smoke growth rate index (SMOGRA$_{RC}$) for the purposes of Specification C1.10a.

2. **Assemblies**

2.1 **General requirement**

The fire hazard properties of assemblies and their ability to screen their core materials as required under Specification C1.10 must be determined by testing in accordance with this clause.

2.2 **Form of test**

Tests must be carried out in accordance with—

(a) for the determination of the Spread-of-Flame Index and Smoke-Developed Index—AS/NZS 1530.3; and

(b) for the determination of the ability to prevent ignition and to screen its core material from free air—AS 1530.4.

2.3 **Test specimens**

Test specimens must incorporate—

(a) all types of joints; and

(b) all types of perforations, recesses or the like for pipes, light switches or other fittings, which are proposed to be used for the member or assembly of members in the building.

2.4 **Concession**

Clause 2.3 does not apply to joints, perforations, recesses or the like that are larger than those in the proposed application and have already been tested in the particular form of construction concerned and found to comply with the conditions of the test.

2.5 **Smaller specimen permitted**

A testing laboratory may carry out the test specified in Clause 2.2(b) at pilot scale if a specimen (which must be not less than 900 mm x 900 mm) will adequately represent the proposed construction in the building, but the results of that test do not apply to construction larger than limits defined by the laboratory conducting the pilot examination.
3. Predicting a material’s group number

For a material tested to AS/NZS 3837, the material’s *group number* must be determined in accordance with the following:

(a) Data must be in the form of time and rate of heat release pairs for the duration of the test. The time interval between pairs should not be more than 5 seconds. The end of the test \( (t_f) \) is determined as defined in AS/NZS 3837.

(b) At least three replicate specimens must be tested. The following procedure must be applied separately to each specimen:

(i) Determine time to ignition \( (t_{ig}) \). Time to ignition is defined as the time (in seconds) when the rate of heat release reaches or first exceeds a value of 50 kW/m\(^2\).

(ii) Calculate the Ignitability Index \( (I_Q) \) expressed in reciprocal minutes.

\[ I_Q = \frac{60}{t_{ig}} \]

(iii) Calculate the following two rates of heat release indices.

\[ I_{Q1} = \int_{t_{ig}}^{t_f} \left( \frac{q''(t)}{(t - t_{ig})^{0.34}} \right) dt \]
\[ I_{Q2} = \int_{t_{ig}}^{t_f} \left( \frac{q''(t)}{(t - t_{ig})^{0.63}} \right) dt \]

\( t = \) time (seconds),
\( q''(t) = \) rate of heat release (kW/m\(^2\)) at time \( t \)

These definite integral expressions represent the area under a curve from the ignition time until the end of the test, where the parameter \( q''(t)/(t - t_{ig})^m \) is plotted on the vertical axis and time \( (t) \) is plotted on the horizontal axis.

(iv) Calculate the following three integral limits:

\[ I_{Q1,10min} = 6800 - 540I_{ig} \]
\[ I_{Q2,12min} = 2475 - 165I_{ig} \]
\[ I_{Q1,12min} = 1650 - 165I_{ig} \]

(v) Classify the material in accordance with Table 3:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>( I_{Q1} &gt; I_{Q1,10 min} ) and ( I_{Q2} &gt; I_{Q2,12 min} )</td>
<td>the material is a Group 4 material</td>
</tr>
<tr>
<td>( I_{Q1} &gt; I_{Q1,10 min} ) and ( I_{Q2} \leq I_{Q2,12 min} )</td>
<td>the material is a Group 3 material</td>
</tr>
<tr>
<td>( I_{Q1} \leq I_{Q1,10 min} ) and ( I_{Q2} &gt; I_{Q2,12 min} )</td>
<td>the material is a Group 2 material</td>
</tr>
<tr>
<td>( I_{Q1} \leq I_{Q1,10 min} ) and ( I_{Q2} \leq I_{Q2,12 min} )</td>
<td>the material is a Group 1 material</td>
</tr>
</tbody>
</table>

(vi) Repeat steps 1 to 5 above for each replicate specimen tested. Where a different classification group is obtained for different specimens tested, then the highest (worst) classification for any specimen must be taken as the final classification for that material.
4. **Predicting a material’s smoke growth rate index (SMOGRA<sub>RC</sub>)**

(a) Measure the instantaneous rate of light-obsuring smoke $R_{\text{inst}}$ expressed in square metres per second (m<sup>2</sup>/s) in the exhaust duct at not more than 6 second intervals in the AS ISO 9705 room test.

(b) Determine the 60 second running average ($R_{60}$) at time $t$. The result is the average rate of light-obsuring smoke over the period $t-30$ to $t+30$ seconds (in m<sup>2</sup>/s). This may also be expressed mathematically as:

$$R_{60} = \frac{1}{60} \int_{t-30}^{t+30} R_{\text{inst}} \, dt$$

(c) Find the time (in seconds) at which the maximum value of the 60 second running average occurs ($t_{60}$).

(d) Calculate the SMOGRA<sub>RC</sub> index (in m<sup>2</sup>/s<sup>2</sup> x 1000)

$$\text{SMOGRA}_{RC} = \frac{1000R_{60}}{t_{60}}$$

The SMOGRA<sub>RC</sub> index is based on the results of a single test.
SECTION B CONTENTS

SECTION B STRUCTURE

B1 STRUCTURAL PROVISIONS

Objective BO1
Functional Statement BF1.1 - BF1.2
Performance Requirement BP1.1 - BP1.3
B1.0 Deemed-to-Satisfy Provisions
B1.1 Resistance to actions
B1.2 Determination of individual actions
B1.3 Loads
B1.4 Determination of structural resistance of materials and forms of construction

NT Appendix (Additional provisions - refer to NT Contents for full details)

NT Specification B1.2 Design of Buildings in Cyclonic Areas
OBJECTIVE

BO1
The *Objective* of this Part is to—
(a) safeguard people from injury caused by structural failure; and
(b) safeguard people from loss of amenity caused by structural behaviour; and
(c) protect *other property* from physical damage caused by structural failure; and
(d) safeguard people from injury that may be caused by failure of, or impact with, glazing.

FUNCTIONAL STATEMENT

BF1.1
A building or structure is to withstand the combination of loads and other actions to which it may be reasonably subjected.

BF1.2
Glazing is to be installed in a building to avoid undue risk of injury to people

PERFORMANCE REQUIREMENT

BP1.1
(a) A building or structure, to the degree necessary, must—
   (i) remain stable and not collapse; and
   (ii) prevent progressive collapse; and
   (iii) minimise local damage and loss of amenity through excessive deformation, vibration or degradation; and
   (iv) avoid causing damage to *other properties*, by resisting the actions to which it may reasonably be subjected.
(b) The actions to be considered to satisfy (a) include but are not limited to—
   (i) permanent actions (dead loads); and
BP1.1

(ii) imposed actions (live loads arising from occupancy and use); and
(iii) wind action; and
(iv) earthquake action; and
(v) snow action; and
(vi) liquid pressure action; and
(vii) ground water action; and
(viii) rainwater action (including ponding action); and
(ix) earth pressure action; and
(x) differential movement; and
(xi) time dependent effects (including creep and shrinkage); and
(xii) thermal effects; and
(xiii) ground movement caused by—
  (A) swelling, shrinkage or freezing of the subsoil; and
  (B) landslip or subsidence; and
  (C) siteworks associated with the building or structure; and
(xiv) construction activity actions.

BP1.2

The structural resistance of materials and forms of construction must be determined using five percentile characteristic material properties with appropriate allowance for—
(a) known construction activities; and
(b) type of material; and
(c) characteristics of the site; and
(d) the degree of accuracy inherent in the methods used to assess the structural behaviour; and
(e) action effects arising from the differential settlement of foundations, and from restrained dimensional changes due to temperature, moisture, shrinkage, creep and similar effects.

BP1.3

Glass installations that are at risk of being subjected to human impact must have glazing that—
(a) if broken on impact, will break in a way that is not likely to cause injury to people; and
(b) resists a reasonably foreseeable human impact without breaking; and
(c) is protected or marked in a way that will reduce the likelihood of human impact
PART B1  STRUCTURAL PROVISIONS

B1.0  Deemed-to-Satisfy Provisions

(a)  Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirement BP1.1 and BP1.3 are satisfied by complying with either—

   (i)  B1.1, B1.2 and B1.4; or

   (ii) B1.3 and B1.4.

(b)  Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of—

   (i)  B1.1, B1.2 and B1.4; or

   (ii) B1.3 and B1.4,

   the relevant Performance Requirements must be determined in accordance with A0.10.

B1.1  Resistance to actions

The resistance of a building or structure must be greater than the most critical action effect resulting from different combinations of actions, where—

(a)  the most critical action effect on a building or structure is determined in accordance with B1.2 and the general design procedures contained in AS/NZS 1170.0; and

(b)  the resistance of a building or structure is determined in accordance with B1.4.

B1.2  Determination of individual actions

The magnitude of individual actions must be determined in accordance with the following:

(a)  Permanent actions:

   (i)  the design or known dimensions of the building or structure; and

   (ii) the unit weight of the construction; and

   (iii) AS/NZS 1170.1.

(b)  Imposed actions:

   (i)  the known loads that will be imposed during the occupation or use of the building or structure; and

   (ii) construction activity actions; and

   (iii) AS/NZS 1170.1.

(c)  Wind, snow and earthquake actions:

   (i)  the applicable annual probability of design event for safety, determined by—

   (A) assigning the building or structure an Importance Level in accordance with Table B1.2a; and

   (B) determining the corresponding annual probability of exceedance in accordance with Table B1.2b; and
(ii) AS/NZS 1170.2, AS 1170.3 (as modified by AS/NZS 1170.0) and AS 1170.4 (as modified by AS/NZS 1170.0) as appropriate.

(d) Actions not covered in (a), (b) and (c) above:

(i) the nature of the action; and

(ii) the nature of the building or structure; and

(iii) the Importance Level of the building or structure determined in accordance with Table B1.2a; and

(iv) AS/NZS 1170.1.

(e) For the purposes of (d) the actions include but are not limited to—

(i) liquid pressure action; and

(ii) ground water action; and

(iii) rainwater action (including ponding action); and

(iv) earth pressure action; and

(v) differential movement; and

(vi) time dependent effects (including creep and shrinkage); and

(vii) thermal effects; and

(viii) ground movement caused by—

(A) swelling, shrinkage or freezing of the subsoil; and

(B) landslip or subsidence; and

(C) siteworks associated with the building or structure; and

(ix) construction activity actions.

Table B1.2a Importance Levels of Buildings and Structures

<table>
<thead>
<tr>
<th>Importance Level</th>
<th>Building Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Buildings or structures presenting a low degree of hazard to life and other property in the case of failure.</td>
</tr>
<tr>
<td>2</td>
<td>Buildings or structures not included in Importance Levels 1, 3 and 4.</td>
</tr>
<tr>
<td>3</td>
<td>Buildings or structures that are designed to contain a large number of people.</td>
</tr>
<tr>
<td>4</td>
<td>Buildings or structures that are essential to post-disaster recovery or associated with hazardous facilities.</td>
</tr>
</tbody>
</table>
Table B1.2b Design Events for Safety

<table>
<thead>
<tr>
<th>Importance Level</th>
<th>Annual probability of exceedance</th>
<th>Wind</th>
<th>Snow</th>
<th>Earthquake</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Non-cyclonic</td>
<td>Cyclonic</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>1:100</td>
<td>1:200</td>
<td>1:100</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>1:500</td>
<td>1:500</td>
<td>1:150</td>
</tr>
<tr>
<td>3</td>
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<td>1:1000</td>
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<td>4</td>
<td></td>
<td>1:2000</td>
<td>1:2000</td>
<td>1:250</td>
</tr>
</tbody>
</table>

B1.3 Loads

The building or structure must resist loads determined in accordance with the following:

(a) Dead and live loads and load combinations: AS 1170.1.

(b) Wind loads: AS 1170.2.

(c) Snow loads: AS 1170.3.

(d) Earthquake loads: AS 1170.4.

B1.4 Determination of structural resistance of materials and forms of construction

The structural resistance of materials and forms of construction must be determined in accordance with the following:

(a) Masonry (including masonry-veneer, unreinforced masonry and reinforced masonry): AS 3700.

(b) Concrete construction (including reinforced and prestressed concrete): AS 3600.

(c) Steel construction—
   (i) Steel structures: AS 4100.
   (ii) Cold-formed steel structures: AS/NZS 4600.

(d) Composite steel and concrete: AS 2327.1.

(e) Aluminium construction: AS/NZS 1664.1 or AS/NZS 1664.2.

(f) Timber construction:
   (i) Design of timber structures: AS 1720.1.
   (ii) * * * * *
   (iii) Timber structures: AS 1684 Part 2, Part 3 or Part 4.

(g) Piling: AS 2159.

(h) Glazed assemblies:
   (i) The following glazed assemblies in an external wall must comply with AS 2047:
(A) Windows excluding those listed in (ii).
(B) Sliding doors with a frame.
(C) Adjustable louvres.
(D) Shopfronts.
(E) Window walls with one piece framing.

(ii) All glazed assemblies not covered by (i) and the following glazed assemblies must comply with AS 1288:

(A) All glazed assemblies not in an external wall.
(B) Hinged doors, including French doors and bi-fold doors.
(C) Revolving doors.
(D) Fixed louvres.
(E) Skylights, roof lights and windows in other than the vertical plane.
(F) Sliding doors without a frame.
(G) Shopfront doors.
(H) Windows constructed on site and architectural one-off windows, which are not design tested in accordance with AS 2047.
(I) Second-hand windows, re-used windows, recycled windows and replacement windows.
(J) Heritage windows.

(i) Termite Risk Management: Where a primary building element is subject to attack by subterranean termites: AS 3660.1, and—

NT B1.4(i)

(i) for the purposes of this provision, a primary building element consisting entirely of, or a combination of, any of the following materials is considered not subject to termite attack:

(A) Steel, aluminium or other metals.
(B) Concrete.
(C) Masonry.
(D) Fibre-reinforced cement.
(E) Timber—naturally termite resistant in accordance with Appendix C of AS 3660.1.
(F) Timber—preservative treated in accordance with Appendix D of AS 3660.1; and

(ii) a durable notice must be permanently fixed to the building in a prominent location, such as a meter box or the like, indicating—

(A) the method of termite risk management; and
(B) the date of installation of the system; and
(C) where a chemical barrier is used, its life expectancy as listed on the National Registration Authority label; and
(D) the installer’s or manufacturer’s recommendations for the scope and frequency of future inspections for termite activity.

(j) Roof construction (except in cyclone areas):

(i) Plastic sheeting: AS/NZS 1562.3, AS/NZS 4256 Parts 1, 2, 3 and 5.
(ii) Roofing tiles: AS 2049, AS 2050.

(iii) Cellulose cement corrugated sheets: AS/NZS 2908.1 with safety mesh installed in accordance with AS/NZS 1562.3 Clause 2.4.3.2 except for sub clause (g) for plastic sheeting.

(iv) Metal roofing: AS 1562.1.

(v) Asphalt shingles: ASTM D3018-90, Class A.


(l) Earthwall construction: NBTC Bulletin 5, edition 4, Table 3.1 and Figure 3.7 and associated Table.

(m) Structures for primary production purposes in rural areas: AS 2867.

(n) Lift shafts which are not required to have an FRL: AS 1735.2 Clause 11.1.2.
FIRE RESISTANCE

C1 Fire Resistance and Stability

C2 Compartmentation and Separation

C3 Protection of Openings
SECTION C FIRE RESISTANCE

C Fire Resistance

Objective CO1
Functional Statements CF1 - CF2
Performance Requirements CP1 - CP9
Verification Methods CV1 - CV2

Part C1 Fire Resistance and Stability

C1.0 Deemed-to-Satisfy Provisions
C1.1 Type of construction required
C1.2 Calculation of rise in storeys
C1.3 Buildings of multiple classification
C1.4 Mixed types of construction
C1.5 Two storey Class 2, 3 or 9c buildings
C1.6 Class 4 parts of buildings
C1.7 Open spectator stands and indoor sports stadiums
C1.8 Lightweight construction
C1.9 * * * * *
C1.10 Fire hazard properties
C1.11 Performance of external walls in fire
C1.12 Non-combustible materials

Part C2 Compartmentation and Separation

C2.0 Deemed-to-Satisfy Provisions
C2.1 Application of Part
C2.2 General floor area and volume limitations
C2.3 Large Isolated Buildings
C2.4 Requirements for open spaces and vehicular access
C2.5 Class 9a and 9c buildings
C2.6 Vertical separation of openings in external walls
C2.7 Separation by fire walls
C2.8 Separation of classifications in the same storey
C2.9 Separation of classifications in different storeys
C2.10 Separation of lift shafts
C2.11 Stairways and lifts in one shaft
C2.12 Separation of equipment
C2.13 Electricity supply system
C2.14 Public corridors in Class 2 and 3 buildings

Part C3 Protection of Openings

C3.0 Deemed-to-Satisfy Provisions
C3.1 Application of Part
C3.2 Protection of openings in external walls
C3.3 Separation of external walls and associated openings in different fire compartments
C3.4 Acceptable methods of protection
C3.5 Doorways in fire walls
C3.6 Sliding fire doors
C3.7 Protection of doorways in horizontal exits
C3.8 Openings in fire-isolated exits
C3.9 Service penetrations in fire-isolated exits
C3.10 Openings in fire-isolated lift shafts
C3.11 Bounding construction: Class 2, 3 and 4 buildings
C3.12 Openings in floors and ceilings for services
C3.13 Openings in shafts
C3.14 * * * * *
C3.15 Openings for service installations
C3.16 Construction joints
C3.17 Columns protected with lightweight construction to achieve an FRL

Specifications
Specification C1.1 Fire-Resisting Construction
Specification C1.8 Structural Tests for Lightweight Construction
Specification C1.10 Fire Hazard Properties - General
Specification C1.10a Fire Hazard Properties - Floors, Walls and Ceilings
Specification C1.11 Performance of External Walls in Fire
Specification C2.5 Smoke-Proof Walls in Health-Care and Aged Care Buildings
Specification C3.4 Fire Doors, Smoke Doors, Fire Windows and Shutters
Specification C3.15 Penetration of Walls, Floors and Ceilings by Services
SECTION C  FIRE RESISTANCE

OBJECTIVE

CO1
The Objective of this Section is to
(a) safeguard people from illness or injury due to a fire in a building; and
(b) safeguard occupants from illness or injury while evacuating a building during a fire; and
(c) facilitate the activities of emergency services personnel; and
(d) avoid the spread of fire between buildings; and
(e) protect other property from physical damage caused by structural failure of a building as a result of fire.

FUNCTIONAL STATEMENTS

CF1
A building is to be constructed to maintain structural stability during fire to—
(a) allow occupants time to evacuate safely; and
(b) allow for fire brigade intervention; and
(c) avoid damage to other property.

CF2
A building is to be provided with safeguards to prevent fire spread—
(a) so that occupants have time to evacuate safely without being overcome by the effects of fire; and
(b) to allow for fire brigade intervention; and
(c) to sole-occupancy units providing sleeping accommodation; and

Application:
CF2(c) only applies to a Class 2 or 3 building or Class 4 part.

(d) to adjoining fire compartments; and
(e) between buildings.
PERFORMANCE REQUIREMENTS

CP1

A building must have elements which will, to the degree necessary, maintain structural stability during a fire appropriate to—

(a) the function or use of the building; and
(b) the fire load; and
(c) the potential fire intensity; and
(d) the fire hazard; and
(e) the height of the building; and
(f) its proximity to other property; and
(g) any active fire safety systems installed in the building; and
(h) the size of any fire compartment; and
(i) fire brigade intervention; and
(j) other elements they support; and
(k) the evacuation time.

CP2

(a) A building must have elements which will, to the degree necessary, avoid the spread of fire—
(i) to exits; and
(ii) to sole-occupancy units and public corridors; and

Application:
CP2(a)(ii) only applies to a Class 2 or 3 building or Class 4 part.

(iii) between buildings; and
(iv) in a building

(b) Avoidance of the spread of fire referred to in (a) must be appropriate to—
(i) the function or use of the building; and
(ii) the fire load; and
(iii) the potential fire intensity; and
(iv) the fire hazard; and
(v) the number of storeys in the building; and
(vi) its proximity to other property; and
(vii) any active fire safety systems installed in the building; and
(viii) the size of any fire compartment; and
(ix) fire brigade intervention; and
(x) other elements they support; and
(xi) the evacuation time.

CP3
A building must be protected from the spread of fire and smoke to allow sufficient time for the orderly evacuation of the building in an emergency.

Application:
CP3 only applies to—
(a) a patient care area of a Class 9a health-care building; and
(b) a Class 9c aged care building.

CP4
A material and an assembly must, to the degree necessary, resist the spread of fire to limit the generation of smoke and heat, and any toxic gases likely to be produced, appropriate to—
(a) the evacuation time; and
(b) the number, mobility and other characteristics of occupants; and
(c) the function or use of the building; and
(d) any active fire safety systems installed in the building.

CP5
A concrete external wall that could collapse as a complete panel (eg. tilt-up and pre-cast concrete) must be designed so that in the event of fire within the building the likelihood of outward collapse is avoided.

Limitation:
CP5 does not apply to a building having more than two storeys above ground level.

CP6
A building must have elements, which will, to the degree necessary, avoid the spread of fire from service equipment having—
(a) a high fire hazard; or
(b) a potential for explosion resulting from a high fire hazard.

CP7
A building must have elements, which will, to the degree necessary, avoid the spread of fire so that emergency equipment provided in a building will continue to operate for a period of time necessary to ensure that the intended function of the equipment is maintained during a fire.

CP8
Any building element provided to resist the spread of fire must be protected, to the degree necessary, so that an adequate level of performance is maintained—
(a) where openings, construction joints and the like occur; and
(b) where penetrations occur for building services.

**CP9**

Access must be provided to and around a building, to the degree necessary, for fire brigade vehicles and personnel to facilitate fire brigade intervention appropriate to—

(a) the function or use of the building; and
(b) the fire load; and
(c) the potential fire intensity; and
(d) the fire hazard; and
(e) any active fire safety systems installed in the building; and
(f) the size of any fire compartment.

**VERIFICATION METHODS**

**CV1**

Compliance with CP2(a)(iii) to avoid the spread of fire between buildings on adjoining allotments is verified when it is calculated that—

(a) a building will not cause heat flux in excess of those set out in column 2 of Table CV1 at locations within the boundaries of an adjoining property set out in column 1 of Table CV1 where another building may be constructed; and

(b) when located at the distances from the allotment boundary set out in column 1 of Table CV1, a building is capable of withstanding the heat flux set out in column 2 of Table CV1 without ignition.

| Table CV1 |
|----------------------------------|--------|
| **Location** | **Heat Flux (kW/m²)** |
| On boundary | 80 |
| 1 m from boundary | 40 |
| 3 m from boundary | 20 |
| 6 m from boundary | 10 |

**CV2**

Compliance with CP2(a)(iii) to avoid the spread of fire between buildings on the same allotment is verified when it is calculated that a building—

(a) is capable of withstanding the heat flux set out in column 2 of Table CV2 without ignition; and
(b) will not cause heat flux in excess of those set out in column 2 of Table CV2, when the distance between the buildings is as set out in column 1 of Table CV2.

<table>
<thead>
<tr>
<th>Distance between buildings</th>
<th>Heat Flux (kW/m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 m</td>
<td>80</td>
</tr>
<tr>
<td>2 m</td>
<td>40</td>
</tr>
<tr>
<td>6 m</td>
<td>20</td>
</tr>
<tr>
<td>12 m</td>
<td>10</td>
</tr>
</tbody>
</table>
C1.0 Deemed-to-Satisfy Provisions

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirements CP1 to CP9 are satisfied by complying with—

(i) C1.1 to C1.12, C2.1 to C2.14 and C3.1 to C3.17; and

(ii) in a building containing an atrium, Part G3; and

(iii) for theatres, stages and public halls, Part H1.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of—

(i) C1.1 to C1.12, C2.1 to C2.14 and C3.1 to C3.17; and

(ii) in a building containing an atrium, Part G3; and

(iii) for theatres, stages and public halls, Part H1,

the relevant Performance Requirements must be determined in accordance with A0.10.

C1.1 Type of construction required

(a) The minimum Type of fire-resisting construction of a building must be that specified in Table C1.1 and Specification C1.1, except as allowed for—

(i) certain Class 2, 3 or 9c buildings in C1.5; and

(ii) * * * * *

(iii) open spectator stands and indoor sports stadiums in C1.7.

(iv) * * * * *

(b) Type A construction is the most fire-resistant and Type C the least fire-resistant of the Types of construction.

Table C1.1 TYPE OF CONSTRUCTION REQUIRED

<table>
<thead>
<tr>
<th>Rise in storeys</th>
<th>Class of building</th>
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<tr>
<td></td>
<td>2, 3, 9</td>
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<tr>
<td>4 OR MORE</td>
<td>A</td>
</tr>
<tr>
<td>3</td>
<td>A</td>
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<tr>
<td>2</td>
<td>B</td>
</tr>
<tr>
<td>1</td>
<td>C</td>
</tr>
</tbody>
</table>

C1.2 Calculation of rise in storeys

(a) The rise in storeys is the sum of the greatest number of storeys at any part of the external walls of the building and any storeys within the roof space—
(i) above the finished ground next to that part; or
(ii) if part of the external wall is on the boundary of the allotment, above the natural ground level at the relevant part of the boundary.

(b) A storey is not counted if—
(i) it is situated at the top of the building and contains only heating, ventilating or lift equipment, water tanks, or similar service units or equipment; or
(ii) it is situated partly below the finished ground and the underside of the ceiling is not more than 1 m above the average finished level of the ground at the external wall, or if the external wall is more than 12 m long, the average for the 12 m part where the ground is lowest.

(c) In a Class 7 or 8 building, a storey that has an average internal height of more than 6 m is counted as—
(i) one storey if it is the only storey above the ground; or
(ii) 2 storeys in any other case.

(d) For the purposes of calculating the rise in storeys of a building—
(i) a mezzanine is regarded as a storey in that part of the building in which it is situated if its floor area is more than 200 m² or more than 1/3 of the floor area of the room, whichever is the lesser; and
(ii) two or more mezzanines are regarded as a storey in that part of the building in which they are situated if they are at or near the same level and have an aggregate floor area more than 200 m² or more than 1/3 of the floor area of the room, whichever is the lesser.

C1.3 Buildings of multiple classification

In a building of multiple classifications, the Type of construction required for the building is the most fire-resisting Type resulting from the application of Table C1.1 on the basis that the classification applying to the top storey applies to all storeys.

C1.4 Mixed types of construction

A building may be of mixed Types of construction where it is separated in accordance with C2.7 and the Type of construction is determined in accordance with C1.1 or C1.3.

C1.5 Two storey Class 2, 3 or 9c buildings

A building having a rise in storeys of 2 may be of Type C construction if—
(a) it is a Class 2 or 3 building or a mixture of these classes and each sole-occupancy unit has—
(i) access to at least 2 exits; or
(ii) its own direct access to a road or open space.

(b) it is a Class 9c aged care building protected throughout with a sprinkler system complying with Specification E1.5 and complies with the maximum compartment size specified in Table C2.2 for Type C construction.
C1.6  Class 4 parts of buildings

A Class 4 part of a building requires the same FRL for building elements and the same construction separating the Class 4 part from the remainder of the building as a Class 2 part in similar circumstances.

C1.7  Open spectator stands and indoor sports stadiums

(a) An open spectator stand or indoor sports stadium may be of Type C construction and need not comply with the other provisions of this Part if it contains not more than 1 tier of seating, is of non-combustible construction, and has only changing rooms, sanitary facilities or the like below the tiered seating.

(b) In (a), one tier of seating means numerous rows of tiered seating incorporating cross-overs but within one viewing level.

C1.8  Lightweight construction

(a) Lightweight construction must comply with Specification C1.8 if it is used in a wall system—
   (i) that is required to have an FRL; or
   (ii) for a lift shaft, stair shaft or service shaft or an external wall bounding a public corridor including a non fire-isolated passageway or non fire-isolated ramp, in a spectator stand, sports stadium, cinema or theatre, railway station, bus station or airport terminal.

(b) If lightweight construction is used for the fire-resisting covering of a steel column or the like, and if—
   (i) the covering is not in continuous contact with the column, then the void must be filled solid, to a height of not less than 1.2 m above the floor to prevent indenting; and
   (ii) the column is liable to be damaged from the movement of vehicles, materials or equipment, then the covering must be protected by steel or other suitable material.

C1.9  * * * * *

This clause has deliberately been left blank.

C1.10  Fire Hazard Properties

(a) The fire hazard properties of any material or assembly in a Class 2, 3, 5, 6, 7, 8 or 9 building must comply with—
   (i) Specification C1.10; or
   (ii) for floor materials and floor coverings, and wall and ceiling lining materials, Specification C1.10 or Specification C1.10a.

(b) Paint or fire-retardant coatings must not be used to make a substrate comply with a required fire hazard properties.

NSW C1.10(b)

(c) The requirements of (a) do not apply to a material or assembly if it is—
C1.10  

(i) plaster, cement render, concrete, terrazzo, ceramic tile or the like; or  
(ii) a fire-protective covering; or  
(iii) a timber-framed window; or  
(iv) a solid timber handrail or skirting; or  
(v) a timber-faced solid-core door or timber-faced fire door; or  
(vi) an electrical switch, socket-outlet, cover plate or the like; or  
(vii) a material used for—  
   (A) a roof covering or roof membrane, or a roof insulating material, applied in continuous contact with a substrate; or  
   (B) an adhesive; or  
   (C) a damp-proof course, flashing, caulking, sealing, ground moisture barrier, or the like; or  
(viii) a paint, varnish, lacquer or similar finish, other than nitro-cellulose lacquer; or  
(ix) a clear or translucent roof light of glass fibre reinforced polyester if—  
   (A) the roof in which it is installed forms part of a single storey building required to be Type C construction; and  
   (B) the material is used as part of the roof covering; and  
   (C) it is not closer than 1.5 m from another roof light of the same type; and  
   (D) each roof light is not more than 14 m² in area; and  
   (E) the area of the roof lights per 70 m² of roof surface is not more than 14 m²; or  
(x) a face plate or neck adaptor of supply and return air outlets of an air handling system; or  
(xi) a face plate or diffuser plate of light fitting and emergency exit signs and associated electrical wiring and electrical components; or  
(xii) a joinery unit, cupboard, shelving or the like; or  
(xiii) any other material that does not significantly increase the hazards of fire.

NSW C1.10(d)

C1.11  Performance of external walls in fire

Concrete external walls that could collapse as complete panels (e.g., tilt-up and precast concrete), in a building having a rise in storeys of not more than 2, must comply with Specification C1.11.

C1.12  Non-combustible materials

The following materials, though combustible or containing combustible fibres, may be used wherever a non-combustible material is required:

(a) Plasterboard.
(b) Perforated gypsum lath with a normal paper finish.
(c) Fibrous-plaster sheet.
(d) Fibre-reinforced cement sheathing.
(e) Pre-finished metal sheeting having a combustible surface finish not exceeding 1 mm thickness and where the Spread-of-Flame Index of the product is not greater than 0.
Bonded laminated materials where—

(i) each laminate is non-combustible; and

(ii) each adhesive layer does not exceed 1 mm in thickness; and

(iii) the total thickness of the adhesive layers does not exceed 2 mm; and

(iv) the Spread-of-Flame Index and the Smoke-Developed Index of the laminated material as a whole does not exceed 0 and 3 respectively.
C2.0 Deemed-to-Satisfy Provisions

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirements CP1 to CP9 are satisfied by complying with—

(i) C1.1 to C1.12, C2.1 to C2.14 and C3.1 to C3.17; and
(ii) in a building containing an atrium, Part G3; and
(iii) for theatres, stages and public halls, Part H1.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of—

(i) C1.1 to C1.12, C2.1 to C2.14 and C3.1 to C3.17; and
(ii) in a building containing an atrium, Part G3; and
(iii) for theatres, stages and public halls, Part H1,

the relevant Performance Requirements must be determined in accordance with A0.10.

C2.1 Application of Part

C2.2, C2.3 and C2.4 do not apply to a carpark provided with a sprinkler system complying with Specification E1.5, an open-deck carpark or an open spectator stand.

C2.2 General floor area and volume limitations

(a) The size of any fire compartment or atrium in a Class 5, 6, 7, 8 or 9 building must not exceed the relevant maximum floor area nor the relevant maximum volume set out in Table C2.2 and Clause C2.5 except as permitted in Clause C2.3.

(b) A part of a building which contains only heating, ventilating, or lift equipment, water tanks, or similar service units is not counted in the floor area or volume of a fire compartment or atrium if it is situated at the top of the building.

(c) In a building containing an atrium, the part of the atrium well bounded by the perimeter of the openings in the floors and extending from the level of the first floor above the atrium floor to the roof covering is not counted in the volume of the atrium for the purposes of this clause.

Table C2.2 MAXIMUM SIZE OF FIRE COMPARTMENTS OR ATRIA

<table>
<thead>
<tr>
<th>Classification</th>
<th>Type of construction of building</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Type A</td>
</tr>
<tr>
<td>max floor area</td>
<td></td>
</tr>
<tr>
<td>5, 9b or 9c aged care building</td>
<td>8 000 m²</td>
</tr>
<tr>
<td>max volume</td>
<td></td>
</tr>
<tr>
<td></td>
<td>48 000 m³</td>
</tr>
</tbody>
</table>
### C2.2 FIRE RESISTANCE

<table>
<thead>
<tr>
<th>Classification</th>
<th>Type of construction of building</th>
</tr>
</thead>
<tbody>
<tr>
<td>6, 7, 8 or 9a (except for patient care areas)</td>
<td>Type A</td>
</tr>
<tr>
<td>max floor area—</td>
<td>5 000 m²</td>
</tr>
<tr>
<td>max volume—</td>
<td>30 000 m³</td>
</tr>
</tbody>
</table>

Note: See C2.5 for maximum size of compartments in patient care areas in Class 9a health care buildings.

### C2.3 Large isolated buildings

The size of a fire compartment in a building may exceed that specified in Table C2.2 where—

**NSW C2.3(a)**

(a) the building does not exceed 18 000 m² in floor area nor exceed 108 000 m³ in volume, if—

(i) the building is Class 7 or 8, it contains not more than 2 storeys and is provided with open space complying with C2.4(a) not less than 18 m wide around the building and—

(A) an automatic fire detection and alarm system complying with Clause 7 of Specification E2.2a; or

(B) an automatic smoke exhaust system in accordance with Specification E2.2b; or

(C) automatic smoke-and-heat vents in accordance with Specification E2.2c; or

(D) natural smoke venting, with ventilation openings distributed as evenly as practicable and comprising permanent openings at roof level with a free area not less than 1.5% of floor area and low level openings which may be permanent or readily openable with a free area not less than 1.5% of floor area; or

(ii) the building is Class 5 to 9 and is protected throughout with a sprinkler system complying with Specification E1.5 and perimeter vehicular access complying with C2.4(b) is provided; or

(b) the building exceeds 18 000 m² in floor area or 108 000 m³ in volume, is protected throughout with a sprinkler system complying with Specification E1.5, is provided with a perimeter vehicular access complying with C2.4(b) and if—

(i) the ceiling height of the fire compartment is not more than 12 m, it has a smoke exhaust system in accordance with Specification E2.2b or smoke-and-heat vents in accordance with Specification E2.2c; or

(ii) the ceiling height is more than 12 m, it has a smoke exhaust system in accordance with Specification E2.2b; or

(c) there is more than one building on the allotment and—

(i) each building complies with (a) or (b); or

(ii) if the buildings are closer than 6 m to each other they are regarded as one building and collectively comply with (a) or (b).
C2.4 Requirements for open spaces and vehicular access

(a) An open space required by C2.3 must—
   (i) be wholly within the allotment except that any road, river, or public place adjoining
       the allotment, but not the farthest 6 m of it may be included; and
   (ii) include vehicular access in accordance with (b); and
   (iii) not be used for the storage or processing of materials; and
   (iv) not be built upon, except for guard houses and service structures (such as
       electricity substations and pump houses) which may encroach upon the width of
       the space if they do not unduly impede fire-fighting at any part of the perimeter of
       the allotment or unduly add to the risk of spread of fire to any building on an
       adjoining allotment.

(b) Vehicular access required by this Part—
   (i) must be capable of providing emergency vehicle access and passage from a public
       road; and
   (ii) must have a minimum unobstructed width of 6 m with no part of its furthest
       boundary more than 18 m from the building and in no part of the 6 m width be built
       upon or used for any purpose other than vehicular or pedestrian movement; and
   (iii) must provide reasonable pedestrian access from the vehicular access to the
       building; and
   (iv) must have a load bearing capacity and unobstructed height to permit the operation
       and passage of fire brigade vehicles; and
   (v) where a public road complies with (i), (ii), (iii) and (iv) may serve as the vehicular
       access or part thereof.

C2.5 Class 9a and 9c buildings

(a) A Class 9a health care building must comply with the following:
   (i) Patient care areas must be divided into fire compartments not exceeding 2000 m².
   (ii) Ward areas—
      (A) where the floor area exceeds 1000 m², must be divided into floor areas not
          more than 1000 m² by walls with an FRL of not less than 60/60/60; and
      (B) where the floor area exceeds 500 m², must be divided into areas not more
          than 500 m² by smoke proof walls complying with Specification C2.5; and
      (C) where division of ward areas by fire-resisting walls under (i) or (ii)(A) is not
          required, any smoke proof wall required under (ii)(B) must have an FRL of not
          less than 60/60/60.
   (iii) Treatment areas must be divided into floor areas not more than 1000 m² by
         smoke-proof walls complying with Specification C2.5.
   (iv) A fire compartment must be separated from the remainder of the building by fire
         walls and—
         (A) in Type A construction—floors and roof or ceiling as required in Specification
             C1.1; and
(B) in Type B construction—floors with an FRL of not less than 120/120/120 and with the openings in external walls bounding patient care areas being vertically separated in accordance with the requirements of C2.6 as if the building were of Type A construction.

(v) The following ancillary use areas located within a patient care area must be separated from the remainder of the patient care area by walls with an FRL of not less than 60/60/60:

(A) A kitchen and related food preparation areas having a combined floor area of more than 30 m².
(B) A room containing a hyperbaric facility (pressure chamber).
(C) A room used predominantly for the storage of medical records having a floor area of more than 10 m².
(D) A laundry, where items of equipment are of the type that are potential fire sources (e.g. gas fire dryers).

(vi) A wall required by (v) to separate ancillary use areas from the remainder of the building must extend to the underside of—

(A) the floor above; or
(B) a non-combustible roof covering; or
(C) a ceiling having a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes.

(vii) Openings in walls required by (ii) and (v) to have an FRL must be protected as follows:

(A) Doorways—self-closing or automatic closing –/60/30 fire doors.
(B) Windows—automatic or permanently fixed closed –/60/— fire windows or –/60/— automatic fire shutters.
(C) Other openings—construction having an FRL not less than –/60/—.

NSW C2.5(b)

(b) A Class 9c aged care building must comply with the following:

(i) A building must be divided into areas not more than 500 m² by smoke proof walls complying with Specification C2.5.

(ii) A fire compartment must be separated from the remainder of the building by fire walls and, notwithstanding Specification C1.1, floors with an FRL of not less than 60/60/60.

(iii) Internal walls (other than those bounding lift and stair shafts) supported by floors provided in accordance with C2.5(b)(ii) need not comply with Specification C1.1 if they have an FRL not less than 60/—/—.

(iv) The following ancillary use areas must be separated from the sole-occupancy units by smoke proof walls complying with Specification C2.5:

(A) A kitchen and related food preparation areas having a combined floor area of more than 30 m².
(B) A laundry, where items of equipment are of the type that are potential fire sources (e.g. gas fire dryers).
(C) Storage rooms greater than 10 m² principally for the storage of administrative records.

(v) Openings in fire walls must be protected as follows:
(A) Doorways—self-closing or automatic closing –/60/30 fire doors.
(B) Windows—automatic or permanently fixed closed –/60/– fire windows or –/60/– automatic fire shutters.
(C) Other openings—construction having an FRL not less than –/60/–.

C2.6 Vertical separation of openings in external walls

(a) If in a building of Type A construction, any part of a window or other opening in an external wall is above another opening in the storey next below and its vertical projection falls no further than 450 mm outside the lower opening (measured horizontally), the openings must be separated by—

(i) a spandrel which—
(A) is not less than 900 mm in height; and
(B) extends not less than 600 mm above the upper surface of the intervening floor; and
(C) is of non-combustible material having an FRL of not less than 60/60/60; or

(ii) part of a curtain wall or panel wall that complies with (i); or

(iii) construction that complies with (i) behind a curtain wall or panel wall and has any gaps packed with a non-combustible material that will withstand thermal expansion and structural movement of the walling without the loss of seal against fire and smoke; or

(iv) a slab or other horizontal construction that—
(A) projects outwards from the external face of the wall not less than 1100 mm; and
(B) extends along the wall not less than 450 mm beyond the openings concerned; and
(C) is non-combustible and has an FRL of not less than 60/60/60.

(b) The requirements of (a) do not apply to—

(i) an open-deck carpark; or
(ii) an open spectator stand; or
(iii) a building which has a sprinkler system complying with Specification E1.5 installed throughout; or
(iv) openings within the same stairway; or
(v) openings in external walls where the floor separating the storeys does not require an FRL with respect to integrity and insulation.

C2.7 Separation by fire walls

(a) Construction—A fire wall must be constructed in accordance with the following:

(i) The fire wall has the relevant FRL prescribed by Specification C1.1 for each of the adjoining parts, and if these are different, the greater FRL, except where Tables 3.9, 4.2 and 5.2 of Specification C1.1 permit a lower FRL on the carpark side.

(ii) Any openings in a fire wall must comply with the Deemed-to-Satisfy Provisions of Part C3.
(iii) Building elements, other than roof battens with dimensions of 75 mm x 50 mm or less or roof sarking, must not pass through or cross the fire wall unless the required fire resisting performance of the fire wall is maintained.

(b) **Separation of buildings**—A part of a building separated from the remainder of the building by a fire wall may be treated as a separate building for the purposes of the Deemed-to-Satisfy Provisions of Sections C, D and E if it is constructed in accordance with (a) and the following:

(i) The fire wall extends through all storeys and spaces in the nature of storeys that are common to that part and any adjoining part of the building.

(ii) The fire wall is carried through to the underside of the roof covering.

(iii) Where the roof of one of the adjoining parts is lower than the roof of the other part, the fire wall extends to the underside of—

(A) the covering of the higher roof, or not less than 6 m above the covering of the lower roof; or

(B) the lower roof if it has an FRL not less than that of the fire wall and no openings closer than 3 m to any wall above the lower roof; or

(C) the lower roof if its covering is non-combustible and the lower part has a sprinkler system complying with Specification E1.5.

(c) **Separation of fire compartments**—A part of a building separated from the remainder of the building by a fire wall may be treated as a separate fire compartment if it is constructed in accordance with (a) and the fire wall extends to the underside of—

(i) a floor having an FRL required for a fire wall; or

(ii) the roof covering.

C2.8 **Separation of classifications in the same storey**

If a building has parts of different classifications located alongside one another in the same storey—

(a) each building element in that storey must have the higher FRL prescribed in Specification C1.1 for that element for the classifications concerned; or

(b) the parts must be separated in that storey by a fire wall having—

(i) the higher FRL prescribed in Table 3 or 4; or

(ii) the FRL prescribed in Table 5,

of Specification C1.1 as applicable, for that element for the Type of construction and the classifications concerned; or

(c) where one part is a carpark complying with Table 3.9, 4.2 or 5.2 of Specification C1.1, the parts may be separated by a fire wall complying with the appropriate Table.

C2.9 **Separation of classifications in different storeys**

If parts of different classification are situated one above the other in adjoining storeys they must be separated as follows:

(a) Type A construction—The floor between the adjoining parts must have an FRL of not less than that prescribed in Specification C1.1 for the classification of the lower storey.

(b) Type B or C construction—If one of the adjoining parts is of Class 2, 3 or 4, the floor separating the part from the storey below must—
(i) be a floor/ceiling system incorporating a ceiling which has a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or
(ii) have an FRL of at least 30/30/30; or
(iii) have a fire-protective covering on the underside of the floor, including beams incorporated in it, if the floor is combustible or of metal.

C2.10 Separation of lift shafts

(a) Any lift connecting more than 2 storeys, or more than 3 storeys if the building is sprinklered, (other than lifts which are wholly within an atrium) must be separated from the remainder of the building by enclosure in a shaft in which—
   (i) in a building required to be of Type A construction—the walls have the relevant FRL prescribed by Specification C1.1; and
   (ii) in a building required to be of Type B construction—the walls—
      (A) if loadbearing, have the relevant FRL prescribed by Table 4 of Specification C1.1; or
      (B) if non-loadbearing, be of non-combustible construction.
(b) Any lift in a patient care area in a Class 9a health-care building or a resident use area in Class 9c aged care building must be separated from the remainder of the building by a shaft having an FRL of not less than—
   (i) in a building of Type A or B construction—120/120/120; or
   (ii) in a building of Type C construction—60/60/60.
(c) An emergency lift must be contained within a fire-resisting shaft having an FRL of not less than 120/120/120.
(d) Openings for lift landing doors and services must be protected in accordance with the Deemed-to-Satisfy Provisions of Part C3.

C2.11 Stairways and lifts in one shaft

A stairway and lift must not be in the same shaft if either the stairway or the lift is required to be in a fire-resisting shaft.

C2.12 Separation of equipment

(a) Equipment other than that described in (b) and (c) must be separated from the remainder of the building with construction complying with (d), if that equipment comprises—
   (i) lift motors and lift control panels, except that the separating construction between the lift shaft and the lift motor room need only be 120/–/–; or
   (ii) emergency generators or central smoke control plant; or
   (iii) boilers; or
   (iv) batteries.
(b) Isolation of equipment need not comply with (a) if the equipment comprises—
   (i) smoke control exhaust fans located in the air stream which are constructed for high temperature operation in accordance with Specification E2.2b; or
(ii) stair pressurising equipment installed in compliance with the relevant provisions of AS/NZS 1668.1; or
(iii) a lift installation without a machine-room; or
(iv) equipment otherwise adequately separated from the remainder of the building.

(c) Separation of on-site fire pumps must comply with the requirements of E1.3.

(d) Separating construction must—
(i) have an FRL as required by Specification C1.1, but not less than 120/120/120; and
(ii) have any doorway in that construction protected with a self-closing fire door having an FRL of not less than –/120/30.

C2.13 Electricity supply system

(a) An electricity substation located within a building must—
(i) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and
(ii) have any doorway in that construction protected with a self-closing fire door having an FRL of not less than –/120/30.

(b) A main switchboard located within the building which sustains emergency equipment operating in the emergency mode must—
(i) be separated from any other part of the building by construction having an FRL of not less than 120/120/120; and
(ii) have any doorway in that construction protected with a self-closing fire door having an FRL of not less than –/120/30.

(c) Electrical conductors located within a building that supply—
(i) a substation located within the building which supplies a main switchboard covered by (b); or
(ii) a main switchboard covered by (b), must—
(iii) have a classification in accordance with AS/NZS 3013 of not less than—
(A) if located in a position that could be subject to damage by motor vehicles—WS53W; or
(B) otherwise—WS52W; or
(iv) be enclosed or otherwise protected by construction having an FRL of not less than 120/120/120.

(d) Where emergency equipment is required in a building, all switchboards in the electrical distribution system, which sustain the electricity supply to the emergency equipment, must provide full segregation by way of enclosed metal partitions designed to prevent the spread of any fault from non-emergency equipment switchgear to the emergency equipment switchgear.

(e) For the purposes of (d), emergency equipment includes the following:
(i) Fire hydrant booster pumps.
(ii) Pumps for automatic sprinkler systems, water spray, chemical fluid suppression systems or the like.
(iii) Pumps for fire hose reels where such pumps and fire hose reels form the sole means of fire protection in the building.

(iv) Air handling systems designed to exhaust and control the spread of fire and smoke.

(v) Emergency lifts.

C2.14 Public corridors in Class 2 and 3 buildings

In a Class 2 or 3 building, a public corridor, if more than 40 m in length, must be divided at intervals of not more than 40 m with smoke-proof walls complying with Clause 2 of Specification C2.5.
C3.0 Deemed-to-Satisfy Provisions

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirements CP1 to CP9 are satisfied by complying with—

(i) C1.1 to C1.12, C2.1 to C2.14 and C3.1 to C3.17; and
(ii) in a building containing an atrium, Part G3; and
(iii) for theatres, stages and public halls, Part H1.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of—

(i) C1.1 to C1.12, C2.1 to C2.14 and C3.1 to C3.17; and
(ii) in a building containing an atrium, Part G3; and
(iii) for theatres, stages and public halls, Part H1,

the relevant Performance Requirements must be determined in accordance with A0.10.

C3.1 Application of Part

(a) The Deemed-to-Satisfy Provisions of this Part do not apply to—

(i) control joints, weep holes and the like in external walls of masonry construction and joints between panels in external walls of pre-cast concrete panel construction if, in all cases they are not larger than necessary for the purpose; and
(ii) non-combustible ventilators for sub-floor or cavity ventilation, if each does not exceed 45 000 mm² in face area and is spaced not less than 2 m from any other ventilator in the same wall; and
(iii) openings in the vertical plane formed between building elements at the construction edge or perimeter of a balcony or verandah, colonnade, terrace, or the like; and
(iv) in a carpark—

(A) service penetrations through; and
(B) openings formed by a vehicle ramp in,

a floor other than a floor that separates a part not used as a carpark.

(b) For the purposes of the Deemed-to-Satisfy Provisions of this Part—

(i) openings in building elements required to be fire-resisting include doorways, windows (including any associated fanlight), infill panels and fixed or openable glazed areas that do not have the required FRL; and
(ii) openings, other than those covered under (a)(iii), between building elements such as columns, beams and the like, in the plane formed at the construction edge or perimeter of the building, are deemed to be openings in an external wall.
C3.2 Protection of openings in external walls

Openings in an *external wall* that is *required* to have an FRL must—

*NSW C3.2(a)*

(a) be not less from a *fire-source feature* to which it is exposed than—

(i) 1 m in a building with a *rise in storeys* of not more than 1; or

(ii) 1.5 m in a building with a *rise in storeys* of more than 1; and

(b) if situated less from a *fire-source feature* to which it is exposed than—

(i) 3 m from a side or rear boundary of the allotment; or

(ii) 6 m from the far boundary of a road adjoining the allotment, if not located in a *storey* at or near ground level; or

(iii) 6 m from another building on the allotment that is not Class 10, be protected in accordance with *C3.4* and if wall-wetting sprinklers are used, they are located externally; and

(c) if *required* to be protected under (b), not occupy more than 1/3 of the area of the *external wall* of the *storey* in which it is located unless they are in a Class 9b building used as an *open spectator stand*.

C3.3 Separation of external walls and associated openings in different fire compartments

The distance between parts of *external walls* and any openings within them in different *fire compartments* separated by a *fire wall* must not be less than that set out in *Table C3.3*, unless—

(a) those parts of each wall have an FRL not less than 60/60/60; and

(b) any openings protected in accordance with *C3.4*.

*Table C3.3 DISTANCE BETWEEN EXTERNAL WALLS AND ASSOCIATED OPENINGS IN DIFFERENT FIRE COMPARTMENTS*

<table>
<thead>
<tr>
<th>Angle between walls</th>
<th>Min. Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>0° (walls opposite)</td>
<td>6 m</td>
</tr>
<tr>
<td>more than 0° to 45°</td>
<td>5 m</td>
</tr>
<tr>
<td>more than 45° to 90°</td>
<td>4 m</td>
</tr>
<tr>
<td>more than 90° to 135°</td>
<td>3 m</td>
</tr>
<tr>
<td>more than 135° to less than 180°</td>
<td>2 m</td>
</tr>
<tr>
<td>180° or more</td>
<td>Nil</td>
</tr>
</tbody>
</table>

C3.4 Acceptable methods of protection

(a) Where protection is *required*, doorways, *windows* and other openings must be protected as follows:
(i) Doorways—internal or external wall-wetting sprinklers as appropriate used with doors that are self-closing or automatic closing, or ~/60/30 fire doors (self-closing or automatic closing).

(ii) Windows—internal or external wall-wetting sprinklers as appropriate used with windows that are automatic or permanently fixed in the closed position, ~/60/– fire windows (automatic or permanently fixed in the closed position) or ~/60/– automatic fire shutters.

(iii) Other openings—internal or external wall-wetting sprinklers as appropriate or construction having an FRL not less than ~/60/–.

(b) Fire doors, fire windows and fire shutters must comply with Specification C3.4.

C3.5 Doorways in fire walls

(a) The aggregate width of openings for doorways in a fire wall, which are not part of a horizontal exit, must not exceed 1/2 of the length of the fire wall, and each doorway must be protected by—

(i) 2 fire doors or fire shutters, one on each side of the doorway, each of which has an FRL of not less than 1/2 that required by Specification C1.1 for the fire wall except that each door or shutter must have an insulation level of at least 30; or

(ii) a fire door on one side and a fire shutter on the other side of the doorway, each of which complies with (i); or

(iii) a single fire door or fire shutter which has an FRL of not less than that required by Specification C1.1 for the fire wall except that each door or shutter must have an insulation level of at least 30.

(b) A fire door or fire shutter required by (a)(i), (a)(ii) or (a)(iii) must be self-closing, or automatic closing in accordance with (ii) and (iii).

(ii) The automatic closing operation must be initiated by the activation of a smoke detector, or a heat detector if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and located on each side of the fire wall not more than 1.5 m horizontal distance from the opening.

(iii) Where any other required suitable fire alarm system, including a sprinkler system complying with Specification E1.5, is installed in the building, activation of the system in either fire compartment separated by the fire wall must also initiate the automatic closing operation.

C3.6 Sliding fire doors

(a) If a doorway in a fire wall is fitted with a sliding fire door which is open when the building is in use—

(i) it must be held open with an electromagnetic device, which when de-activated in accordance with (b), allows the door to be fully closed not less than 20 seconds, and not more than 30 seconds, after release; and

(ii) in the event of power failure to the door—the door must fail safe in the closed position in accordance with (i); and

(iii) an audible warning device must be located near the doorway and a red flashing warning light of adequate intensity on each side of the doorway must be activated in accordance with (b); and
(iv) signs must be installed on each side of the doorway located directly over the opening stating—

**WARNING—SLIDING FIRE DOOR**

in capital letters not less than 50 mm high in a colour contrasting with the background.

(b) The electromagnetic device must be de-activated and the warning system activated by heat or smoke detectors, as appropriate, installed in accordance with AS/NZS 1905.1 and the relevant provisions of AS 1670.1.

(ii) Where any other required suitable fire alarm system, including a sprinkler system complying with Specification E1.5, is installed in the building, activation in either fire compartment separated by the fire wall must also de-activate the electromagnetic device and activate the warning system.

### C3.7 Protection of doorways in horizontal exits

(a) A doorway that is part of a horizontal exit must be protected by either—

(i) a single fire door that has an FRL of not less than that required by Specification C1.1 for the fire wall except that the door must have an insulation level of at least 30; or

(ii) in a Class 7 or 8 building—2 fire doors, one on each side of the doorway, each with an FRL of not less than 1/2 that required by Specification C1.1 for the fire wall except that each door must have an insulation level of at least 30.

(b) Each door required by (a) must be self-closing, or automatic-closing in accordance with (ii) and (iii).

(ii) The automatic-closing operation must be initiated by the activation of a smoke detector, or a heat detector if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and located on each side of the fire wall not more than 1.5 m horizontal distance from the opening.

(iii) Where any other required suitable fire alarm system, including a sprinkler system complying with Specification E1.5, is installed in the building, activation of the system in either fire compartment separated by the fire wall must also initiate the automatic-closing operation.

### C3.8 Openings in fire-isolated exits

(a) Doorways that open to fire-isolated stairways, fire-isolated passageways or fire-isolated ramps, and are not doorways opening to a road or open space, must be protected by —/60/30 fire doors that are self-closing, or automatic-closing in accordance with (ii) and (iii).

(ii) The automatic-closing operation must be initiated by the activation of a smoke detector, or a heat detector if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and located not more than 1.5 m horizontal distance from the approach side of the opening.
(iii) Where any other required suitable fire alarm system, including a sprinkler system complying with Specification E1.5, is installed in the building, activation of the system must also initiate the automatic-closing operation.

(b) A window in an external wall of a fire-isolated stairway, fire-isolated passageway or fire-isolated ramp must be protected in accordance with C3.4 if it is within 6 m of, and exposed to, a window or other opening in a wall of the same building, other than in the same fire-isolated enclosure.

C3.9 Service penetrations in fire-isolated exits

Fire-isolated exits must not be penetrated by any services other than—

(a) electrical wiring permitted by D2.7(e) to be installed within the exit; or

(b) ducting associated with a pressurisation system if it—
   (i) is constructed of material having an FRL of not less than –/120/60 where it passes through any other part of the building; and
   (ii) does not open into any other part of the building; or

(c) water supply pipes for fire services.

C3.10 Openings in fire-isolated lift shafts

(a) Doorways—If a lift shaft is required to be fire-isolated, an entrance doorway to that shaft must be protected by –/60/– fire doors that—
   (i) comply with AS 1735.11; and
   (ii) are set to remain closed except when discharging or receiving passengers, goods or vehicles.

(b) Lift indicator panels—A lift call panel, indicator panel or other panel in the wall of a fire-isolated lift shaft must be backed by construction having an FRL of not less than –/60/60 if it exceeds 35 000 mm² in area.

C3.11 Bounding construction: Class 2, 3 and 4 buildings

(a) A doorway in a Class 2 or 3 building must be protected if it provides access from a sole-occupancy unit to—
   (i) a public corridor, public lobby, or the like; or
   (ii) a room not within a sole-occupancy unit; or
   (iii) the landing of an internal non fire-isolated stairway that serves as a required exit; or
   (iv) another sole-occupancy unit.

(b) A doorway in a Class 2 or 3 building must be protected if it provides access from a room not within a sole-occupancy unit to—
   (i) a public corridor, public lobby, or the like; or
   (ii) the landing of an internal non fire-isolated stairway that serves as a required exit.

(c) A doorway in a Class 4 part must be protected if it provides access to any other internal part of the building.

NSW C3.11(d)

(d) Protection for a doorway must be at least—
(i) in a building of Type A construction—a self-closing -/60/30 fire door; and
(ii) in a building of Type B or C construction—a self-closing, tight fitting, solid core door, not less than 35 mm thick,

except—
(iii) in a Class 3 building used as a residential aged care building protected with a sprinkler system complying with Specification E1.5—

(A) a tight fitting, solid core door not less than 35 mm thick if the building is divided into floor areas not exceeding 500 m² with smoke proof walls complying with Clause 2 of Specification C2.5; or
(B) a tight fitting, solid core door not less than 35 mm thick fitted with a self-closing device, a delayed closing device or an automatic closing device.

(e) Other openings in internal walls which are required to have an FRL with respect to integrity and insulation must not reduce the fire-resisting performance of the wall.

(f) A door required by (d) may be automatic-closing in accordance with (ii) and (iii).

(ii) The automatic-closing operation must be initiated by the activation of a smoke detector, or a heat detector if smoke detectors are unsuitable in the atmosphere, installed in accordance with the relevant provisions of AS 1670.1 and located not more than 1.5 m horizontal distance from the approach side of the opening.

(iii) Where any other required suitable fire alarm system, including a sprinkler system complying with Specification E1.5, is installed in the building, activation of the system must also initiate the automatic-closing operation.

(g) In a Class 2 or 3 building where a path of travel to an exit does not provide a person seeking egress with a choice of travel in different directions to alternative exits and is along an open balcony, landing or the like and passes an external wall of—

(i) another sole-occupancy unit; or
(ii) a room not within a sole-occupancy unit,

then that external wall must—

(iii) be constructed of concrete or masonry, or be lined internally with a fire-protective covering; and
(iv) have any doorway fitted with a self-closing, tight-fitting solid core door not less than 35 mm thick; and
(v) have any windows or other openings—

(A) protected internally in accordance with C3.4; or
(B) located at least 1.5 m above the floor of the balcony, landing or the like.

NSW C3.11(h)

C3.12 Openings in floors and ceilings for services

(a) Where a service passes through—

(i) a floor that is required to have an FRL with respect to integrity and insulation; or
(ii) a ceiling required to have a resistance to the incipient spread of fire,

the service must be installed in accordance with (b).
(b) A service must be protected—
   (i) in a building of Type A construction, by a *shaft* complying with Specification C1.1; or
   (ii) in a building of Type B or C construction, by a *shaft* that will not reduce the fire
        performance of the building elements it penetrates; or
   (iii) in accordance with C3.15.

(c) Where a service passes through a floor which is *required* to be protected by a
    fire-protective covering, the penetration must not reduce the fire performance of the covering.

C3.13 Openings in shafts

In a building of Type A construction, an opening in a wall providing access to a ventilating, pipe, 
garbage or other service *shaft* must be protected by—

(a) if it is in a *sanitary compartment*—a door or panel which, together with its frame, is
    *non-combustible* or has an FRL of not less than –/30/30; or
(b) a *self-closing* –/60/30 fire door or hopper; or
(c) an access panel having an FRL of not less than –/60/30; or
(d) if the *shaft* is a garbage *shaft*—a door or hopper of *non-combustible* construction.

C3.14 ** * * * * *

This clause has deliberately been left blank.

C3.15 Openings for service installations

Where an electrical, electronic, plumbing, mechanical ventilation, air-conditioning or other
service penetrates a building element (other than an *external wall* or roof) that is *required* to
have an FRL with respect to *integrity* or *insulation* or a *resistance to the incipient spread of fire*,
that installation must comply with one of the following:

(a) The method and materials used are identical with a prototype assembly of the service
    and building element which has been tested in accordance with AS 4072.1 and AS
    1530.4 and has achieved the *required* FRL or *resistance to the incipient spread of fire*.

(b) It complies with (a) except for the *insulation* criteria relating to the service if—
   (i) the service is protected so that *combustible* material cannot be located within 100
       mm of it; and
   (ii) it is not located in a *required exit*.

(c) In the case of ventilating or air-conditioning ducts or equipment, the installation is in
    accordance with AS/NZS 1668.1.

(d) The service is a pipe system comprised entirely of metal (excluding pipe seals or the like)
    and is installed in accordance with *Specification C3.15* and it—
   (i) penetrates a wall, floor or ceiling, but not a ceiling *required* to have a *resistance to
       the incipient spread of fire*; and
   (ii) connects not more than 2 *fire compartments* in addition to any *fire-resisting* service
       *shafts*; and
(iii) does not contain a flammable or combustible liquid or gas.

(e) The service is sanitary plumbing installed in accordance with Specification C3.15 and it—

(i) is of metal or UPVC pipe; and
(ii) penetrates the floors of a Class 5, 6, 7, 8 or 9b building; and
(iii) is in a sanitary compartment separated from other parts of the building by walls with the FRL required by Specification C1.1 for a stair shaft in the building and a self-closing —/60/30 fire door.

(f) The service is a wire or cable, or a cluster of wires or cables installed in accordance with Specification C3.15 and it—

(i) penetrates a wall, floor or ceiling, but not a ceiling required to have a resistance to the incipient spread of fire; and
(ii) connects not more than 2 fire compartments in addition to any fire-resisting service shafts.

(g) The service is an electrical switch, outlet, or the like, and it is installed in accordance with Specification C3.15.

C3.16 Construction joints

Construction joints, spaces and the like in and between building elements required to be fire-resisting with respect to integrity and insulation must be protected in a manner identical with a prototype tested in accordance with AS 1530.4 to achieve the required FRL.

C3.17 Columns protected with lightweight construction to achieve an FRL

A column protected by lightweight construction to achieve an FRL which passes through a building element that is required to have an FRL or a resistance to the incipient spread of fire, must be installed using a method and materials identical with a prototype assembly of the construction which has achieved the required FRL or resistance to the incipient spread of fire.
1. **SCOPE**

This Specification contains requirements for the fire-resisting construction of building elements.

2. **GENERAL REQUIREMENTS**

2.1 **Exposure to fire-source features**

(a) A part of a building element is exposed to a fire-source feature if any of the horizontal straight lines between that part and the fire-source feature, or vertical projection of the feature, is not obstructed by another part of the building that—

(i) has an FRL of not less than 30/--/--; and

(ii) is neither transparent nor translucent.

(b) A part of a building element is not exposed to a fire-source feature if the fire-source feature is—

(i) an external wall of another building that stands on the allotment and the part concerned is more than 15 m above the highest part of that external wall; or

(ii) a side or rear boundary of the allotment and the part concerned is below the level of the finished ground at every relevant part of the boundary concerned.

(c) If various distances apply for different parts of a building element—

(i) the entire element must have the FRL applicable to that part having the least distance between itself and the relevant fire-source feature; or

(ii) each part of the element must have the FRL applicable according to its individual distance from the relevant fire-source feature, but this provision does not override or permit any exemption from Clause 2.2.

2.2 **Fire protection for a support of another part**

(a) Where a part of a building required to have an FRL depends upon direct vertical or lateral support from another part to maintain its FRL, that supporting part, subject to (b), must—

(i) have an FRL not less than that required by other provisions of this Specification; and

(ii) if located within the same fire compartment as the part it supports have an FRL in respect of structural adequacy the greater of that required—

(A) for the supporting part itself; and

(B) for the part it supports; and

(iii) be non-combustible—

(A) if required by other provisions of this Specification; or

(B) if the part it supports is required to be non-combustible.

(b) The following building elements need not comply with (a)(ii) and (a)(iii)(B):
(i) An element providing lateral support to an *external wall* complying with Clause 5.1(b) or C1.11.

(ii) An element providing support within a *carpark* and complying with Clause 3.9, 4.2 or 5.2.

(iii) A roof providing lateral support in a building—
(A) of Type A construction if it complies with Clause 3.5(a), (b) or (d); and
(B) of Type B and C construction.

(iv) A column providing lateral support to a wall where the column complies with Clause 2.5(a) and (b).

(v) An element providing lateral support to a *fire wall* or *fire-resisting wall*, provided the wall is supported on both sides and failure of the element on one side does not affect the fire performance of the wall.

2.3 Lintels

A lintel must have the FRL *required* for the part of the building in which it is situated, unless it does not contribute to the support of a fire door, fire *window* or fire shutter, and—

(a) it spans an opening in—
   (i) a wall of a building containing only one *storey*; or
   (ii) a non-*loadbearing* wall of a Class 2 or 3 building; or

(b) it spans an opening in masonry which is not more than 150 mm thick and—
   (i) not more than 3 m wide if the masonry is non-*loadbearing*; or
   (ii) not more than 1.8 m wide if the masonry is *loadbearing* and part of a solid wall or one of the leaves of a cavity wall.

2.4 Attachments not to impair fire-resistance

(a) A *combustible* material may be used as a finish or lining to a wall or roof, or in a sign, sunscreen or blind, awning, or other attachment to a building element which has the *required* FRL if—
   (i) the material is exempted under C1.10 or complies with the *fire hazard properties* prescribed in—
      (A) Clause 2 of Specification C1.10; or
      (B) Clause 2 and 3 of Specification C1.10a; and
   (ii) it is not located near or directly above a *required exit* so as to make the *exit* unusable in a fire; and
   (iii) it does not otherwise constitute an undue risk of fire spread via the facade of the building.

(b) The attachment of a facing or finish, or the installation of ducting or any other service, to a part of a building *required* to have an FRL must not impair the *required* FRL of that part.

2.5 General concessions

(a) *Steel columns*—A steel column, other than one in a *fire wall* or *common wall*, need not have an FRL in a building that contains—
   (i) only 1 *storey*; or
(ii) 2 storeys in some of its parts and 1 storey only in its remaining parts if the sum of the floor areas of the upper storeys of its 2 storey parts does not exceed the lesser of—

(A) 1/8 of the sum of the floor areas of the 1 storey parts; or

(B) in the case of a building to which one of the maximum floor areas specified in Table C2.2 is applicable—1/10 of that area; or

(C) in the case of a building to which two or more of the maximum floor areas specified in Table C2.2 is applicable—1/10 of the lesser or those areas.

(b) Timber columns—A timber column may be used in a single storey building if—

(i) in a fire wall or common wall the column has an FRL not less than that listed in the appropriate Table 3, 4 or 5; and

(ii) in any other case where the column is required to have an FRL in accordance with Table 3, 4 or 5, it has an FRL of not less than 30/–/–.

(c) Structures on roofs—A non-combustible structure situated on a roof need not comply with the other provisions of this Specification if it only contains—

(i) lift motor equipment; or

(ii) one or more of the following:

(A) Hot water or other water tanks.

(B) Ventilating ductwork, ventilating fans and their motors.

(C) Air-conditioning chillers.

(D) Window cleaning equipment.

(E) Other service units that are non-combustible and do not contain combustible liquids or gases.

(d) Curtain walls and panel walls—A requirement for an external wall to have an FRL does not apply to a curtain wall or panel wall which is of non-combustible construction and fully protected by automatic external wall-wetting sprinklers.

(e) * * * * *

This clause has deliberately been left blank.

(f) Balconies and verandahs—A balcony, verandah or the like and any incorporated supporting part, which is attached to or forms part of a building, need not comply with Tables 3, 4 and 5 if—

(i) it does not form part of the only path of travel to a required exit from the building; and

(ii) in Type A construction—

(A) it is situated not more than 2 storeys above the lowest storey providing direct egress to a road or open space; and

(B) any supporting columns are of non-combustible construction.

2.6 Mezzanine floors: Concession

(a) This Clause does not apply to a Class 9b building that is a spectator stand or audience viewing area accommodating more than 100 persons as calculated according to D1.13.
(b) A mezzanine and its supports need not have an FRL or be non-combustible provided—

(i) the total floor area of all the mezzanines in the same room does not exceed 1/3 of the floor area of the room or 200 m², whichever is the lesser; and

(ii) the FRL of each wall and column that supports any other part of the building within 6 m of the mezzanine is increased by the amount listed in Table 2.6.

### Table 2.6 INCREASED FRLs—CONSTRUCTION SURROUNDING MEZZANINES

<table>
<thead>
<tr>
<th>Level otherwise required for any FRL criterion (mins)</th>
<th>Increase in level to (not less than):</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>60</td>
<td>90</td>
</tr>
<tr>
<td>90</td>
<td>120</td>
</tr>
<tr>
<td>120</td>
<td>180</td>
</tr>
<tr>
<td>180</td>
<td>240</td>
</tr>
</tbody>
</table>

The increase in level applies to each FRL criterion (structural adequacy, integrity or insulation) relevant to the building element concerned.

2.7 Enclosure of shafts

Shafts required to have an FRL must be enclosed at the top and bottom by construction having an FRL not less than that required for the walls of a non-loadbearing shaft in the same building, except that these provisions need not apply to—

(a) the top of a shaft extending beyond the roof covering, other than one enclosing a fire-isolated stairway or ramp; or

(b) the bottom of a shaft if it is non-combustible and laid directly on the ground.

2.8 Carparks in Class 2 and 3 buildings

(a) If a Class 2 building contains not more than 4 storeys of which—

(i) one storey is Class 7 used solely for the purpose of parking motor vehicles or for some other purpose that is ancillary to a Class 2; and

(ii) the remaining storeys are of Class 2,

the carpark storey is regarded as Class 2 only for the purpose of determining the relevant fire-resisting requirements of this Specification.

(b) If a Class 3 building or a building of Class 2 and 3 contains not more than 3 storeys of which—

(i) one storey is Class 7 used solely for the purpose of parking motor vehicles or for some other purpose that is ancillary to the other storeys; and

(ii) the remaining storeys are of Class 2 or 3,

the carpark storey is regarded as Class 2 or 3 only for the purpose of determining the relevant fire-resisting requirements of this Specification.

2.9 Residential aged care building: Concession

In a Class 3 building protected with a sprinkler system complying with Specification E1.5 and used as a residential aged care building, any FRL criterion prescribed in Tables 3, 4 or 5—
(a) for any floor and any loadbearing wall, may be reduced to 60, except any FRL criterion of 90 for an external wall must be maintained when tested from the outside; and

(b) for any non-loadbearing internal wall, need not apply if—
   (i) it is lined on each side with standard grade plasterboard not less than 13 mm thick or similar non-combustible material; and
   (ii) it extends—
      (A) to the underside of the floor next above; or
      (B) to the underside of a ceiling lined with standard grade plasterboard not less than 13 mm thick or a material with at least an equivalent level of fire protection; or
      (C) to the underside of a non-combustible roof covering; and
   (iii) any insulation installed in the cavity of the wall is non-combustible; and
   (iv) any construction joint, space or the like between the top of the wall and the floor, ceiling or roof is smoke sealed with intumescent putty or other suitable material.

3. TYPE A FIRE-RESISTING CONSTRUCTION

3.1 Fire-resistance of building elements

In a building required to be of Type A construction—

(a) each building element listed in Table 3 and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned; and

(b) external walls, common walls and the flooring and floor framing of lift pits must be non-combustible; and

(c) any internal wall required to have an FRL with respect to integrity and insulation must extend to—
   (i) the underside of the floor next above; or
   (ii) the underside of a roof complying with Table 3; or
   (iii) if under Clause 3.5 the roof is not required to comply with Table 3, the underside of the non-combustible roof covering and, except for roof battens with dimensions of 75 mm x 50 mm or less or roof sarking, must not be crossed by timber or other combustible building elements; or
   (iv) a ceiling that is immediately below the roof and has a resistance to the incipient spread of fire to the roof space between the ceiling and the roof of not less than 60 minutes; and

(d) a loadbearing internal wall and a loadbearing fire wall (including those that are part of a loadbearing shaft) must be of concrete or masonry; and

(e) a non-loadbearing—
   (i) internal wall required to be fire-resisting; and
   (ii) lift, ventilating, pipe, garbage, or similar shaft that is not for the discharge of hot products of combustion,

must be of non-combustible construction; and
(f) the FRLs specified in Table 3 for an external column apply also to those parts of an internal column that face and are within 1.5 m of a window and are exposed through that window to a fire-source feature.

Table 3 TYPE A CONSTRUCTION: FRL OF BUILDING ELEMENTS

<table>
<thead>
<tr>
<th>Building element</th>
<th>Class of building—FRL: (in minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Structural adequacy/Integrity/Insulation</td>
</tr>
<tr>
<td></td>
<td>2, 3 or 4 part 5, 7a or 9 6 7b or 8</td>
</tr>
</tbody>
</table>

**EXTERNAL WALL** (including any column and other building element incorporated therein) or other external building element, where the distance from any fire-source feature to which it is exposed is—

For **loadbearing** parts—

<table>
<thead>
<tr>
<th>Distance</th>
<th>Structural adequacy</th>
<th>Integrity</th>
<th>Insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 1.5m</td>
<td>90/90/90</td>
<td>120/120/120</td>
<td>180/180/180</td>
</tr>
<tr>
<td>1.5 to less than 3 m</td>
<td>90/60/60</td>
<td>120/90/90</td>
<td>180/180/120</td>
</tr>
<tr>
<td>3 or more</td>
<td>90/60/60</td>
<td>120/60/30</td>
<td>180/120/90</td>
</tr>
</tbody>
</table>

For **non-loadbearing** parts—

<table>
<thead>
<tr>
<th>Distance</th>
<th>Structural adequacy</th>
<th>Integrity</th>
<th>Insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 1.5m</td>
<td>- /90/90</td>
<td>- /120/120</td>
<td>- /180/180</td>
</tr>
<tr>
<td>1.5 to less than 3 m</td>
<td>- /60/60</td>
<td>- /90/90</td>
<td>- /180/120</td>
</tr>
<tr>
<td>3 m or more</td>
<td>- / - / -</td>
<td>- / - / -</td>
<td>- / - / -</td>
</tr>
</tbody>
</table>

**EXTERNAL COLUMN** not incorporated in an external wall, where the distance from any fire-source feature to which it is exposed is—

<table>
<thead>
<tr>
<th>Distance</th>
<th>Structural adequacy</th>
<th>Integrity</th>
<th>Insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 3 m</td>
<td>90/-/-</td>
<td>120/-/-</td>
<td>180/-/-</td>
</tr>
<tr>
<td>3 m or more</td>
<td>-/-/-</td>
<td>-/-/-</td>
<td>-/-/-</td>
</tr>
</tbody>
</table>

**COMMON WALLS and FIRE WALLS—**

<table>
<thead>
<tr>
<th>Structural adequacy</th>
<th>Integrity</th>
<th>Insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>90/90/90</td>
<td>120/120/120</td>
<td>180/180/180</td>
</tr>
</tbody>
</table>

**INTERNAL WALLS—**

**Fire-resisting lift and stair shafts—**

<table>
<thead>
<tr>
<th>Loadbearing</th>
<th>Structural adequacy</th>
<th>Integrity</th>
<th>Insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>90/90/90</td>
<td>120/120/120</td>
<td>180/120/120</td>
<td>240/120/120</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-loadbearing</th>
<th>Structural adequacy</th>
<th>Integrity</th>
<th>Insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>- /90/90</td>
<td>- /120/120</td>
<td>- /120/120</td>
<td>- /120/120</td>
</tr>
</tbody>
</table>

Bounding public corridors, public lobbies and the like—

<table>
<thead>
<tr>
<th>Loadbearing</th>
<th>Structural adequacy</th>
<th>Integrity</th>
<th>Insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>90/90/90</td>
<td>120/-/-</td>
<td>180/-/-</td>
<td>240/-/-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-loadbearing</th>
<th>Structural adequacy</th>
<th>Integrity</th>
<th>Insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>- /60/60</td>
<td>-/-/-</td>
<td>-/-/-</td>
<td>-/-/-</td>
</tr>
</tbody>
</table>

Between or bounding sole-occupancy units—

<table>
<thead>
<tr>
<th>Loadbearing</th>
<th>Structural adequacy</th>
<th>Integrity</th>
<th>Insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>90/90/90</td>
<td>120/-/-</td>
<td>180/-/-</td>
<td>240/-/-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-loadbearing</th>
<th>Structural adequacy</th>
<th>Integrity</th>
<th>Insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>- /60/60</td>
<td>-/-/-</td>
<td>-/-/-</td>
<td>-/-/-</td>
</tr>
</tbody>
</table>

Ventilating, pipe, garbage, and like shafts not used for the discharge of hot products of combustion—

<table>
<thead>
<tr>
<th>Loadbearing</th>
<th>Structural adequacy</th>
<th>Integrity</th>
<th>Insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>90/90/90</td>
<td>120/90/90</td>
<td>180/120/120</td>
<td>240/120/120</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-loadbearing</th>
<th>Structural adequacy</th>
<th>Integrity</th>
<th>Insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>- /90/90</td>
<td>- /90/90</td>
<td>- /120/120</td>
<td>- /120/120</td>
</tr>
</tbody>
</table>
FIRE RESISTANCE

3.2 Concessions for floors

A floor need not comply with Table 3 if—

(a) it is laid directly on the ground; or

(b) in a Class 2, 3, 5 or 9 building, the space below is not a storey, does not accommodate motor vehicles, is not a storage or work area, and is not used for any other ancillary purpose; or

(c) it is a timber stage floor in a Class 9b building laid over a floor having the required FRL and the space below the stage is not used as a dressing room, store room, or the like; or

(d) it is within a sole-occupancy unit in a Class 2 or 3 building or Class 4 part; or

(e) it is an open-access floor (for the accommodation of electrical and electronic services and the like) above a floor with the required FRL.

3.3 Floor loading of Class 5 and 9b buildings: Concession

If a floor in a Class 5 or 9b building is designed for a live load not exceeding 3 kPa—

(a) the floor next above (including floor beams) may have an FRL of 90/90/90; or

(b) the roof, if that is next above (including roof beams) may have an FRL of 90/60/30.

3.4 Roof superimposed on concrete slab: Concession

A roof superimposed on a concrete slab roof need not comply with Clause 3.1 as to fire-resisting construction if—

(a) the superimposed roof and any construction between it and the concrete slab roof are non-combustible throughout; and

(b) the concrete slab roof complies with Table 3.

3.5 Roof: Concession

A roof need not comply with Table 3 if its covering is non-combustible and the building—

(a) has a sprinkler system complying with Specification E1.5 installed throughout; or

(b) has a rise in storeys of 3 or less; or

(c) is of Class 2 or 3; or

(d) has an effective height of not more than 25 m and the ceiling immediately below the roof has a resistance to the incipient spread of fire to the roof space of not less than 60 minutes.

3.6 Roof lights

If a roof is required to have an FRL or its covering is required to be non-combustible, roof lights or the like installed in that roof must—
(a) have an aggregate area of not more than 20% of the roof surface; and
(b) be not less than 3 m from—
   (i) any boundary of the allotment other than the boundary with a road or public place; and
   (ii) any part of the building which projects above the roof unless that part has the FRL required of a fire wall and any openings in that part of the wall for 6 m vertically above the roof light or the like are protected in accordance with C3.4; and
   (iii) any roof light or the like in an adjoining sole-occupancy unit if the walls bounding the unit are required to have an FRL; and
   (iv) any roof light or the like in an adjoining fire-separated section of the building; and
(c) if a ceiling with a resistance to the incipient spread of fire is required, be installed in a way that will maintain the level of protection provided by the ceiling to the roof space.

3.7 Internal columns and walls: Concession

For a building with an effective height of not more than 25 m and having a roof without an FRL in accordance with Clause 3.5, in the storey immediately below that roof, internal columns other than those referred to in Clause 3.1(f) and internal walls other than fire walls and shaft walls may have—

(a) in a Class 2 or 3 building: FRL 60/60/60; or
(b) in a Class 5, 6, 7, 8 or 9 building—
   (i) with rise in storeys exceeding 3: FRL 60/60/60
   (ii) with rise in storeys not exceeding 3: no FRL.

3.8 Open spectator stands and indoor sports stadiums: Concession

In an open spectator stand or indoor sports stadium, the following building elements need not have the FRL specified in Table 3:

(a) The roof if it is non-combustible.
(b) Columns and loadbearing walls supporting only the roof if they are non-combustible.
(c) Any non-loadbearing part of an external wall less than 3 m—
   (i) from any fire-source feature to which it is exposed if it has an FRL of not less than –/60/60 and is non-combustible; or
   (ii) from an external wall of another open spectator stand if it is non-combustible.

3.9 Carparks

(a) Notwithstanding Clause 3.1, a carpark may comply with Table 3.9 if it is an open-deck carpark or is protected with a sprinkler system complying with Specification E1.5 and is—
   (i) a separate building; or
   (ii) a part of a building—
      (A) which only occupies part of a storey, and is separated from the remaining part by a fire wall; or
(B) which is located above or below another classification, and the floor separating the classifications complies with C2.9; or

(C) which is located above another Class 7 part of the building not used for carparking, and the floor separating the parts complies with Table 3 for a Class 7 part other than a carpark; or

(D) which is located below another Class 7 part of the building not used for carparking, and the floor separating the parts complies with Table 3.9.

(b) For the purposes of this clause, a carpark—

(i) includes—

(A) an administration area associated with the functioning of the carpark; and

(B) where the carpark is sprinklered, is associated with a Class 2 or 3 building and provides carparking for separate sole-occupancy units, each carparking area with an area not greater than 10% of its floor area for purposes ancillary to the sole-occupancy units; but

(ii) excludes—

(A) except for (b)(i), any area of another classification, or other part of a Class 7 building not used for carparking; and

(B) a building or part of a building specifically intended for the parking of trucks, buses, vans and the like.

Table 3.9 REQUIREMENTS FOR CARPARKS

<table>
<thead>
<tr>
<th>Building element</th>
<th>FRL (not less than) Structural adequacy/Integrity/Insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ESA/M (not greater than)</td>
</tr>
<tr>
<td>Wall</td>
<td></td>
</tr>
<tr>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>(i)</td>
<td></td>
</tr>
<tr>
<td>less than 3 m from a fire-source feature to which it is exposed:</td>
<td></td>
</tr>
<tr>
<td>Loadbearing</td>
<td>60/60/60</td>
</tr>
<tr>
<td>Non-loadbearing</td>
<td>-/60/60</td>
</tr>
<tr>
<td>(ii)</td>
<td></td>
</tr>
<tr>
<td>3 m or more from a fire-source feature to which it is exposed</td>
<td>- / - / -</td>
</tr>
<tr>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>(i)</td>
<td></td>
</tr>
<tr>
<td>loadbearing, other than one supporting only the roof (not used for carparking)</td>
<td>60/ -/ -</td>
</tr>
<tr>
<td>(ii)</td>
<td>supporting only the roof (not used for carparking)</td>
</tr>
<tr>
<td>(iii)</td>
<td>non-loadbearing</td>
</tr>
</tbody>
</table>
### Building element

<table>
<thead>
<tr>
<th>Building element</th>
<th>FRL (not less than) Structural adequacy/Integrity/Insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(c)</strong> fire wall</td>
<td></td>
</tr>
<tr>
<td>(i) from the direction used as a carpark</td>
<td>60/60/60</td>
</tr>
<tr>
<td>(ii) from the direction not used as a carpark</td>
<td>as required by Table 3</td>
</tr>
</tbody>
</table>

### Column

<table>
<thead>
<tr>
<th>Column</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) supporting only the roof (not used for carparking) and 3 m or more from a fire-source feature to which it is exposed</td>
<td>- / - / -</td>
</tr>
<tr>
<td>(b) steel column, other than one covered by (a) and one that does not support a part of a building that is not used as a carpark</td>
<td>60/ - / - or 26 m²/tonne</td>
</tr>
<tr>
<td>(c) any other column not covered by (a) or (b)</td>
<td>60/ - / -</td>
</tr>
</tbody>
</table>

### Beam

<table>
<thead>
<tr>
<th>Beam</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) steel floor beam in continuous contact with a concrete floor slab</td>
<td>60/ - / - or 30 m²/tonne</td>
</tr>
<tr>
<td>(b) any other beam</td>
<td>60/ - / -</td>
</tr>
</tbody>
</table>

### Fire-resisting lift and stair shaft (within the carpark only)

| Fire-resisting lift and stair shaft | 60/60/60 |

### Floor slab and vehicle ramp

| Floor slab and vehicle ramp | 60/60/60 |

### Roof (not used for carparking)

| Roof (not used for carparking) | - / - / - |

### Notes:

1. ESA/M means the ratio of exposed surface area to mass per unit length.

2. Refer to Specification E1.5 for special requirements for a sprinkler system in a carpark complying with Table 3.9 and located within a multi-classified building.

### 3.10 Class 2 buildings: Concession

(a) A Class 2 building having a rise in storeys of not more than 3 need not comply with Clauses 3.1(b), (d) and (e) of Specification C1.1 and the requirement of C2.6 for non-combustible material, if it is constructed using—

(i) timber framing throughout; or

(ii) non-combustible material throughout; or

(iii) a combination of (i) and (ii),

provided—

(iv) * * * * *

(v) any insulation installed in the cavity of a wall required to have an FRL is non-combustible; and

(vi) the building is fitted with an automatic smoke alarm system complying with Specification E2.2a.

(b) A Class 2 building having a rise in storeys of not more than 4 may have the top three storeys constructed in accordance with (a) provided—
(i) the lowest storey is used solely for the purpose of parking motor vehicles or for some other ancillary purpose; and  
(ii) the lowest storey is constructed of concrete or masonry including the floor between it and the Class 2 part of the building above; and  
(iii) the lowest storey and the storey above are separated by construction having an FRL of not less than 90/90/90 with no openings or penetrations that would reduce the fire-resisting performance of that construction except that a doorway in that construction may be protected by a –/60/30 self-closing fire door.

(c) In a Class 2 building complying with (a) or (b) and fitted with a sprinkler system complying with Specification E1.5, any FRL criterion prescribed in Table 3—

(i) for any floor and any loadbearing wall, may be reduced to 60, except any FRL criterion of 90 for an external wall must be maintained when tested from the outside; and  
(ii) for any non-loadbearing internal wall, need not apply if—  
   (A) it is lined on each side with 13 mm standard grade plasterboard or similar non-combustible material; and  
   (B) it extends—  
      (aa) to the underside of the floor next above; or  
      (bb) to the underside of a ceiling with a resistance to the incipient spread of fire of 60 minutes; or  
      (cc) to the underside of a non-combustible roof covering; and  
   (C) any insulation installed in the cavity of the wall is non-combustible; and  
   (D) any construction joint, space or the like between the top of the wall and the floor, ceiling or roof is smoke sealed with intumescent putty or other suitable material; and  
   (E) any doorway in the wall is protected by a self-closing, tight fitting, solid core door not less than 35 mm thick.

4. TYPE B FIRE-RESISTING CONSTRUCTION

4.1 Fire-resistance of building elements

In a building required to be of Type B construction—

(a) each building element listed in Table 4, and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned; and  
(b) the external walls, common walls, and the flooring and floor framing in any lift pit, must be non-combustible; and  
(c) if a stair shaft supports any floor or a structural part of it—  
   (i) the floor or part must have an FRL of 60/-/- or more; or  
   (ii) the junction of the stair shaft must be constructed so that the floor or part will be free to sag or fall in a fire without causing structural damage to the shaft; and
(d) any internal wall which is required to have an FRL with respect to integrity and insulation, except a wall that bounds a sole-occupancy unit in the topmost (or only) storey and there is only one unit in that storey, must extend to—

(i) the underside of the floor next above if that floor has an FRL of at least 30/30/30; or

(ii) the underside of a ceiling having a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or

(iii) the underside of the roof covering if it is non-combustible and, except for roof battens with dimensions of 75 mm x 50 mm or less or roof sarking, must not be crossed by timber or other combustible building elements; or

(iv) 450 mm above the roof covering if it is combustible, and;

(e) a loadbearing internal wall and a loadbearing fire wall (including those that are part of a loadbearing shaft) must be of concrete or masonry; and

(f) a non-loadbearing internal wall required to be fire-resisting must be of non-combustible construction; and

(g) in a Class 5, 6, 7, 8 or 9 building, in the storey immediately below the roof, internal columns and internal walls other than fire walls and shaft walls, need not comply with Table 4; and

(h) lift, subject to C2.10, ventilating, pipe, garbage, and similar shafts which are not for the discharge of hot products of combustion and not loadbearing, must be of non-combustible construction in—

(i) a Class 2, 3 or 9 building; and

(ii) a Class 5, 6, 7 or 8 building if the shaft connects more than 2 storeys; and

(i) in a Class 2 or 3 building, except where within the one sole-occupancy unit, or a Class 9a health-care building or a Class 9b building, a floor separating storeys or above a space for the accommodation of motor vehicles or used for storage or any other ancillary purpose, must—

(i) be constructed so that it is at least of the standard achieved by a floor/ceiling system incorporating a ceiling which has a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or

(ii) have an FRL of at least 30/30/30; or

(iii) have a fire-protective covering on the underside of the floor, including beams incorporated in it, if the floor is combustible or of metal.

(j) in a Class 9c aged care building a floor above a space for the accommodation of motor vehicles or used for storage or any other ancillary purpose, and any column supporting the floor must—

(i) be constructed so that it is at least of the standard achieved by a floor/ceiling system incorporating a ceiling which has a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or

(ii) have an FRL of at least 30/30/30; or

(iii) have a fire-protective covering on the underside of the floor, including beams incorporated in it, if the floor is combustible or of metal.
Table 4 TYPE B CONSTRUCTION: FRL OF BUILDING ELEMENTS

<table>
<thead>
<tr>
<th>Building element</th>
<th>Class of building—FRL: (in minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Structural adequacy/Integrity/Insulation</td>
</tr>
<tr>
<td></td>
<td>2, 3 or 4 part</td>
</tr>
<tr>
<td>EXTERNAL WALL</td>
<td></td>
</tr>
<tr>
<td>(including any column and other building element incorporated therein) or other external building element, where the distance from any fire-source feature to which it is exposed is—</td>
<td></td>
</tr>
<tr>
<td>For loadbearing parts-</td>
<td></td>
</tr>
<tr>
<td>less than 1.5 m</td>
<td>90/ 90/ 90</td>
</tr>
<tr>
<td>1.5 to less than 3 m</td>
<td>90/ 60/ 30</td>
</tr>
<tr>
<td>3 to less than 9 m</td>
<td>90/ 30/ 30</td>
</tr>
<tr>
<td>9 to less than 18 m</td>
<td>90/ 30/ -</td>
</tr>
<tr>
<td>18 m or more</td>
<td>- / - / -</td>
</tr>
<tr>
<td>For non-loadbearing parts-</td>
<td></td>
</tr>
<tr>
<td>less than 1.5 m</td>
<td>- / 90/ 90</td>
</tr>
<tr>
<td>1.5 to less than 3 m</td>
<td>- / 60/ 30</td>
</tr>
<tr>
<td>3 m or more</td>
<td>- / - / -</td>
</tr>
<tr>
<td>EXTERNAL COLUMN</td>
<td></td>
</tr>
<tr>
<td>not incorporated in an external wall, where the distance from any fire-source feature to which it is exposed is—</td>
<td></td>
</tr>
<tr>
<td>less than 3 m</td>
<td>90/ - / -</td>
</tr>
<tr>
<td>3 m or more</td>
<td>- / - / -</td>
</tr>
<tr>
<td>COMMON WALLS and FIRE WALLS—</td>
<td></td>
</tr>
<tr>
<td>90/ 90 / 90</td>
<td>120/120/120</td>
</tr>
<tr>
<td>INTERNAL WALLS—</td>
<td></td>
</tr>
<tr>
<td>Fire-resisting lift and stair shafts-</td>
<td></td>
</tr>
<tr>
<td>Loadbearing</td>
<td>90/ 90/ 90</td>
</tr>
<tr>
<td>Fire-resisting stair shafts</td>
<td></td>
</tr>
<tr>
<td>Non-loadbearing</td>
<td>- / 90/ 90</td>
</tr>
<tr>
<td>Bounding public corridors, public lobbies and the like-</td>
<td></td>
</tr>
<tr>
<td>Loadbearing</td>
<td>60/ 60/ 60</td>
</tr>
<tr>
<td>Non-loadbearing</td>
<td>- / 60/ 60</td>
</tr>
<tr>
<td>Between or bounding sole-occupancy units-</td>
<td></td>
</tr>
<tr>
<td>Loadbearing</td>
<td>60/ 60/ 60</td>
</tr>
<tr>
<td>Non-loadbearing</td>
<td>- / 60/ 60</td>
</tr>
<tr>
<td>OTHER LOADBEARING INTERNAL WALLS and COLUMNS-</td>
<td></td>
</tr>
<tr>
<td>60/ - / -</td>
<td>120/ - / -</td>
</tr>
<tr>
<td>ROOFS</td>
<td>- / - / -</td>
</tr>
</tbody>
</table>
4.2 Carpars

(a) Notwithstanding Clause 4.1, a carpark may comply with Table 4.2 if it is an open-deck carpark or is protected with a sprinkler system complying with Specification E1.5 and is—

(i) a separate building; or
(ii) a part of a building, and if occupying only part of a storey, is separated from the remaining part by a fire wall.

(b) For the purposes of this clause, a carpark—

(i) includes—

(A) an administration area associated with the functioning of the carpark; and
(B) where the carpark is sprinklered, is associated with a Class 2 or 3 building and provides carparking for separate sole-occupancy units, each carparking area with an area not greater than 10% of its floor area for purposes ancillary to the sole-occupancy units; but

(ii) excludes—

(A) except for (b)(i), any area of another classification, or other part of a Class 7 building not used for carparking; and
(B) a building or part of a building specifically intended for the parking of trucks, buses, vans and the like.

Table 4.2 REQUIREMENTS FOR CARPARKS

<table>
<thead>
<tr>
<th>Building element</th>
<th>FRL (not less than)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Structural adequacy/</td>
</tr>
<tr>
<td></td>
<td>Integrity/ Insulation</td>
</tr>
<tr>
<td></td>
<td>ESA/M (not greater</td>
</tr>
<tr>
<td></td>
<td>than)</td>
</tr>
</tbody>
</table>

Wall

(a) external wall

<table>
<thead>
<tr>
<th></th>
<th>Loadbearing</th>
<th>Non-loadbearing</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>60/60/60</td>
<td>- / - / -</td>
</tr>
<tr>
<td>(ii)</td>
<td>- / - / -</td>
<td>- / - / -</td>
</tr>
</tbody>
</table>

(b) internal wall

<table>
<thead>
<tr>
<th></th>
<th>Loadbearing</th>
<th>Non-loadbearing</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>60/ - / -</td>
<td>- / - / -</td>
</tr>
<tr>
<td>(ii)</td>
<td>- / - / -</td>
<td>- / - / -</td>
</tr>
<tr>
<td>(iii)</td>
<td>- / - / -</td>
<td>- / - / -</td>
</tr>
</tbody>
</table>

Table 4.2 REQUIREMENTS FOR CARPARKS

<table>
<thead>
<tr>
<th>Building element</th>
<th>FRL (not less than)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Structural adequacy/</td>
</tr>
<tr>
<td></td>
<td>Integrity/ Insulation</td>
</tr>
<tr>
<td></td>
<td>ESA/M (not greater</td>
</tr>
<tr>
<td></td>
<td>than)</td>
</tr>
</tbody>
</table>
### Spec C1.1 – 4.

**FIRE RESISTANCE**

<table>
<thead>
<tr>
<th>Building element</th>
<th>FRL (not less than)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Structural adequacy/</td>
</tr>
<tr>
<td></td>
<td>Integrity/ Insulation</td>
</tr>
</tbody>
</table>

#### (c) fire wall

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>from the direction used as a carpark</td>
</tr>
<tr>
<td>(ii)</td>
<td>from the direction not used as a carpark</td>
</tr>
</tbody>
</table>

#### Column

| (a) | supporting only the roof (not used for carparking) and 3 m or more from a fire-source feature to which it is exposed | - / - / - |
| (b) | steel column, other than one covered by (a) | 60/ - / - or 26 m²/tonne |
| (c) | any other column not covered by (a) or (b) | 60/ - / - |

#### Beam

| (a) | less than 3 m from a fire source feature: |
| (i) | steel floor beam in continuous contact with a concrete floor slab | 60/ - / - or 30 m²/tonne |
| (ii) | any other beam | 60/ - / - |
| (b) | 3 m or more from a fire source feature | - / - / - |

#### Lift shaft

- / - / -

#### Fire-resisting stair shaft (within the carpark only)

- / - / -

#### Roof, floor slab and vehicle ramp

- / - / -

Note: ESA/M means the ratio of exposed surface area to mass per unit length.

### 4.3 Class 2 buildings: Concession

(a) A Class 2 building having a rise in storeys of not more than 2 need not comply with Clause 4.1(b), (e), (f) and (h) of Specification C1.1 if it is constructed using—

(i) timber framing throughout; or

(ii) non-combustible material throughout; or

(iii) a combination of (i) and (ii),

provided—

(iv) * * * * *

(v) any insulation installed in the cavity of a wall required to have an FRL is non-combustible; and

(vi) the building is fitted with an automatic smoke alarm system complying with Specification E2.2a.

(b) In a Class 2 building complying with (a) and fitted with a sprinkler system complying with Specification E1.5, any FRL criterion prescribed in Table 4—

(i) for any loadbearing wall, may be reduced to 60, except any FRL criterion of 90 for an external wall must be maintained when tested from the outside; and
(ii) for any non-loadbearing internal wall, need not apply, if—
(A) it is lined on both sides with 13 mm standard grade plasterboard or similar non-combustible material; and
(B) it extends—
(aa) to the underside of the floor next above if that floor has an FRL of at least 30/30/30 or is lined on the underside with a fire-protective covering; or
(bb) to the underside of a ceiling with a resistance to the incipient spread of fire of 60 minutes; or
(cc) to the underside of a non-combustible roof covering; and
(C) any insulation installed in the cavity of the wall is non-combustible; and
(D) any construction joints, spaces and the like between the top of the wall and the floor, ceiling or roof is smoke sealed with intumescent putty or other suitable material.

5. TYPE C FIRE-RESISTING CONSTRUCTION

5.1 Fire-resistance of building elements
In a building required to be of Type C construction—
(a) a building element listed in Table 5 and any beam or column incorporated in it, must have an FRL not less than that listed in the Table for the particular Class of building concerned; and
(b) an external wall that is required by Table 5 to have an FRL need only be tested from the outside to satisfy the requirement; and
(c) a fire wall or an internal wall bounding a sole-occupancy unit or separating adjoining units must comply with Specification C1.8 if it is of lightweight construction and is required to have an FRL; and
(d) in a Class 2 or 3 building, an internal wall which is required by Table 5 to have an FRL must extend—
(i) to the underside of the floor next above if that floor has an FRL of at least 30/30/30 or a fire-protective covering on the underside of the floor; or
(ii) to the underside of a ceiling having a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes; or
(iii) to the underside of the roof covering if it is non-combustible, and except for roof battens with dimensions of 75 mm x 50 mm or less or roof sarking, must not be crossed by timber or other combustible building elements; or
(iv) 450 mm above the roof covering if it is combustible; and
(e) in a Class 2, or 3 building, except where within the one sole-occupancy unit, or a Class 9a health-care building, or a Class 9b building, a floor separating storeys, or above a space for the accommodation of motor vehicles or used for storage or any other ancillary purpose, and any column supporting the floor, must—
(i) have an FRL of at least 30/30/30; or
(ii) have a fire-protective covering on the underside of the floor including beams incorporated in it and around the column, if the floor or column is combustible or of metal.
(f) in a Class 9c aged care building a floor above a space for the accommodation of motor vehicles or used for storage or any other ancillary purpose, and any column supporting the floor, must—

(i) have an FRL of at least 30/30/30; or

(ii) have a fire-protective covering on the underside of the floor including beams incorporated in it and around the column, if the floor or column is combustible or of metal.

Table 5 TYPE C CONSTRUCTION: FRL OF BUILDING ELEMENTS

<table>
<thead>
<tr>
<th>Building element</th>
<th>Class of building—FRL: (in minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Structural adequacy/Integrity/Insulation</td>
</tr>
<tr>
<td></td>
<td>2, 3 or 4 part</td>
</tr>
<tr>
<td>EXTERNAL WALL</td>
<td>90/90/90</td>
</tr>
<tr>
<td>Less than 1.5 m</td>
<td>-/-/-</td>
</tr>
<tr>
<td>1.5 to less than 3 m</td>
<td>-/-/-</td>
</tr>
<tr>
<td>3 m or more</td>
<td>-/-/-</td>
</tr>
<tr>
<td>EXTERNAL COLUMN</td>
<td>90/90/90</td>
</tr>
<tr>
<td>Less than 1.5 m</td>
<td>90/-/-</td>
</tr>
<tr>
<td>1.5 to less than 3 m</td>
<td>-/-/-</td>
</tr>
<tr>
<td>3 m or more</td>
<td>-/-/-</td>
</tr>
<tr>
<td>COMMON WALLS and FIRE WALLS</td>
<td>90/90/90</td>
</tr>
</tbody>
</table>

5.2 Car parks

(a) Notwithstanding Clause 5.1, a car park may comply with Table 5.2 if it is an open-deck car park or is protected with a sprinkler system complying with Specification E1.5 and is—

(i) a separate building; or

(ii) a part of a building, and if occupying only part of a storey, is separated from the remaining part by a fire wall.

(b) For the purposes of this clause, a car park—
FIRE RESISTANCE

(i) includes—
(A) an administration area associated with the functioning of the carpark; and
(B) where the carpark is sprinklered, is associated with a Class 2 or 3 building and provides carparking for separate sole-occupancy units, each carparking area with an area not greater than 10% of its floor area for purposes ancillary to the sole-occupancy units; but

(ii) excludes—
(A) except for (b)(i), any area of another classification, or other part of a Class 7 building not used for carparking; and
(B) a building or part of a building specifically intended for the parking of trucks, buses, vans and the like.

Table 5.2 REQUIREMENTS FOR CARPARKS

<table>
<thead>
<tr>
<th>Building element</th>
<th>FRL (not less than)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Structural adequacy/</td>
</tr>
<tr>
<td></td>
<td>Integrity/ Insulation</td>
</tr>
<tr>
<td></td>
<td>ESA/M (not greater than)</td>
</tr>
<tr>
<td>Wall</td>
<td></td>
</tr>
<tr>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>external wall</td>
<td></td>
</tr>
<tr>
<td>(i)</td>
<td>less than 1.5 m from a fire-source feature to which it is exposed:</td>
</tr>
<tr>
<td></td>
<td>Loadbearing</td>
</tr>
<tr>
<td></td>
<td>60/60/60</td>
</tr>
<tr>
<td></td>
<td>Non-loadbearing</td>
</tr>
<tr>
<td></td>
<td>- /60/60</td>
</tr>
<tr>
<td>(ii)</td>
<td>1.5 m or more from a fire-source feature to which it is exposed</td>
</tr>
<tr>
<td></td>
<td>- / / / -</td>
</tr>
<tr>
<td>(b)</td>
<td>internal wall</td>
</tr>
<tr>
<td></td>
<td>- / / / -</td>
</tr>
<tr>
<td>(c)</td>
<td>fire wall</td>
</tr>
<tr>
<td>(i)</td>
<td>from the direction used as a carpark</td>
</tr>
<tr>
<td></td>
<td>60/60/60</td>
</tr>
<tr>
<td>(ii)</td>
<td>from the direction not used as a carpark</td>
</tr>
<tr>
<td></td>
<td>90/90/90</td>
</tr>
<tr>
<td>Column</td>
<td></td>
</tr>
<tr>
<td>(a)</td>
<td>steel column less than 1.5 m from a fire-source feature</td>
</tr>
<tr>
<td></td>
<td>60/ - / - or 26 m²/tonne</td>
</tr>
<tr>
<td>(b)</td>
<td>any other column less than 1.5 m from a fire-source feature</td>
</tr>
<tr>
<td></td>
<td>60/ / / -</td>
</tr>
<tr>
<td>(c)</td>
<td>any other column not covered by (a) or (b)</td>
</tr>
<tr>
<td></td>
<td>- / - / -</td>
</tr>
<tr>
<td>Beam</td>
<td></td>
</tr>
<tr>
<td>(a)</td>
<td>less than 1.5 m from a fire-source feature</td>
</tr>
<tr>
<td>(i)</td>
<td>steel floor beam in continuous contact with a concrete floor slab</td>
</tr>
<tr>
<td></td>
<td>60/ - / - or 30 m²/tonne</td>
</tr>
<tr>
<td>(ii)</td>
<td>any other beam</td>
</tr>
<tr>
<td></td>
<td>60/ - / -</td>
</tr>
</tbody>
</table>
**FIRE RESISTANCE**

<table>
<thead>
<tr>
<th>Building element</th>
<th>FRL (not less than) Structural adequacy/ Integrity/ Insulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) 1.5 m or more from a fire-source feature</td>
<td>- / - / -</td>
</tr>
<tr>
<td>Roof, floor slab and vehicle ramp</td>
<td>- / - / -</td>
</tr>
</tbody>
</table>

Note: ESA/M means the ratio of exposed surface area to mass per unit length.
**Deemed-to-Satisfy Provisions**

1. **Scope**

   This Specification describes tests to be applied to and criteria to be satisfied by a wall system of lightweight construction.

2. **Application**

   A wall system need not be tested in accordance with this Specification for static pressure or impact if it is designed and constructed in accordance with the Deemed-to-Satisfy Provisions of Section B to resist the appropriate pressures and impacts defined in this Specification.

3. **Tests**

   3.1 **Walls of certain Class 9b buildings**

      Lightweight construction forming—

      (a) a wall of a lift shaft and stair shaft; and

      (b) an external and internal wall bounding a public corridor, public lobby or the like, including a fire-isolated and non fire-isolated passageway or ramp,

      in a spectator stand, sports stadium, cinema or theatre, railway or bus station or airport terminal, must be subjected to the following tests and must fulfil the following criteria:

      (i) The materials tests of Clause 5(a) and the criteria of Clause 6(a).

      (ii) A static test by the imposition of a uniformly distributed load of 1.0 kPa (or its equivalent) in accordance with Clause 5(b) and the damage and deflection criteria of Clauses 6(b) and (c) respectively.

      (iii) A dynamic test by the fall of the impact bag through a height of 350 mm in accordance with Clause 5(c) and the damage and deflection criteria of Clauses 6(b) and (d) respectively.

      (iv) The surface indentation test of Clause 5(d) and the surface indentation criterion of Clause 6(e).

   3.2 **Walls of shafts and fire-isolated exits generally**

      A wall of lightweight construction that is required to be fire-resisting and which bounds a lift shaft, stair shaft, or service shaft, fire-isolated passageway or fire-isolated ramp must be subjected to the following tests and must fulfil the following criteria:

      (a) The materials tests of Clause 5(a) and the criteria of Clause 6(a).


Deemed-to-Satisfy Provisions

(b) A static test by the imposition of a uniformly distributed load of 0.35 kPa (or its equivalent) in accordance with Clause 5(b) and the damage and deflection criteria of Clauses 6(b) and (c) respectively.

(c) A dynamic test by the fall of the impact bag through a height of 150 mm in accordance with Clause 5(c) and the damage and deflection criteria of Clauses 6(b) and (d) respectively.

(d) The surface indentation test of Clause 5(d) and the surface indentation criterion of Clause 6(e).

3.3 Additional requirements for lift shafts

(a) In addition to the requirements of Clauses 3.1 and 3.2, a wall system for use in a lift shaft that is required to be fire-resisting must be subjected to dynamic test by the imposition of—

(i) where the lift car speed is 7 m/s or less—$10^6$ cycles of a uniformly distributed load between 0 and 0.2 kPa (or its equivalent); or

(ii) where the lift car speed is greater than 7 m/s—$10^6$ cycles of a uniformly distributed load between 0 and 0.35 kPa (or its equivalent) in accordance with Clause 5(e) and must fulfil the damage criteria of Clause 6(b).

(b) The wall system must be subjected to the static test in accordance with Clause 3.2(b) after the successful conclusion of the dynamic test specified in (a).

3.4 Walls generally

An external and internal wall of lightweight construction that is required to be fire-resisting, other than one covered by Clauses 3.1, 3.2 or 3.3, must be subjected to the following tests and must fulfil the following criteria:

(a) The materials tests of Clause 5(a) and the criteria of Clause 6(a).

(b) A static test by the imposition of a uniformly distributed load of 0.25 kPa (or its equivalent) in accordance with Clause 5(b) and the damage and deflection criteria of Clauses 6(b) and (c) respectively.

(c) A dynamic test by fall of the impact bag through a height of 100 mm in accordance with Clause 5(c) and the damage and deflection criteria of Clauses 6(b) and (d) respectively.

(d) The surface indentation test of Clause 5(d) and the surface indentation criterion of Clause 6(e).

4. Test specimens

4.1 General

Testing must be carried out on either—

(a) construction in situ; or

(b) a laboratory specimen of the construction.
4.2 Testing in situ

If testing is carried out in situ, it must be done on that part of the construction least likely, because of the particular combination of the height of the walls, the support conditions and other aspects of the construction, to resist the loads.

4.3 Testing of specimens

If a laboratory specimen is tested, the specimen must span only in the direction corresponding to the height of the wall and testing must be done in accordance with either (a) or (b) below:

(a)

(i) The height of the test specimen (or length, if the specimen is tested horizontally) must be identical with the height between supports in the actual construction; and

(ii) the specimen must be supported at the top and bottom (or at each end if tested horizontally) by components identical with, and in a manner identical with, the actual construction.

(b) If the distance between supports of the actual construction is more than 3 m, then a smaller specimen may be tested but—

(i) the distance between supports must be not less than 3 m; and

(ii) forces, reactions and support conditions must be modelled so as to reproduce the behaviour of the actual construction if it were tested in-situ.

5. Test methods

Tests must be carried out in accordance with the following:

(a) Material tests—The methods specified for the constituent materials of the construction of the standards adopted by reference in the BCA.

(b) For resistance to static pressure—The provisions for testing walls under transverse load in ASTM E72-80, except that—

(i) support conditions must be as specified in Clause 4.3; and

(ii) equivalent load shall mean the quarter-point load that produces the same deflection or central moment as appropriate.

(c) For resistance to impact—The provisions for testing wall systems in ASTM E695-79, except that—

(i) the point of impact must be set 1.5 m above finished floor level or 1.5 m above the part of the specimen that corresponds to finished floor level; and

(ii) the impact bag must be not less than 225 mm in diameter and not more than 260 mm in diameter and have a mass of 27.2 kg (+ 0.1 kg, -0); and

(iii) the mass must be achieved by putting loose, dry sand into the bag and must be adjusted before each series of impact tests; and

(iv) where the impact bag and suspension cannot be vertical at the instant of impact on a curved surface or an inclined surface, the height of drop is the net height at the point of impact.
Deemed-to-Satisfy Provisions

(d) **For resistance to surface indentation**—The test for resistance to surface indentation must be carried out at three points on the surface of an undamaged sample sheet as follows:

(i) A steel ball of 10 mm diameter with a load of 150 N must be placed gently on the surface of the sheet and allowed to remain in position for 5 minutes.

(ii) The ball and load must then be removed and the diameter of each impression of the ball on the surface measured.

(e) **For resistance of lift shaft construction to repetitive load**—As for 5(b) except that—

(i) it is sufficient to test one specimen with the pressure applied from the side of the construction on which the lift will operate; and

(ii) the load must be applied dynamically at a frequency not less than 1 Hz and not more than 3 Hz; and

(iii) equivalent load shall mean the quarter-point load that produces the same central moment as the distributed load.

6. **Criteria for compliance**

The wall system or the specimen of it must fulfil the following criteria:

(a) **Materials**—Materials must comply with the applicable standard adopted by reference in the BCA.

(b) **Damage**—There must be no crack, penetration or permanent surface-deformation to a depth of more than 0.5 mm or any other non-elastic deformation or fastener failure.

(c) **Deflection—Static pressure**—Under static pressure the deflection must not be more than—

(i) 1/240th of the height between supports; or

(ii) for construction other than a lift shaft—30 mm; or

(iii) for a lift shaft—20 mm unless the requirements of Clause 15.2(a) of AS 1735.2 or Clauses 5.2.1.1 and 5.2.1.2 of Appendix A of AS 1735.1 are fulfilled.

(d) **Deflection—Impact**—Under impact the instantaneous deflection must not be more than—

(i) 1/120th of the height of the wall between supports; or

(ii) for construction other than a lift shaft—30 mm; or

(iii) for a lift shaft—20 mm unless the requirements of Clause 15.2(a) of AS 1735.2 are fulfilled.

(e) **Surface indentation**—No impression must be more than 5 mm in diameter.
1. **Scope**

This Specification sets out requirements in relation to the fire hazard properties of materials and assemblies in buildings.

2. **Class 2 to 9 buildings: General requirements**

Except where superseded by Clause 3 or 4, any material or assembly used in a Class 2, 3, 5, 6, 7, 8 or 9 building must—

(a) in the case of a sarking-type material, have a Flammability Index not more than 5; or

(b) in the case of other materials, have—

(i) a Spread-of-Flame Index not more than 9; and

(ii) a Smoke-Developed Index not more than 8 if the Spread-of-Flame Index is more than 5; or

(c) be completely covered on all faces by concrete or masonry not less than 50 mm thick; or

(d) in the case of a composite member or assembly, be constructed so that when assembled as proposed in a building—

(i) any material which does not comply with (a) or (b) is protected on all sides and edges from exposure to the air; and

(ii) the member or assembly, when tested in accordance with Specification A2.4, has a Smoke-Developed Index and a Spread-of-Flame Index not exceeding those prescribed in (b); and

(iii) the member or assembly retains the protection in position so that it prevents ignition of the material and continues to screen it from access to free air for a period of not less than 10 minutes.

3. **Fire-isolated exits**

In a fire-isolated stairway, fire-isolated passageway, or fire-isolated ramp in a Class 2 to 9 building—

(a) a material, other than a sarking-type material used in a ceiling or used as a finish, surface, lining or attachment, must have a—

(i) Spread-of-Flame Index of 0; and

(ii) Smoke-Developed Index of not more than 2; and

(iii) if combustible, be attached directly to a non-combustible substrate and not exceed 1 mm in finished thickness; and
Deemed-to-Satisfy Provisions

(b) a sarking-type material used in the form of an exposed wall or ceiling, or as a finish or attachment thereto, must have a Flammability Index of 0.

4. Class 2, 3 and 9 buildings

A material, other than a sarking-type material must if—

(a) in a Class 2, 3, 9a or 9b building, it is used as a finish, surface, lining or attachment to any wall or ceiling in a public corridor which is a means of egress to—
   (i) a required fire-isolated stairway or an external stairway used instead; or
   (ii) a required fire-isolated passageway, or required fire-isolated ramp,

   have a Spread-of-Flame Index of 0 and a Smoke-Developed Index of not more than 5; or

(b) in a Class 9a building in a patient-care area, it is used as a finish, surface, lining or attachment to a—
   (i) ceiling—have a Spread-of-Flame Index of 0 and a Smoke-Developed Index of not more than 3; and
   (ii) wall—have a Spread-of-Flame Index of not more than 2 and a Smoke-Developed Index of not more than 5, except that skirtings of up to 150 mm above the floor may be considered as, and have the Early Fire Hazard Indices of, the floor covering; and
   (iii) floor—have a—
       (A) Spread-of-Flame Index of not more than 3 and a Smoke-Developed Index of not more than 5; or
       (B) Spread-of-Flame Index of 0 and a Smoke-Developed Index of not more than 6; or

(c) in a Class 9b building not protected by a sprinkler system used as a theatre or public hall, in the auditorium or audience seating area, it is used as a finish, surface, lining or attachment to a—
   (i) ceiling—have a Spread-of-Flame Index of not more than 6 and a Smoke-Developed Index of not more than 3; and
   (ii) wall—have a Spread-of-Flame Index of not more than 6 and a Smoke-Developed Index of not more than 5; and
   (iii) floor—have a Spread-of-Flame Index of not more than 7 and a Smoke-Developed Index of not more than 5, except where the auditorium is used mainly for—
       (A) indoor swimming or ice skating—have a Spread-of-Flame Index of not more than 9 and a Smoke-Developed Index of not more than 8; or
       (B) other indoor sports or multi-purpose functions—have a Spread-of-Flame Index of not more than 8 and a Smoke-Developed Index of not more than 7; or

NSW Spec C1.10 4(d)

(d) in a Class 9b building used as a theatre or public hall, it is used in any part of fixed seating in the audience area or auditorium have a Spread-of-Flame Index of 0 and a Smoke-Developed Index of not more than 5.
Deemed-to-Satisfy Provisions

5. Materials deemed to comply
   * * * * *
   This clause has deliberately been left blank.

6. Fire-retardant coatings not acceptable
   * * * * *
   This clause has deliberately been left blank.

7. Exempted building parts and materials
   * * * * *
   This clause has deliberately been left blank.

8. Air-handling ductwork
   Rigid and flexible ductwork in a Class 2 to 9 building must comply with the fire hazard properties set out in AS 4254.

9. Lift cars
   The materials used in the construction of a lift car must comply with the fire hazard properties required by AS 1735.2.
1. **Scope**

This Specification sets out requirements in relation to the fire hazard properties of—

(a) floor materials and floor coverings; and

(b) wall and ceiling linings.

2. **Floor materials and floor coverings**

A floor material or floor covering must have—

(a) a *critical radiant flux* not less than that listed in Table 1; and

(b) in a building not protected by a sprinkler system complying with Specification E1.5, a maximum *smoke development rate* of 750 percent-minutes.

### Table 1 CRITICAL RADIANT FLUX (CRF in kW/m²) OF FLOOR MATERIALS AND FLOOR COVERINGS

<table>
<thead>
<tr>
<th>Class of building</th>
<th>General Building not fitted with a sprinkler system complying with Specification E1.5</th>
<th>General Building fitted with a sprinkler system complying with Specification E1.5</th>
<th>Fire—Isolated Exits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 2, 3, 5, 6, 7, 8 or 9b</td>
<td>2.2</td>
<td>1.2</td>
<td>2.2</td>
</tr>
<tr>
<td>Excluding accommodation for the aged</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class 3</td>
<td>4.5</td>
<td>2.2</td>
<td>4.5</td>
</tr>
<tr>
<td>Accommodation for the aged</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class 9a</td>
<td>Patient care areas</td>
<td>4.5</td>
<td>4.5</td>
</tr>
<tr>
<td>Areas other than patient care areas</td>
<td>2.2</td>
<td>1.2</td>
<td>4.5</td>
</tr>
<tr>
<td>Class 9c</td>
<td>Resident use areas</td>
<td>2.2</td>
<td>4.5</td>
</tr>
<tr>
<td>Areas other than resident use areas</td>
<td>—</td>
<td>1.2</td>
<td>4.5</td>
</tr>
</tbody>
</table>
3. Walls and ceilings

(a) For the purposes of this Clause, the group number of a material is determined by either—
   (i) physical testing in accordance with AS ISO 9705; or
   (ii) prediction in accordance with Clause 3 of Specification A2.4 using data obtained by testing the material at 50 kW/m$^2$ irradiance in the horizontal orientation with edge frame in accordance with AS/NZS 3837.

(b) The group number of a material is as follows when tested or predicted in accordance with sub-clause (a):
   (i) A Group 1 material is one that does not reach flashover when exposed to 100 kW for 600 seconds followed by exposure to 300 kW for 600 seconds.
   (ii) A Group 2 material is one that reaches flashover following exposure to 300 kW within 600 seconds after not reaching flashover when exposed to 100 kW for 600 seconds.
   (iii) A Group 3 material is one that reaches flashover in more than 120 seconds but within 600 seconds when exposed to 100 kW.
   (iv) A Group 4 material is one that reaches flashover within 120 seconds when exposed to 100 kW.

(c) A material used as a finish, surface, lining or attachment to a wall or ceiling must be a Group 1, Group 2 or Group 3 material used in accordance with Table 2 and for buildings not fitted with a sprinkler system complying with Specification E1.5, have—
   (i) a smoke growth rate index not more than 100; or
   (ii) an average specific extinction area less than 250m$^2$/kg.

Table 2 WALL AND CEILING LINING MATERIALS (Material Groups Permitted)

<table>
<thead>
<tr>
<th>Class of building</th>
<th>Fire-isolated exits</th>
<th>Public corridors</th>
<th>Specific areas</th>
<th>Other areas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wall/ceiling</td>
<td>Wall</td>
<td>Ceiling</td>
<td>Wall</td>
</tr>
<tr>
<td>Class 2 or 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excluding ...</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unsprinklered</td>
<td>1</td>
<td>1, 2</td>
<td>1, 2</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>Sprinklered</td>
<td>1</td>
<td>1, 2, 3</td>
<td>1, 2, 3</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>Class 3 or 9a</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accommodation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unsprinklered</td>
<td>1</td>
<td>1</td>
<td>1, 2</td>
</tr>
<tr>
<td></td>
<td>Sprinklered</td>
<td>1</td>
<td>1, 2</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>Class 5, 6, 7, 8 or 9b schools</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unsprinklered</td>
<td>1</td>
<td>1, 2</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td></td>
<td>Sprinklered</td>
<td>1</td>
<td>1, 2, 3</td>
<td>1, 2, 3</td>
</tr>
</tbody>
</table>

SUPERSEDED
Deemed-to-Satisfy Provisions

<table>
<thead>
<tr>
<th>Class of building</th>
<th>Fire-isolated exits</th>
<th>Public corridors</th>
<th>Specific areas</th>
<th>Other areas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wall/ceiling</td>
<td>Wall</td>
<td>Ceiling</td>
<td>Wall</td>
</tr>
<tr>
<td>Class 9b other than schools</td>
<td></td>
<td></td>
<td></td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>Sprinklered</td>
<td>1</td>
<td>1, 2</td>
<td>1, 2, 3</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>Class 9c</td>
<td>1, 2, 3</td>
<td>1, 2</td>
<td>1, 2, 3</td>
<td>1, 2, 3</td>
</tr>
<tr>
<td>Sprinklered</td>
<td>1, 2, 3</td>
<td>1, 2</td>
<td>1, 2, 3</td>
<td>1, 2, 3</td>
</tr>
</tbody>
</table>

For the purpose of this Table:

1. "Sprinklered" means a building fitted with a sprinkler system complying with Specification E1.5.
2. "Specific areas" means within:
   (a) for Class 2 and 3 buildings, a sole-occupancy unit.
   (b) for Class 5 buildings, open plan offices with a minimum floor dimension/floor to ceiling height ratio > 5.
   (c) for Class 6 buildings, shops or other building with a minimum floor dimension/floor to ceiling height ratio > 5.
   (d) for Class 9a health-care buildings, patient care areas.
   (e) for Class 9b theatres and halls, etc, an auditorium.
   (f) for Class 9b schools, a classroom.
   (g) for Class 9c aged care buildings, resident use areas.

4. Lift cars

In a lift car, the fire hazard properties of materials used as—
   (a) floor materials and floor coverings must have critical radiant flux not less than 2.2; and
   (b) wall and ceiling linings must be a Group 1 material or a Group 2 material in accordance with Clause 3(b).
1. **Scope**

This Specification contains measures to minimise, in the event of fire, the likelihood of *external walls* covered by Clause 2 collapsing outwards as complete panels and the likelihood of panels separating from supporting members.

2. **Application**

This Specification applies to buildings having a *rise in storeys* of not more than 2 with concrete *external walls* that could collapse as complete panels (eg. tilt-up and precast concrete) which—

(a) consist of either single or multiple panels attached by steel connections to lateral supporting members; and

(b) depend on those connections to resist outward movement of the panels relative to the supporting members; and

(c) have height to thickness ratio not greater than 50.

3. **General requirements for external wall panels**

(a) Cast-in inserts and fixings must be anchored into the panel with welded bars or be fixed to the panel reinforcement.

(b) Cast-in inserts for top connections and fixings acting together must be able to resist an ultimate load of two times the larger of the forces *required* to develop—

   (i) the ultimate bending moment capacity of the panel at its base; or

   (ii) the overturning moment at the base of the panel arising from an outwards lateral displacement at the top of the panel equal to one tenth of the panel height.

(c) Top connections of the panel exposed to fire, such as clips and drilled-in inserts, acting together must be able to resist an ultimate load of six times the larger of the forces *required* to develop the moment specified in (b)(i) or (ii).

**Note.**

The increased forces specified by use of the multiplier of two or six in (b) and (c) above are to take account of the lower strength of the connections and members at the higher than ambient temperatures expected in a fire.

(d) Lateral supporting members and their connections must be designed to resist the connection forces specified in (b) and (c) and in the case of an eaves tie member the force in the member must be determined assuming that it deforms in a manner...
Deemed-to-Satisfy Provisions

compatible with the lateral displacement of the wall panels, and that it acts in tension only.

(e) *External wall* panels that span vertically must have at least two upper connections per panel to the supporting member, except that where a number of panels are designed to act as one unit, (eg, tongue and groove hollow-core panels), only two upper connections are required for each unit.

(f) *External wall* panels that span horizontally between columns must have at least two connections at each column.

4. Additional requirements for vertically spanning external wall panels adjacent to columns

(a) Where vertically spanning *external wall* panels are located adjacent to columns, connections to the panels must be located and/or detailed to minimise forces that may develop between the panels and columns arising from the restraint of differential displacement.

(b) The requirements of (a) are satisfied by—

(i) detailing the connections and/or the supporting member to sustain a relative outward displacement of (d) between the panels and columns at the connection height where \( d(m) \) is calculated as—

(A) the square of the connection height (m) divided by one hundred and twenty-five, when the connection height is less than 5 m; or

(B) the connection height (m) divided by twenty-five, when the connection height (m) is greater than or equal to 5 m; or

(ii) in situations where an eaves tie member is used to provide lateral support to *external wall* panels, the tie member is connected to the panels no closer than a distance (s) from the column where s(m) is taken as one quarter of the panel height (m).
Deemed-to-Satisfy Provisions

1. **SCOPE**

This Specification sets out requirements for the construction of smoke-proof walls in Class 9a health-care buildings and Class 9c aged care buildings. Smoke proof walls required to have an FRL are to be in accordance with Clause A2.3.

2. **Class 9a health-care buildings**

Smoke-proof walls required by C2.5 in Class 9a health-care buildings must comply with the following:

(a) Be non-combustible and extend to the underside of—
   (i) the floor above; or
   (ii) a non-combustible roof covering; or
   (iii) a ceiling having a resistance to the incipient spread of fire to the space above itself of not less than 60 minutes.

(b) Not incorporate any glazed areas unless the glass is safety glass as defined in AS 1288.

(c) Only have doorways which are fitted with smoke doors complying with Specification C3.4.

(d) Have all openings around penetrations and the junctions of the smoke-proof wall and the remainder of the building stopped with non-combustible material to prevent the free passage of smoke.

(e) Incorporate smoke dampers where air-handling ducts penetrate the wall unless the duct forms part of a smoke hazard management system required to continue air movement through the duct during a fire.

3. **Class 9c aged care buildings**

Smoke-proof walls required by C2.5 in Class 9c aged care buildings must comply with the following:

(a) Have non-combustible wall lining and extend to the underside of—
   (i) the floor above; or
   (ii) a non-combustible roof covering; or
   (iii) a flush plasterboard ceiling lined with 13 mm standard grade plasterboard or a fire protective covering with any penetration smoke sealed with intumescent putty or other suitable material.
Deemed-to-Satisfy Provisions

(b) If plasterboard is used in the lining on a wall, it must be a minimum of 13 mm standard grade plasterboard.

c) Not incorporate any glazed areas unless the glass is safety glass as defined in AS 1288.

d) Only have doorways which are fitted with smoke doors complying with Specification C3.4.

(e) Have all openings around penetrations and the junctions of the smoke-proof wall and the remainder of the building stopped with non-combustible material to prevent the free passage of smoke.

(f) Incorporate smoke dampers where air-handling ducts penetrate the wall unless the duct forms part of a smoke hazard management system required to continue air movement through the duct during a fire.

4. Doorways in smoke-proof walls

A door required by C2.5 or this Specification to be smoke-proof or have an FRL, other than one that serves a fire compartment provided with a zone smoke control system in accordance with AS/NZS 1668.1, must provide a smoke reservoir by not extending within 400 mm of the underside of—

(a) a roof covering; or

(b) the floor above; or

(c) an imperforate false ceiling that will prevent the free passage of smoke.
1. SCOPE

This Specification sets out requirements for the construction of fire doors, smoke doors, fire windows and fire shutters.

2. FIRE DOORS

A *required* fire door must—

(a) comply with AS/NZS 1905.1; and

(b) not fail by radiation through any glazed part during the period specified for *integrity* in the *required* FRL.

3. SMOKE DOORS

3.1 General requirements

Smoke doors must be constructed so that smoke will not pass from one side of the doorway to the other and, if they are glazed, there is minimal danger of a person being injured by accidentally walking into them.

3.2 Construction deemed-to-satisfy

A smoke door of one or two leaves satisfies Clause 3.1 if it is constructed as follows:

(a) The leaves are side-hung to swing—

   (i) in the direction of egress; or

   (ii) in both directions.

(b) The leaves are capable of resisting smoke at 200°C for 30 minutes.

   (i) Solid-core leaves at least 35 mm thick satisfy (i).

(c) The leaves are fitted with smoke seals.

(d) The leaves are normally in the closed position; or

   (A) The leaves are closed *automatically* with the *automatic* closing operation initiated by smoke detectors, installed in accordance with the relevant provisions of AS 1670.1—1995 AS 1670.1, located on each side of the doorway not more than 1.5 m horizontal distance from the opening; and
Deemed-to-Satisfy Provisions

(B) In the event of power failure to the door, the leaves fail-safe in the closed position.

(e) The leaves return to the fully closed position after each manual opening.

(f) Any glazing incorporated in the door complies with AS 1288.

(g)

(i) If a glazed panel is capable of being mistaken for an unobstructed exit, the presence of the glass must be identified by opaque construction.

(ii) An opaque mid-height band, mid-rail or crash bar satisfies (i).

4. FIRE SHUTTERS

A required fire shutter must—

(a) be a shutter that—

   (i) is identical with a tested prototype that has achieved the required FRL; and

   (ii) is installed in the same manner and in an opening that is not larger than the tested prototype; and

   (iii) did not have a rise in average temperature on the side remote from the furnace of more than 140 K during the first 30 minutes of the test; or

(b) be a steel shutter complying with AS 1905.2 if a metallic fire shutter is not prohibited by C3.5.

5. FIRE WINDOWS

A required fire window must be—

(a) identical in construction with a prototype that has achieved the required FRL; and

(b) installed in the same manner and in an opening that is not larger than the tested prototype.
SPECIFICATION C3.15 PENETRATION OF WALLS, FLOORS AND CEILINGS BY SERVICES

Deemed-to-Satisfy Provisions

1. **Scope**

This Specification prescribes materials and methods of installation for services that penetrate walls, floors and ceilings required to have an FRL.

2. **Application**

(a) This Specification applies to installations permitted under the Deemed-to-Satisfy Provisions of the BCA as alternatives to systems that have been demonstrated by test to fulfil the requirements of C3.15(a).

(b) This Specification does not apply to installations in ceilings required to have a resistance to the incipient spread of fire nor to the installation of piping that contains or is intended to contain a flammable liquid or gas.

3. **Metal pipe systems**

(a) A pipe system comprised entirely of metal (excluding pipe seals or the like) that is not normally filled with liquid must not penetrate a wall, floor or ceiling within 100 mm of any combustible material, and must be constructed of—

(i) copper alloy or stainless steel with a wall thickness of at least 1 mm; or

(ii) cast iron or steel (other than stainless steel) with a wall thickness of at least 2 mm.

(b) An opening for a pipe system comprised entirely of metal (excluding pipe seals or the like) must—

(i) be neatly formed, cut or drilled; and

(ii) be no closer than 200 mm to any other service penetration; and

(iii) accommodate only one pipe.

(c) A pipe system comprised entirely of metal (excluding pipe seals or the like) must be wrapped but must not be lagged or enclosed in thermal insulation over the length of its penetration of a wall, floor or ceiling unless the lagging or thermal insulation fulfils the requirements of Clause 7.

(d) The gap between a metal pipe and the wall, floor or ceiling it penetrates must be fire-stopped in accordance with Clause 7.
4. **Pipes penetrating sanitary compartments**

If a pipe of metal or UPVC penetrates the floor of a sanitary compartment in accordance with C3.15(e)—

(a) the opening must be neatly formed and no larger than is necessary to accommodate the pipe or fitting; and

(b) the gap between pipe and floor must be fire-stopped in accordance with Clause 7.

5. **Wires and cables**

If a wire or cable or cluster of wires or cables penetrates a floor, wall or ceiling—

(a) the opening must be neatly formed, cut or drilled and no closer than 50 mm to any other service opening; and

(b) the opening must be no larger in cross-sectional area than—

(i) 2000 mm² if only a single cable is accommodated and the gap between cable and wall, floor or ceiling is no wider than 15 mm; or

(ii) 500 mm² in any other case; and

(c) the gap between the service and the wall, floor or ceiling must be fire-stopped in accordance with Clause 7.

6. **Electrical switches and outlets**

If an electrical switch, outlet, socket or the like is accommodated in an opening or recess in a wall, floor or ceiling—

(a) the opening or recess must not—

(i) be located opposite any point within 300 mm horizontally or 600 mm vertically of any opening or recess on the opposite side of the wall; or

(ii) extend beyond half the thickness of the wall; and

(b) the gap between the service and the wall, floor or ceiling must be fire-stopped in accordance with Clause 7.

7. **Fire-stopping**

(a) **Material:** The material used for the fire-stopping of service penetrations must be concrete, high-temperature mineral fibre, high-temperature ceramic fibre or other material that does not flow at a temperature below 1120°C when tested in accordance with AS 1038.15, and must have—

(i) demonstrated in a system tested in accordance with C3.15(a) that it does not impair the fire-resisting performance of the building element in which it is installed; or

(ii) demonstrated in a test in accordance with (e) that it does not impair the fire-resisting performance of the test slab.
Deemed-to-Satisfy Provisions

(b) **Installation:** Fire-stopping material must be packed into the gap between the service and wall, floor or ceiling in a manner, and compressed to the same degree, as adopted for testing under Clause 7(a)(i) or (ii).

(c) **Hollow construction:** If a pipe penetrates a hollow wall (such as a stud wall, a cavity wall or a wall of hollow blockwork) or a hollow floor/ceiling system, the cavity must be so framed and packed with fire-stopping material that the material is—

(i) installed in accordance with Clause 7(b) to a thickness of 25 mm all round the service for the full length of the penetration; and

(ii) restrained, independently of the service, from moving or parting from the surfaces of the service and of the wall, floor or ceiling.

(d) **Recesses:** If an electrical switch, socket, outlet or the like is accommodated in a recess in a hollow wall or hollow floor/ceiling system—

(i) the cavity immediately behind the service must be framed and packed with fire-stopping material in accordance with Clause 7(c); or

(ii) the back and sides of the service must be protected with refractory lining board identical with and to the same thickness as that in which the service is installed.

(e) **Test:** The test to demonstrate compliance of a fire-stopping material with this Specification must be conducted as follows:

(i) The test specimen must comprise a concrete slab not less than 1 m square and not more than 100 mm thick, and appropriately reinforced if necessary for structural adequacy during manufacture, transport and testing.

(ii) The slab must have a hole 50 mm in diameter through the centre and the hole must be packed with the fire-stopping material.

(iii) The slab must be conditioned in accordance with AS 1530.4.

(iv) Two thermocouples complying with AS 1530.4 must be attached to the upper surface of the packing each about 5 mm from its centre.

(v) The slab must be tested on flat generally in accordance with Section 10 of AS 1530.4 and must achieve an FRL of 60/60/60 or as otherwise required.
ACCESS AND EGRESS

D1 Provision for Escape
D2 Construction of Exits
D3 Access for People with Disabilities
SECTION D ACCESS AND EGRESS

Section D  Access and Egress

Objective DO1
Functional Statements DF1 - DF2
Performance Requirements DP1 - DP9

Part D1  Provision for Escape

D1.0 Deemed-to-Satisfy Provisions
D1.1 Application of Part
D1.2 Number of exits required
D1.3 When fire-isolated exits are required
D1.4 Exit travel distances
D1.5 Distance between alternative exits
D1.6 Dimensions of exits and paths of travel to exits
D1.7 Travel via fire-isolated exits
D1.8 External stairways or ramps in lieu of fire-isolated exits
D1.9 Travel by non-fire-isolated stairways or ramps
D1.10 Discharge from exits
D1.11 Horizontal exits
D1.12 Non-required stairways, ramps or escalators
D1.13 Number of persons accommodated
D1.14 Measurement of distances
D1.15 Method of measurement
D1.16 Plant rooms and lift motor rooms: Concession

Part D2  Construction of Exits

D2.0 Deemed-to-Satisfy Provisions
D2.1 Application of Part
D2.2 Fire-isolated stairways and ramps
D2.3 Non-fire-isolated stairways and ramps
D2.4 Separation of rising and descending stair flights
D2.5 Open access ramps and balconies
D2.6 Smoke lobbies
D2.7 Installations in exits and paths of travel
D2.8 Enclosure of space under stairs and ramps
D2.9 Width of stairways
D2.10 Pedestrian ramps
D2.11 Fire-isolated passageways
D2.12 Roof as open space
D2.13 Goings and risers
D2.14 Landings
D2.15 Thresholds
D2.16 Balustrades or other barriers
D2.17 Handrails
D2.18 Fixed platforms, walkways, stairways and ladders
D2.19 Doorways and doors
D2.20 Swinging doors
D2.21 Operation of latch
D2.22 Re-entry from fire-isolated exits
D2.23 Signs on doors

Part D3  Access for People with Disabilities

D3.0 Deemed-to-Satisfy Provisions
D3.1 Application of Part
D3.2 General building access requirements
D3.3 Parts of buildings to be accessible
D3.4 Concessions
D3.5 Carparking
D3.6 Identification of accessible facilities, services and features
D3.7 Hearing augmentation
D3.8 Tactile indicators

Specifications

Specification D1.12 Non-Required Stairways, Ramps and Escalators
Specification D3.6 Braille and Tactile Signs

ACT Appendix (Additional provisions — refer to ACT Contents for full details)
ACT D1.101 Notices on fire—isolated stairs

NSW Appendix (Additional provisions — refer to NSW Contents for full details)
NSW D2.101 Doors in path of travel in a place of public entertainment
OBJECTIVE

DO1

The Objective of this Section is to—

(a) provide, as far as is reasonable, people with safe, equitable and dignified access to—
   (i) a building; and
   (ii) the services and facilities within a building; and
(b) safeguard occupants from illness or injury while evacuating in an emergency.

FUNCTIONAL STATEMENTS

DF1

A building is to provide, as far as is reasonable—

(a) safe; and
(b) equitable and dignified,

access for people to the services and facilities within.

Application:

DF1(b), with respect to people with disabilities, only requires special provisions in—

(a) a Class 3, 5, 6, 8 or 9 building; or
(b) a Class 7 building other than a Class 7 carpark associated with a Class 2 building; or
(c) a Class 10a building other than a Class 10a building associated with a Class 1 or 2 building or Class 4 part of a building.

DF2

A building is to be provided with means of evacuation which allow occupants time to evacuate safely without being overcome by the effects of an emergency.

Limitation:

DF2 does not apply to the internal parts of a sole-occupancy unit in a Class 2 or 3 building or Class 4 part.
PERFORMANCE REQUIREMENTS

DP1
Access must be provided, to the degree necessary, to enable—
(a) safe; and
(b) equitable and dignified,
movement of people to and within a building.

SA Application to DP1

Application:
DP1(b), with respect to people with disabilities, only requires special provisions in—
(a) a Class 3, 5, 6, 8 or 9 building; or
(b) a Class 7 building other than a Class 7 carpark associated with a Class 2 building; or
(c) a Class 10a building other than a Class 10a building associated with a Class 1 or 2 building or Class 4 part of a building.

DP2
So that people can move safely to and within a building, it must have—
(a) walking surfaces with safe gradients; and
(b) any doors installed to avoid the risk of occupants—
   (i) having their egress impeded; or
   (ii) being trapped in the building; and
(c) any stairways and ramps with—
   (i) slip-resistant walking surfaces on—
       (A) ramps; and
       (B) stairway treads or near the edge of the nosing; and
   (ii) suitable handrails where necessary to assist and provide stability to people using the stairway or ramp; and
   (iii) suitable landings to avoid undue fatigue; and
   (iv) landings where a door opens from or onto the stairway or ramp so that the door does not create an obstruction; and
   (v) in the case of a stairway, suitable safe passage in relation to the nature, volume and frequency of likely usage.

DP3
Where people could fall—
(a) 1 m or more—
   (i) from a floor or roof or through an opening (other than through an openable window) in the external wall of a building; or
(ii) due to a sudden change of level within or associated with a building; or

(b) 4 m or more from a floor through an openable window,

a barrier must be provided which must be—

(c) continuous and extend for the full extent of the hazard; and

(d) of a height to protect people from accidentally falling from the floor or roof or through the opening; and

(e) constructed to prevent people from falling through the barrier; and

(f) capable of restricting the passage of children; and

(g) of strength and rigidity to withstand—

(i) the foreseeable impact of people; and

(ii) where appropriate, the static pressure of people pressing against it.

**Limitations:**

DP3 does not apply where such a barrier would be incompatible with the intended use of an area such as a stage, loading dock or the like.

DP3(f) does not apply to—

(a) fire-isolated stairways, fire-isolated ramps, and other areas used primarily for emergency purposes, excluding external stairways and external ramps; and

(b) Class 7 (other than car parks) and Class 8 buildings and parts of buildings containing those classes.

**DP4**

*Exits* must be provided from a building to allow occupants to evacuate safely, with their number, location and dimensions being appropriate to—

(a) the travel distance; and

(b) the number, mobility and other characteristics of occupants; and

(c) the function or use of the building; and

(d) the height of the building; and

(e) whether the exit is from above or below ground level.

**DP5**

To protect evacuating occupants from a fire in the building *exits* must be fire isolated, to the degree necessary, appropriate to—

(a) the number of *storeys* connected by the *exits*; and

(b) the *fire safety system* installed in the building; and

(c) the function or use of the building; and

(d) the number of *storeys* passed through by the *exits*; and

(e) *fire brigade* intervention.
DP6
So that occupants can safely evacuate the building, paths of travel to exits must have dimensions appropriate to—
(a) the number, mobility and other characteristics of occupants; and
(b) the function or use of the building.

Limitation:
DP6 does not apply to the internal parts of a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building.
With respect to people with disabilities, DP6 does not apply to—
(a) a Class 2 building; or
(b) a Class 7 carpark associated with a Class 2 building.

DP7
Accessways must be provided, as far as is reasonable, to and within a building which—
(a) have features to enable people with disabilities to safely, equitably and with dignity—
   (i) approach the building from the road boundary and from any carparking spaces associated with the building; and
   (ii) access work and public spaces, accommodation and facilities for personal hygiene; and
(b) are identified at appropriate locations and are easy to find; and
(c) enable a person in a wheelchair to manoeuvre.

SA Application to DP1

Application:
DP7 only applies to—
(a) a Class 3, 5, 6, 8 or 9 building; or
(b) a Class 7 building other than a Class 7 carpark associated with a Class 2 building; or
(c) a Class 10 building other than a Class 10 building associated with a Class 2 building or Class 4 part of a building.

DP8
Carparking spaces for use by people with disabilities must be—
(a) provided, to the degree necessary, to give equitable access for carparking; and
(b) designated and easy to find.

Limitation:
DP8 does not apply to a building where—
(a) a parking service is provided; and
(b) direct access to any carparking spaces by the general public or occupants is not available.

DP9

An inbuilt communication system for entry, information, entertainment, or for the provision of a service, must be suitable for occupants who are hearing impaired.

Limitation:

DP9 does not apply to—
(a) a Class 2 building; or
(b) a Class 4 part of a building; or
(c) a Class 7 carpark associated with a Class 2 building; or
(d) an inbuilt communication system used only for emergency warning purposes.
**Deemed-to-Satisfy Provisions**

**D1.0 Deemed-to-Satisfy Provisions**

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirements DP1 to DP9 are satisfied by complying with—

(i) D1.1 to D1.16, D2.1 to D2.23 and D3.1 to D3.8; and

(ii) in a building containing an *atrium*, Part G3; and

(iii) for theatres, *stages* and public halls, Part H1.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of—

(i) D1.1 to D1.16, D2.1 to D2.23 and D3.1 to D3.8; and

(ii) in a building containing an *atrium*, Part G3; and

(iii) for theatres, *stages* and public halls, Part H1,

the relevant Performance Requirements must be determined in accordance with A0.10.

**D1.1 Application of Part**

The Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a *sole-occupancy unit* in a Class 2 or 3 building or a Class 4 part of a building.

**D1.2 Number of exits required**

(a) **All buildings**—Every building must have at least one *exit* from each *storey*.

(b) **Class 2 to 8 buildings**—In addition to any *horizontal exit*, not less than 2 *exits* must be provided from the following:

(i) Each *storey* if the building has an *effective height* of more than 25 m.

(ii) A Class 2 or 3 building subject to C1.5.

(c) **Basements**—In addition to any *horizontal exit*, not less than 2 *exits* must be provided from any *storey* if egress from that *storey* involves a vertical rise within the building of more than 1.5 m, unless—

(i) the *floor area* of the *storey* is not more than 50 m²; and

(ii) the distance of travel from any point on the floor to a single *exit* is not more than 20 m.

(d) **Class 9 buildings**—In addition to any *horizontal exit*, not less than 2 *exits* must be provided from the following:

(i) Each *storey* if the building has a *rise in storeys* of more than 6 or an *effective height* of more than 25 m.

(ii) Any *storey* which includes a *patient care area* in a Class 9a *health-care building*.

(iii) Any *storey* that contains sleeping areas in a Class 9c *aged care building*.
Deemed-to-Satisfy Provisions

(iv) Each storey in a Class 9b building used as an early childhood centre.
(v) Each storey in a primary or secondary school with a rise in storeys of 2 or more.
(vi) Any storey or mezzanine that accommodates more than 50 persons, calculated under D1.13.

NSW D1.2(d)(vii)

(e) Exits from Class 9c aged care buildings and patient care areas in Class 9a health-care buildings—In a Class 9a health-care building and a Class 9c aged care building, at least one exit must be provided from every part of a storey which has been divided into fire compartments in accordance with C2.2 or C2.5.

(f) Exits in open spectator stands—In an open spectator stand containing more than one tier of seating, every tier must have not less than 2 stairways or ramps, each forming part of the path of travel to not less than 2 exits.

(g) Access to exits—Without passing through another sole-occupancy unit every occupant of a storey or part of a storey must have access to—

(i) an exit; or
(ii) at least 2 exits, if 2 or more exits are required.

D1.3 When fire-isolated exits are required

(a) Class 2 and 3 buildings—Every required exit must be fire-isolated unless it connects, passes through or passes by not more than—

(i) 3 consecutive storeys in a Class 2 building; or
(ii) 2 consecutive storeys in a Class 3 building,

and one extra storey may be included if—

(iii) it is only for the accommodation of motor vehicles or for other ancillary purposes; or
(iv) the building has a sprinkler system complying with Specification E1.5 installed throughout; or
(v) the required exit does not provide access to or egress for, and is separated from, the extra storey by construction having—

(A) an FRL of –/60/60, if non-loadbearing; and
(B) an FRL of 90/90/90, if loadbearing; and
(C) no opening that could permit the passage of fire or smoke.

(b) Class 5 to 9 buildings—Every required exit must be fire-isolated unless—

(i) in a Class 9a health-care building—it connects, or passes through or passes by not more than 2 consecutive storeys in areas other than patient care areas; or
(ii) it is part of an open spectator stand; or
(iii) in any other case except in a Class 9c aged care building, it connects, passes through or passes by not more than 2 consecutive storeys and one extra storey may be included if—

(A) the building has a sprinkler system complying with Specification E1.5 installed throughout; or
D1.3 ACCESS AND EGRESS

Deemed-to-Satisfy Provisions

(B) the required exit does not provide access to or egress for, and is separated from, the extra storey by construction having—

(aa) an FRL of -/60/60, if non-loadbearing; and

(bb) an FRL of 90/90/90 for Type A construction or 60/60/60 for Type B construction, if loadbearing; and

(cc) no opening that could permit the passage of fire or smoke.

D1.4 Exit travel distances

(a) Class 2 and 3 buildings—

(i) The entrance doorway of any sole-occupancy unit must be not more than—

(A) 6 m from an exit or from a point from which travel in different directions to 2 exits is available; or

(B) 20 m from a single exit serving the storey at the level of egress to a road or open space; and

(ii) no point on the floor of a room which is not in a sole-occupancy unit must be more than 20 m from an exit or from a point at which travel in different directions to 2 exits is available.

(b) Class 4 parts—The entrance doorway to any Class 4 part must be not more than 6 m from an exit or a point from which travel in different directions to 2 exits is available.

(c) Class 5 to 9 buildings—Subject to (d), (e) and (f)—

(i) no point on a floor must be more than 20 m from an exit, or a point from which travel in different directions to 2 exits is available, in which case the maximum distance to one of those exits must not exceed 40 m; and

(ii) in a Class 5 or 6 building, the distance to a single exit serving a storey at the level of access to a road or open space may be increased to 30 m.

Vic D1.4(d)

(d) Class 9a buildings—In a patient care area in a Class 9a building—

(i) no point on the floor must be more than 12 m from a point from which travel in different directions to 2 of the required exits is available; and

(ii) the maximum distance to one of those exits must not be more than 30 m from the starting point.

(e) Open spectator stands—The distance of travel to an exit in a Class 9b building used as an open spectator stand must be not more than 60 m.

(f) Assembly buildings—In a Class 9b building other than a school or early childhood centre, the distance to one of the exits may be 60 m if—

(i) the path of travel from the room concerned to that exit is through another area which is a corridor, hallway, lobby, ramp or other circulation space; and

(ii) the room is smoke-separated from the circulation space by construction having an FRL of not less than 60/60/60 with every doorway in that construction protected by a tight fitting, self-closing, solid-core door not less than 35 mm thick; and

(iii) the maximum distance of travel does not exceed 40 m within the room and 20 m from the doorway to the room through the circulation space to the exit.
D1.5 Distance between alternative exits

Exits that are required as alternative means of egress must be—

(a) distributed as uniformly as practicable within or around the storey served and in positions where unobstructed access to at least 2 exits is readily available from all points on the floor including lift lobby areas; and

(b) not less than 9 m apart; and

(c) not more than—

(i) in a Class 2 or 3 building—45 m apart; or

(ii) in a Class 9a health-care building, if such required exit serves a patient care area—45 m apart; or

(iii) in all other cases—60 m apart; and

(d) located so that alternative paths of travel do not converge such that they become less than 6 m apart.

D1.6 Dimensions of exits and paths of travel to exits

In a required exit or path of travel to an exit—

(a) the unobstructed height throughout must be not less than 2 m, except the unobstructed height of any doorway may be reduced to not less than 1980 mm; and

(b) the unobstructed width of each exit or path of travel to an exit, except for doorways, must be not less than—

(i) 1 m; or

(ii) 1.8 m in a passageway, corridor or ramp normally used for the transportation of patients in beds within a treatment area or ward area; and

(iii) in a public corridor in a Class 9c aged care building, notwithstanding (c) and (d)—

(A) 1.5 m; and

(B) 1.8 m for the full width of the doorway, providing access into a sole-occupancy unit or communal bathroom, and

(c) if the storey or mezzanine accommodates more than 100 persons but not more than 200 persons, the aggregate unobstructed width, except for doorways, must be not less than—

(i) 1 m plus 250 mm for each 25 persons (or part) in excess of 100; or

(ii) 1.8 m in a passageway, corridor or ramp normally used for the transportation of patients in beds within a treatment area or ward area; and

(d) if the storey or mezzanine accommodates more than 200 persons, the aggregate unobstructed width, except for doorways, must be increased to—

(i) 2 m plus 500 mm for every 60 persons (or part) in excess of 200 persons if egress involves a change in floor level by a stairway or ramp with a gradient steeper than 1 in 12; or

(ii) in any other case, 2 m plus 500 mm for every 75 persons (or part) in excess of 200; and
Deemed-to-Satisfy Provisions

(e) in an open spectator stand which accommodates more than 2000 persons, the aggregate unobstructed width, except for doorways, must be increased to 17 m plus a width (in metres) equal to the number in excess of 2000 divided by 600; and

(f) the unobstructed width of a doorway must be not less than—

(i) in patient care areas through which patients would normally be transported in beds, if the doorway provides access to, or from, a corridor of width—
   (A) less than 2.2 m — 1200 mm; or
   (B) 2.2 m or greater — 1070 mm; and
   where the doorway is fitted with two leaves and one leaf is secured in the closed position in accordance with D2.21(f), the other leaf must permit an unobstructed opening not less than 800 mm wide; or

(ii) in patient care areas in a horizontal exit—1250 mm; or

(iii) the unobstructed width of each exit provided to comply with (b), (c), (d) or (e), minus 250 mm; or

Vic D1.6(f)(iv)

(iv) in a Class 9c aged care building—
   (A) 1070 mm where it opens from a public corridor to a sole-occupancy unit; or
   (B) 870 mm in other resident use areas; or
   (C) 800 mm in non-resident use areas,
   and where the doorway is fitted with two leaves and one leaf is secured in the closed position in accordance with D2.21(f), the other leaf must permit an unobstructed opening not less than 870 mm wide in resident use areas and 800 mm wide in non-resident use areas; or

(v) in any other case except where it opens to a sanitary compartment or bathroom — 750 mm wide; and

NSW D1.6(f)(vi)

(g) the unobstructed width of a required exit must not diminish in the direction of travel to a road or open space, except where the width is increased in accordance with (b)(ii) or (f)(i).

NSW D1.6(h)

D1.7 Travel via fire-isolated exits

(a) A doorway from a room must not open directly into a stairway, passageway or ramp that is required to be fire-isolated unless it is from—

   (i) a public corridor, public lobby or the like; or
   (ii) a sole-occupancy unit occupying all of a storey; or
   (iii) a sanitary compartment, airlock or the like.

(b) Each fire-isolated stairway or fire-isolated ramp must provide independent egress from each storey served and discharge directly, or by way of its own fire-isolated passageway—

   (i) to a road or open space; or
Deemed-to-Satisfy Provisions

(ii) to a point—
   (A) in a storey or space, within the confines of the building, that is used only for pedestrian movement, car parking or the like and is open for at least 2/3 of its perimeter; and
   (B) from which an unimpeded path of travel, not further than 20 m, is available to a road or open space; or

(iii) into a covered area that—
   (A) adjoins a road or open space; and
   (B) is open for at least 1/3 of its perimeter; and
   (C) has an unobstructed clear height throughout, including the perimeter openings, of not less than 3 m; and
   (D) provides an unimpeded path of travel from the point of discharge to the road or open space of not more than 6 m.

(c) Where travel from the point of discharge necessitates passing within 6 m of any part of an external wall of the same building, measured at right angles to the path of travel, that part of the wall must have—
   (i) an FRL of at least 60/60/60; and
   (ii) any openings protected internally in accordance with C3.4.

(d) If more than 2 access doorways, not from a sanitary compartment or the like, open to a required fire-isolated exit in the same storey—
   (i) a smoke lobby in accordance with D2.6 must be provided; or
   (ii) the exit must be pressurised in accordance with AS/NZS 1668.1.

(e) A ramp must be provided at any change in level less than 600 mm in a fire-isolated passageway in a Class 9 building.

D1.8 External stairways or ramps in lieu of fire-isolated exits

(a) An external stairway or ramp may serve as a required exit in lieu of a fire-isolated exit serving a storey below an effective height of 25 m, if the stairway or ramp is—
   (i) non-combustible throughout; and
   (ii) protected in accordance with (c) if it is within 6 m of, and exposed to any part of the external wall of the building it serves.

(b) For the purposes of this clause—
   (i) exposure under (a)(ii) is measured in accordance with Clause 2.1 of Specification C1.1, as if the exit was a building element and the external wall of the building was a fire-source feature to the exit, except that the FRL required in Clause 2.1(a)(i) must not be less than 60/60/60; and
   (ii) the plane formed at the construction edge or perimeter of an unenclosed building or part such as an open-deck carpark, open spectator stand or the like, is deemed to be an external wall; and
   (iii) openings in an external wall and openings under (c) and (d), are determined in accordance with C3.1.
Deemed-to-Satisfy Provisions

(c) The protection referred to in (a)(ii), must adequately protect occupants using the exit from exposure to a fire within the building, in accordance with one of the following methods:

(i) The part of the external wall of the building to which the exit is exposed must have—

(A) an FRL of not less than 60/60/60; and

(B) no openings less than 3 m from the exit (except a doorway serving the exit protected by a –/60/30 fire door in accordance with C3.8(a)); and

(C) any opening 3 m or more but less than 6 m from the exit, protected in accordance with C3.4 and if wall wetting sprinklers are used, they are located internally.

(ii) The exit must be protected from—

(A) any part of the external wall of the building having an FRL of less than 60/60/60; and

(B) any openings in the external wall,

by the construction of a wall, roof, floor or other shielding element as appropriate in accordance with (d).

(d) The wall, roof, floor or other shielding element required by (c)(ii) must—

(i) have an FRL of not less than 60/60/60; and

(ii) have no openings less than 3 m from the external wall of the building (except a doorway serving the exit protected by a –/60/30 fire door in accordance with C3.8(a)); and

(iii) have any opening 3 m or more but less than 6 m from any part of the external wall of the building protected in accordance with C3.4 and if wall wetting sprinklers are used, they are located on the side exposed to the external wall.

D1.9 Travel by non-fire-isolated stairways or ramps

(a) A non-fire-isolated stairway or non-fire-isolated ramp serving as a required exit must provide a continuous means of travel by its own flights and landings from every storey served to the level at which egress to a road or open space is provided.

(b) In a Class 2, 3 or 4 building, the distance between the doorway of a room or sole-occupancy unit and the point of egress to a road or open space by way of a stairway or ramp that is not fire-isolated and is required to serve that room or sole-occupancy unit must not exceed—

(i) 30 m in a building of Type C construction; or

(ii) 60 m in all other cases.

(c) In a Class 5 to 9 building, the distance from any point on a floor to a point of egress to a road or open space by way of a required non-fire-isolated stairway or non-fire-isolated ramp must not exceed 80 m.

(d) In a Class 2, 3 or 9a building, a required non-fire-isolated stairway or non-fire-isolated ramp must discharge at a point not more than—

(i) 15 m from a doorway providing egress to a road or open space or from a fire-isolated passageway leading to a road or open space; or
(ii) 30 m from one of 2 such doorways or passageways if travel to each of them from the non-fire-isolated stairway or non-fire-isolated ramp is in opposite or approximately opposite directions.

(e) In a Class 5 to 8 or 9b building, a required non fire-isolated stairway or non fire-isolated ramp must discharge at a point not more than—

(i) 20 m from a doorway providing egress to a road or open space or from a fire-isolated passageway leading to a road or open space; or

(ii) 40 m from one of 2 such doorways or passageways if travel to each of them from the non-fire-isolated stairway or non-fire-isolated ramp is in opposite or approximately opposite directions.

(f) In a Class 2 or 3 building, if 2 or more exits are required and are provided by means of internal non-fire-isolated stairways or non-fire-isolated ramps, each exit must—

(i) provide separate egress to a road or open space; and

(ii) be suitably smoke-separated from each other at the level of discharge.

D1.10 Discharge from exits

(a) An exit must not be blocked at the point of discharge and where necessary, suitable barriers must be provided to prevent vehicles from blocking the exit, or access to it.

(b) If a required exit leads to an open space, the path of travel to the road must have an unobstructed width throughout of not less than—

(i) the minimum width of the required exit; or

(ii) 1 m,

whichever is the greater.

(c) If an exit discharges to open space that is at a different level than the public road to which it is connected, the path of travel to the road must be by—

(i) a ramp or other incline having a gradient not steeper than 1:8 at any part, or not steeper than 1:14 if required by the Deemed-to-Satisfy Provisions of Part D3; or

(ii) except if the exit is from a Class 9a building, a stairway complying with the Deemed-to-Satisfy Provisions of the BCA.

(d) The discharge point of alternative exits must be located as far apart as practical.

(e) In a Class 9b building which is an open spectator stand that accommodates more than 500 persons, a required stairway or required ramp must not discharge to the ground in front of the stand.

NSW D1.10(f)

(f) In a Class 9b building containing an auditorium which accommodates more than 500 persons, not more than 2/3 of the required width of exits must be located in the main entrance foyer.

D1.11 Horizontal exits

(a) Horizontal exits must not be counted as required exits—

(i) between sole-occupancy units; or
Deemed-to-Satisfy Provisions

(ii) in a Class 9b building used as an early childhood centre, primary or secondary school.

(b) In a Class 9a health-care building or Class 9c aged care building, horizontal exits may be counted as required exits if the path of travel from a fire compartment leads by one or more horizontal exits directly into another fire compartment which has at least one required exit which is not a horizontal exit.

(c) In cases other than in (b), horizontal exits must not comprise more than half of the required exits from any part of a storey divided by a fire wall.

(d) Horizontal exits must have a clear area on the side of the fire wall to which occupants are evacuating, to accommodate the total number of persons (calculated under D1.13) served by the horizontal exit of not less than—

(i) 2.5 m² per patient/resident in a Class 9a health-care building or Class 9c aged care building; and

(ii) 0.5 m² per person in any other case.

(e) Where a fire compartment is provided with only two exits, and one of those exits is a horizontal exit, the clear area required by (d) is to be of a size that accommodates all the occupants from the fire compartment being evacuated.

(f) The clear area required by (d) must be connected to the horizontal exit by an unobstructed path that has at least the dimensions required for the horizontal exit and may include the area of the unobstructed path.

D1.12 Non-required stairways, ramps or escalators

An escalator, moving walkway or non-required non fire-isolated stairway or pedestrian ramp—

(a) must not be used in a patient care area in a Class 9a health-care building or a resident use area in a Class 9c aged care building; and

(b) may connect any number of storeys if it is—

(i) in an open spectator stand or indoor sports stadium; or

(ii) in a carpark or an atrium; or

(iii) outside a building; or

(iv) in a Class 5 or 6 building that is sprinklered throughout, where the escalator, walkway, stairway or ramp complies with Specification D1.12; and

(c) except where permitted in (b) must not connect more than—

(i) 3 storeys if each of those storeys is provided with a sprinkler system complying with Specification E1.5 throughout; or

(ii) 2 storeys,

provided that in each case, those storeys must be consecutive, and one of those storeys is situated at a level at which there is direct egress to a road or open space; and

(d) except where permitted in (b) or (c), must not connect, directly or indirectly, more than 2 storeys at any level in a Class 5, 6, 7, 8 or 9 building and those storeys must be consecutive.
D1.13 Number of persons accommodated

The number of persons accommodated in a storey, room or mezzanine must be determined with consideration to the purpose for which it is used and the layout of the floor area by—

(a) calculating the sum of the numbers obtained by dividing the floor area of each part of the storey by the number of square metres per person listed in Table D1.13 according to the use of that part, excluding spaces set aside for—

(i) lifts, stairways, ramps and escalators, corridors, hallways, lobbies and the like; and

(ii) service ducts and the like, sanitary compartments or other ancillary uses; or

(b) reference to the seating capacity in an assembly building or room; or

(c) any other suitable means of assessing its capacity.

Table D1.13 AREA PER PERSON ACCORDING TO USE

<table>
<thead>
<tr>
<th>Type of use</th>
<th>m² per person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art gallery, exhibition area, museum</td>
<td>4</td>
</tr>
<tr>
<td>Bar</td>
<td></td>
</tr>
<tr>
<td>—bar standing</td>
<td>0.5</td>
</tr>
<tr>
<td>—other</td>
<td>1</td>
</tr>
<tr>
<td>Board room</td>
<td>2</td>
</tr>
<tr>
<td>Boarding house</td>
<td>15</td>
</tr>
<tr>
<td>Cafe, church, dining room</td>
<td>1</td>
</tr>
<tr>
<td>Carpark</td>
<td>30</td>
</tr>
<tr>
<td>Computer room</td>
<td>25</td>
</tr>
<tr>
<td>Court room</td>
<td></td>
</tr>
<tr>
<td>—judicial area</td>
<td>10</td>
</tr>
<tr>
<td>—public seating</td>
<td>1</td>
</tr>
<tr>
<td>Dance floor</td>
<td>0.5</td>
</tr>
<tr>
<td>Dormitory</td>
<td>5</td>
</tr>
<tr>
<td>Early childhood centre</td>
<td>4</td>
</tr>
<tr>
<td>Factory—</td>
<td></td>
</tr>
<tr>
<td>(a) machine shop, fitting shop or like place for cutting, for cutting, grading, finishing or fitting of metals or glass, except in the fabrication of structural steelwork or manufacture of vehicles or bulky products</td>
<td>5</td>
</tr>
<tr>
<td>(b) areas used for fabrication and processing other than those in (a)</td>
<td></td>
</tr>
<tr>
<td>(c) a space in which the layout and natural use of fixed plant or equipment determines the number of persons who will occupy the space during working hours</td>
<td>50</td>
</tr>
<tr>
<td>Area per person determined by the use of the plant or equipment</td>
<td></td>
</tr>
</tbody>
</table>
### Deemed-to-Satisfy Provisions

<table>
<thead>
<tr>
<th>Type of use</th>
<th>m² per person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gymnasium</td>
<td>3</td>
</tr>
<tr>
<td>Hostel, hotel, motel, guest house</td>
<td>15</td>
</tr>
<tr>
<td>Indoor sports stadium—arena</td>
<td>10</td>
</tr>
<tr>
<td>Kiosk</td>
<td>1</td>
</tr>
<tr>
<td>Kitchen, laboratory, laundry</td>
<td>10</td>
</tr>
<tr>
<td>Library—reading space</td>
<td>2</td>
</tr>
<tr>
<td>Library—storage space</td>
<td>30</td>
</tr>
<tr>
<td>Office, including one for typewriting or document copying</td>
<td>10</td>
</tr>
<tr>
<td>Patient care areas</td>
<td>10</td>
</tr>
<tr>
<td>Plant room—ventilation, electrical or other service units</td>
<td>30</td>
</tr>
<tr>
<td>Plant room—boilers or power plant</td>
<td>50</td>
</tr>
<tr>
<td>Reading room</td>
<td>2</td>
</tr>
<tr>
<td>Restaurant</td>
<td>1</td>
</tr>
<tr>
<td>School—general classroom</td>
<td>2</td>
</tr>
<tr>
<td>School—multi-purpose hall</td>
<td>1</td>
</tr>
<tr>
<td>School—staff room</td>
<td>10</td>
</tr>
<tr>
<td>School—trade and practical area</td>
<td>primary</td>
</tr>
<tr>
<td>School—trade and practical area</td>
<td>secondary</td>
</tr>
<tr>
<td>Shop—space for sale of goods—</td>
<td></td>
</tr>
<tr>
<td>(a) at a level entered direct from the open air or any lower level</td>
<td>3</td>
</tr>
<tr>
<td>(b) all other levels</td>
<td>5</td>
</tr>
<tr>
<td>Showroom—display area, covered mall or arcade</td>
<td>5</td>
</tr>
<tr>
<td>Skating rink, based on rink area</td>
<td>1.5</td>
</tr>
<tr>
<td>Spectator stand, audience viewing area:</td>
<td></td>
</tr>
<tr>
<td>—standing viewing area</td>
<td>0.3</td>
</tr>
<tr>
<td>—removable seating</td>
<td>1</td>
</tr>
<tr>
<td>—fixed seating (number of seats)</td>
<td></td>
</tr>
<tr>
<td>—bench seating (450 mm/person)</td>
<td></td>
</tr>
<tr>
<td>Storage space</td>
<td>30</td>
</tr>
<tr>
<td><strong>Swimming pool, based on pool area</strong></td>
<td>1.5</td>
</tr>
</tbody>
</table>
### D1.13 ACCESS AND EGRESS

#### Deemed-to-Satisfy Provisions

<table>
<thead>
<tr>
<th>Type of use</th>
<th>m² per person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch room, transformer room</td>
<td>30</td>
</tr>
<tr>
<td>Telephone exchange</td>
<td>30</td>
</tr>
<tr>
<td>—private</td>
<td></td>
</tr>
<tr>
<td><strong>NSW Table D1.13</strong></td>
<td></td>
</tr>
<tr>
<td>Theatre and public hall</td>
<td>1</td>
</tr>
<tr>
<td>Theatre dressing room</td>
<td>4</td>
</tr>
<tr>
<td>Transport terminal</td>
<td>2</td>
</tr>
<tr>
<td>Workshop — for maintenance staff</td>
<td>30</td>
</tr>
<tr>
<td>—for manufacturing processes As for Factory</td>
<td></td>
</tr>
</tbody>
</table>

**Notes to table:**

Bar standing is the area used by standing patrons and extends not less than 1.5m wide from the outside edge of the bar top for the length of the serving area of the bar.

### D1.14 Measurement of distances

The nearest part of an *exit* means in the case of—

(a) a *fire-isolated stairway*, *fire-isolated passageway*, or *fire-isolated ramp*, the nearest part of the doorway providing access to them; and

(b) a *non-fire-isolated stairway*, the nearest part of the nearest riser; and

(c) a *non-fire-isolated ramp*, the nearest part of the junction of the floor of the ramp and the floor of the *storey*; and

(d) a doorway opening to a road or *open space*, the nearest part of the doorway; and

(e) a *horizontal exit*, the nearest part of the doorway.

### D1.15 Method of measurement

The following rules apply:

(a) In the case of a room that is not a *sole-occupancy unit* in a Class 2 or 3 building or Class 4 part, the distance includes the straight-line measurement from any point on the floor of the room to the nearest part of a doorway leading from it, together with the distance from that part of the doorway to the single *required exit* or point from which travel in different directions to 2 *required exits* is available.

(b) Subject to (d), the distance from the doorway of a *sole-occupancy unit* in a Class 2 or 3 building or a Class 4 part is measured in a straight line to the nearest part of the *required single exit* or point from which travel in different directions to 2 *required exits* is available.

(c) Subject to (d), the distance between *exits* is measured in a straight line between the nearest parts of those *exits*.

(d) Only the shortest distance is taken along a corridor, hallway, external balcony or other path of travel that curves or changes direction.
Deemed-to-Satisfy Provisions

(e) If more than one corridor, hallway, or other internal path of travel connects required exits, the measurement is along the path of travel through the point at which travel in different directions to those exits is available.

(f) If a wall (including a demountable internal wall) that does not bound—
   (i) a room; or
   (ii) a corridor, hallway or the like,
causes a change of direction in proceeding to a required exit, the distance is measured along the path of travel past that wall.

(g) If permanent fixed seating is provided, the distance is measured along the path of travel between the rows of seats.

(h) In the case of a non fire-isolated stairway or non fire-isolated ramp, the distance is measured along a line connecting the nosings of the treads, or along the slope of the ramp, together with the distance connecting those lines across any intermediate landings.

D1.16 Plant rooms and lift motor rooms: Concession

(a) Where a plant room or lift motor room has a floor area—
   (i) not more than 100 m\(^2\), a ladder may be used in lieu of a stairway from each point of egress from the room; or
   (ii) more than 100 m\(^2\) and not more than 200 m\(^2\), and where two or more points of egress are provided from the room, a ladder may be used in lieu of a stairway from all but one of those points.

(b) A ladder permitted under (a)—
   (i) may form part of an exit provided that in the case of a fire-isolated stairway it is contained within the shaft; or
   (ii) may discharge within a storey in which case it must be considered as forming part of the path of travel; and
   (iii) must comply with—
      (A) AS 1657 for a plant room; and
      (B) AS 1735.2 for a lift motor room.
PART D2

CONSTRUCTION OF EXITS

D2.0 Deemed-to-Satisfy Provisions

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirements DP1 to DP9 are satisfied by complying with—
   (i) D1.1 to D1.16, D2.1 to D2.23 and D3.1 to D3.8; and
   (ii) in a building containing an atrium, Part G3; and
   (iii) for theatres, stages and public halls, Part H1.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of—
   (i) D1.1 to D1.16, D2.1 to D2.23 and D3.1 to D3.8; and
   (ii) in a building containing an atrium, Part G3; and
   (iii) for theatres, stages and public halls, Part H1,
   the relevant Performance Requirements must be determined in accordance with A0.10.

NSW D2.1

D2.1 Application of Part

Except for—

(a) D2.13, D2.14(a) and D2.16, the Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a sole-occupancy unit in a Class 3 building; and

(b) D2.13, D2.14(a), D2.16 and D2.18, the Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a sole-occupancy unit in a Class 2 building or Class 4 part.

D2.2 Fire-isolated stairways and ramps

A stairway or ramp (including any landings) that is required to be within a fire-resisting shaft must be constructed—

(a) of non-combustible materials; and

(b) so that if there is local failure, it will not cause structural damage to, or impair the fire-resistance of, the shaft.

D2.3 Non-fire-isolated stairways and ramps

In a building having a rise in storeys of more than 2, required stairs and ramps (including landings and any supporting building elements) which are not required to be within a fire-resisting shaft, must be constructed according to D2.2, or only of—

(a) reinforced or prestressed concrete; or

(b) steel in no part less than 6 mm thick; or

(c) timber that—
   (i) has a finished thickness of not less than 44 mm; and
D2.3 ACCESS AND EGRESS

(ii) has an average density of not less than 800 kg/m³ at a moisture content of 12%; and
(iii) has not been joined by means of glue unless it has been laminated and glued with resorcinol formaldehyde or resorcinol phenol formaldehyde glue.

D2.4 Separation of rising and descending stair flights

If a stairway serving as an exit is required to be fire-isolated—
(a) there must be no direct connection between—
   (i) a flight rising from a storey below the lowest level of access to a road or open space; and
   (ii) a flight descending from a storey above that level; and
(b) any construction that separates or is common to the rising and descending flights must be—
   (i) non-combustible; and
   (ii) smoke proof in accordance with Clause 2 of Specification C2.5.

D2.5 Open access ramps and balconies

Where an open access ramp or balcony is provided to meet the smoke hazard management requirements of Table E2.2a, it must—
(a) have ventilation openings to the outside air which—
   (i) have a total unobstructed area not less than the floor area of the ramp or balcony; and
   (ii) are evenly distributed along the open sides of the ramp or balcony; and
(b) not be enclosed on its open sides above a height of 1 m except by an open grille or the like having a free air space of not less than 75% of its area.

D2.6 Smoke lobbies

A smoke lobby required by D1.7 must—
(a) have a floor area not less than 6 m²; and
(b) be separated from the occupied areas in the storey by walls which are impervious to smoke, and—
   (i) have an FRL of not less than 60/60/– (which may be fire-protective grade plasterboard, gypsum block with set plaster, face brickwork, glass blocks or glazing); and
   (ii) extend from slab to slab, or to the underside of a ceiling with a resistance to the incipient spread of fire of 60 minutes which covers the lobby; and
   (iii) any construction joints between the top of the walls and the floor slab, roof or ceiling must be smoke sealed with intumescent putty or other suitable material; and
(c) at any opening from the occupied areas, have smoke doors complying with Clause 3 of Specification C3.4 except that the smoke sensing device need only be located on the approach side of the opening; and
(d) be pressurised as part of the exit if the exit is required to be pressurised under E2.2.
D2.7  Installations in exits and paths of travel

(a)  Access to service *shafts* and services other than to fire-fighting or detection equipment as permitted in the *Deemed-to-Satisfy Provisions* of Section E, must not be provided from a *fire-isolated stairway*, *fire-isolated passageway* or *fire-isolated ramp*.

(b)  An opening to any chute or duct intended to convey hot products of combustion from a boiler, incinerator, fireplace or the like, must not be located in any part of a *required exit* or any corridor, hallway, lobby or the like leading to a *required exit*.

(c)  Gas or other fuel services must not be installed in a *required exit*.

(d)  Services or equipment comprising—
   (i)  electricity meters, distribution boards or ducts; or
   (ii)  central telecommunications distribution boards or equipment; or
   (iii)  electrical motors or other motors serving equipment in the building,
   may be installed in—
   (iv)  a *required exit*, except for fire-isolated *exits* specified in (a); or
   (v)   in any corridor, hallway, lobby or the like leading to a *required exit*, if the services or equipment are enclosed by *non-combustible* construction or a *fire-protective covering* with doorways or openings suitably sealed against smoke spreading from the enclosure.

(e)  Electrical wiring may be installed in a fire-isolated *exit* if the wiring is associated with—
   (i)  a lighting, detection, or pressurisation system serving the *exit*; or
   (ii)  a security, surveillance or management system serving the *exit*; or
   (iii)  an intercommunication system or an audible or visual alarm system in accordance with D2.22; or
   (iv)  the monitoring of hydrant or sprinkler isolating valves.

D2.8  Enclosure of space under stairs and ramps

(a)  *Fire-isolated stairways and ramps*—If the space below a *required fire-isolated stairway* or *fire-isolated ramp* is within the fire-isolated *shaft*, it must not be enclosed to form a cupboard or similar enclosed space.

(b)  *Non fire-isolated stairways and ramps*—The space below a *required non fire-isolated stairway* (including an external stairway) or *non fire-isolated ramp* must not be enclosed to form a cupboard or other enclosed space unless—
   (i)  the enclosing walls and ceilings have an FRL of not less than 60/60/60; and
   (ii)  any access doorway to the enclosed space is fitted with a *self-closing* 60/30 fire door.

D2.9  Width of stairways

(a)  The *required* width of a stairway must—
   (i)  be measured clear of all obstructions such as handrails, projecting parts of balustrades or other barriers and the like; and
D2.9

ACCESS AND EGRESS

(ii) extend without interruption, except for ceiling cornices, to a height not less than 2 m vertically above a line along the nosings of the treads or the floor of the landing.

(b) A required stairway that exceeds 2 m in width is counted as having a width of only 2 m unless it is divided by a handrail, balustrade or other barrier continuous between landings and each division is less than 2 m wide.

D2.10 Pedestrian ramps

(a) A fire-isolated ramp may be substituted for a fire-isolated stairway if the construction enclosing the ramp and the width and ceiling height comply with the requirements for a fire-isolated stairway.

(b) A ramp serving as a required exit must—
   (i) where the ramp is also serving as an accessible ramp under Part D3, be in accordance with AS 1428.1; or
   (ii) in any other case, have a gradient not steeper than 1:8.

(c) The floor surface of a ramp must have a non-slip finish.

D2.11 Fire-isolated passageways

(a) The enclosing construction of a fire-isolated passageway must have an FRL when tested for a fire outside the passageway in another part of the building of—
   (i) if the passageway discharges from a fire-isolated stairway or ramp—not less than that required for the stairway or ramp shaft; or
   (ii) in any other case—not less than 60/60/60.

(b) Notwithstanding (a)(ii), the top construction of a fire-isolated passageway need not have an FRL if the walls of the fire-isolated passageway extend to the underside of—
   (i) a non-combustible roof covering; or
   (ii) a ceiling having a resistance to the incipient spread of fire of not less than 60 minutes separating the roof space or ceiling space in all areas surrounding the passageway within the fire compartment.

D2.12 Roof as open space

If an exit discharges to a roof of a building, the roof must—

(a) have an FRL of not less than 120/120/120; and

(b) not have any rooflights or other openings within 3 m of the path of travel of persons using the exit to reach a road or open space.

D2.13 Goings and risers

A stairway must have—

(a) not more than 18 nor less than 2 risers in each flight; and

(b) except as permitted by (i), going (G), riser (R) and quantity (2R + G) in accordance with Table D2.13; and

(c) except as permitted by (i), goings and risers that are constant throughout in one flight; and
(d) risers which do not have any openings that would allow a 125 mm sphere to pass through between the treads; and

(e) treads which have a non-slip finish or an adequate non-skid strip near the edge of the nosings; and

(f) treads of solid construction (not mesh or other perforated material) if the stairway is more than 10 m high or connects more than 3 storeys; and

(g) in a Class 9b building—not more than 36 risers in consecutive flights without a change in direction of at least 30°; and

(h) in the case of a required stairway, no winders in lieu of a landing; and

(i) in the case of a non-required stairway—

\[ \text{NSW D2.13(j),(k),(l)} \]

(i) not more than 3 winders in lieu of a quarter landing; and

(ii) not more than 6 winders in lieu of a half landing; and

(iii) the going of all straight treads must be constant throughout the same flight; and

(iv) the going of all winders in lieu of a quarter or half landing may vary from the going of the straight treads within the same flight provided that the going of all such winders is constant.

**Table D2.13 Risers and Going Dimensions (mm)**

<table>
<thead>
<tr>
<th></th>
<th>Riser (R)</th>
<th>Going (G)</th>
<th>Quantity (2R+G)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Max</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>Public stairways</td>
<td>190</td>
<td>115</td>
<td>355</td>
</tr>
<tr>
<td>Private stairways(a)</td>
<td>190</td>
<td>115</td>
<td>355</td>
</tr>
</tbody>
</table>

**Note:**

(a) Private stairways are—

(i) Stairways in a sole-occupancy unit in a Class 2 building or Class 4 part; and

(ii) In any building, stairways which are not part of a required exit and to which the public do not normally have access.

(b) The going in tapered treads (except winders in lieu of a quarter or half landing) in a curved or spiral stairway is measured—
**D2.13**

<table>
<thead>
<tr>
<th></th>
<th>Riser (R)</th>
<th>Going (G)(b)</th>
<th>Quantity (2R+G)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Max</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>(i)</td>
<td>270 mm in from the outer side of the unobstructed width of the stairway if the stairway is less than 1 m wide (applicable to a non-required stairway only); and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ii)</td>
<td>270 mm from each side of the unobstructed width of the stairway if the stairway is 1 m wide or more.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**D2.14 Landings**

In a stairway—

(a) landings having a maximum gradient of 1:50 may be used in any building to limit the number of risers in each *flight* and each landing must—

(i) be not less than 750 mm long, and where this involves a change in direction, the length is measured 500 mm from the inside edge of the landing; and

(ii) have a non-slip finish throughout or an adequate non-skid strip near the edge of the landing where it leads to a *flight* below; and

(b) in a Class 9a building—

(i) the area of any landing must be sufficient to move a stretcher, 2 m long and 600 mm wide, at a gradient not more than the gradient of the stairs, with at least one end of the stretcher on the landing while changing direction between *flights*; or

(ii) the stair must have a change of direction of 180°, and the landing a clear width of not less than 1.6 m and a clear length of not less than 2.7 m.

**D2.15 Thresholds**

The threshold of a doorway must not incorporate a step or ramp at any point closer to the doorway than the width of the door leaf unless—

(a) in *patient care areas* in a Class 9a *health-care building*, the door sill is not more than 25 mm above the finished floor level to which the doorway opens; or

(b) in a Class 9c *aged care building*, a ramp is provided with a maximum gradient of 1 in 8 for a maximum height of 25 mm over the threshold; or

(c) in other cases—

(i) the doorway opens to a road or *open space*, external stair landing or external balcony; and

(ii) the door sill is not more than 190 mm above the finished surface of the ground, balcony, or the like, to which the doorway opens.

**D2.16 Balustrades or other barriers**

(a) A continuous balustrade or other barrier must be provided along the side of any roof to which public access is provided, any stairway or ramp, any floor, corridor, hallway, balcony, verandah, *mezzanine*, access bridge or the like and along the side of any path of access to a building, if—
D2.16

ACCESS AND EGRESS

(i) it is not bounded by a wall; and
(ii) its level above the surface beneath, is more than—
   (A) 4 m where it is possible for a person to fall through an openable window; or
   (B) 1 m in any other case,

except at the perimeter of a stage, rigging loft, loading dock or areas referred to in D2.18.

(b) A balustrade or other barrier in—
   (i) fire-isolated stairways, fire-isolated ramps and other areas used primarily for
       emergency purposes, excluding external stairways and external ramps; and
   (ii) Class 7 (other than carparks) and Class 8 buildings and parts of buildings
       containing those classes,

must comply with (f) and (g)(i).

(c) A balustrade or other barrier in stairways and ramps, other than those covered in (b),
    must comply with (f) and (g)(ii).

(d) A balustrade or other barrier along the side of a horizontal or near horizontal surface such
    as a—
   (i) roof to which public access is provided and any path of access to a building; and
   (ii) floor, corridor, hallway, balcony, verandah, mezzanine, access bridge or the like,
       must comply with (f) and (g)(ii).

(e) A balustrade or other barrier in front of fixed seating on a mezzanine or balcony within an
    auditorium in a Class 9b building must comply with (f)(iv) and (g)(ii).

(f) The height of a balustrade or other barrier must be constructed in accordance with the
    following:
   (i) The height is not less than 865 mm above the nosings of the stair treads or the
       floor of a ramp or other path of travel with a gradient not less than 1:20.
   (ii) The height is not less than—
       (A) 1 m above the floor of any access path, balcony, landing or the like where the
           path of travel has a gradient less than 1:20; or
       (B) 865 mm above the floor of a landing to a stair or ramp where the balustrade or
           other barrier is provided along the inside edge of the landing and does not
           exceed a length of 500 mm; or
       (C) 865 mm above the floor beneath an openable window.
   (iii) A transition zone may be incorporated where the balustrade or other barrier height
       changes from 865 mm on the stair flight or ramp to 1 m at the landing.

NSW D2.16(f)(iv) and (v)

(iv) For a balustrade or other barrier provided under (e), the height above the floor
    must be not less than—
    (A) 1 m; or
    (B) 700 mm and a horizontal projection extends not less than 1 m outwards from
        the top of the balustrade.

(g) Openings in a balustrade or other barrier must be constructed in accordance with the
    following:
D2.16 ACCESS AND EGRESS

(i) For a balustrade or other barrier provided under (b)—
   (A) the space between balusters or the width of any opening (including any openable window or panel) must not be more than 300 mm; or
   (B) where rails are used, a rail must be provided at a height of not more than 150 mm above the nosings of the stair treads or the floor of the landing, balcony or the like and the space between rails must not be more than 460 mm.

(ii) For a balustrade or other barrier other than those provided under (b)—
   (A) any opening does not permit a 125 mm sphere to pass through it and for stairs, the space is measured above the nosings; and
   (B) for floors more than 4 m above the surface beneath, any horizontal or near horizontal elements between 150 mm and 760 mm above the floor must not facilitate climbing.

D2.17 Handrails

(a) Except for handrails referred to in D2.18, handrails must be—
   (i) located along at least one side of the ramp or flight; and
   (ii) located along each side if the total width of the stairway or ramp is 2 m or more; and
   (iii) not more than 2 m apart in the case of intermediate handrails; and
   (iv) in a Class 9b building used as a primary school—
       (A) have one handrail fixed at a height of not less than 865 mm; and
       (B) have a second handrail fixed at a height between 665 mm and 750 mm, measured above the nosings of stair treads and the floor surface of the ramp, landing or the like; and
   (v) in any other case, fixed at a height of not less than 865 mm above the nosings of stair treads and the floor surface of the ramp, landing, or the like; and
   (vi) continuous between stair flight landings and have no obstruction on or above them that will tend to break a hand-hold.

(b) Handrails—
   (i) in a Class 9a health-care building must be provided along at least one side of every passageway or corridor used by patients, and must be—
       (A) fixed not less than 50 mm clear of the wall; and
       (B) where practicable, continuous for their full length.
   (ii) in a Class 9c aged care building must be provided along both sides of every passageway or corridor used by residents, and must be—
       (A) fixed not less than 50 mm clear of the wall; and
       (B) where practicable, continuous for their full length.

(c) Handrails required to assist people with disabilities must be provided in accordance with D3.3(a)(ii).
D2.18 Fixed platforms, walkways, stairways and ladders

A fixed platform, walkway, stairway, ladder and any going and riser, landing, handrail, balustrade or other barrier attached thereto may comply with AS 1657 in lieu of D2.13, D2.14, D2.16 and D2.17 if it only serves:

(a) machinery rooms, boiler houses, lift-motor rooms, plant-rooms, and the like; or
(b) non-habitable rooms, such as attics, storerooms and the like that are not used on a frequent or daily basis in the internal parts of a sole-occupancy unit in a Class 2 building or Class 4 part.

D2.19 Doorways and doors

(a) A doorway in a resident use area of a Class 9c aged care building must not be fitted with—
   (i) a sliding fire door; or
   (ii) a sliding smoke door; or
   (iii) a revolving door; or
   (iv) a roller shutter door; or
   (v) a tilt-up door.

(b) A doorway serving as a required exit or forming part of a required exit, or a doorway in a patient care area of a Class 9a health-care building—
   (i) must not be fitted with a revolving door; and
   (ii) must not be fitted with a roller shutter or tilt-up door unless—
      (A) it serves a Class 6, 7 or 8 building or part with a floor area not more than 200 m²; and
      (B) the doorway is the only required exit from the building or part; and
      (C) it is held in the open position while the building or part is lawfully occupied; and
   (iii) must not be fitted with a sliding door unless—
      (A) it leads directly to a road or open space; and
      (B) the door is able to be opened manually under a force of not more than 110 N; and
   (iv) if fitted with a door which is power-operated—
      (A) it must be able to be opened manually under a force of not more than 110 N if there is a malfunction or failure of the power source; and
      (B) if it leads directly to a road or open space it must open automatically if there is a power failure to the door or on the activation of a fire or smoke alarm anywhere in the fire compartment served by the door.

NSW D2.19(b)(v)

D2.20 Swinging doors

A swinging door in a required exit or forming part of a required exit—

(a) must not encroach—
D2.20 ACCESS AND EGRESS

(i) at any part of its swing by more than 500 mm on the required width (including any landings) of a required—

(A) stairway; or

(B) ramp; or

(C) passageway,

if it is likely to impede the path of travel of the people already using the exit; and

(ii) when fully open, by more than 100 mm on the required width of the required exit, and

the measurement of encroachment in each case is to include door handles or other furniture or attachments to the door; and

(b) must swing in the direction of egress unless—

(i) it serves a building or part with a floor area not more than 200 m², it is the only required exit from the building or part and it is fitted with a device for holding it in the open position; or

(ii) it serves a sanitary compartment or airlock (in which case it may swing in either direction); and

(c) must not otherwise impede the path or direction of egress.

D2.21 Operation of latch

A door in a required exit, forming part of a required exit or in the path of travel to a required exit must be readily openable without a key from the side that faces a person seeking egress, by a single hand downward action or pushing action on a single device which is located between 900 mm and 1.2 m from the floor, except if it—

(a) serves a vault, strong-room, sanitary compartment, or the like; or

(b) serves only, or is within—

(i) a sole-occupancy unit in a Class 2 or 3 building or a Class 4 part; or

(ii) a sole-occupancy unit with a floor area not more than 200 m² in a Class 5, 6, 7 or 8 building; or

(iii) a space which is otherwise inaccessible to persons at all times when the door is locked; or

(c) serves an occupancy where special arrangements for security are necessary and it can be immediately unlocked—

(i) by operating a fail-safe control switch, not contained within a protective enclosure, to actuate a device to unlock the door; or

(ii) by hand by a person or persons, specifically nominated by the owner, properly instructed as to the duties and responsibilities involved and available at all times when the building is lawfully occupied so that persons in the building or part may immediately escape if there is a fire; or

(d) is fitted with a fail-safe device which automatically unlocks the door upon the activation of any sprinkler system complying with Specification E1.5 or smoke or heat detector system installed throughout the building; or

(e) serves a storey or room accommodating more than 100 persons, determined in accordance with D1.13, in a Class 9b building, other than a school, an early childhood...
centre or a building used for religious purposes, in which case it must be readily openable—
(i) without a key from the side that faces a person seeking egress; and
(ii) by a single hand pushing action on a single device such as a panic bar located between 900 mm and 1.2 m from the floor; and
(iii) where a two-leaf door is fitted, the provisions of (i) and (ii) need only apply to one door leaf if the appropriate requirements of D1.6 are satisfied by the opening of that one leaf; or
(f) is in a Class 9a or 9c building and—
(i) is one leaf of a two-leaf door complying with D1.6(f)(i) or D1.6(f)(iv) provided that it is not held closed by a locking mechanism and is readily openable; and
(ii) the door is not required to be a fire door or smoke door.

NSW D2.21(g) Vic D2.21(g)

D2.22 Re-entry from fire-isolated exits

(a) Doors of a fire-isolated exit in the following buildings must not be locked from the inside:
   (i) A Class 9a health-care building; or
   (ii) A Class 9c aged care building; or
   (iii) A building more than 25 m in effective height.

(b) Doors required by (a) not to be locked, may be locked if they are automatically unlocked by a fail-safe device upon the activation of a fire alarm and—
   (i) on at least every fourth storey, the doors are not able to be locked and a sign is fixed on such doors stating that re-entry is available; or
   (ii) an intercommunication system, or an audible or visual alarm system, operated from within the enclosure is provided near the doors and a sign is fixed adjacent to such doors explaining its purpose and method of operation.

D2.23 Signs on doors

(a) A sign, to alert persons that the operation of certain doors must not be impaired, must be installed where it can readily be seen on, or adjacent to, a—
   (i) 
      (A) required fire door providing direct access to a fire isolated exit, except a door providing direct egress from a sole-occupancy unit in a Class 2 or 3 building or Class 4 part; and
      (B) required smoke door,
      on the side of the door that faces a person seeking egress; and
   (ii) 
      (A) fire door forming part of a horizontal exit; and
      (B) smoke door that swings in both directions; and
      (C) door leading from a fire isolated exit to a road or open space,
      on each side of the door.
(b) A sign referred to in (a) must be in capital letters not less than 20 mm high in a colour contrasting with the background and state—

(i) for an automatic door held open by an automatic hold-open device—

“FIRE (SMOKE) DOOR—DO NOT OBSTRUCT”; or

(ii) for a self-closing door—

“FIRE (SMOKE) DOOR
DO NOT OBSTRUCT
DO NOT KEEP OPEN”; or

NSW D2.101

(iii) for a door discharging from a fire-isolated exit—

“FIRE SAFETY DOOR—DO NOT OBSTRUCT”.
Deemed-to-Satisfy Provisions

D3.0 Deemed-to-Satisfy Provisions

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirements DP1 to DP9 are satisfied by complying with—
   (i) D1.1 to D1.16, D2.1 to D2.23 and D3.1 to D3.8; and
   (ii) in a building containing an atrium, Part G3; and
   (iii) for theatres, stages and public halls, Part H1.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of—
   (i) D1.1 to D1.16, D2.1 to D2.23 and D3.1 to D3.8; and
   (ii) in a building containing an atrium, Part G3; and
   (iii) for theatres, stages and public halls, Part H1,
   the relevant Performance Requirements must be determined in accordance with A0.10.

D3.1 Application of Part

SA D3.1
The Deemed-to-Satisfy Provisions of this Part apply to Class 3, 5, 6, 7, 8, 9 or 10a buildings other than—
(a) a Class 10a building associated with a Class 2 building or Class 4 part of a building; or
(b) a Class 7a building associated with a Class 2 building.

D3.2 General building access requirements

(a) Buildings must be accessible as required by Table D3.2.
(b) Parts of buildings required to be accessible must comply with this Part and AS 1428.1.
(c) External access to a building required to be accessible must be in accordance with this Part and AS 1428.1, and must be provided—
   (i) from the allotment boundary at the main points of entry; and
   (ii) from any accessible carparking space on the allotment in accordance with D3.5; and
   (iii) from any adjacent and associated accessible building on the allotment; and
   (iv) through the principal public entrance.

SA Table D3.2 Class 2
### Table D3.2 REQUIREMENTS FOR ACCESS FOR PEOPLE WITH DISABILITIES

<table>
<thead>
<tr>
<th>Class of building</th>
<th>Access requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class 3 building or group of buildings</strong></td>
<td>(a) Common areas and unique features and services</td>
</tr>
<tr>
<td></td>
<td>(i) the common areas on the storey incorporating the principal public entrance; and</td>
</tr>
<tr>
<td></td>
<td>(ii) any facility <em>required</em> to be accessible; and</td>
</tr>
<tr>
<td></td>
<td>(iii) not less than 1 of each room or area in which a unique service is provided or which has a unique feature.</td>
</tr>
<tr>
<td></td>
<td>(b) If the building or group of buildings contains <em>sole-occupancy units</em>—</td>
</tr>
<tr>
<td></td>
<td>for 1 to 20 units To and within 1 <em>sole-occupancy unit.</em></td>
</tr>
<tr>
<td></td>
<td>for more than 20 but not more than 45 units To and within 2 <em>sole-occupancy units.</em></td>
</tr>
<tr>
<td></td>
<td>for each additional 30 units or part thereof To and within 1 additional <em>sole-occupancy unit.</em></td>
</tr>
<tr>
<td></td>
<td>Where 2 or more <em>accessible sole-occupancy units</em> are <em>required</em>, they must be distributed as equitably as practical so as to be representative of the range of amenity available.</td>
</tr>
<tr>
<td></td>
<td>(c) If accommodation is provided for more than 10 persons, other than in <em>sole-occupancy units</em>—</td>
</tr>
<tr>
<td></td>
<td>up to 49 beds To 2 beds.</td>
</tr>
<tr>
<td></td>
<td>more than 49 but not more than 99 beds To 4 beds.</td>
</tr>
<tr>
<td></td>
<td>more than 99 beds To 6 beds.</td>
</tr>
<tr>
<td><strong>Class 5, 6, 7 and 8</strong></td>
<td>To and within—</td>
</tr>
<tr>
<td></td>
<td>(i) the entrance floor; and</td>
</tr>
<tr>
<td></td>
<td>(ii) any other floor to which vertical access by way of a ramp, step ramp or kerb ramp complying with AS 1428.1 or a passenger lift is provided.</td>
</tr>
<tr>
<td><strong>Class 9a health-care</strong></td>
<td>To and within all areas normally used by the public, patients or staff.</td>
</tr>
<tr>
<td><strong>Class 9b</strong></td>
<td>To and within—</td>
</tr>
</tbody>
</table>
## Deemed-to-Satisfy Provisions

<table>
<thead>
<tr>
<th>Class of building</th>
<th>Access requirements</th>
</tr>
</thead>
</table>
| An assembly building not being a school or an early childhood centre | (i) every auditorium but not to every tier or platform; and  
(ii) the main entrance to the auditorium; and  
(iii) if fixed seating is provided, not less than 1 wheelchair space for each 100 persons or part thereof, with a minimum of 2 spaces, up to 200 persons, and an additional space for each additional 200 persons or part thereof by which the number of persons exceeds 200; and  
(iv) all other areas normally used by the occupants. |
| A school | To and within—  
(i) all areas normally used by the occupants, including staff, students and visitors, if no alternative similar facilities to those provided in that area are accessible elsewhere in the school; and  
(ii) any other floor to which vertical access by way of a ramp, step ramp or kerb ramp complying with AS 1428.1, or a passenger lift is provided. |
| An early childhood centre | To and within all areas normally used by the occupants including staff, children and visitors. |
| Aged care buildings or group of buildings being a Class 9c building | To and within—  
(i) the common areas on the storey incorporating the principal public entrance, excluding resident use sanitary facilities, utility rooms, store rooms and the like; and  
(ii) any facility required to be accessible; and  
(iii) not less than 1 of each room or area in which a unique service is provided or which has a unique feature. |
| (b) If the building or group of buildings contains sole-occupancy units— | for 1 to 20 units To and within 1 sole-occupancy unit. |
### Deemed-to-Satisfy Provisions

<table>
<thead>
<tr>
<th>Class of building</th>
<th>Access requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>for more than 20 but not more than 45 units</td>
<td>To and within 2 sole-occupancy units.</td>
</tr>
<tr>
<td>for each additional 30 units or part thereof</td>
<td>To and within 1 additional sole-occupancy unit.</td>
</tr>
<tr>
<td>Where 2 or more accessible sole-occupancy units are required, they must be distributed as equitably as practical so as to be representative of the range of amenity available.</td>
<td></td>
</tr>
</tbody>
</table>

(c) If accommodation is provided for more than 10 persons, other than in sole-occupancy units—

| up to 49 beds | To 2 beds. |
| more than 49 but not more than 99 beds | To 4 beds. |
| more than 99 beds | To 6 beds. |

**Class 10a**

To and within building containing any of the following:

(i) Sanitary facilities, showers, handbasins, changeroom facilities or the like.

(ii) A unique service or feature, such as a public shelter or the like, which is located in an accessible area.

**Notes:**

For the purpose of this Table:

1. A unique service or feature, unless otherwise indicated, includes a TV room, dining room, lounge room, common laundry, recreation area, individual shop, eating area, public viewing area, ticket purchasing, lunchroom, and the like.

2. A double bed counts as 1 bed.

3. A common area does not include an internal space such as a corridor or lobby that is not an accessway.

### D3.3 Parts of buildings to be accessible

(a) In a building or part of a building **required by Table D3.2** to be accessible—

(i) access must be provided—

(A) to any sanitary compartment **required** for the use of people with disabilities; and

(B) to areas normally used by the occupants, excluding any plantroom, commercial kitchen, cleaners’ store room, maintenance accessway, rigging loft, or the like; and
Deemed-to-Satisfy Provisions

(ii) where access is required to the entrance floor but not to other levels and a passenger lift is not installed, at least one required ramp must have handrails complying with Clause 5.3(e) of AS 1428.1 or at least one required stairway must comply with Clause 9 of AS 1428.1; and

(A) * * * * *
(B) * * * * *

(iii) every passenger lift must comply with E3.6.

(b) A path of travel required to be accessible must not include a stairway, turnstile, revolving door, escalator or other impediment which would prevent a person in a wheelchair using it.

(c) Access, finishes and fittings, including passageways, ramps, step ramps or kerb ramps, signs, doorways and other parts of the building required by this Part must comply with the provisions of AS 1428.1.

D3.4 Concessions

It is not necessary to provide access for people with disabilities to—

(a) more than 30% of the public space in a restaurant, cafe, bar, function room, or the like, in a Class 6 or Class 9b building; or

(b) a mezzanine; or

(c) a space not regarded as a storey by definition; or

(d) any area if access would be inappropriate because of the particular purpose for which the area is used.

SA D3.4(e)

D3.5 Carparking

Carparking spaces for people with disabilities—

(a) subject to (b), must be provided in accordance with Table D3.5 in—

(i) a carpark required to be accessible; and

(ii) a carparking area on the same allotment as a building required to be accessible; and

(b) need not be provided in a carpark or carparking area where a parking service is provided and direct access to any of the carparking spaces is not available to the general public or occupants; and

(c) subject to (d), must comply with AS 2890.1; and

(d) are not required to be signed where there is a total of not more than 5 carparking spaces, so as to restrict the use of the carparking space only for people with disabilities.
### Deemed-to-Satisfy Provisions

#### Table D3.5 CARPARKING SPACES FOR PEOPLE WITH DISABILITIES

<table>
<thead>
<tr>
<th>Class of building to which the carpark or carparking area is associated</th>
<th>Number of carparking spaces required for people with disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class 3</strong></td>
<td></td>
</tr>
<tr>
<td>(a) Boarding house, guest house, hostel, lodging house, backpackers accommodation, or the residential part of a hotel or motel.</td>
<td>To be calculated by multiplying the total number of carparking spaces by the—</td>
</tr>
<tr>
<td>(i) percentage of accessible sole-occupancy units to the total number of sole-occupancy units; or</td>
<td></td>
</tr>
<tr>
<td>(ii) percentage of beds to which access for people with disabilities is provided to the total number of beds provided.</td>
<td></td>
</tr>
<tr>
<td>(b) Residential part of a school, accommodation for the aged, disabled or children, residential part of a health-care building which accommodates members of staff or the residential part of a detention centre.</td>
<td>1 space for every 100 carparking spaces or part thereof.</td>
</tr>
<tr>
<td><strong>Class 5, 7, 8 and 9c</strong></td>
<td>1 space for every 100 carparking spaces or part thereof.</td>
</tr>
<tr>
<td><strong>Class 6</strong></td>
<td></td>
</tr>
<tr>
<td>(a) Up to 1000 carparking spaces; and</td>
<td>1 space for every 50 carparking spaces or part thereof.</td>
</tr>
<tr>
<td>(b) for each additional 100 carparking spaces or part thereof in excess of 1000 carparking spaces.</td>
<td>1 space.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Class of building to which the carpark or carparking area is associated</strong></th>
<th><strong>Number of carparking spaces required for people with disabilities</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class 9a</strong></td>
<td></td>
</tr>
<tr>
<td>(a) Hospital (non-outpatient area)</td>
<td>1 space for every 100 carparking spaces or part thereof.</td>
</tr>
<tr>
<td>(b) Hospital (outpatient area)—</td>
<td></td>
</tr>
<tr>
<td>(i) up to 1000 carparking spaces; and</td>
<td>1 space for every 50 carparking spaces or part thereof.</td>
</tr>
<tr>
<td>(ii) for each additional 100 carparking spaces or part thereof in excess of 1000 carparking spaces.</td>
<td>1 space.</td>
</tr>
<tr>
<td>(c) Nursing home</td>
<td>1 space for every 100 carparking spaces or part thereof.</td>
</tr>
</tbody>
</table>
D3.5  Access and Egress

Deemed-to-Satisfy Provisions

<table>
<thead>
<tr>
<th>Class of building to which the carpark or carparking area is associated</th>
<th>Number of carparking spaces required for people with disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>(d) Clinic or day surgery not forming part of a hospital.</td>
<td>1 space for every 100 carparking spaces or part thereof.</td>
</tr>
<tr>
<td>Class 9b</td>
<td></td>
</tr>
<tr>
<td>(a) School</td>
<td>1 space for every 100 carparking spaces or part thereof.</td>
</tr>
<tr>
<td>(b) Other assembly buildings—</td>
<td></td>
</tr>
<tr>
<td>(i) up to 1000 carparking spaces; and</td>
<td>1 space for every 50 carparking spaces or part thereof.</td>
</tr>
<tr>
<td>(ii) for each additional 100 carparking spaces or part thereof in excess of 1000 carparking spaces.</td>
<td>1 space.</td>
</tr>
</tbody>
</table>

D3.6  Identification of accessible facilities, services and features

In every building required to be accessible, clear and legible Braille and tactile signage complying with Specification D3.6 and incorporating the international symbol of access or deafness or other symbol as appropriate, in accordance with AS 1428.1 must identify—

(a) each—
   (i) sanitary facility; and
   (ii) accessible space with a hearing augmentation system; and
(b) where an entrance or lift is not accessible, identify each accessible—
   (i) entrance; and
   (ii) lift or bank of lifts, and

the path of travel from the principal public entrance to these features and facilities where their location is not apparent to the building occupant.

D3.7  Hearing augmentation

(a) Where an inbuilt amplification system, other than one used for emergency warning purposes only, is installed, a hearing augmentation system complying with AS 1428.1 must be provided in the following locations:

   (i) In any conference room, meeting room or the like with a floor area of more than 100 m².
   (ii) In any room used for judicatory purposes.
   (iii) In any auditorium in a Class 9b building, equitably distributed and to not less than 15% of the floor area.
   (iv) At any ticket office, tellers booth, reception area or the like where the public is screened from the service provider.
Deemed-to-Satisfy Provisions

(b) In a Class 9b building, any screen or scoreboard capable of displaying public announcements, must be capable of supplementing any public address system, other than a public address system used for emergency warning purposes only.

D3.8 Tactile indicators

(a) For a building required to be accessible, tactile ground surface indicators must be provided to warn people with a vision impairment that they are approaching—

(i) if used by the public—

(A) a stairway; and
(B) an escalator; and
(C) a travelator; and
(D) a ramp other than a step ramp and kerb ramp; and

(ii) in the absence of a suitable barrier—

(A) an overhead obstruction less than 2 m above floor level, other than a doorway; and
(B) a path of travel meeting a vehicular way adjacent to a principal public entrance to a building, if there is no kerb or kerb ramp at that point.

(b) Tactile ground surface indicators required by (a) must be Type B indicators in accordance with AS 1428.4.

(c) A hostel for the aged, nursing home for the aged, a residential aged care building or a Class 9c aged care building, need not comply with (a)(i) if handrails incorporating a raised dome button in accordance with AS 1428.1 are provided to warn people with impaired vision that they are approaching a stairway or ramp.
1. **Scope**

This Specification contains the requirements to allow non-required stairways, ramps or escalators to connect any number of storeys in a Class 5 or 6 building. The requirements do not apply in an atrium or outside a building.

2. **Requirements**

An escalator, moving walkway or non-required non-fire-isolated stairway or pedestrian ramp must comply with the following:

(a) The escalator, walkway, stairway or ramp must be bounded by a shaft of:

   (i) construction with an FRL of not less than 120/120/120 if loadbearing or -/120/120 if non-loadbearing and if of lightweight construction must comply with Specification C1.8; or

   (ii) glazed construction with an FRL of not less than -/60/30 protected by a wall wetting system in accordance with Clause 2.4 of Specification G3.8.

(b) The void of each non-required stairway, ramp or escalator must not connect more than 2 storeys.

(c) Rising and descending escalators, walkways, stairways and ramps within one shaft must be separated by construction with an FRL of not less than -/60/30.

(d) Openings into the shaft must be protected by fire doors with an FRL not less than -/60/30.

(e) When the fire door is in the closed position, the floor or any covering over the floor beneath the fire door must not be combustible.

(f) Fire doors must be fitted with smoke seals and the assembly must be tested in accordance with AS 1530.4.

(g) Fire doors must be—

   (i) closed and locked for security reasons; or

   (ii) held open and be automatic closing.

(h) Smoke detectors must be installed on both sides of the opening, not more than 1.5 m horizontal distance from the opening.

(i) In the closed position, fire doors must be openable on a single hand downward action or horizontal pushing action on a single device within the shaft and by key only from outside the shaft.
Deemed-to-Satisfy Provision

(j) A warning sign must be displayed where it can readily be seen outside the *shaft* near all fire doors opening to the *shaft*. The sign must comply with the details and dimensions of Figure 2.

Figure 2 WARNING SIGN FOR NON-REQUIRED STAIRWAY, RAMP OR ESCALATOR

<table>
<thead>
<tr>
<th>DO NOT USE THIS STAIRWAY IF THERE IS A FIRE</th>
<th>=20 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>Do not use this stairway if there is a fire</td>
<td>=16 mm</td>
</tr>
</tbody>
</table>

(k) All doors opening into the *shaft* must be within 20 m of a *required exit*.

(l) Signs showing the direction of the nearest *required exit* must be installed where they can be readily seen.

(m) Materials attached to any wall, ceiling or floor within the *shaft* must have a *Spread-of-Flame Index* of 0 and a *Smoke-Developed Index* of not more than 5.

(n) Emergency lighting must be installed in the *shaft* in accordance with E4.4.

(o) No step or ramp may be closer to the threshold of the doorway than the width of the door leaf.
1. **Scope**

This Specification sets out the requirements for the design and installation of Braille and tactile signage.

2. **Braille and Tactile signage**

2.1 **Location of Braille and tactile signs**

   Signs including symbols, numbering and lettering must be designed and installed as follows:

   (a) Signs must be located not less than 1200 mm and not higher than 1600 mm above the floor or ground surface.

   (b) Signs with single lines of characters must have the line of tactile characters not less than 1250 mm and not higher than 1350 mm above the floor or ground surface.

   (c) Signs identifying rooms containing features or facilities listed in D3.6 must be located—

      (i) on the wall on the latch side of the door with the leading edge of the sign located between 50 mm and 300 mm from the architrave; and

      (ii) in the event of insufficient latch side dimension, a sign may be placed on the non-latch side of the door; and

      (iii) where (i) or (ii) is not possible, the sign may be placed on the door itself.

   (d) Signs identifying paths of travel must be placed so they are located directly ahead in the direction of travel. Where one wall continues in the direction of travel and the other forms a corner, the sign must be placed on the continuing wall.

2.2 **Braille and tactile sign specification**

   The following applies to Braille and tactile sign orientation:

   (a) Tactile characters must be raised or embossed to a height of not less than 1 mm and not more than 1.5 mm.

   (b) Characters must have a height of not less than 17.5 mm for each metre of viewing distance.

   (c) Upper case tactile characters must have a height of not less than 15 mm and not more than 55 mm.

   (d) Lower case tactile characters must have a height of 50% of the related upper case characters.

   (e) Tactile characters, symbols, and the like, must have rounded edges.

   (f) The entire sign, including any frame, must have all edges rounded.

   (g) The surface of the sign must be continuous for hygiene purposes.
(h) Signs must be constructed so as to resist the removal of letters and Braille dots by picking or adhesive failure.

(i) The background, negative space or fill of signs must be of matt or low sheen finish.

(j) The characters, symbols, logos and other features of signs must be matt or low sheen finish.

(k) The minimum letter spacing of tactile characters on signs must be 2 mm.

(l) The minimum word spacing of tactile characters on signs must be 10 mm.

(m) Fonts with letters of constant stroke thickness must be used.

(n) The thickness of letter strokes must be not less than 2 mm and not more than 7 mm.

(o) Tactile text must be left justified, except that single words may be centre justified.

2.3 Luminance-contrast

The following applies to luminance-contrast as defined in AS 1428.1:

(a) The background, negative space or fill of a sign or border must have a minimum luminance-contrast with the surface on which it is mounted of 30%.

(b) A border must be provided for luminance-contrast with the sign's background and shall have a minimum width of 5 mm.

(c) Tactile characters, icons and symbols must have a minimum 30% luminance-contrast with their background or fill within the sign.

(d) Luminance-contrasts must be met under the lighting conditions in which the sign is to be located.

2.4 Lighting

Braille and tactile signs must be illuminated to ensure luminance-contrast requirements are met at all times during which the sign is required to be read.

2.5 Braille

The following applies to Braille:

(a) Braille must be grade 1 Braille (uncontracted) in accordance with the criteria set out by the Australian Braille Authority.

(b) Braille must be raised and domed.

(c) Braille must be located 8 mm below the bottom line of text (not including descenders).

(d) Braille must be left justified.

(e) Where an arrow is used in the tactile sign, a small arrow must be provided for Braille readers.

(f) On signs with multiple lines of text and characters, a semi-circular Braille locator at the left margin must be horizontally aligned with the first line of Braille text.
SERVICES AND EQUIPMENT

E1 Fire Fighting Equipment
E2 Smoke Hazard Management
E3 Lift Installations
E4 Emergency Lighting, Exit Signs and Warning Systems
SECTION E SERVICES AND EQUIPMENT

Part E1 Fire Fighting Equipment

Objective EO1
Functional Statement EF1.1
Performance Requirements EP1.1 - EP1.6
E1.0 Deemed-to-Satisfy Provisions
E1.1 * * * * * *
E1.2 * * * * * *
E1.3 Fire hydrants
E1.4 Fire hose reels
E1.5 Sprinklers
E1.6 Portable fire extinguishers
E1.7 * * * * * *
E1.8 Fire control centres
E1.9 Fire precautions during construction
E1.10 Provision for special hazards
Specification E1.5 Fire Sprinkler Systems
Specification E1.8 Fire Control Centres

Part E2 Smoke Hazard Management

Objective EO2
Functional Statement EF2.1
Performance Requirements EP2.1 - EP2.2
E2.0 Deemed-to-Satisfy Provisions
E2.1 Application of Part
E2.2 General requirements
E2.3 Provision for special hazards
Specification E2.2a Smoke Detection and Alarm Systems
Specification E2.2b Smoke Exhaust Systems
Specification E2.2c Smoke-and-Heat Vents

Part E3 Lift Installations

Objective EO3
Functional Statements EF3.1 - EF3.3
Performance Requirements EP3.1 - EP3.4
E3.0 Deemed-to-Satisfy Provisions
E3.1 * * * * *
E3.2 Stretcher facility in lifts
E3.3 Warning against use of lifts in fire
E3.4 Emergency lifts
E3.5 Landings
E3.6 Facilities for people with disabilities
E3.7 Fire service controls
E3.8 Aged care buildings
Part E4  Emergency Lighting, Exit Signs and Warning Systems

Objective EO4
Functional Statement EF4.1
E4.0 Deemed-to-Satisfy Provisions
E4.1 * * * * *
E4.2 Emergency lighting requirements
E4.3 Measurement of distance
E4.4 Design and operation of emergency lighting
E4.5 Exit signs
E4.6 Direction signs
E4.7 Class 2 and 3 buildings and Class 4 parts: Exemptions
E4.8 Design and operation of exit signs
E4.9 Emergency warning and intercommunication system

Tas Appendix (Additional provisions - refer to Tas Contents for full details)
Tas E1.101 Fire detection and alarm system
OBJECTIVE

EO1

The Objective of this Part is to—

(a) safeguard occupants from illness or injury while evacuating during a fire; and
(b) provide facilities for occupants and the fire brigade to undertake fire-fighting operations; and
(c) prevent the spread of fire between buildings.

TAS EO1(d)

FUNCTIONAL STATEMENT

EF1.1

A building is to be provided with fire-fighting equipment to safeguard against fire spread—

(a) to allow occupants time to evacuate safely without being overcome by the effects of fire; and
(b) so that occupants may undertake initial attack on a fire; and
(c) so that the fire brigade have the necessary equipment to undertake search, rescue, and fire-fighting operations; and
(d) to other parts of the building; and
(e) between buildings.

TAS EF1.2

PERFORMANCE REQUIREMENTS

EP1.1

A fire hose reel system must be installed to the degree necessary to allow occupants to safely undertake initial attack on a fire appropriate to—

(a) the size of the fire compartment; and
Deemed-to-Satisfy Provisions

(b) the function or use of the building; and
(c) any other fire safety systems installed in the building; and
(d) the fire hazard.

EP1.2

Fire extinguishers must be installed to the degree necessary to allow occupants to undertake initial attack on a fire appropriate to—
(a) the function or use of the building; and
(b) any other fire safety systems installed in the building; and
(c) the fire hazard.

EP1.3

A fire hydrant system must be provided to the degree necessary to facilitate the needs of the fire brigade appropriate to—
(a) fire-fighting operations; and
(b) the floor area of the building; and
(c) the fire hazard.

Application:
EP1.3 only applies to a building where a fire brigade is available to attend.

EP1.4

An automatic fire suppression system must be installed to the degree necessary to control the development and spread of fire appropriate to—
(a) the size of the fire compartment; and
(b) the function or use of the building; and
(c) the fire hazard; and
(d) the height of the building.

EP1.5

Suitable means of fire-fighting must be installed to the degree necessary in a building under construction to allow initial fire attack by construction workers and for the fire brigade to undertake attack on the fire appropriate to—
(a) the fire hazard; and
(b) the height the building has reached during its construction.

EP1.6

Suitable facilities must be provided to the degree necessary in a building to co-ordinate fire brigade intervention during an emergency appropriate to—
Deemed-to-Satisfy Provisions

(a) the function or use of the building; and
(b) the floor area of the building; and
(c) the height of the building.

TAS EP1.7
PART E1  FIRE FIGHTING EQUIPMENT

Deemed-to-Satisfy Provisions

E1.0 Deemed-to-Satisfy Provisions

Tas E1.0

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirements EP1.1 to EP1.6 are satisfied by complying with E1.1 to E1.10.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of E1.1 to E1.10, the relevant Performance Requirements must be determined in accordance with A0.10.

E1.1 ** * * * * *

This clause has deliberately been left blank.

E1.2 ** * * * * *

This clause has deliberately been left blank.

E1.3 Fire hydrants

(a) A fire hydrant system must be provided to serve a building—
   (i) having a total floor area greater than 500 m²; and
   (ii) where a fire brigade is available to attend a building fire.

(b) The fire hydrant system—
   (i) must be installed in accordance with AS 2419.1; and
   (ii) where internal fire hydrants are provided, they must serve only the storey on which they are located except that a sole-occupancy unit—
      (A) in a Class 2 or 3 building or Class 4 part may be served by a single fire hydrant located at the level of egress from that sole-occupancy unit; or
      (B) of not more than 2 storeys in a Class 5, 6, 7, 8 or 9 building may be served by a single fire hydrant located at the level of egress from that sole-occupancy unit provided the fire hydrant can provide coverage to the whole of the sole-occupancy unit; and
   (iii) where an on-site pumpset is provided to achieve the performance requirements of AS 2419.1, the pumpset must comprise—
      (A) two pumps with at least one driven by a compression ignition engine or an electric motor supplied from an emergency power generator; or
      (B) two pumps driven by electric motors connected to completely independent power sources; or
Deemed-to-Satisfy Provisions

SA E1.3(b)(iii)(C)

(C) if connected to a reticulated water supply and installed in a building not greater than 25 m in effective height, one pump driven by—

(aa) a compression ignition engine; or
(bb) an electric motor supplied from an emergency power generator; or
(cc) an electric motor connected to two completely independent power sources through an automatic change-over facility; and

(iv) any fixed on-site pumpset which is located within the building must be in a clearly indicated room—

(A) having direct egress to a road or open space; and
(B) if the building is not protected throughout with a sprinkler system complying with Specification E1.5, separated from the remainder of the building by construction having an FRL of not less than that required for a fire wall for the particular building classification; and

(v) any fixed on-site pumpset which is located external to the building must be within a clearly indicated weatherproof enclosure having direct egress to a road or open space, and if within 6 m of the building—

(A) each wall of the enclosure exposed to the building; or
(B) that part of the external wall of the building which extends 2 m each side of the enclosure and 3 m above the enclosure; or
(C) a wall between the building and the enclosure which extends 2 m each side of the enclosure and 3 m above the enclosure,

has an FRL of not less than that required for a fire wall for the particular building classification; and

(vi) where the water supply system is taken from a static source, suitable connections and vehicular access must be provided to permit fire brigade personnel to draw water from that source and a fire-service booster connection must be provided adjacent to allow boosting of the system; and

(vii) must be designed to meet the operational requirements of the fire brigade for operating flows and pressures.

E1.4 Fire hose reels

(a) E1.4 does not apply to—

(i) a Class 9c aged care building; or
(ii) classrooms and associated corridors in a primary or secondary school.

(b) A fire hose reel system must be provided—

(i) to serve the whole building where one or more internal fire hydrants are installed; or
(ii) where internal fire hydrants are not installed, to serve any fire compartment with a floor area greater than 500 m², and for the purposes of this clause, a sole-occupancy unit in a Class 2 or 3 building or Class 4 part is considered to be a fire compartment.

(c) The fire hose reel system must—
Deemed-to-Satisfy Provisions

(i) have fire hose reels installed in accordance with AS 2441; and

(ii) provide fire hose reels to serve only the storey at which they are located, except a sole-occupancy unit—

(A) in a Class 2 or 3 building or Class 4 part may be served by a single fire hose reel located at the level of egress from that sole-occupancy unit; and

(B) of not more than 2 storeys in a Class 5, 6, 7, 8 or 9 building may be served by a single fire hose reel located at the level of egress from that sole-occupancy unit provided the fire hose reel can provide coverage to the whole of the sole-occupancy unit; and

(iii) have fire hose reels provided so that the nozzle end of a fully extended fire hose fitted to the reel and laid to avoid any partitions or other physical barriers will reach every part of the floor of the storey; and

(iv) have fire hose reels provided in accordance with (iii) located—

(A) externally; or

(B) internally within 4 m of an exit; or

(C) internally adjacent to a fire hydrant (other than one within a fire-isolated exit); or

(D) in any combination of (A), (B) and (C), so that the fire hose will not need to pass through doorways fitted with fire or smoke doors, except doorways referred to in C2.13, C3.11 or C3.13 and doorways in walls referred to in C2.12; and

(v) where connected to a metered water supply—

(A) maintain the required flow rate and at the most hydraulically disadvantaged fire hose reel; and

(B) have a water meter and street supply to the allotment with a nominal diameter of not less than 25 mm; and

(C) have a water supply pipework reticulation arrangement in accordance with Figure E1.4; and

(D) have any system valve which can isolate flow in the fire hose reel water supply main—

(aa) secured in the open position by a padlocked metal strap; and

(bb) labelled with an engraved non-ferrous metal tag with 8 mm upper case wording:

FIRE SERVICE VALVE—

CLOSE ONLY TO SERVICE FIRE HOSE REELS;

and

(vi) where supplied by a fire hose reel main greater than 25 mm nominal bore and connected to a fire hydrant main, have a valve in accordance with (v)(D) fitted at the connection to that main and wherever practicable be located in a fire-isolated stairway, passageway or ramp, or outside the building.
E1.4

SERVICES AND EQUIPMENT

Deemed-to-Satisfy Provisions

Figure E1.4
WATER SUPPLY RETICULATION: COMBINED SERVICES

E1.5 Sprinklers

A sprinkler system must—
(a) be installed in a building when required by Table E1.5; and
(b) comply with Specification E1.5.

NT Table E1.5
Vic Table E1.5

Table E1.5 REQUIREMENTS FOR SPRINKLERS

<table>
<thead>
<tr>
<th>Occupancy</th>
<th>When sprinklers are required</th>
</tr>
</thead>
<tbody>
<tr>
<td>All classes—</td>
<td>In buildings more than 25 m in effective height.</td>
</tr>
<tr>
<td>(a) including an open-deck carpark within a multiclassified building; but</td>
<td></td>
</tr>
<tr>
<td>(b) excluding an open-deck carpark being a separate building</td>
<td></td>
</tr>
<tr>
<td>Class 6</td>
<td>In fire compartments where either of the following apply:</td>
</tr>
<tr>
<td></td>
<td>(a) A floor area of more than 3 500 m².</td>
</tr>
<tr>
<td></td>
<td>(b) A volume more than 21 000 m³.</td>
</tr>
</tbody>
</table>
### Deemed-to-Satisfy Provisions

<table>
<thead>
<tr>
<th>Occupancy</th>
<th>When sprinklers are required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 7a building, other than <em>open-deck carparks</em></td>
<td>Where more than 40 vehicles are accommodated.</td>
</tr>
<tr>
<td>Class 9c aged care building</td>
<td>All buildings</td>
</tr>
<tr>
<td>Theatres, Stages &amp; Public Halls</td>
<td>see <a href="#">Part H1</a></td>
</tr>
<tr>
<td>Atrium construction</td>
<td>see <a href="#">Part G3</a></td>
</tr>
<tr>
<td>Large isolated buildings</td>
<td>see <a href="#">Clause C2.3</a></td>
</tr>
<tr>
<td>Occupancies of excessive hazard (see Note 3)</td>
<td>In <em>fire compartments</em> where either of the following apply:</td>
</tr>
<tr>
<td></td>
<td>(a) A <em>floor area</em> of more than 2,000 m².</td>
</tr>
<tr>
<td></td>
<td>(b) A volume of more than 12,000 m³.</td>
</tr>
</tbody>
</table>

**Notes:**

1. See [Specification C1.1](#) for use of sprinklers in Class 2 buildings and *carparks* generally.
2. See [Part E2](#) for use of sprinklers to satisfy Smoke Hazard Management provisions.
3. For the purposes of this Table, occupancies of excessive *fire hazard* comprise buildings which contain—

(a) hazardous processes or storage including the following:

(i) Aircraft hangars.

(ii) Cane furnishing manufacture, processing and storage.

(iii) Fire-lighter and fireworks manufacture and warehousing.

(iv) Foam plastic and foam plastic goods manufacture, processing and warehousing, eg, furniture factory.

(v) Hydrocarbon based sheet product, manufacture, processing and warehousing, eg, vinyl floor coverings.

(vi) Woodwool and other flammable loose fibrous material manufacture.

(b) *Combustible* Goods with an aggregate volume exceeding 1,000 m³ and stored to a height greater than 4 m including the following:

(i) Aerosol packs with flammable contents.

(ii) Carpets and clothing.

(iii) Electrical appliances.
Deemed-to-Satisfy Provisions

<table>
<thead>
<tr>
<th>Occupancy</th>
<th>When sprinklers are required</th>
</tr>
</thead>
<tbody>
<tr>
<td>(iv) <strong>Combustible</strong> compressed fibreboards (low and high density) and plywoods.</td>
<td></td>
</tr>
<tr>
<td>(v) <strong>Combustible</strong> cartons, irrespective of content</td>
<td></td>
</tr>
<tr>
<td>(vi) Esparto and other fibrous <strong>combustible</strong> material.</td>
<td></td>
</tr>
<tr>
<td>(vii) Furniture including timber, cane and composite, where foamed rubber or plastics are incorporated.</td>
<td></td>
</tr>
<tr>
<td>(viii) Paper storage (all forms of new or waste) eg, bales, sheet, horizontal or vertical rolls, waxed coated or processed.</td>
<td></td>
</tr>
<tr>
<td>(ix) Textiles raw and finished, eg, rolled cloth, clothing and manchester.</td>
<td></td>
</tr>
<tr>
<td>(x) Timber storage including sheets, planks, boards, joists and cut sizes.</td>
<td></td>
</tr>
<tr>
<td>(xi) Vinyl, plastic, foamed plastic, rubber and other <strong>combustible</strong> sheets, offcuts and random pieces and rolled material storage, eg, carpet, tar paper, linoleum, wood veneer and foam mattresses.</td>
<td></td>
</tr>
<tr>
<td>(xii) All materials having wrappings or preformed containers of foamed plastics.</td>
<td></td>
</tr>
</tbody>
</table>

**E1.6 Portable fire extinguishers**

Portable fire extinguishers must be provided as listed in Table E1.6 and must be selected, located and distributed in accordance with Sections 1, 2, 3 and 4 of AS 2444.

**E1.7**

This clause has deliberately been left blank.

**E1.8 Fire control centres**

A fire control centre facility in accordance with Specification E1.8 must be provided for—

(a) a building with an effective height of more than 25 m; and
(b) a Class 6, 7, 8 or 9 building with a total floor area of more than 18 000 m².

**E1.9 Fire precautions during construction**

In a building under construction—
Deemed-to-Satisfy Provisions

(a) not less than one fire extinguisher to suit Class A, B and C fires and electrical fires must be provided at all times on each storey adjacent to each required exit or temporary stairway or exit; and

(b) after the building has reached an effective height of 12 m—

(i) the required fire hydrants and fire hose reels must be operational in at least every storey that is covered by the roof or the floor structure above, except the 2 uppermost storeys; and

(ii) any required booster connections must be installed.

Table E1.6 REQUIREMENTS FOR EXTINGUISHERS (Note 3)

<table>
<thead>
<tr>
<th>Occupancy class</th>
<th>Risk class (as defined in AS 2444)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General provisions</strong>—Class 2 to 9 (except within sole-occupancy units of a Class 2 or 3 building or Class 4 part or sole-occupancy units in a Class 9c aged care building)</td>
<td>(a) To cover Class AE or E fire risks associated with emergency services switchboards. (Note 1)</td>
</tr>
<tr>
<td></td>
<td>(b) To cover Class F fire risks involving cooking oils and fats in kitchens.</td>
</tr>
<tr>
<td></td>
<td>(c) To cover Class B fire risks in locations where flammable liquids in excess of 50 litres are stored or used (not including that held in fuel tanks of vehicles).</td>
</tr>
<tr>
<td></td>
<td>(d) To cover Class A fire risks in normally occupied fire compartments less than 500 m² not provided with fire hose reels (excluding open deck carparks).</td>
</tr>
<tr>
<td></td>
<td>(e) To cover Class A fire risks in classrooms and associated corridors in primary and secondary schools not provided with fire hose reels.</td>
</tr>
<tr>
<td><strong>Specific provisions</strong> (in addition to general provisions)—</td>
<td>To cover Class A and E fire risks. (Note 2)</td>
</tr>
<tr>
<td>(a) Class 9a health care building</td>
<td></td>
</tr>
<tr>
<td>(b) Class 3 parts of detention and correctional occupancies</td>
<td></td>
</tr>
<tr>
<td>(c) Class 3 accommodation for children, aged persons and people with disabilities</td>
<td></td>
</tr>
<tr>
<td>(d) Class 9c aged care buildings</td>
<td></td>
</tr>
</tbody>
</table>
Deemed-to-Satisfy Provisions

<table>
<thead>
<tr>
<th>Occupancy class</th>
<th>Risk class (as defined in AS 2444)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Notes</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>For the purposes of this Table, an emergency services switchboard is one which sustains emergency equipment operating in the emergency mode.</td>
</tr>
<tr>
<td>2.</td>
<td>A Class E fire extinguisher need only be located at each nurses, supervisors station or the like.</td>
</tr>
<tr>
<td>3.</td>
<td>Additional extinguishers may be required to cover fire risks in relation to special hazards provided for in E1.10.</td>
</tr>
</tbody>
</table>

E1.10  Provision for special hazards

Suitable additional provision must be made if special problems of fighting fire could arise because of—

(a) the nature or quantity of materials stored, displayed or used in a building or on the allotment; or

(b) the location of the building in relation to a water supply for fire-fighting purposes.

*Tas E1.101*
Deemed-to-Satisfy Provisions

1. Scope
This Specification sets out requirements for the design and installation of fire sprinkler systems.

2. Adoption of AS 2118
Subject to this Specification, a sprinkler system must comply with—
(a) AS 2118.1; or
(b) for a Class 2 or 3 building: AS 2118.4 as applicable; or
(c) for a combined sprinkler and fire hydrant system: AS 2118.6; or
(d) for a Class 9c aged care building: AS 2118.4.

3. Separation of sprinklered and non-sprinklered areas
Where a part of a building is not protected with sprinklers, the sprinklered and non-sprinklered parts must be fire-separated with a wall or floor which must—
(a) comply with any specific requirement of the Deemed-to-Satisfy Provisions of the BCA; or
(b) where there is no specific requirement, comply with the relevant part of AS 2118.

4. Protection of openings
Any openings, including those for service penetrations, in construction separating sprinklered and non-sprinklered parts of a building, including the construction separating the areas nominated as permitted exceptions in AS 2118.1, must be protected in accordance with the Deemed-to-Satisfy Provisions of Part C3.

5. Fast response sprinklers
Fast response sprinklers may be installed only if they are suitable for the type of application proposed and it is demonstrated that the sprinkler system is designed to accommodate their use.
Deemed-to-Satisfy Provisions

6. **Sprinkler valve enclosures**
   
   (a) Sprinkler alarm valves must be located in a secure room or enclosure which has direct egress to a road or open space.
   
   (b) All sprinkler valve rooms and enclosures must be secured with a system suitable for use by the fire brigade.

7. **Water supply**

   The Grade of water supply to a required sprinkler system must not be less than—

   (a) for a building greater than 25 m in effective height, Grade 1, except that a secondary water supply storage capacity of 25,000 litres may be used if—
      
      (i) the storage tank is located at the topmost storey of the building; and
      
      (ii) the building occupancy is classified as no more hazardous than Ordinary Hazard 2 (OH2) under AS 2118.1; and
      
      (iii) an operational fire brigade service is available to attend a building fire; and
   
   (b) for a building not greater than 25 m in effective height, at least Grade 3.

8. **Building occupant warning system**

   A required sprinkler system must be connected to and activate a building occupant warning system complying with Clause 6 of Specification E2.2a.

9. **Connection to other systems**

   Where a smoke hazard management system is installed and is actuated by smoke detectors, the sprinkler system must, wherever practicable, be arranged to also activate the smoke hazard management system.

10. **Anti-tamper devices**

    Where a sprinkler system is installed in a theatre, public hall or the like, any valves provided to control sprinklers over any stage area must be fitted with anti-tamper devices connected to a monitoring panel at the location normally used by the stage manager.

11. **Sprinkler systems in carparks**

    The sprinkler system protecting a carpark complying with Table 3.9 of Specification C1.1 in a multiclassified building must—

    (a) be independent of the sprinkler system protecting any part of the building not used as a carpark; or
Deemed-to-Satisfy Provisions

(b) if forming part of a sprinkler system protecting a part of the building not used as a carpark, be designed such that the section protecting the non-carpark part can be isolated without interrupting the water supply or otherwise affecting the effective operation of the section protecting the carpark.

12. Class 9c aged care buildings

In addition to the provisions of AS 2118.4, a sprinkler system in a Class 9c aged care building must—

(a) be provided with a monitored main stop valve in accordance with AS 2118.1; and

(b) be permanently connected with a direct data link or other approved monitoring system to a fire station or fire station dispatch centre.
1. Scope
This Specification describes the construction and content of required fire control centres or rooms.

2. Purpose and content
A fire control centre or room must—
(a) provide an area from which fire-fighting operations or other emergency procedures can be directed or controlled; and
(b) contain controls, panels, telephones, furniture, equipment and the like associated with the required fire services in the building; and
(c) not be used for any purpose other than the control of—
   (i) fire-fighting activities; and
   (ii) other measures concerning the occupant safety or security.

3. Location of fire control centre or room
A fire control centre or room must be so located in a building that egress from any part of its floor, to a public road or open space, does not involve changes in level which in aggregate exceed 300 mm.

4. Construction
A fire control centre in a building more than 50 m in effective height must be in a separate room where—
(a) the enclosing construction is of concrete, masonry or the like, sufficiently impact resistant to withstand the impact of any likely falling debris, and with an FRL of not less than 120/120/120; and
(b) any material used as a finish, surface, lining or the like within the room complies with the requirements of Specification C1.10 or Specification C1.10a for fire-isolated exits; and
(c) services, pipes, ducts and the like that are not directly required for the proper functioning of the fire control room do not pass through it; and
(d) openings in the walls, floors or ceiling which separate the room from the interior of the building are confined to doorways, ventilation and other openings for services necessary for the proper functioning of the facility.
Deemed-to-Satisfy Provisions

5. Protection of openings

Openings permitted by Clause 4 must be protected as follows:

(a) Openings for windows, doorways, ventilation, service pipes, conduits and the like, in an external wall of the building that faces a public road or open space, must be protected in accordance with the Deemed-to-Satisfy Provisions of Part C3.

(b) Openings in the floors, ceilings and internal walls enclosing a fire control room must, except for doorways, be protected in accordance with the Deemed-to-Satisfy Provisions of Part C3.

(c) A door opening in the internal walls enclosing a fire-control room, must be fitted with a self closing –/120/30 smoke sealed fire door.

(d) Openings associated with natural or mechanical ventilation must—

(i) not be made in any ceiling or floor immediately above or below the fire control room; and

(ii) be protected by a –/120/- fire damper if the opening is for a duct through a wall required to have an FRL, other than an external wall.

6. Exit doors

(a) Required doors to a fire control room must open into the room, be lockable and located so that persons using escape routes from the building will not obstruct or hinder access to the room.

(b) The fire control room must be accessible via two paths of travel—

(i) one from the front entrance of the building; and

(ii) one direct from a public place or fire-isolated passageway which leads to a public place and has a door with an FRL of not less than –/120/30.

7. Size and contents

(a) A fire control room must contain not less than—

(i) a Fire Indicator Panel and necessary control switches and visual status indication for all required fire pumps, smoke control fans and other required fire safety equipment installed in the building; and

(ii) a telephone directly connected to an external telephone exchange; and

(iii) a blackboard or whiteboard not less than 1200 mm wide x 1000 mm high; and

(iv) a pin-up board not less than 1200 mm wide x 1000 mm high; and

(v) a raked plan layout table of a size suitable for laying out the plans provided under (vi); and

(vi) colour-coded, durable, tactical fire plans.

(b) In addition, a fire control room may contain—
Deemed-to-Satisfy Provisions

(i) master emergency control panels, lift annunciator panels, remote switching controls for gas or electrical supplies and emergency generator backup; and

(ii) building security, surveillance and management systems if they are completely segregated from all other systems.

(c) A fire control room must—

(i) have a floor area of not less than 10 m² and the length of any internal side must be not less than 2.5 m; and

(ii) if only the minimum prescribed equipment is installed—have a net floor area of not less than 8 m² with a clear space of not less than 1.5 m² in front of the Fire Indicator Panel; and

(iii) if additional equipment is installed—have an additional area of not less than 2 m² net floor area for each additional facility and a clear space of not less than 1.5 m² in front of each additional control or indicator panel,

and the area required for any path of travel through the room to other areas must be provided in addition to the requirements (ii) and (iii).

8. Ventilation and power supply

A fire control room must be ventilated by—

(a) natural ventilation from a window or doorway in an external wall of the building which opens directly into the fire control room from a roadway or open space; or

(b) a pressurisation system that only serves the fire control room, and—

(i) is installed in accordance with AS/NZS 1668.1 as though the room is a fire-isolated stairway; and

(ii) is activated automatically by operation of the fire alarm, or sprinkler system complying with Specification E1.5, installed in the building and manually by an over-riding control in the room; and

(iii) provides a flow of fresh air through the room of not less than 30 air changes per hour when the system is operating and any door to the room is open; and

(iv) has fans, motors and ductwork that form part of the system but not contained within the fire control room protected by enclosing construction with an FRL of not less than 120/120/120; and

(v) has any electrical supply to the fire control room or equipment necessary for its operation connected to the supply side of the main disconnection switch for the building,

and no openable devices other than necessary doorways, pressure controlled relief louvres and windows that are openable by a key, must be constructed in the fire control room.

9. Sign

The external face of the door to the fire control room must have a sign with the words—
Deemed-to-Satisfy Provisions

FIRE CONTROL ROOM

in letters of not less than 50 mm high and of a colour which contrasts with that of the background.

10. Lighting

Emergency lighting in accordance with the Deemed-to-Satisfy Provisions of Part E4 must be provided in a fire control room, except that an illumination level of not less than 400 lux must be maintained at the surface of the plan table.

11. Equipment not permitted within a fire control centre or room

An internal combustion engine, pumps, sprinkler control valves, pipes and pipe fittings must not be located in a fire control centre or room, but may be located in rooms accessed through the fire control centre or room.

12. Ambient sound level

(a) The ambient sound level within the fire control centre or room measured when all fire safety equipment is operating in the manner in which it operates in an emergency must not exceed 65 dB(A).

(b) The measurement must be taken for a sufficient time to characterize the effects of all sound sources. Where there is not a great variation in noise level, a measurement time of 60 seconds may be used.
OBJECTIVE

EO2
The Objective of this Part is to—
(a) safeguard occupants from illness or injury by warning them of a fire so that they may safely evacuate; and
(b) safeguard occupants from illness or injury while evacuating during a fire.

FUNCTIONAL STATEMENT

EF2.1
A building is to be provided with safeguards so that—
(a) occupants are warned of a fire in the building so that they may safely evacuate; and
(b) occupants have time to safely evacuate before the environment in any evacuation route becomes untenable from the effects of fire.

PERFORMANCE REQUIREMENTS

EP2.1
In a building providing sleeping accommodation, occupants must be provided with automatic warning on the detection of smoke so they may evacuate in the event of a fire to a safe place.

Application:
EP2.1 only applies to a Class 2, 3, 9a or 9c building or Class 4 part.

EP2.2
(a) In the event of a fire in a building the conditions in any evacuation route must be maintained for the period of time occupants take to evacuate the part of the building so that—
   (i) the temperature will not endanger human life; and
   (ii) the level of visibility will enable the evacuation route to be determined; and
   (iii) the level of toxicity will not endanger human life.
EP2.2
SERVICES AND EQUIPMENT

(b) The period of time occupants take to evacuate referred to in (a) must be appropriate to—

(i) the number, mobility and other characteristics of the occupants; and
(ii) the function or use of the building; and
(iii) the travel distance and other characteristics of the building; and
(iv) the fire load; and
(v) the potential fire intensity; and
(vi) the fire hazard; and
(vii) any active fire safety systems installed in the building; and
(viii) fire brigade intervention.

Limitation:
EP2.2 does not apply to an open-deck carpark or open spectator stand.
E2.0 Deemed-to-Satisfy Provisions

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirements EP2.1 and EP2.2 are satisfied by complying with—

(i) E2.1 to E2.3; and

(ii) in a building containing an atrium, Part G3.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of—

(i) E2.1 to E2.3; and

(ii) in a building containing an atrium, Part G3,

the relevant Performance Requirements must be determined in accordance with A0.10.

E2.1 Application of Part

(a) The Deemed-to-Satisfy Provisions of this Part do not apply to any open deck carpark or open spectator stand.

(b) The smoke exhaust and smoke-and-heat vent provisions of this Part do not apply to any area not used by occupants for an extended period of time such as a storeroom with a floor area less than 30 m², sanitary compartment, plant room or the like.

E2.2 General requirements

(a) A building must comply with (b), (c), (d) and—

(i) Table E2.2a as applicable to Class 2 to 9 buildings such that each separate part complies with the relevant provisions for the classification; and

(ii) Table E2.2b as applicable to Class 6 and 9b buildings such that each separate part complies with the relevant provisions for the classification.

(b) An air-handling system which does not form part of a smoke hazard management system in accordance with Table E2.2a or Table E2.2b and which recycles air from one fire compartment to another fire compartment or operates in a manner that may unduly contribute to the spread of smoke from one fire compartment to another fire compartment must—

(i) be designed and installed to operate as a smoke control system in accordance with AS/NZS 1668.1; or

(ii) (A) incorporate smoke dampers where the air-handling ducts penetrate any elements separating the fire compartments served; and

(B) be arranged such that the air-handling system is shut down and the smoke dampers are activated to close automatically by smoke detectors complying with Clause 4.10 of AS/NZS 1668.1; and

for the purposes of this provision, each sole-occupancy unit in a Class 2 or 3 building is treated as a separate fire compartment.
(c) Miscellaneous air-handling systems covered by Sections 5 and 11 of AS/NZS 1668.1 serving more than one *fire compartment* (other than a *carpark* ventilation system) and not forming part of a smoke hazard management system must comply with that Section of the Standard.

(d) A smoke detection system must be installed in accordance with Clause 5 of Specification E2.2a to operate AS/NZS 1668.1 systems that are provided for zone smoke control and *automatic* air pressurisation for fire-isolated exits.

### E2.3 Provision for special hazards

Additional smoke hazard management measures may be necessary due to the—

(a) special characteristics of the building; or

(b) special function or use of the building; or

(c) special type or quantity of materials stored, displayed or used in a building; or

(d) special mix of classifications within a building or *fire compartment*, which are not addressed in Tables E2.2a and E2.2b.

<table>
<thead>
<tr>
<th>Table E2.2a GENERAL PROVISIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRE-ISOLATED EXITS</td>
</tr>
<tr>
<td>A required—</td>
</tr>
<tr>
<td>(a) fire-isolated stairway, including any associated fire-isolated passageway or fire-isolated ramp serving—</td>
</tr>
<tr>
<td>(i) any storey above an effective height of 25m; or</td>
</tr>
<tr>
<td>(ii) more than 2 below ground storeys, not counted in the <em>rise in storeys</em> in accordance with C1.2, or</td>
</tr>
<tr>
<td>(iii) an atrium; or</td>
</tr>
<tr>
<td>(iv) a Class 9a building with a <em>rise in storeys</em> of more than 2; or</td>
</tr>
<tr>
<td>(v) a Class 9c aged care building with a <em>rise in storeys</em> of more than 2; and</td>
</tr>
<tr>
<td>(b) fire-isolated passageway or fire-isolated ramp with a length of travel more than 60 m to a road or open space,</td>
</tr>
<tr>
<td>must be provided with—</td>
</tr>
<tr>
<td>(c) an automatic air pressurisation system for fire-isolated exits in accordance with AS/NZS 1668.1; or</td>
</tr>
<tr>
<td>(d) open access ramps or balconies in accordance with D2.5.</td>
</tr>
</tbody>
</table>

Notes:

1. An automatic air pressurisation system for fire-isolated exits applies to the entire exit.

2. Refer D1.7(d) for pressurisation of a fire-isolated exit having more than 2 access doorways from within the same storey.
BUILDINGS MORE THAN 25 M IN EFFECTIVE HEIGHT

CLASS 2 AND 3 BUILDINGS AND CLASS 4 PART OF A BUILDING

A Class 2 and 3 building or part of a building and Class 4 part of a building must be provided with an automatic smoke detection and alarm system complying with Specification E2.2a.

Note: Refer C2.14 for division of public corridors greater than 40 m in length.

CLASS 5, 6, 7b, 8 and 9b BUILDINGS

A Class 5, 6, 7b, 8 and 9b building or part of a building must be provided with a zone smoke control system in accordance with AS/NZS 1668.1.

Note: Refer Table E2.2b for Specific Provisions applicable to a Class 6 (in a fire compartment having a floor area of more than 2000 m²) and 9b building or part of a building.

CLASS 9a BUILDINGS

A Class 9a building must be provided with—

(a) an automatic smoke detection and alarm system complying with Specification E2.2a; and
(b) a zone smoke control system in accordance with AS/NZS 1668.1.

Note: A building more than 25 m in effective height requires a sprinkler system under E1.5.

BUILDINGS NOT MORE THAN 25 M IN EFFECTIVE HEIGHT

CLASS 2 AND 3 BUILDINGS AND CLASS 4 PART

A Class 2 and 3 building or part of a building and Class 4 part of a building—

(a) must be provided with an automatic smoke detection and alarm system complying with Specification E2.2a; and
(b) where a required fire-isolated stairway serving the Class 2 or 3 parts also serves one or more storeys of Class 5, 6, 7 (other than an open deck carpark), 8 or 9b parts—

(i) the fire-isolated stairway, including any associated fire-isolated passageway or fire-isolated ramp, must be provided with an automatic air pressurisation system for fire-isolated exits in accordance with AS/NZS 1668.1; or
(ii) the Class 5, 6, 7 (other than an open deck carpark), 8 and 9b parts must be provided with—

(A) an automatic smoke detection and alarm system complying with Specification E2.2a; or
(B) a sprinkler system complying with Specification E1.5; and
SERVICES AND EQUIPMENT

(c) where a required fire-isolated stairway serving the Class 4 part also serves one or more storeys of Class 5, 6, 7 (other than an open deck carpark), 8 or 9b parts—

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<tbody>
<tr>
<td>(i) a system complying with (b)(i) or (b)(ii) must be installed; or</td>
<td></td>
</tr>
<tr>
<td>(ii) a smoke alarm or detector system complying with Specification E2.2a must be provided except that alarms or detectors need only be installed adjacent to each doorway into each fire-isolated stairway (set back horizontally from the doorway by a distance of not more than 1.5 m) to initiate a building occupant warning system for the Class 4 part.</td>
<td></td>
</tr>
</tbody>
</table>

Notes:

1. Refer C2.14 for division of public corridors greater than 40 m in length.

2. Refer Table E2.2b for Specific Provisions applicable to a Class 6 (in a fire compartment having a floor area of more than 2000 m²) and 9b building or part of a building.

CLASS 5, 6, 7b, 8 and 9b BUILDINGS

In a—

(a) Class 5 or 9b school building or part of a building having a rise in storeys of more than 3; or

(b) Class 6, 7b, 8 or 9b building (other than a school) or part of a building having a rise in storeys of more than 2; or

(c) building having a rise in storeys of more than 2 and containing—

<p>| | |</p>
<table>
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<tr>
<td>(i) a Class 5 or 9b school part; and</td>
<td></td>
</tr>
<tr>
<td>(ii) a Class 6, 7b, 8 or 9b (other than a school) part,</td>
<td></td>
</tr>
</tbody>
</table>

the building must be provided with—

(d) in each required fire-isolated stairway, including any associated fire-isolated passageway or fire-isolated ramp, an automatic air pressurisation system for fire-isolated exits in accordance with AS/NZS 1668.1; or

(e) a zone smoke control system in accordance with AS/NZS 1668.1, if the building has more than one fire compartment; or

(f) an automatic smoke detection and alarm system complying with Specification E2.2a; or

(g) a sprinkler system complying with Specification E1.5.

Notes:

1. Refer Table E2.2b for Specific Provisions applicable to a Class 6 (in a fire compartment having a floor area of more than 2000 m²) and 9b building or part of a building.

2. Refer provisions under Class 2 and 3 buildings and Class 4 part in this Table where a Class 5, 6, 7b, 8 and 9b building contains a Class 2, 3 or 4 part.
### CLASS 9a and 9c BUILDINGS

A Class 9a health-care building or a Class 9c aged care building, or a building containing a part thereof, must be provided throughout with—

(a) an automatic smoke detection and alarm system complying with Specification E2.2a; and

(b) automatic shutdown of any air-handling system which does not form part of a zone smoke control system (other than individual room units with a capacity not more than 1000 L/s, systems serving critical treatment areas and miscellaneous exhaust air systems installed in accordance with Sections 5 and 11 of AS/NZS 1668.1) on the activation of—

(i) smoke detectors installed in accordance with (a); and

(ii) any other installed fire detection and alarm system including a sprinkler system complying with Specification E1.5; and

(c) in a building having a rise in storeys of more than 2 and not more than 25 m effective height (not being a Class 9c aged care building)—

(i) a zone smoke control system in accordance with AS/NZS 1668.1; or

(ii) a sprinkler system complying with Specification E1.5 throughout with residential sprinkler heads in patient care areas.

Note: Refer to Clause 2 of Specification C2.5 for the provisions for smoke dampers.

### CLASS 7a BUILDINGS

A Class 7a building, including a basement, provided with a mechanical ventilation system in accordance with AS 1668.2 must comply with Clause 5.5 of AS/NZS 1668.1 and—

(a) fans with metal blades suitable for operation at normal temperature may be used; and

(b) the electrical power and control cabling need not be fire rated.

### BASEMENTS (other than Class 7a buildings)

A basement, not counted in the rise in storeys in accordance with C1.2, must—

(a) comply with measures in accordance with this Table applicable to the building generally; and

(b) where the basement has a total floor area of more than 2000 m², be provided with—

(i) if not more than 2 below ground storeys—

(A) a zone smoke control system in accordance with AS/NZS 1668.1, if the basement has more than one fire compartment; or

(B) an automatic smoke detection and alarm system complying with Specification E2.2a; or
SERVICES AND EQUIPMENT

(C) a sprinkler system complying with Specification E1.5; or

(ii) if more than 2 below ground storeys, a sprinkler system complying with Specification E1.5.

Notes:

1. Refer Table E2.2b for Specific Provisions applicable to a Class 6 (in a fire compartment having a floor area of more than 2000 m²) and 9b building or part of a building.

2. Basements with more than 3 below ground storeys or containing Class 6 or 9b occupancies with a large number of occupants may require special consideration in accordance with E2.3.

ATRIUMS

Refer Part G3.

NSW Table E2.2b

Table E2.2b SPECIFIC PROVISIONS

CLASS 6 BUILDINGS—IN FIRE COMPARTMENTS MORE THAN 2000 m²

CLASS 6 BUILDINGS (not containing an enclosed common walkway or mall serving more than one shop)

(a) Each fire compartment having a floor area of more than 2000 m², other than in a shop described in (b), must be provided with—

(i) an automatic smoke exhaust system complying with Specification E2.2b; or

(ii) automatic smoke-and-heat vents complying with Specification E2.2c, if the building is single storey; or

(iii) if the floor area of the fire compartment is not more than 3500 m² and the building—

(A) is single storey, an automatic smoke detection and alarm system complying with Specification E2.2a; or

(B) has a rise in storeys of not more than 2, a sprinkler system complying with Specification E1.5.

(b) A shop within the fire compartment need not comply with (a) if it—

(i) has a floor area of not more than 2000 m²; and

(ii) is single storey with a main public entrance opening to a road or open space.

CLASS 6 BUILDINGS (containing an enclosed common walkway or mall serving more than one shop)

(a) Each fire compartment having a floor area of more than 2000 m²—

(i) in the enclosed common walkway or mall; and
(ii) in a shop with a floor area of more than 1000 m², opening onto the enclosed common walkway or mall; and

(iii) in a shop, other than a shop described in (b), not opening onto the enclosed common walkway or mall,

must be provided with—

(A) an automatic smoke exhaust system complying with Specification E2.2b; or

(B) automatic smoke-and-heat vents complying with Specification E2.2c, if the building is single storey; or

(C) if the floor area of the fire compartment is not more than 3500 m² and the building has a rise in storeys of not more than 2, a sprinkler system complying with Specification E1.5.

(b) A shop within the fire compartment need not comply with (a)(iii) if it—

(i) has a floor area of not more than 2000 m²; and

(ii) is single storey with a main public entrance opening to a road or open space.

Note: A fire compartment having a floor area of more than 3500 m² in a Class 6 building requires a sprinkler system under E1.5.

CLASS 9b—ASSEMBLY BUILDINGS

NIGHTCLUBS and DISCOTHEQUES AND THE LIKE

A building or part of a building used as a nightclub, discotheque and the like must be provided with—

(a) automatic shutdown of any air-handling system (other than miscellaneous exhaust air systems installed in accordance with Sections 5 and 11 of AS/NZS 1668.1) which does not form part of the smoke hazard management system, on the activation of—

(i) smoke detectors installed complying with Clause 5 of Specification E2.2a; and

(ii) any other installed fire detection and alarm system, including a sprinkler system complying with Specification E1.5; and

(b) (i) an automatic smoke exhaust system complying with Specification E2.2b; or

(ii) automatic smoke-and-heat vents complying with Specification E2.2c, if the building is single storey; or

(iii) a sprinkler system complying with Specification E1.5 with fast response sprinkler heads.

EXHIBITION HALLS

A building or part of a building used as an exhibition hall must be provided with—

(a) automatic shutdown of any air-handling system (other than miscellaneous exhaust air systems installed in accordance with Sections 5 and 11 of AS/NZS 1668.1) which does not form part of the smoke hazard management system, on the activation of—

(i) smoke detectors installed complying with Specification E2.2a; and
SERVICES AND EQUIPMENT

(ii) any other installed fire detection and alarm system, including a sprinkler system complying with Specification E1.5; and

(b) where the floor area is more than 2000 m² and not more than 3500 m²—

(i) an automatic smoke exhaust system complying with Specification E2.2b; or

(ii) automatic smoke-and-heat vents complying with Specification E2.2c, if the building is single storey; or

(iii) a sprinkler system complying with Specification E1.5; and

(c) where the floor area is more than 3500 m², a sprinkler system complying with Specification E1.5 and—

(i) an automatic smoke exhaust system complying with Specification E2.2b; or

(ii) automatic smoke-and-heat vents complying with Specification E2.2c, if the building is single storey.

THEATRES and PUBLIC HALLS

A building or part of a building used as a theatre or public hall which—

(a) is a school assembly, church or community hall, and has a stage and any backstage area with a total floor area of more than 300 m²; or

(b) is not a school assembly, church or community hall, and has a stage and any backstage area with a total floor area of more than 200 m²; or

(c) has a stage with an associated rigging loft—

must be provided with—

(i) an automatic smoke exhaust system complying with Specification E2.2b; or

(ii) automatic smoke-and-heat vents complying with Specification E2.2c, if the building is single storey.

THEATRES and PUBLIC HALLS (not listed above) INCLUDING LECTURE THEATRES AND CINEMA/AUDITORIUM COMPLEXES

A building or part of a building used as a theatre and public hall (not listed above) including a lecture theatre and cinema/auditorium complex—

(a) must be provided with automatic shutdown of any air-handling system (other than miscellaneous exhaust air systems installed in accordance with Sections 5 and 11 of AS/NZS 1668.1) which does not form part of the smoke hazard management system, on the activation of—

(i) smoke detectors installed complying with Specification E2.2a; and

(ii) any other installed fire detection and alarm system, including a sprinkler system complying with Specification E1.5; and

(b) other than in the case of a school lecture theatre, where the floor area of the fire compartment is more than 2000 m²—

(i) an automatic smoke exhaust system complying with Specification E2.2b; or
(ii) *automatic smoke-and-heat vents* complying with *Specification E2.2c*, if the building is single *storey*; or

(iii) if the floor area of the *fire compartment* is not more than 5000 m² and the building has a *rise in storeys* of not more than 2—

(A) an *automatic smoke detection and alarm system* complying with *Specification E2.2a*; or

(B) a sprinkler system complying with *Specification E1.5*.

**OTHER ASSEMBLY BUILDINGS (not listed above) and EXCLUDING SCHOOLS**

(a) Each *fire compartment*, other than one in a building described in (b), having a *floor area* of more than 2000 m² must be provided with—

(i) an *automatic smoke exhaust system* complying with *Specification E2.2b*; or

(ii) *automatic smoke-and-heat vents* complying with *Specification E2.2c*, if the building is single *storey*; or

(iii) if the *floor area* of the *fire compartment* is not more than 5000 m² and the building has a *rise in storeys* of not more than 2—

(A) an *automatic smoke detection and alarm system* complying with *Specification E2.2a*; or

(B) a sprinkler system complying with *Specification E1.5*.

(b) The following buildings are exempt from the provisions of (a):

(i) Sporting complexes (including sports halls, gymnasiums, *swimming pools*, ice and roller rinks, and the like) other than an indoor sports stadium with a total spectator seating for more than 1000.

(ii) Churches and other places used solely for religious worship.
1. **Scope**

This Specification describes the installation and operation of *automatic* smoke detection and alarm systems.

2. **Type of system**

A *required* automatic smoke detection and alarm system must comply with the following:

(a) **Class 2 and 3 buildings and Class 4 part:**
   
   (i) Subject to (ii), a Class 2 and 3 building and Class 4 part must be provided with—
      
      (A) a smoke alarm system complying with Clause 3; or
      
      (B) a smoke detection system complying with Clause 4; or
      
      (C) a combination of a smoke alarm system complying with Clause 3 within *sole-occupancy units* and a smoke detection system complying with Clause 4 in areas not within the *sole-occupancy units*.
      
   (ii) A Class 3 building must be provided with a smoke detection system complying with Clause 4 if it—
      
      (A) has a Class 3 part located more than 2 *storeys* above ground level; or
      
      (B) accommodates more than 20 residents and is used as a residential part of a *school* or accommodation for the aged, children or people with disabilities.

(b) **Class 5, 6, 7, 8 and 9b buildings:** A smoke detection system complying with Clause 4.

(c) **Class 9a health-care building:**

   (i) Where 6 or less bed patients are accommodated—
      
      (A) a smoke alarm system complying with Clause 3; or
      
      (B) a smoke detection system complying with Clause 4.
      
   (ii) Where more than 6 bed patients are accommodated, a smoke detection system complying with Clause 4.

(d) **Class 9c aged care building:** A smoke detection system complying with Clause 4.

3. **Smoke alarm system**

(a) A smoke alarm system must—

   (i) consist of smoke alarms complying with AS 3786; and
   
   (ii) be powered from the consumers mains source.
Deemed-to-Satisfy Provisions

(b) In kitchens and other areas where the use of the area is likely to result in smoke alarms causing spurious signals, heat alarms may be installed in lieu of smoke alarms, or an alarm acknowledgement facility may be installed, except where the kitchen or other area is sprinklered, the heat alarms need not be provided.

(c) In a Class 2 or 3 building or Class 4 part, smoke alarms must be installed—

(i) within each sole-occupancy unit, located on or near the ceiling in any storey—

(A) containing bedrooms—

(aa) between each part of the sole-occupancy unit containing bedrooms and the remainder of the sole-occupancy unit; and

(bb) where bedrooms are served by a hallway, in that hallway; and

(B) not containing any bedrooms, in egress paths; and

(ii) in a building not protected with a sprinkler system, in public corridors and other internal public spaces, located in accordance with the requirements for smoke detectors in AS 1670.1 and connected to activate a building occupant warning system in accordance with Clause 6; and

(d) In a Class 9a building, smoke alarms must be installed in every room, public corridor and other internal public spaces and—

(i) be located in accordance with the requirements for smoke detectors in AS 1670.1 and interconnected to provide a common alarm; and

(ii) have manual call points installed in evacuation routes so that no point on a floor is more than 30 m from a manual call point.

4. Smoke detection system

(a) A smoke detection system must—

(i) subject to (c) and (d), comply with AS 1670.1 except for the provisions of—

(A) Clause 3.26(f); and

(B) * * * * *

(C) * * * * *

(ii) activate a building occupant warning system in accordance with Clause 6.

(b) In kitchens and other areas where the use of the area is likely to result in smoke detectors causing spurious signals, heat detectors may be installed in lieu of smoke detectors, or an alarm acknowledgement facility may be installed, except where the kitchen or other area is sprinklered, the heat detectors need not be provided.

(c) In a Class 2 or 3 building or Class 4 part of a building smoke detectors must be installed—

(i) within each sole-occupancy unit, located in accordance with the requirements for smoke alarms in Clause 3(c)(i); and

(ii) in a building not protected with a sprinkler system, in public corridors and other internal public spaces.

(d) In a Class 9a health-care building—
Deemed-to-Satisfy Provisions

(i)  
(A) photo-electric type smoke detectors must be installed in patient care areas and alternate photo-electric and ionisation detectors must be installed in paths of travel to exits from patient-care areas; and
(B) in areas other than patient care areas and paths of travel to exits from patient care areas, type “A” rate of rise heat detectors may be installed in lieu of smoke detectors, except that the heat detectors need not be installed if the area is sprinklered; and

(ii) manual call points must be installed in evacuation routes so that no point on a floor is more than 30 m from a manual call point.

Vic Spec E2.2a 4(e)

(e) In a Class 9c aged care building—

(i) remote automatic indication of each zone must be given in each smoke compartment by means of—
(A) mimic panels with an illuminated display; or
(B) annunciator panels with alpha numeric display; and

(ii) if the building accommodates more than 20 residents, manual call points must be installed in paths of travel so that no point on a floor is more than 30 m from a manual call point.

5. Smoke detection for smoke control systems

(a) Smoke detectors required to activate air pressurisation systems for fire-isolated exits and zone smoke control systems must—

(i) be installed in accordance with AS/NZS 1668.1; and

(ii) have additional smoke detectors installed adjacent to each bank of lift landing doors set back horizontally from the door openings by a distance of not more than 3 m.

(b) Smoke detectors required to activate—

(i) automatic shutdown of air-handling systems in accordance with Table E2.2b; or

(ii) a smoke exhaust system in accordance with Specification E2.2b, must—

(iii) be spaced—
(A) not more than 20 m apart and not more than 10 m from any wall, bulkhead or smoke curtain; and
(B) in enclosed malls and walkways in a Class 6 building not more than 15 m apart and not more than 7.5 m from any wall, bulkhead or curtain; and

(iv) have a sensitivity—
(A) in accordance with AS/NZS 1668.1 in areas other than a multi-storey walkway and mall in a Class 6 building; and
Deemed-to-Satisfy Provisions

(B) not exceeding 0.5% smoke obscuration per metre with compensation for external airborne contamination as necessary, in a multi-storey walkway and mall in a Class 6 building.

(c) Smoke detectors provided to activate a smoke control system must—

(i)  
(A) form part of a building fire or smoke detection system complying with AS 1670.1; or
(B) be a separate dedicated system incorporating Grade 1 control and indicating equipment with alarm verification facility and complying with AS 4428.1; and

(ii) activate a building occupant warning system complying with Clause 6, except that smoke detectors provided solely to initiate automatic shutdown of air-handling systems in accordance with (b)(i) need not activate a building occupant warning system.

6. Building occupant warning system

A building occupant warning system must comply with Clause 3.22 of AS 1670.1 to sound through all occupied areas except—

(a) in a Class 2 and 3 building or Class 4 part provided with a smoke alarm system in accordance with Clause 3(c)(ii)—

(i) the sound pressure level need not be measured within a sole-occupancy unit if a level of not less than 85 dB(A) is provided at the door providing access to the sole-occupancy unit; and

(ii) the inbuilt sounders of the smoke alarms may be used to wholly or partially meet the requirements; and

(b) in a Class 2 and 3 building or Class 4 part provided with a smoke detection system in accordance with Clause 4(c), the sound pressure level from a warning system need not be measured within a sole-occupancy unit if a level of not less than 100 dB(A) is provided at the door providing access to the sole-occupancy unit; and

(c) in a Class 3 building used as a residential aged care building, the system—

(i) must be arranged to provide a warning for occupants; and

(ii) in areas used by residents, may have its alarm adjusted in volume and content to minimise trauma consistent with the type and condition of residents; and

(d) in a Class 9a health-care building, in a patient care area, the system—

(i) must be arranged to provide a warning for occupants; and

(ii) in a ward area, may have its alarm adjusted in volume and content to minimise trauma consistent with the type and condition of the patients.

(e) in a Class 9c aged care building, the system—

(i) must be arranged to provide a warning for occupants; and

(ii) must notify staff caring for the residents of the building; and

(iii) in areas used by residents, may have its alarm adjusted in volume and content to minimise trauma consistent with the type and condition of resident.
7. **System monitoring**

The following installations must be connected to a fire alarm monitoring system connected to a fire station or fire station dispatch centre in accordance with AS 1670.3:

(a) A smoke detection system in a Class 3 building provided in accordance with Clause 2(a)(ii).

*b*Vic Spec E2.2a 7(b)*

(b) A smoke detection system in a Class 9a *health-care building*, if the building accommodates more than 20 patients.

*b*Vic Spec E2.2a 7(c)*

(c) A smoke detection system in a Class 9c *aged care building*.

(d) Smoke detection in accordance with Clause 5 provided to activate—

(i) a smoke exhaust system in accordance with *Specification E2.2b*; or

(ii) *smoke-and-heat vents* in accordance with *Specification E2.2c*.

*b*NSW Spec E2.2a 7(e)*

(e) A fire detection system installed in accordance with C2.3(a)(i)(A).
Deemed-to-Satisfy Provisions

1. **Scope**

   This Specification describes the requirements for mechanical smoke exhaust systems.

2. **Smoke exhaust capacity**

   (a) Smoke exhaust fans must have a sufficient capacity to contain the smoke layer—
   
   (i) within a smoke reservoir formed in accordance with Clause 4 and not less than 2 m above the highest floor level; and
   
   (ii) above the top of any openings interconnecting different smoke reservoirs.

   (b) Exhaust rates must be determined in accordance with Figure 2.1, with the height measurement taken from the lowest floor level to the underside of the smoke layer.

3. **Smoke exhaust fans**

   Each smoke exhaust fan, complete with its drive, flexible connections, control gear and wiring must—

   (a) be constructed and installed so that it is capable of continuous operation (exhausting the required volumetric flow rate at the installed system resistance) at a temperature of 200° C for a period of not less than 1 hour; and

   (b) in a building not fitted with a sprinkler system, be capable of continuous operation at a temperature of 300° C for a period of not less than 30 minutes; and

   (c) be rated to handle the required volumetric flow rate at ambient temperature to be capable of exhausting cool smoke during the early stages of a fire and to allow routine testing; and

   (d) have any high temperature overload devices installed, automatically overridden during the smoke exhaust operation.
### Deemed-to-Satisfy Provisions

#### Figure 2.1

**SMOKE EXHAUST RATE**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Unsprinklered</th>
<th>Sprinklered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 2, 3 or 5</td>
<td>5 MW</td>
<td>1.5 MW</td>
</tr>
<tr>
<td>Class 6</td>
<td>10 MW</td>
<td>5 MW</td>
</tr>
<tr>
<td>Class 7 or 8</td>
<td>15 MW</td>
<td>5 MW</td>
</tr>
<tr>
<td>Class 9-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• generally</td>
<td>5 MW</td>
<td>1.5 MW</td>
</tr>
<tr>
<td>• exhibition halls</td>
<td>10 MW</td>
<td>5 MW</td>
</tr>
<tr>
<td>• theatres, stages &amp;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• public halls complying with Part H1 (Note 1)</td>
<td>10 MW</td>
<td>5 MW</td>
</tr>
</tbody>
</table>

**Note 1.** If the smoke reservoir above the stage is smoke separated from the audience area, the fire load specified applies to the stage area only and the fire load for audience area is as per Class 9 generally.
Deemed-to-Satisfy Provisions

4. Smoke reservoirs

(a) A fire compartment must be divided at ceiling level into smoke reservoirs formed by smoke baffles/curtains of non-combustible and non-shatterable construction.

(b) The horizontal area of a smoke reservoir must not exceed 2000 m² and in enclosed walkways and malls of a Class 6 building must not exceed 60 m in length.

(c) Smoke reservoirs must be of sufficient depth to contain the smoke layer and must not be less than 500 mm below an imperforate ceiling or roof.

(d) (i) Within a multi-storey fire compartment, a non-combustible bulkhead or smoke baffle/curtain must be provided around the underside of each opening into a building void to minimise the spread of smoke to other storeys.

(ii) The depth of the bulkhead or smoke baffle must be not less than the depth of the smoke reservoir provided under (c) plus an additional 400 mm.

5. Smoke exhaust fan and vent location

Smoke exhaust fans and vents must be located—

(a) such that each smoke reservoir is served by one or more fans with the maximum exhaust rate at any one point limited to avoid extracting air from below the smoke layer; and

(b) to prevent the formation of stagnant regions resulting in excessive cooling and downward mixing of smoke; and

(c) at natural collection points for the hot smoky gases within each smoke reservoir having due regard to the ceiling geometry and its effect on the migratory path of the smoke; and

(d) away from the intersection of walkways or malls; and

(e) to ensure that any voids containing escalators and/or stairs commonly used by the public are not used as a smoke exhaust path; and

(f) to discharge directly to outdoor with a velocity of not less than 5 m/s, at a suitable point not less than 6 m from any air intake point or exit.

6. Make-up air

(a) Low level make-up air must be provided either automatically or via permanent ventilation openings to replace the air exhausted so as to minimise—

(i) any disturbance of the smoke layer due to turbulence created by the incoming air; and

(ii) the risk of smoke migration to areas remote from the fire due to the effect of make-up air on the air balance of the total system.

(b) The velocity of make-up air through doorways must not exceed 2.5 m/s.
Deemed-to-Satisfy Provisions

(c) Within a multi-storey fire compartment, make-up air must be provided across each vertical opening from a building void to the fire-affected storey at an average velocity of 1 m/s so as to minimise the spread of smoke from the fire-affected storey to other storeys.

7. Smoke exhaust system control

(a) Each smoke exhaust fan must be activated sequentially by smoke detectors complying with Specification E2.2a and arranged in zones to match the smoke reservoir served by the fan(s).

(b) Subject to (c) and (d), an air handling system (other than individual room units less than 1000 L/s and miscellaneous exhaust air systems installed in accordance with Sections 5 and 11 of AS/NZS 1668.1) which does not form part of the smoke hazard management system must be automatically shut down on the activation of the smoke exhaust system.

(c) In a single storey fire compartment, air handling systems in all non fire-affected zones may operate on 100% outdoor air to provide make-up air to the fire-affected zone.

(d) Within a multi-storey fire compartment, air handling systems in all non fire-affected zones and storeys must operate at 100% outdoor air to provide make-up air to the fire-affected storey via building voids connecting storeys.

(e) Manual override control and indication together with operating instructions for use by emergency personnel must be provided adjacent to the fire indicator panel in accordance with the requirements of Clauses 4.13 and 4.15 of AS/NZS 1668.1.

(f) Manual control for the smoke exhaust system must also be provided at a location normally used by the stage manager in a theatre.

(g) Power supply wiring to exhaust fans together with detection, control, and indication circuits (and where necessary to automatic make-up air supply arrangements) must comply with AS/NZS 1668.1.

8. Smoke detection

A smoke detection system must be installed in accordance with Specification E2.2a to activate the smoke exhaust system.
**Deemed-to-Satisfy Provisions**

1. **Adoption of AS 2665**

   *Automatic smoke-and-heat vents* must be installed as a system complying with AS 2665 except that—
   (a) * * * * *
   (b) * * * * *
   (c) permanently open vents may form part of the smoke/heat venting system provided they comply with the relevant criteria for *automatic smoke-and-heat vents* in AS 2665.

2. **Controls**

   Where a *smoke-and-heat vent* system is installed to comply with *Table E2.2b*, the following must apply:
   (a) In addition to thermally released link operation, *smoke-and-heat vents* must also be initiated by smoke detection complying with *Clauses 5 and 7 of Specification E2.2a* and arranged in zones to match the smoke reservoirs.
   (b) * * * * *
   (c) * * * * *

3. * * * * *
OBJECTIVE

EO3
The Objective of this Part is to—
(a) facilitate the safe movement of occupants; and
(b) facilitate access for emergency services personnel to carry out emergency procedures and assist in the evacuation of occupants.

FUNCTIONAL STATEMENTS

EF3.1
Where a passenger lift is provided, it is to facilitate safe and easy—
(a) movement for occupants with disabilities; and
(b) evacuation of occupants, who due to illness or injury need stretcher assistance.

Application:
EF3.1(b) only applies to a building with an effective height of more than 12 m.

EF3.2
A building is to be provided with one or more passenger lifts to facilitate—
(a) the safe access for emergency services personnel; and
(b) safe and easy evacuation of occupants who due to illness, injury or disability cannot use stairways in the event of an emergency.

Application:
EF3.2 only applies to—
(a) a building with an effective height of more than 25 m; and
(b) a Class 9a building in which patient care areas are located above a level with direct access to a road or open space.

EF3.3
A building having a passenger lift is to be provided with measures to alert occupants when use of the lift is inappropriate.
EP3.1

Stretcher facilities must be provided—
(a) in at least one emergency lift required by EP3.2; or
(b) where an emergency lift is not required and a passenger lift is provided, in at least one lift, to serve each floor in the building served by the passenger lift.

**Application:**
EP3.1(b) only applies to a building with an effective height of more than 12 m.

EP3.2

One or more passenger lifts fitted as emergency lifts to serve each floor served by the lifts in a building must be installed to facilitate the activities of the fire brigade and other emergency services personnel.

**Application:**
EP3.2 only applies to—
(a) a building with an effective height of more than 25 m; and
(b) a Class 9a building in which patient care areas are located at a level that does not have direct access to a road or open space.

EP3.3

Signs or other means must be provided to warn occupants against the use of a lift during a fire.

EP3.4

When a passenger lift is provided in a building required to be accessible, it must be suitable for use by occupants with disabilities.
Deemed-to-Satisfy Provisions

E3.0 Deemed-to-Satisfy Provisions

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirements EP3.1 to EP3.4 are satisfied by complying with E3.1 to E3.8.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of E3.1 to E3.8, the relevant Performance Requirements must be determined in accordance with A0.10.

E3.1 *

This clause has deliberately been left blank.

E3.2 Stretcher facility in lifts

(a) A stretcher facility in accordance with (b) must be provided—
   (i) in at least one emergency lift required by E3.4; or
   (ii) where an emergency lift is not required, if passenger lifts are installed in any building with an effective height of more than 12 m, in at least one of those lifts to serve each floor served by the lifts.

(b) A stretcher facility must accommodate a raised stretcher with a patient lying on it horizontally by providing a clear space not less than 600 mm wide x 2000 mm long x 1400 mm high above the floor level.

E3.3 Warning against use of lifts in fire

A warning sign must—

(a) be displayed where it can be readily seen—
   (i) near every call button for a passenger lift or group of lifts throughout a building; except
   (ii) a small lift such as a dumb-waiter or the like that is for the transport of goods only; and

(b) comply with the details and dimensions of Figure E3.3 and consist of—
   (i) incised, inlaid or embossed letters on a metal, wood, plastic or similar plate securely and permanently attached to the wall; or
   (ii) letters incised or inlaid directly into the surface of the material forming the wall.
E3.4 Emergency lifts

(a) At least one emergency lift complying with (e) must be installed in—
   (i) a building which has an effective height of more than 25 m; and
   (ii) a Class 9a building in which patient care areas are located at a level that does not have direct egress to a road or open space.

(b) An emergency lift may be combined with a passenger lift and must serve those storeys served by the passenger lift so that all storeys of the building served by passenger lifts are served by at least one emergency lift.

(c) Where two or more passenger lifts are installed and serve the same storeys, excluding a lift that is within an atrium and not contained wholly within a shaft—
   (i) at least two emergency lifts must be provided to serve those storeys; and
   (ii) if located within different shafts, at least one emergency lift must be provided in each shaft.

(d) An emergency lift must be contained within a fire-resisting shaft in accordance with the requirements of C2.10.

(e) An emergency lift must—
   (i) comply with AS 1735.2 or Appendix A of AS 1735.1; and
   (ii) in a Class 9a building serving a patient care area—
       (A) have the following minimum dimensions, measured clear of all obstructions, including handrails, etc:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Minimum Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum depth of car</td>
<td>2280 mm</td>
</tr>
<tr>
<td>Minimum width of car</td>
<td>1600 mm</td>
</tr>
<tr>
<td>Minimum floor to ceiling height</td>
<td>2300 mm</td>
</tr>
<tr>
<td>Minimum door height</td>
<td>2100 mm</td>
</tr>
<tr>
<td>Minimum door width</td>
<td>1300 mm; and</td>
</tr>
</tbody>
</table>

       (B) be connected to a standby power supply system where installed; and
Deemed-to-Satisfy Provisions

(iii) have a rating of at least 600 kg if the building has an effective height of more than 75 m.

E3.5  Landings

(a) The provisions of Clause 12.2— “Access” of AS 1735.2 do not apply.
(b) Access and egress to and from liftwell landings must comply with the Deemed-to-Satisfy Provisions of Section D.

E3.6  Facilities for people with disabilities

Where required by D3.3(a), every passenger lift must—

(a) be provided with a handrail complying with the provisions for a mandatory handrail in AS 1735.12; and
(b) have minimum internal floor dimensions complying with AS 1735.12; and
(c) have doors with a minimum clear opening complying with AS 1735.12; and
(d) be fitted with a series of door opening sensory devices which will detect a 75 mm diameter rod across the door opening between 50 mm and 1550 mm above floor level; and
(e) have car control buttons complying with Section 7 of AS 1735.12.

E3.7  Fire service controls

All passenger lift cars must be provided with fire service controls in accordance with AS 1735.2 or Appendix A of AS 1735.1.

E3.8  Aged care buildings

Where residents in a Class 9c aged care building are on levels which do not have direct access to a road or open space, the building must be provided with either,

(a) at least one lift to accommodate a stretcher in accordance with E3.2(b); or
(b) a ramp in accordance with AS 1428.1, and

the lift or ramp must discharge at a level providing direct access to a road or open space.
PART E4
EMERGENCY LIGHTING, EXIT SIGNS AND WARNING SYSTEMS

OBJECTIVE

EO4

The Objective of this Part is, in an emergency, to safeguard occupants from injury by—

(a) having adequate lighting; and
(b) having adequate identification of exits and paths of travel to exits; and
(c) being made aware of the emergency.

FUNCTIONAL STATEMENT

EF4.1

A building is to be provided with—

(a) adequate lighting upon failure of normal artificial lighting during an emergency; and
(b) adequate means—
   (i) of warning occupants to evacuate; and
   (ii) to manage the evacuation process; and
   (iii) to identify exits and paths of travel to an exit.

PERFORMANCE REQUIREMENTS

EP4.1

A level of illumination for safe evacuation in an emergency must be provided, to the degree necessary, appropriate to—

(a) the function or use of the building; and
(b) the floor area of the building; and
(c) the distance of travel to an exit.

Limitation:
EP4.1 does not apply to the internal parts of a sole-occupancy unit in a Class 2, 3 or 9c building or Class 4 part of a building.
EP4.2

To facilitate evacuation, suitable signs or other means of identification must, to the degree necessary—
(a) be provided to identify the location of exits; and
(b) guide occupants to exits; and
(c) be clearly visible to occupants; and
(d) operate in the event of a power failure of the main lighting system for sufficient time for occupants to safely evacuate.

Limitation:
EP4.2 does not apply to the internal parts of a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building.

EP4.3

To warn occupants of an emergency and assist evacuation of a building, an emergency warning and intercommunication system must be provided, to the degree necessary, appropriate to—
(a) the floor area of the building; and
(b) the function or use of the building; and
(c) the height of the building.
Deemed-to-Satisfy Provisions

E4.0 Deemed-to-Satisfy Provisions

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirements EP4.1 to EP4.3 are satisfied by complying with E4.1 to E4.9.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of E4.1 to E4.9, the relevant Performance Requirements must be determined in accordance with A0.10.

E4.1 *

This clause has deliberately been left blank.

E4.2 Emergency lighting requirements

An emergency lighting system must be installed—

(a) in every fire-isolated stairway, fire-isolated ramp or fire-isolated passageway; and

(b) in every storey of a Class 5, 6, 7, 8 or 9 building where the storey has a floor area more than 300 m²—

(i) in every passageway, corridor, hallway, or the like, that is part of the path of travel to an exit; and

(ii) in any room having a floor area more than 100 m² that does not open to a corridor or space that has emergency lighting or to a road or open space; and

(iii) in any room having a floor area more than 300 m²; and

(c) in every passageway, corridor, hallway, or the like, having a length of more than 6 m from the entrance doorway of any sole-occupancy unit in a Class 2 or 3 building or Class 4 part to the nearest doorway opening directly to—

(i) a fire-isolated stairway, fire-isolated ramp or fire-isolated passageway; or

(ii) an external stairway serving instead of a fire-isolated stairway under D1.8; or

(iii) an external balcony leading to a fire-isolated stairway, fire-isolated ramp or fire-isolated passageway; or

(iv) a road or open space; and

(d) in every required non fire-isolated stairway; and

(e) in a sole-occupancy unit in a Class 5, 6 or 9 building if—

(i) the floor area of the unit is more than 300 m²; and

(ii) an exit from the unit does not open to a road or open space or to an external stairway, passageway, balcony or ramp, leading directly to a road or open space; and
Deemed-to-Satisfy Provisions

(f) in every room or space to which there is public access in every storey in a Class 6 or 9b building if—
   (i) the floor area in that storey is more than 300 m²; or
   (ii) any point on the floor of that storey is more than 20 m from the nearest doorway opening directly to a stairway, ramp, passageway, road or open space; or
   (iii) egress from that storey involves a vertical rise within the building of more than 1.5 m, or any vertical rise if the storey concerned does not admit sufficient light; or
   (iv) the storey provides a path of travel from any other storey required by (i), (ii) or (iii) to have emergency lighting; and

(g) in a Class 9a health-care building—
   (i) in every passageway, corridor, hallway, or the like, serving a treatment area or a ward area; and
   (ii) in a patient care area having a floor area of more than 120 m²; and

(h) in every Class 9c aged care building excluding within sole-occupancy units; and
   (i) in every required fire control centre.

E4.3 Measurement of distance

Distances, other than vertical rise, must be measured along the shortest path of travel whether by straight lines, curves or a combination of both.

E4.4 Design and operation of emergency lighting

Every required emergency lighting system must comply with AS/NZS 2293.1.

E4.5 Exit signs

An exit sign must be clearly visible to persons approaching the exit, and must be installed on, above or adjacent to each—

(a) door providing direct egress from a storey to—
   (i) an enclosed stairway, passageway or ramp serving as a required exit; and
   (ii) an external stairway, passageway or ramp serving as a required exit; and
   (iii) an external access balcony leading to a required exit; and

(b) door from an enclosed stairway, passageway or ramp at every level of discharge to a road or open space; and

(c) horizontal exit; and

(d) door serving as, or forming part of, a required exit in a storey required to be provided with emergency lighting in accordance with E4.2.
E4.6 Direction signs

NSW E4.6

If an exit is not readily apparent to persons occupying or visiting the building then exit signs with directional arrows must be installed in appropriate positions in corridors, hallways, lobbies, and the like, indicating the direction to a required exit.

E4.7 Class 2 and 3 buildings and Class 4 parts: Exemptions

E4.5 does not apply to—

(a) a Class 2 building in which every door referred to is clearly and legibly labelled on the side remote from the exit or balcony—
   (i) with the word “EXIT” in capital letters 25 mm high in a colour contrasting with that of the background; or
   (ii) by some other suitable method; and
(b) an entrance door of a sole-occupancy unit in a Class 2 or 3 building or Class 4 part.

E4.8 Design and operation of exit signs

Every required exit sign must—

(a) comply with AS/NZS 2293.1; and
(b) be clearly visible at all times when the building is occupied by any person having the right of legal entry to the building.

E4.9 Emergency warning and intercommunication systems

An emergency warning and intercommunication system complying where applicable with AS 1670.4 and AS 4428.4 must be installed—

(a) in a building with an effective height of more than 25 m; and
(b) in a Class 3 building having a rise in storeys of more than 2 and used as—
   (i) the residential part of a school; or
   (ii) accommodation for the aged, children or people with disabilities; and
(c) in a Class 3 building used as a residential aged care building, except that the system—
   (i) must be arranged to provide a warning for occupants; and
   (ii) in areas used by the residents, may have its alarm adjusted in volume and content to minimise trauma consistent with the type and condition of residents; and
(d) in a Class 9a building having a floor area of more than 1000 m$^2$ or a rise in storeys of more than 2, and the system—
   (i) must be arranged to provide a warning for occupants; and
   (ii) in a ward area, may have its alarm adjusted in volume and content to minimise trauma consistent with the type and condition of patients; and
Deemed-to-Satisfy Provisions

(e) in a Class 9b building—
   (i) used as a school and having a rise in storeys of more than 3; or
   (ii) used as a theatre, public hall, or the like, having a floor area more than 1000 m² or a rise in storeys of more than 2.
HEALTH AND AMENITY

F1  Damp and Weatherproofing
F2  Sanitary and Other Facilities
F3  Room Sizes
F4  Light and Ventilation
F5  Sound Transmission and Insulation
## SECTION F CONTENTS

### SECTION F HEALTH AND AMENITY

#### Part F1 Damp and Weatherproofing

<table>
<thead>
<tr>
<th>Objective</th>
<th>Functional Statements</th>
<th>Performance Requirements</th>
<th>Deemed-to-Satisfy Provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>FO1</td>
<td>FF1.1 - FF1.3</td>
<td>FP1.1 - FP1.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stormwater drainage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1.5</td>
<td>Roof coverings</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sarking</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1.7</td>
<td>Water proofing of wet areas in buildings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1.9</td>
<td>Damp-proofing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1.10</td>
<td>Damp-proofing of floors on the ground</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1.11</td>
<td>Provision of floor wastes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1.12</td>
<td>Sub-floor ventilation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1.13</td>
<td>Glazed assemblies</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Part F2 Sanitary and Other Facilities

<table>
<thead>
<tr>
<th>Objective</th>
<th>Functional Statements</th>
<th>Performance Requirements</th>
<th>Deemed-to-Satisfy Provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>FO2</td>
<td>FF2.1 - FF2.4</td>
<td>FP2.1 - FP2.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Facilities in residential buildings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F2.2</td>
<td>Calculation of number of occupants and fixtures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F2.3</td>
<td>Facilities in Class 3 to 9 buildings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F2.4</td>
<td>Facilities for people with disabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F2.5</td>
<td>Construction of sanitary compartments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F2.6</td>
<td>Interpretation: Urinals and washbasins</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F2.7</td>
<td>Microbial (legionella) control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F2.8</td>
<td>Waste management</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Part F3 Room Sizes

<table>
<thead>
<tr>
<th>Objective</th>
<th>Functional Statement</th>
<th>Performance Requirement</th>
<th>Deemed-to-Satisfy Provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>FO3</td>
<td>FF3.1</td>
<td>FP3.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Height of rooms and other spaces</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Part F4 Light and Ventilation

<table>
<thead>
<tr>
<th>Objective</th>
<th>Functional Statements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FO4</td>
<td>FF4.1 - FF4.3</td>
<td></td>
</tr>
</tbody>
</table>

**SUPERSEDED**
Performance Requirements FP4.1 - FP4.5
F4.0 Deemed-to-Satisfy Provisions
F4.1 Provision of natural light
F4.2 Methods and extent of natural lighting
F4.3 Natural light borrowed from adjoining room
F4.4 Artificial lighting
F4.5 Ventilation of rooms
F4.6 Natural ventilation
F4.7 Ventilation borrowed from adjoining room
F4.8 Restriction on position of water closets and urinals
F4.9 Airlocks
F4.10 * * * * *
F4.11 Carparks
F4.12 Kitchen local exhaust ventilation

Part F5  Sound Transmission and Insulation

Objective FO5
Functional Statement FF5.1
Performance Requirements FP5.1 - FP5.6
Verification Methods FV5.1 and FV5.2
F5.0 Deemed-to-Satisfy Provisions
F5.1 Application of Part
F5.2 Determination of airborne sound insulation ratings
F5.3 Determination of impact sound insulation ratings
F5.4 Sound insulation rating of floors
F5.5 Sound insulation rating of walls
F5.6 Sound insulation rating of services
F5.7 Sound isolation of pumps
Specification F5.2 Sound Insulation for Building Elements
Specification F5.5 Impact Sound - Test of Equivalence

ACT Appendix (Additional provisions - refer to ACT Contents for full details)
ACT F3.101 Carparking facilities

Qld Appendix (Additional provisions - refer to Qld Contents for full details)
QLD Part F101 Vermin Control

Tas Appendix (Additional provisions - refer to Tas Contents for full details)
Tas F2.101 Non-flushed Urinals
Tas F2.102 Installation of Closet Fixtures
Tas F4.101 Fixed Natural Ventilation

Vic Appendix (Additional provisions - refer to Vic Contents for full details)
Vic F2.101 First aid rooms
Vic F3.101 Childrens services - size of rooms
Vic F3.102 Class 3 buildings - size of rooms
Vic F3.103 Class 3 and Class 9a residential aged care buildings - size of rooms
Vic Part F6 Energy Efficiency
OBJECTIVE

FO1
The *Objective* of this Part is to—
(a) safeguard occupants from illness or injury and protect the building from damage caused by—
   (i) *surface water*; and
   (ii) external moisture entering a building; and
   (iii) the accumulation of internal moisture in a building; and
(b) protect *other property* from damage caused by redirected *surface water*.

FUNCTIONAL STATEMENTS

FF1.1
A building including any associated *sitework* is to be constructed in a way that protects people and *other property* from the adverse effects of redirected *surface water*.

FF1.2
A building is to be constructed to provide resistance to moisture penetrating from the outside including rising from the ground.

FF1.3
A building is to be constructed to avoid the likelihood of—
(a) the creation of unhealthy or dangerous conditions; and
(b) damage to building elements,
caused by dampness or water overflow from bathrooms, laundries and the like.
HEALTH AND AMENITY

PERFORMANCE REQUIREMENTS

FP1.1

Surface water, resulting from a storm having an average recurrence interval of 20 years and which is collected or concentrated by a building or sitework, must be disposed of in a way that avoids the likelihood of damage or nuisance to any other property.

FP1.2

Surface water, resulting from a storm having an average recurrence interval of 100 years must not enter the building.

Limitation:

FP1.2 does not apply to—

(a) a Class 7 or 8 building where in the particular case there is no necessity for compliance; or
(b) a garage, tool shed, sanitary compartment, or the like, forming part of a building used for other purposes; or
(c) an open spectator stand or open-deck carpark.

FP1.3

A drainage system for the disposal of surface water must—

(a) convey surface water to an appropriate outfall; and
(b) avoid the entry of water into a building; and
(c) avoid water damaging the building.

FP1.4

A roof and external wall (including openings around windows and doors) must prevent the penetration of water that could cause—

(a) unhealthy or dangerous conditions, or loss of amenity for occupants; and
(b) undue dampness or deterioration of building elements.

Limitation:

FP1.4 does not apply to—

(a) a Class 7 or 8 building where in the particular case there is no necessity for compliance; or
(b) a garage, tool shed, sanitary compartment, or the like, forming part of a building used for other purposes; or
(c) an open spectator stand or open-deck carpark.
FP1.5
SA FP1.5
Moisture from the ground must be prevented from causing—
(a) undue dampness or deterioration of building elements; and
(b) unhealthy or dangerous conditions, or loss of amenity for occupants.

Limitation:
FP1.5 does not apply to—
(a) a Class 7 or 8 building where in the particular case there is no necessity for compliance; or
(b) a garage, tool shed, sanitary compartment, or the like, forming part of a building used for other purposes; or
(c) an open spectator stand or open-deck carpark.

FP1.6
SA FP1.6
Overflow from a bathroom, laundry facility or the like must be prevented from penetrating to—
(a) another sole-occupancy unit used for sleeping accommodation; and
(b) a public space,
in a storey below in the same building.

FP1.7
SA FP1.8
To protect the structure of the building and to maintain the amenity of the occupants, water must be prevented from penetrating—
(a) behind fittings and linings; and
(b) into concealed spaces,
of sanitary compartments, bathrooms, laundries and the like.
F1.0  Deemed-to-Satisfy Provisions

(a)  *Performance Requirement FP1.4*, for the prevention of the penetration of water through *external walls*, must be complied with.

| There are no Deemed to Satisfy Provisions for this Performance Requirement in respect of external walls. |

SA F1.0(b)

(b)  Where a *Building Solution* is proposed to comply with the *Deemed-to-Satisfy Provisions*, *Performance Requirements FP1.1 to FP1.3 and FP1.5 to FP1.7* are satisfied by complying with F1.1 to F1.13.

(c)  Where a *Building Solution* is proposed as an *Alternative Solution* to the Deemed-to-Satisfy Provisions of F1.1 to F1.13, the relevant *Performance Requirements* must be determined in accordance with A0.10.

F1.1  Stormwater drainage

Stormwater drainage must comply with AS/NZS 3500.3.2.

F1.2  * * * * * *

This clause has deliberately been left blank.

F1.3  * * * * * *

This clause has deliberately been left blank.

F1.4  * * * * * *

This clause has deliberately been left blank.

F1.5  Roof coverings

A roof must be covered with—

(a)  concrete roofing tiles complying with AS 2049 and fixed, except in cyclonic areas, in accordance with AS 2050, as appropriate; or

(b)  terracotta roofing tiles complying with AS 2049 and fixed, except in cyclonic areas, in accordance with AS 2050; or

(c)  cellulose cement corrugated sheeting complying with AS/NZS 2908.1 and installed in accordance with AS/NZS 1562.2; or

(d)  metal sheet roofing complying with AS 1562.1; or

(e)  plastic sheet roofing designed and installed in accordance with AS/NZS 4256 Parts 1, 2, 3 and 5 and AS/NZS 1562.3; or
HEALTH AND AMENITY

(f) asphalt shingles complying with ASTM D3018-90, Class A.

F1.6 Sarking

Sarking-type materials used for weatherproofing of roofs and walls must comply with AS/NZS 4200 Parts 1 and 2.

F1.7 Water proofing of wet areas in buildings

SA F1.7

(a) The following parts of a building must be impervious to water:

(i) In any building—the floor surface or substrate in a shower enclosure, or within 1.5 m measured horizontally from a point vertically below the shower fitting, if there is no enclosure.

(ii) In a Class 3, 5, 6, 7, 8 or 9 building—the floor surface or substrate in a bathroom or shower room, slop hopper or sink compartment, laundry or sanitary compartment which is used in common by the occupants.

(iii) In a Class 2 or 3 building or Class 4 part—the floor of those rooms fitted with a floor waste in accordance with F1.11.

(iv) The wall surface or substrate—

(A) of a shower enclosure, or if the shower is not enclosed, within 1.5 m and exposed to a shower fitting, to a height of 1.8 m above the floor; and

(B) immediately adjacent or behind a bath, trough, basin, sink, or similar fixture, to a height not less than 150 mm above the fixture if it is within 75 mm of the wall.

(v) The junction between the floor and wall if the wall and floor are required to be impervious to water.

(vi) The junction between the wall and fixture if the wall is required to be impervious to water.

(b) Water proofing of wet areas in a building must comply with the relevant parts of AS 3740.

(c) Where a slab or stall type urinal is installed—

(i) the floor surface of the room containing the urinal must—

(A) be an impervious material; and

(B) where no step is installed—

(aa) be graded to the urinal channel for a distance of 1.5 m from the urinal channel; and

(bb) the remainder of the floor be graded to a floor waste; and

(C) where a step is installed—

(aa) the step must have an impervious surface and be graded to the urinal channel; and

(bb) the floor behind the step must be graded to a floor waste; and

(ii) the junction between the floor surface and the urinal channel must be impervious.

(d) Where a wall hung urinal is installed—
HEALTH AND AMENITY

F1.7

(i) The wall must be surfaced with impervious material extending from the floor to not less than 50 mm above the top of the urinal and not less than 225 mm on each side of the urinal.

(ii) The floor must be surfaced with impervious material.

(e) In a room with timber or steel framed walls and containing a urinal—

(i) the wall must be surfaced with an impervious material extending from the floor to not less than 100 mm above the floor surface; and

(ii) the junction of the floor surface and the wall surface must be impervious.

F1.8

This clause has deliberately been left blank.

F1.9 Damp-proofing

(a) Except for a building covered by (c), moisture from the ground must be prevented from reaching—

(i) the lowest floor timbers and the walls above the lowest floor joists; and

(ii) the walls above the damp-proof course; and

(iii) the underside of a suspended floor constructed of a material other than timber, and the supporting beams or girders.

SA F1.9(b)

(b) Where a damp-proof course is provided, it must consist of—

(i) a material that complies with AS/NZS 2904; or

(ii) impervious termite shields in accordance with AS 3660.1.

(c) The following buildings need not comply with (a):

(i) A Class 7 or 8 building where in the particular case there is no necessity for compliance.

(ii) A garage, tool shed, sanitary compartment, or the like, forming part of a building used for other purposes.

(iii) an open spectator stand or open-deck carpark.

F1.10 Damp-proofing of floors on the ground

SA F1.10

If a floor of a room is laid on the ground or on fill, moisture from the ground must be prevented from reaching the upper surface of the floor and adjacent walls by the insertion of a vapour barrier in accordance with AS 2870, except damp-proofing need not be provided if—

(a) weatherproofing is not required; or

(b) the floor is the base of a stair, lift or similar shaft which is adequately drained by gravitation or mechanical means.
F1.11 Provision of floor wastes

SA F1.11
In a Class 2 or 3 building or Class 4 part, the floor of each bathroom and laundry located at any level above a sole-occupancy unit or public space must be graded to permit drainage to a floor waste.

F1.12 Sub-floor ventilation
The sub-floor space between a suspended floor of a building and the ground must be in accordance with the following:

(a) The sub-floor space must—
   (i) be cleared of all building debris and vegetation; and
   (ii) be cross-ventilated by means of openings; and
   (iii) contain no dead air spaces; and
   (iv) be graded to prevent surface water ponding under the building; and
   (v) have evenly spaced ventilation openings.

(b) In double leaf masonry walls, the cross ventilation openings specified in (a) must be provided in both leaves of the masonry, with inner-leaf openings being aligned with outer-leaf openings to allow an unobstructed flow of air.

(c) Internal walls constructed in sub-floor spaces must be provided with openings—
   (i) having an unobstructed area equivalent to that required for the adjacent external openings; and
   (ii) which are evenly distributed throughout such internal walls.

(d) The clearance between the ground surface and the underside of the floor, including any horizontal framing member, must be in accordance with Table F1.12.

(e) The sub-floor ventilation openings in internal and external walls must be in accordance with Table F1.12 for the climatic zones given in Figure F1.12.

(f) Where ventilation is obstructed by patios, paving or the like, additional ventilation must be provided to ensure that the overall level of ventilation is maintained.

(g) Where the ground or sub-floor space is excessively damp or subject to frequent flooding, in addition to the requirements of (a) to (f)—
   (i) the area of sub-floor ventilation required in (e) must be increased by 50%; or
   (ii) a sealed impervious membrane must be provided over the ground; or
   (iii) Durability Class 1 or 2 timbers or H3 preservative treated timbers in accordance with AS 1684.2 Parts 2, AS 1684.3—19993 or AS 1684.4—19994 must be used.
Figure F1.12
CLIMATIC ZONES BASED ON RELATIVE HUMIDITY

Note: The season with the highest relative humidity is used. Generally this will be July for southern Australia and January for northern Australia.

Table F1.12 SUB-FLOOR VENTILATION AND CLEARANCE

<table>
<thead>
<tr>
<th>Climate zone (see Figure F1.12)</th>
<th>Minimum sub-floor ventilation (mm²/m of wall)</th>
<th>Minimum height from ground surface (mm)</th>
<th>Termite inspection not required</th>
<th>Termite inspection required (see note)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No membrane</td>
<td>Ground sealed with impervious membrane</td>
<td></td>
<td>Termite inspection not required</td>
<td>Termite inspection required (see note)</td>
</tr>
<tr>
<td>1</td>
<td>2000</td>
<td>1000</td>
<td>150</td>
<td>400</td>
</tr>
<tr>
<td>2</td>
<td>4000</td>
<td>2000</td>
<td>150</td>
<td>400</td>
</tr>
<tr>
<td>3</td>
<td>6000</td>
<td>3000</td>
<td>150</td>
<td>400</td>
</tr>
</tbody>
</table>

Note: On sloping sites, 400 mm clearance may be reduced to 150 mm within 2 m of external walls.
F1.13 Glazed assemblies

(a) Subject to (b) and (c), the following glazed assemblies in an external wall, must comply with AS 2047 requirements for resistance to water penetration:

(i) Windows.
(ii) Sliding doors with a frame.
(iii) Adjustable louvres.
(iv) Shopfronts.
(v) Window walls with one piece framing.

(b) The following buildings need not comply with (a):

(i) A Class 7 or 8 building where in the particular case there is no necessity for compliance.
(ii) A garage, tool shed, sanitary compartment, or the like, forming part of a building used for other purposes, except where the construction of the garage, tool shed, sanitary compartment or the like contributes to the weatherproofing of the other part of the building.
(iii) An open spectator stand or open-deck carpark.

(c) The following glazed assemblies need not comply with (a):

(i) All glazed assemblies not in an external wall.
(ii) Hinged doors, including French doors and bi-fold doors.
(iii) Revolving doors.
(iv) Fixed louvres.
(v) Skylights, roof lights and windows in other than the vertical plane.
(vi) Sliding doors without a frame.
(vii) Shopfront doors.
(viii) Windows constructed on site and architectural one-off windows, which are not design tested in accordance with AS 2047.
(ix) Second-hand windows, re-used windows, recycled windows and replacement windows.
(x) Heritage windows.
OBJECTIVE

FO2
The *Objective* of this Part is to—
(a) safeguard occupants from illness caused by infection; and
(b) safeguard occupants from loss of amenity arising from the absence of adequate personal hygiene facilities; and
(c) enable occupants to carry out laundering; and
(d) provide for facilities to enable food preparation; and
(e) enable unconscious occupants of *sanitary compartments* to be removed from the compartment.

FUNCTIONAL STATEMENTS

FF2.1
A building is to be provided with—
(a) suitable sanitary facilities and space and facilities for personal hygiene; and

*NSW FF2.1(b)*
(b) adequate means for the prevention of contaminants to hot water, warm water and cooling water systems.

FF2.2
A building is to be provided with space and facilities for laundering.

*Vic FF2.2 Application*

**Application:**

FF2.2 only applies to—
(a) a Class 2 building or Class 4 part; and
(b) a Class 9a *health-care building*; and
(c) a Class 9c *aged care building*; and
(d) an *early childhood centre*.
FF2.3

A building is to be provided with space and facilities for the preparation and cooking of food.

**Application:**

FF2.3 only applies to—

(a) a Class 2 building or Class 4 part; and
(b) a Class 9a *health-care building*; and
(c) a Class 9c *aged care building*; and
(d) an *early childhood centre*.

FF2.4

A *sanitary compartment* is to have sufficient space or other means to permit an unconscious occupant to be removed from the compartment.

**PERFORMANCE REQUIREMENTS**

**FP2.1**

Suitable sanitary facilities for personal hygiene must be provided in a convenient location within or associated with a building, to the degree necessary, appropriate to—

(a) the function or use of the building; and
(b) the number and gender of the occupants; and
(c) the disability or other particular needs of the occupants.

**FP2.2**

*Vic FP2.2 Application*

Laundering facilities or space for laundering facilities must be provided in a convenient location within or associated with a building appropriate to the function or use of the building.

**Application:**

FP2.2 only applies to—

(a) a Class 2 building or Class 4 part; and
(b) a Class 9a *health-care building*; and
(c) a Class 9c *aged care building*; and
(d) an *early childhood centre*.

**FP2.3**

A facility must be provided which includes—

(a) a means for food rinsing, utensil washing and waste water disposal; and
FP2.3

(b) a means for cooking food; and
(c) a space for food preparation.

Vic FP2.3(d)

Application:
FP2.3 only applies to—
(a) a Class 2 building or Class 4 part; and
(b) a Class 9a health-care building; and
(c) a Class 9c aged care building; and
(d) an early childhood centre.

FP2.4

Suitable means must be provided in a building containing wards or bedrooms to facilitate the emptying of sewage or dirty water from containers.

Application:
FP2.4 only applies to a Class 9a or 9c building.

FP2.5

A sanitary compartment must be constructed with sufficient space or other means to permit an unconscious occupant to be removed from the compartment.

NSW FP2.6

FP2.6

Hot water, warm water and cooling water systems installed in a building must control the accumulation of harmful levels of micro-organisms.

Limitation:
FP2.6 does not apply to a system serving only a single sole-occupancy unit in a Class 2 or 3 building or Class 4 part.
F2.0 Deemed-to-Satisfy Provisions

Vic F2.0

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirements FP2.1 to FP2.6 are satisfied by complying with F2.1 to F2.8.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of F2.1 to F2.8, the relevant Performance Requirements must be determined in accordance with A0.10.

F2.1 Facilities in residential buildings

Sanitary and other facilities for Class 2 and 3 buildings and Class 9c aged care buildings and for Class 4 parts of buildings must be provided in accordance with Table F2.1.

Vic Table F2.1

<table>
<thead>
<tr>
<th>Class of building</th>
<th>Minimum facilities required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 2</td>
<td>Within each sole-occupancy unit—</td>
</tr>
<tr>
<td></td>
<td>(a) a kitchen sink and facilities for the preparation and cooking of food; and</td>
</tr>
<tr>
<td></td>
<td>(b) a bath or shower; and</td>
</tr>
<tr>
<td></td>
<td>(c) a closet pan and washbasin.</td>
</tr>
<tr>
<td></td>
<td>Laundry facilities, either—</td>
</tr>
<tr>
<td></td>
<td>(a) in each sole-occupancy unit—</td>
</tr>
<tr>
<td></td>
<td>(i) clothes washing facilities, comprising at least one washtub and space for a washing machine; and</td>
</tr>
<tr>
<td></td>
<td>(ii) clothes drying facilities comprising—</td>
</tr>
<tr>
<td></td>
<td>(A) clothes line or hoist with not less than 7.5 m of line; or</td>
</tr>
<tr>
<td></td>
<td>(B) space for one heat-operated drying cabinet or appliance in the same room as the clothes washing facilities; or</td>
</tr>
<tr>
<td></td>
<td>(b) a separate laundry for each 4 sole-occupancy units, or part—</td>
</tr>
<tr>
<td></td>
<td>(i) clothes washing facilities comprising at least one washtub and one washing machine; and</td>
</tr>
<tr>
<td></td>
<td>(ii) clothes drying facilities comprising—</td>
</tr>
<tr>
<td></td>
<td>(A) clothes line or hoist with not less than 7.5 m of line per sole-occupancy unit; or</td>
</tr>
<tr>
<td></td>
<td>(B) one heat-operated drying cabinet or appliance for each 4 sole-occupancy units, or part.</td>
</tr>
<tr>
<td>Class of building</td>
<td>Minimum facilities required</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td><strong>Class 2</strong></td>
<td>Facilities for employees—</td>
</tr>
<tr>
<td></td>
<td>If the building contains more than 10 <em>sole-occupancy units</em>, or a group of Class 2 buildings on the one allotment contains, in total, more than 10 <em>sole-occupancy units</em>—a closet pan and washbasin in a compartment or room at or near ground level and accessible to employees without entering a <em>sole-occupancy unit</em>.</td>
</tr>
<tr>
<td><strong>Class 3</strong></td>
<td>Facilities for residents—</td>
</tr>
<tr>
<td>(other than Class 3 residential aged care buildings)</td>
<td>For each building or group of buildings—</td>
</tr>
<tr>
<td></td>
<td>(a) a bath or shower; and</td>
</tr>
<tr>
<td></td>
<td>(b) a closet pan and washbasin,</td>
</tr>
<tr>
<td></td>
<td>for each 10 residents for whom private facilities are not provided, except that—</td>
</tr>
<tr>
<td></td>
<td>(c) if one urinal is provided for each 25 males up to 50 and one additional urinal for each additional 50 males or parts thereof,</td>
</tr>
<tr>
<td></td>
<td>one closet pan for each 12 males may be provided.</td>
</tr>
<tr>
<td></td>
<td>Facilities for employees—see Clause F2.3.</td>
</tr>
<tr>
<td></td>
<td>Note: These facilities need not be situated within the building.</td>
</tr>
<tr>
<td><strong>Class 3</strong></td>
<td>Facilities for residents—</td>
</tr>
<tr>
<td>Residential aged care buildings</td>
<td>For each building or group of buildings—</td>
</tr>
<tr>
<td></td>
<td>(a) a shower, closet pan and wash basin for each 8 residents or part thereof for whom private facilities are not provided; and</td>
</tr>
<tr>
<td></td>
<td>(b) a suitable bath for each 30 residents or part thereof.</td>
</tr>
<tr>
<td></td>
<td>Note: Urinals must not be taken into consideration in calculating the number of facilities.</td>
</tr>
<tr>
<td><strong>Class 4</strong></td>
<td>For each <em>sole-occupancy unit</em>—</td>
</tr>
<tr>
<td></td>
<td>(a) a kitchen sink and facilities for the preparation and cooking of food; and</td>
</tr>
<tr>
<td></td>
<td>(b) a bath or shower; and</td>
</tr>
<tr>
<td></td>
<td>(c) a closet pan and washbasin; and</td>
</tr>
<tr>
<td></td>
<td>(d) clothes washing facilities, comprising a washtub and space in the same room for a washing machine or wash copper; and</td>
</tr>
<tr>
<td></td>
<td>(e) a clothes line or hoist, or space for a heat-operated drying cabinet or similar appliance for the exclusive use of the occupants.</td>
</tr>
</tbody>
</table>
### F2.1 HEALTH AND AMENITY

<table>
<thead>
<tr>
<th>Class of building</th>
<th>Minimum facilities required</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class 9c aged care buildings</strong></td>
<td>Facilities for residents—</td>
</tr>
<tr>
<td></td>
<td>For each building or group of buildings—</td>
</tr>
<tr>
<td></td>
<td>(a) a closet pan and wash basin for each 6 residents or part thereof for whom private facilities are not provided; and</td>
</tr>
<tr>
<td></td>
<td>(b) a shower for each 7 residents or part thereof for whom private facilities are not provided; and</td>
</tr>
<tr>
<td></td>
<td>(c) a suitable bath, fixed or mobile.</td>
</tr>
</tbody>
</table>

**Other facilities**

(d) one kitchen or other adequate facility for the preparation and cooking or reheating of food including a kitchen sink and washbasin; and

(e) laundry facilities for the cleansing and drying of linen and clothing or adequate facilities for holding and dispatch or treatment of soiled linen and clothing and the like and the receipt and storage of clean linen; and

(f) one clinical hand washing basin for each 16 residents or part thereof.

**Note:** Urinals must not be taken into consideration in calculating the number of facilities.

### F2.2 Calculation of number of occupants and fixtures

(a) The number of persons accommodated must be calculated according to D1.13 if it cannot be more accurately determined by other means.

(b) Unless the premises are used predominantly by one sex, sanitary facilities must be provided on the basis of equal numbers of males and females.

(c) In calculating the number of sanitary facilities to be provided under F2.1 and F2.3, a unisex facility required for people with disabilities may be counted once for each sex.

(d) For the purposes of this Part, a unisex facility comprises one closet pan, one washbasin and means for the disposal of sanitary towels.

### F2.3 Facilities in Class 3 to 9 buildings

**SA F2.3(a)**

(a) Sanitary facilities must be provided for Class 3, 5, 6, 7, 8 and 9 buildings in accordance with Table F2.3.

(b) A health-care building must be provided with—

(i) one kitchen or other adequate facility for the preparation and cooking or reheating of food including a kitchen sink and washbasin; and

(ii) laundry facilities for the cleansing and drying of linen and clothing or adequate facilities for holding and dispatch or treatment of soiled linen and clothing, sanitary towels and the like and the receipt and storage of clean linen.

**Vic F2.3(c)**

(c) An early childhood centre must be provided with—
(i) one kitchen with facilities for preparation of and cooking food for infants including a kitchen sink and space for a refrigerator; and

(ii) if the centre accommodates children younger than 3 years old, a laundry facility comprising a washtub and space in the same room for a washing machine.

SA Table F2.3

Vic Table F2.3

Table F2.3 SANITARY FACILITIES IN CLASS 3, 5, 6, 7, 8 AND 9 BUILDINGS

<table>
<thead>
<tr>
<th>Class of Building</th>
<th>User</th>
<th>Max Number Served by—</th>
<th>Closet Pan(s)</th>
<th>Urinals</th>
<th>Washbasin(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>Each Extra</td>
</tr>
<tr>
<td>3,5,6 and 9 other</td>
<td>Employees</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>than schools</td>
<td>Males</td>
<td>20 40 20</td>
<td>25</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>15 30 15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 and 8</td>
<td>Employees</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Males</td>
<td>20 40 20</td>
<td>25</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>15 30 15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6—Department</td>
<td>Patrons</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>stores, shopping</td>
<td>Males</td>
<td>1200 2400 1200</td>
<td>600</td>
<td>1200</td>
<td>1200</td>
</tr>
<tr>
<td>centres</td>
<td>Females</td>
<td>300 600 1200</td>
<td></td>
<td>600</td>
<td>1200</td>
</tr>
<tr>
<td>6—Restaurants</td>
<td>Patrons</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cafes, bars</td>
<td>Males</td>
<td>100 300 200</td>
<td>50</td>
<td>100</td>
<td>*50</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>25 50 **50</td>
<td></td>
<td>50</td>
<td>150</td>
</tr>
</tbody>
</table>

* Where the number of male patrons exceeds 250, not less than 5 urinals must be provided plus one additional urinal for every additional 100 males in excess of 250.

** Where the number of female patrons exceeds 250, not less than 6 closet pans must be provided plus one additional closet pan for every 100 females in excess of 250.

9a— Health-care

| buildings         | Patients |                          |     |     |           |     |     |           |     |     |           |
|                   | Males    | - 16 8                   | 8   | 16 | 8         | 8   | 16 | 8         |
|                   | Females  | - 16 8                   | 8   | 16 | 8         |

Other facilities

(i) One shower for each 8, or part, patients or inmates.

(ii) One island-type plunge bath in each storey containing a ward area.

9b—Schools

| Employees         |                          |     |     |           |     |     |           |     |     |           |
|                   | Males      | 20 40 20 20 45 30 30 60 | 30 | 60 | 30        |
|                   | Females    | 5 20 15                   |     | 30 | 60        |

<p>| Students          |                          |     |     |           |     |     |           |     |     |           |
|                   | Males      | 30 70 70 30 70 35 20 40 | 20 | 40 | 40        |
|                   | Females    | 10 20 20                   |     | 20 | 40        |</p>
<table>
<thead>
<tr>
<th>Class of Building</th>
<th>User</th>
<th>Max Number Served by—</th>
<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Closet Pan(s)</td>
<td>Urinals</td>
<td>Washbasin(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2 Each Extra</td>
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<td>9b— Early childhood centres</td>
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<td>Other facilities</td>
<td>(a) One bath or shower-bath must be provided.</td>
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<td>(b) If the centre accommodates children under 3 years of age a bench type baby bath must be provided.</td>
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<td>Note: Facilities for use by children must be—</td>
<td>(i) junior pans; and</td>
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<td>(ii) wash basins with a rim height not exceeding 600 mm.</td>
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<td>9b— Theatres and cinemas with multiple auditoria, sporting venues, art galleries or the like</td>
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<td>Other facilities</td>
<td>One shower for each 10, or part, participants.</td>
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<td>9b— Single auditorium theatres and cinemas</td>
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<td>* Where the number of female patrons exceeds 250, not less than 6 closet pans must be provided plus one additional closet pan for every 80 females, or part, in excess of 250.</td>
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<td>9b— Churches, chapels or the like</td>
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<td>9b— Public halls, function rooms, or the like</td>
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<td>* Where the number of male patrons exceeds 250, not less than 5 urinals must be provided plus one additional urinal for every additional 100 males in excess of 250.</td>
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<td>** Where the number of female patrons exceeds 250, not less than 6 closet pans must be provided plus one additional closet pan for every 100 females in excess of 250.</td>
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<td>1. Employees—a reference to employees includes owners and managers using the building.</td>
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<td>2. Urinals—a urinal need not be provided if the number of males employed is less than 10.</td>
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</table>
F2.3 HEALTH AND AMENITY

<table>
<thead>
<tr>
<th>Class of Building</th>
<th>User</th>
<th>Max Number Served by—</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Closet Pan(s)</td>
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</table>

3. Unisex facility—instead of separate facilities for each sex, if not more than 10 persons are employed, a unisex facility may be provided.

4. Combined facilities—if the majority of employees are of one sex, not more than 2 employees of the other sex may share toilet facilities if—

(a) facilities for females include adequate means for the disposal of sanitary towels; and

(b) the facilities are separated by means of walls, partitions and doors to afford privacy.

5. Use of public facilities—sanitary facilities for employees need not be separate from those required for public use in a Class 6 or 9b building, other than a school or early childhood centre.

6. Sanitary facilities for public—sanitary facilities need not be provided for the public if—

(a) a Class 6 building used as a department store or shopping centre if the building accommodates less than 600 persons; or

(b) a Class 6 building used as a restaurant, cafe, bar if the building accommodates not more than 20 persons; or

(c) a Class 9b building used as a public hall, function room or the like if the building accommodates not more than 20 persons; or

(d) a Class 9b building used as a sporting venue, theatre, cinema, museum, art gallery or the like if the number of spectators or patrons is not more than 100.

7. For females—adequate means of disposal of sanitary towels must be provided.

F2.4 Facilities for people with disabilities

(a) Sanitary facilities must be provided in accordance with Table F2.4 for—

SA F2.4(a)(i)

(i) every Class 3, 5, 6, 7, 8 and 9 building that is required to be accessible in accordance with Part D3 and must be calculated as part of the number of facilities required by Table F2.3; and

(ii) a Class 10a building required to be accessible.

(b) The construction and layout of all facilities provided in accordance with Table F2.4 must comply with AS 1428.1.

(c) A unisex facility must be located so that it can be entered without crossing an area reserved for one sex only.

(d) Where two or more facilities for people with disabilities are required, the number of mirror image configurations of each facility shall be provided as evenly as possible.

SA Table F2.4
### Table F2.4 SANITARY FACILITIES FOR PEOPLE WITH DISABILITIES

<table>
<thead>
<tr>
<th>Class of building</th>
<th>Minimum facilities</th>
</tr>
</thead>
</table>
| **Class 3 and a Class 9c aged care building** — In *every sole-occupancy unit* to which access for people with disabilities is required | (a) one closet pan and washbasin; and  
(b) one shower |
| **Shelf** | A sanitary facility must have a shelf. |
| **Class 3 and a Class 9c aged care building** — In *—*  
(i) accommodation areas, other than in *sole-occupancy units*; and  
(ii) other parts of the building, to which access for people with disabilities is required | Where **F2.1** and **F2.3** require 1–100 closet pans plus urinals:  
(a) two wheelchair *accessible* unisex facilities; or  
(b) one wheelchair *accessible* unisex closet pan and washbasin for each sex.  
Where **F2.1** and **F2.3** require 101–200 closet pans plus urinals:  
(a) two wheelchair *accessible* unisex facilities; or  
(b) one wheelchair *accessible* unisex closet pan and washbasin for each sex.  
Where **F2.1** and **F2.3** require more than 200 closet pans plus urinals:  
(a) two wheelchair *accessible* unisex facilities or one wheelchair *accessible* unisex facility and one wheelchair *accessible* closet pan and washbasin for each sex; and  
(b) one additional wheelchair *accessible* unisex facility or one wheelchair *accessible* closet pan and washbasin for each sex for each additional 100 facilities normally required. |
| **Class 5, 6, 7, 8 and 9** — to which access for people with disabilities is required | Where **F2.1** and **F2.3** require 1 or more showers:  
(a) one *accessible* shower for each 10 showers or part thereof, but not less than one for use by both sexes.  
**Sanitary Towels** | Adequate facilities for the disposal of sanitary towels must be provided.  
**Shelf** | A unisex sanitary facility must have a shelf. |
### HEALTH AND AMENITY

**Class of building** | **Minimum facilities**
--- | ---
**Class 10a—required to be accessible** | (a) Where sanitary facilities are provided—not less than 1 wheelchair accessible unisex facility.
(b) Where sanitary facilities containing more than one sanitary compartment are provided for the general public in addition to the wheelchair accessible unisex facility—not less than 1 sanitary compartment for each sex, suitable for an ambulant person with a disability.
(c) Where shower facilities are provided, not less than 1 accessible shower for each 10 showers or part thereof, with not less than 1 accessible shower suitably located for use by both sexes.

**Sanitary Towels—**
Adequate facilities for the disposal of sanitary towels must be provided.

**Shelf—**
A unisex sanitary facility must have a shelf.

**Notes:**

1. A sanitary compartment suitable for an ambulant person with a disability need not be wheelchair accessible.

2. Where sanitary facilities required by Tables F2.1 and Table F2.3 are located in an appurtenant Class 10a building, the number of accessible sanitary facilities must be determined as if the Class 10a building was of the same classification as that to which it is appurtenant.

---

### F2.5 Construction of sanitary compartments

(a) Other than in an early childhood centre, sanitary compartments must have doors and partitions that separate adjacent compartments and extend—

(i) from floor level to the ceiling in the case of a unisex facility; or

(ii) to a height of not less than 1.5 m above the floor if primary school children are the principal users; or

(iii) 1.8 m above the floor in all other cases.

(b) The door to a fully enclosed sanitary compartment must—

(i) open outwards; or

(ii) slide; or

(iii) be readily removable from the outside of the sanitary compartment,

**Vic F2.5(c)**

unless there is a clear space of at least 1.2 m between the closet pan within the sanitary compartment and the nearest part of the doorway.
F2.6 Interpretation: Urinals and washbasins

(a) A urinal may be—
   (i) an individual stall or wall-hung urinal; or
   (ii) each 600 mm length of a continuous urinal trough; or
   (iii) a closet pan used in place of a urinal.

(b) A washbasin may be—
   (i) an individual basin; or
   (ii) a part of a hand washing trough served by a single water tap.

F2.7 Microbial (legionella) control

Hot water, warm water and cooling water systems in a building other than a system serving only a single sole-occupancy unit in a Class 2 or 3 building or Class 4 part must be installed in accordance with AS/NZS 3666.1.

NSW F2.7

F2.8 Waste management

(a) In a Class 9a health-care building, at least one slop-hopper or other device, other than a water closet pan or urinal, must be provided—
   (i) on any storey containing ward areas or bedrooms to facilitate emptying of containers of sewage or dirty water; and
   (ii) with a flushing apparatus, tap and grating.

(b) In a Class 9c aged care building, the following facilities must be provided for every 60 beds or part thereof on each storey containing resident use areas—
   (i) one slop-hopper or other device for the safe handling and disposal of liquid and solid wastes with a flushing apparatus, tap and grating other than a water closet pan or urinal; and
   (ii) an appliance for the disinfection of pans.

Tas F2.101, F2.102

Vic F2.101
PART F3  ROOM SIZES

OBJECTIVE

FO3
The *Objective* of this Part is to safeguard occupants from injury or loss of amenity caused by inadequate height of a room or space.

*ACT FO3*

*Vic FO3*

FUNCTIONAL STATEMENT

FF3.1
A building is to be constructed to provide height in a room or space suitable for the intended use.

*ACT FF3.2*

*Vic FF3.1*

PERFORMANCE REQUIREMENT

FP3.1
A *habitable room* or space must have sufficient height that does not unduly interfere with its intended function.

*ACT FP3.2*

*Vic FP3.1*
Deemed-to-Satisfy Provisions

F3.0 Deemed-to-Satisfy Provisions

ACT F3.0

Vic F3.0

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirement FP3.1 is satisfied by complying with F3.1.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of F3.1, the relevant Performance Requirements must be determined in accordance with A0.10.

F3.1 Height of rooms and other spaces

The ceiling height must be not less than—

(a) in a Class 2 or 3 building or Class 4 part—
   (i) a kitchen, laundry, or the like—2.1 m; and
   (ii) a corridor, passageway or the like—2.1 m; and
   (iii) a habitable room excluding a kitchen—2.4 m; and

(b) in a Class 5, 6, 7 or 8 building—
   (i) generally, except as allowed in (ii) and (e)—2.4 m; and
   (ii) a corridor, passageway, or the like—2.1 m; and

(c) in a Class 9a health-care building—
   (i) a patient care area—2.4 m; and
   (ii) an operating theatre or delivery room—3 m; and
   (iii) a treatment room, clinic, waiting room, passageway, corridor, or the like—2.4 m; and

(d) in a Class 9b building—
   (i) a school classroom or other assembly building or part that accommodates not more than 100 persons—2.4 m; and
   (ii) a theatre, public hall or other assembly building or part that accommodates more than 100 persons—2.7 m; and

(e) in a Class 9c aged care building—
   (i) a kitchen, laundry, or the like—2.1 m; and
   (ii) a corridor, passageway or the like—2.4 m; and
   (iii) a habitable room excluding a kitchen—2.4 m; and

(f) in any building—
Deemed-to-Satisfy Provisions

(i) a bathroom, shower room, sanitary compartment, airlock, tea preparation room, pantry, store room, garage, car parking area, or the like—2.1 m; and

(ii) a commercial kitchen—2.4 m.

_Vic F3.101—F3.103_

_ACT F3.101_
PART F4  LIGHT AND VENTILATION

OBJECTIVE

FO4
The Objective of this Part is to—
(a) safeguard occupants from injury, illness or loss of amenity due to—
   (i) isolation from natural light; and
   (ii) lack of adequate artificial lighting; and
(b) safeguard occupants from illness or loss of amenity due to lack of air freshness.

FUNCTIONAL STATEMENTS

FF4.1
A space within a building used by occupants is to be provided with openings to admit natural light consistent with its function or use.

FF4.2
A space within a building used by occupants is to be provided with artificial lighting consistent with its function or use which, when activated in the absence of suitable natural light, will enable safe movement.

FF4.3
A space used by occupants within a building is to be provided with adequate ventilation consistent with its function or use.

PERFORMANCE REQUIREMENTS

FP4.1
Sufficient openings must be provided and distributed in a building so that natural light, when available, provides a level of illuminance appropriate to the function or use of that part of the building.
FP4.2
Artificial lighting must be installed to provide a level of illuminance appropriate to the function or use of the building to enable safe movement by occupants.

FP4.3
A space in a building used by occupants must be provided with means of ventilation with outdoor air which will maintain adequate air quality.

FP4.4
A mechanical air-handling system installed in a building must control—
(a) the circulation of objectionable odours; and
(b) the accumulation of harmful contamination by micro-organisms, pathogens and toxins.

FP4.5
Contaminated air must be disposed of in a manner which does not unduly create a nuisance or hazard to people in the building or other property.
PART F4
LIGHT AND VENTILATION

F4.0  Deemed-to-Satisfy Provisions

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirements FP4.1 to FP4.5 are satisfied by complying with F4.1 to F4.12.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of F4.1 to F4.12, the relevant Performance Requirements must be determined in accordance with A0.10.

F4.1  Provision of natural light

Natural lighting must be provided in:

(a) **Class 2 buildings and Class 4 parts**—to all habitable rooms.

(b) **Class 3 buildings**—to all bedrooms and dormitories.

(c) **Class 9a and 9c buildings**—to all rooms used for sleeping purposes.

Vic F4.1(d)

(d) **Class 9b buildings**—to all general purpose classrooms in primary or secondary schools and all playrooms or the like for the use of children in an early childhood centre.

F4.2  Methods and extent of natural lighting

(a) Subject to **Clause 3.6 of Specification C1.1**, required natural lighting must be provided by windows that—

(i) have an aggregate light transmitting area measured exclusive of framing members, glazing bars or other obstructions of not less than 10% of the floor area of the room; and

(ii) are open to the sky or face a court or other space open to the sky or an open verandah, carport or the like.

Vic F4.2(b)

(b) Except in a Class 9c aged care building, in a Class 2, 3 or 9 building or Class 4 part a required window that faces a boundary of an adjoining allotment or a wall of the same building or another building on the allotment must not be less than a horizontal distance from that boundary or wall that is the greater of—

(i) generally—1 m; and

(ii) in a patient care area or other room used for sleeping purposes in a Class 9a building—3 m; and

(iii) 50% of the square root of the exterior height of the wall in which the window is located, measured in metres from its sill.

Vic F4.2(c)

(c) In a Class 9c aged care building, a required window must be transparent and located—

(i) in an external wall with the window sill not more than 1 m above the floor level; and
(ii) where the window faces an adjoining allotment, another building or another wall of the same building, it must not be less than a horizontal distance of 3 m from the adjoining allotment, other building or wall.

F4.3 Natural light borrowed from adjoining room

Natural lighting to a room in a Class 2 building or Class 4 part of a building or in a sole-occupancy unit of a Class 3 building, may come through a glazed panel or opening from an adjoining room (including an enclosed verandah) if—

(a) both rooms are within the same sole-occupancy unit or the enclosed verandah is on common property; and

(b) the glazed panel or opening has an area of not less than 10% of the floor area of the room to which it provides light; and

(c) the adjoining room has windows with an aggregate light transmitting area of not less than 10% of the combined floor areas of both rooms,

and the areas specified in (b) and (c) may be reduced as appropriate if direct natural light is provided from another source.

F4.4 Artificial lighting

(a) Artificial lighting must be provided—

(i) in required stairways, passageways, and ramps; and

(ii) if natural lighting of a standard equivalent to that required by F4.2 is not available, and the periods of occupation or use of the room or space will create undue hazard to occupants seeking egress in an emergency, in—

(A) Class 4 parts—to sanitary compartments, bathrooms, shower rooms, airlocks and laundries; and

(B) Class 2 buildings—to sanitary compartments, bathrooms, shower rooms, airlocks, laundries, common stairways and other spaces used in common by the occupants of the building; and

(C) Class 3, 5, 6, 7, 8 and 9 buildings—to all rooms that are frequently occupied all spaces required to be accessible, all corridors, lobbies, internal stairways, other circulation spaces and paths of egress.

(b) The artificial lighting system must comply with AS/NZS 1680.0.

(c) The system may provide a lesser level of illumination to the following spaces during times when the level of lighting would be inappropriate for the use:

(i) A theatre, cinema or the like, when performances are in progress, with the exception of aisle lighting required by Part H1.

(ii) A museum, gallery or the like, where sensitive displays require low lighting levels.

(iii) A discotheque, nightclub or the like, where to create an ambience and character for the space, low lighting levels are used.

F4.5 Ventilation of rooms

A habitable room, office, shop, factory, workroom, sanitary compartment, bathroom, shower room, laundry and any other room occupied by a person for any purpose must have—

(a) natural ventilation complying with F4.6; or
NSW F4.5(b)

(b) a mechanical ventilation or air-conditioning system complying with AS 1668.2 and AS/NZS 3666.1.

F4.6 Natural ventilation

Natural ventilation provided in accordance with F4.5(a) must consist of permanent openings, windows, doors or other devices which can be opened—

(a) with an aggregate opening or openable size not less than 5% of the floor area of the room required to be ventilated; and

(b) open to—

(i) suitably sized court, or space open to the sky; or

(ii) an open verandah, carport, or the like; or

(iii) an adjoining room in accordance with F4.7.

F4.7 Ventilation borrowed from adjoining room

Natural ventilation to a room may come through a window, opening, ventilating door or other device from an adjoining room (including an enclosed verandah) if both rooms are within the same sole-occupancy unit or the enclosed verandah is common property, and—

(a) in a Class 2 building, a sole-occupancy unit of a Class 3 building or Class 4 part of a building—

(i) the room to be ventilated is not a sanitary compartment; and

(ii) the window, opening, door or other device has a ventilating area of not less than 5% of the floor area of the room to be ventilated; and

(iii) the adjoining room has a window, opening, door or other device with a ventilating area of not less than 5% of the combined floor areas of both rooms; and

(b) in a Class 5, 6, 7, 8 or 9 building—

(i) the window, opening, door or other device has a ventilating area of not less than 10% of the floor area of the room to be ventilated, measured not more than 3.6 m above the floor; and

(ii) the adjoining room has a window, opening, door or other device with a ventilating area of not less than 10% of the combined floor areas of both rooms; and

(c) the ventilating areas specified in (a) and (b) may be reduced as appropriate if direct natural ventilation is provided from another source.

F4.8 Restriction on position of water closets and urinals

A room containing a closet pan or urinal must not open directly into—

(a) a kitchen or pantry; or

(b) a public dining room or restaurant; or

(c) a dormitory in a Class 3 building; or

(d) a room used for public assembly (which is not an early childhood centre, primary school or open spectator stand); or

(e) a workplace normally occupied by more than one person.
F4.9 Airlocks

If a room containing a closet pan or urinal is prohibited under F4.8 from opening directly to another room—

(a) in a sole-occupancy unit in a Class 2 or 3 building or Class 4 part—
   (i) access must be by an airlock, hallway or other room; or
   (ii) the room containing the closet pan or urinal must be provided with mechanical exhaust ventilation; and

(b) in a Class 5, 6, 7, 8 or 9 building (which is not an early childhood centre, primary school or open spectator stand)—
   (i) access must be by an airlock, hallway or other room with a floor area of not less than 1.1 m² and fitted with self-closing doors at all access doorways; or
   (ii) the room containing the closet pan or urinal must be provided with mechanical exhaust ventilation and the doorway to the room adequately screened from view.

F4.10 * * * * *

This clause has deliberately been left blank. Its content covering sub-floor ventilation has been relocated to F1.12.

F4.11 Carparks

Every storey of a carpark, except an open-deck carpark, must have—

(a) a system of ventilation complying with AS 1668.2; or
(b) an adequate system of permanent natural ventilation.

F4.12 Kitchen local exhaust ventilation

A commercial kitchen must be provided with a kitchen exhaust hood complying with AS/NZS 1668.1 and AS 1668.2 where—

(a) any cooking apparatus has—
   (i) a total maximum electrical power input exceeding 8 kW; or
   (ii) a total gas power input exceeding 29 MJ/h; or

(b) the total maximum power input to more than one apparatus exceeds—
   (i) 0.5 kW electrical power; or
   (ii) 1.8 MJ gas,
   per m² of floor area of the room or enclosure.

Tas F4.101
OBJECTIVE

NT Part F5
Qld Part F5
WA Part F5

FO5

The Objective of this Part is to safeguard occupants from illness or loss of amenity as a result of undue sound being transmitted—
(a) between adjoining sole-occupancy units; and
(b) from common spaces to sole-occupancy units; and
(c) from parts of different classifications to sole-occupancy units.

Application:
FO5 only applies to a Class 2 or 3 building or a Class 9c aged care building.

FUNCTIONAL STATEMENT

FF5.1

A part of a building that separates sole-occupancy units, or separates a sole-occupancy unit from a common space or part of another classification within the building is to be constructed to prevent undue sound transmission.

Application:
FF5.1 only applies to a Class 2 or 3 building or a Class 9c aged care building.

PERFORMANCE REQUIREMENTS

FP5.1

Floors separating—
(a) sole-occupancy units; or
(b) a *sole-occupancy units* from a plant room, lift *shaft*, stairway, *public corridor*, public lobby, or the like, or a part of a different classification,

must provide insulation against the transmission of airborne and impact generated sound sufficient to prevent illness or loss of amenity to the occupants.

**Application:**
FP5.1 only applies to a Class 2 or 3 building.

**FP5.2**

Walls separating *sole-occupancy units* or a *sole-occupancy unit* from a plant room, lift *shaft*, stairway, *public corridor*, public lobby, or the like, or parts of a different classification, must provide insulation against the transmission of—

(a) airborne sound; and

(b) impact generated sound, if the wall is separating a bathroom, *sanitary compartment*, laundry or kitchen in one *sole-occupancy unit* from a *habitable room* (other than a kitchen) in an adjoining unit,

sufficient to prevent illness or loss of amenity to the occupants.

**Application:**
FP5.2 only applies to a Class 2 or 3 building.

**FP5.3**

The *required* sound insulation of a floor or a wall must not be compromised by—

(a) the incorporation or penetration of a pipe or other service element; or

(b) a door assembly.

**Application**
FP5.3 only applies to a Class 2 or 3 building.

**FP5.4**

Floors separating *sole-occupancy units* must provide insulation against the transmission of airborne and impact generated sound sufficient to prevent illness or loss of amenity to the occupants.

**Application**
FP5.4 only applies to a Class 9c *aged care building*.

**FP5.5**

Walls separating *sole-occupancy units*, or a *sole-occupancy unit* from a kitchen, bathroom, *sanitary compartment* (not being an associated ensuite), laundry, plant room or utilities room, must provide insulation against the transmission of—

(a) airborne sound; and
(b) impact generated sound, if the wall separates a sole-occupancy unit from a kitchen or laundry, sufficient to prevent illness or loss of amenity to the occupants.

Application
FP5.5 only applies to a Class 9c aged care building.

FP5.6
The required sound insulation of a floor or a wall must not be compromised by the incorporation or penetration of a pipe or other service element.

Application
FP5.6 only applies to a Class 9c aged care building.

VERIFICATION METHODS

FV5.1
Compliance with FP5.1 and FP5.3 to avoid the transmission of airborne and impact generated sound through floors is verified when it is measured in-situ that the separating floor has—

(a) airborne: a weighted standardised level difference with spectrum adaptation term \((D_{nT,w} + C_{tr})\) not less than 45 when determined under AS/NZS 1276.1 or ISO 717.1; and

(b) impact: a weighted standardised impact sound pressure level with spectrum adaptation term \((L_{nT,w} + C_{t})\) not more than 62 when determined under AS/ISO 717.2.

FV5.2
Compliance with FP5.2(a) and FP5.3 to avoid the transmission of airborne sound through walls is verified when it is measured in-situ that—

(a) a wall separating sole-occupancy units has a weighted standardised level difference with spectrum adaptation term \((D_{nT,w} + C_{t})\) not less than 45 when determined under AS/NZS 1276.1 or ISO 717.1; or

(b) a wall separating a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby, or the like, or parts of a different classification, has a weighted standardised level difference \((D_{nT,w})\) not less than 45 when determined under AS/NZS 1276.1 or ISO 717.1; or

(c) any door assembly located in a wall that separates a sole-occupancy unit from a stairway, public corridor, public lobby, or the like, has a weighted standardised level difference \((D_{nT,w})\) not less than 25 when determined under AS/NZS 1276.1 or ISO 717.1.
PART F5
SOUND TRANSMISSION AND INSULATION

F5.0 Deemed-to-Satisfy Provisions

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirements FP5.1 to FP5.6 are satisfied by complying with F5.1 to F5.7.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of F5.1 to F5.7, the relevant Performance Requirements must be determined in accordance with A0.10.

F5.1 Application of Part

The Deemed-to-Satisfy Provisions of this Part apply to Class 2 and 3 buildings and Class 9c aged care buildings.

F5.2 Determination of airborne sound insulation ratings

A form of construction required to have an airborne sound insulation rating must—

(a) have the required value for weighted sound reduction index \( R_w \) or weighted sound reduction index with spectrum adaptation term \( R_w + C_l \) determined in accordance with AS/NZS 1276.1 or ISO 717.1 using results from laboratory measurements; or

(b) comply with Specification F5.2.

F5.3 Determination of impact sound insulation ratings

(a) A floor in a building required to have an impact sound insulation rating must—

(i) have the required value for weighted normalised impact sound pressure level with spectrum adaptation term \( L_{n,w}+C_l \) determined in accordance with AS/ISO 717.2 using results from laboratory measurements; or

(ii) comply with Specification F5.2.

(b) A wall in a building required to have an impact sound insulation rating must—

(i) for a Class 2 or 3 building be of discontinuous construction; and

(ii) for a Class 9c aged care building, must—

(A) for other than masonry, be two or more separate leaves without rigid mechanical connection except at the periphery; or

(B) be identical with a prototype that is no less resistant to the transmission of impact sound when tested in accordance with Specification F5.5 than a wall listed in Table 2 of Specification F5.2.

(c) For the purposes of this Part, discontinuous construction means a wall having a minimum 20 mm cavity between 2 separate leaves, and
(i) for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and

(ii) for other than masonry, there is no mechanical linkage between leaves except at the periphery.

**F5.4 Sound insulation rating of floors**

(a) A floor in a Class 2 or 3 building must have an $R_w + C_{ir}$ (airborne) not less than 50 and an $L_{n,w} + C_{il}$ (impact) not more than 62 if it separates—

(i) sole-occupancy units; or

(ii) a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification.

(b) A floor in a Class 9c aged care building separating sole-occupancy units must have an $R_w$ not less than 45.

**F5.5 Sound insulation rating of walls**

(a) A wall in a Class 2 or 3 building must —

(i) have an $R_w + C_{ir}$ (airborne) not less than 50, if it separates sole-occupancy units; and

(ii) have an $R_w$ (airborne) not less than 50, if it separates a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like, or parts of a different classification; and

(iii) comply with F5.3(b) if it separates:

(A) a bathroom, sanitary compartment, laundry or kitchen in one sole-occupancy unit from a habitable room (other than a kitchen) in an adjoining unit; or

(B) a sole-occupancy unit from a plant room or lift shaft.

(b) A door may be incorporated in a wall in a Class 2 or 3 building that separates a sole-occupancy unit from a stairway, public corridor, public lobby or the like, provided the door assembly has an $R_w$ not less than 30.

(c) A wall in a Class 9c aged care building must have an $R_w$ not less than 45 if it separates—

(i) sole-occupancy units; or

(ii) a sole-occupancy unit from a kitchen, bathroom, sanitary compartment (not being an associated ensuite), laundry, plant room or utilities room.

(d) In addition to (c), a wall separating a sole-occupancy unit in a Class 9c aged care building from a kitchen or laundry must comply with F5.3(b).

(e) Where a wall required to have sound insulation has a floor above, the wall must continue to—

(i) the underside of the floor above; or

(ii) a ceiling that provides the sound insulation required for the wall.

(f) Where a wall required to have sound insulation has a roof above, the wall must continue to—

(i) the underside of the roof above; or

(ii) a ceiling that provides the sound insulation required for the wall.
F5.6 Sound insulation rating of services

(a) If a duct, soil, waste or water supply pipe, including a duct or pipe that is located in a wall or floor cavity, serves or passes through more than one sole-occupancy unit, the duct or pipe must be separated from the rooms of any sole-occupancy unit by construction with an $R_w + C_{tr}$ (airborne) not less than—

(i) 40 if the adjacent room is a habitable room (other than a kitchen); or

(ii) 25 if the adjacent room is a kitchen or non-habitable room.

(b) If a storm water pipe passes through a sole-occupancy unit it must be separated in accordance with (a)(i) and (ii).

F5.7 Sound isolation of pumps

A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating or other pump.
1. **Scope**

(a) This Specification lists the $R_w$, $R_w + C_{tr}$ and $L_{n,w+C_l}$ for some common forms of construction.

(b) Wall systems listed in Table 2 having a minimum 20 mm cavity between 2 separate leaves, with—

(i) for masonry, where wall ties are required to connect leaves, the ties are of the resilient type; and

(ii) for other than masonry, there is no mechanical linkage between leaves except at the periphery,

are deemed to be discontinuous construction.

2. **Construction deemed-to-satisfy**

The forms of construction listed in Table 2 for wall construction and Table 3 for floor construction, are considered to have the $R_w$, $R_w + C_{tr}$ and $L_{n,w+C_l}$ stated in that Table. The forms of construction must be installed as follows:

(a) **Masonry**—Units must be laid with all joints filled solid, including those between the masonry and any adjoining construction.

(b) **Concrete slabs**—Joints between concrete slabs or panels and any adjoining construction must be filled solid.

(c) **Sheeting materials**—

(i) if one layer is required on both sides of a wall, it must be fastened to the studs with joints staggered on opposite sides; and

(ii) if two layers are required, the second layer must be fastened over the first layer so that the joints do not coincide with those of the first layer; and

(iii) joints between sheets or between sheets and any adjoining construction must be taped and filled solid.

(d) **Timber or steel-framed construction**—perimeter framing members must be securely fixed to the adjoining structure and—

(i) bedded in resilient compound; or

(ii) the joints must be caulked so that there are no voids between the framing members and the adjoining structure.

(e) **Services**—

(i) Services must not be chased into concrete or masonry elements.
Deemed-to-Satisfy Provisions

(ii) A door or panel required to have a certain $R_w + C_{tr}$ that provides access to a duct, pipe or other service must—

(A) not open into any habitable room (other than a kitchen); and
(B) be firmly fixed so as to overlap the frame or rebate of the frame by not less than 10 mm, be fitted with a sealing gasket along all edges and be constructed of—

(aa) wood, particleboard or blockboard not less than 33 mm thick; or
(bb) compressed fibre reinforced cement sheeting not less than 9 mm thick; or
(cc) other suitable material with a mass per unit area not less than 24.4 kg/m$^2$

(iii) A water supply pipe must—

(A) only be installed in the cavity of discontinuous construction; and
(B) in the case of a pipe that serves only one sole-occupancy unit, not be fixed to the wall leaf on the side adjoining any other sole-occupancy unit and have a clearance not less than 10 mm to the other wall leaf.

(iv) Electrical outlets must be offset from each other—

(A) in masonry walling, not less than 100 mm; and
(B) in timber or steel framed walling, not less than 300 mm.

Table 2 ACCEPTABLE FORMS OF CONSTRUCTION FOR WALLS

<table>
<thead>
<tr>
<th>Description</th>
<th>$R_w + C_{tr}$ (not less than)</th>
<th>$R_w$ (not less than)</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wall construction type: Masonry</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Two leaves of 110 mm clay brick masonry with:
  (a) cavity not less than 50 mm between leaves; and |
  (b) 50 mm thick glass wool insulation with a density of 11 kg/m$^3$ or 50 mm thick polyester insulation with a density of 20 kg/m$^3$ in the cavity. |
| | 50 | 50 |
| Two leaves of 110 mm clay brick masonry with:
  (a) cavity not less than 50 mm between leaves; and |
  (b) 13 mm cement render on each outside face. |
| | 50 | 50 |
### Deemed-to-Satisfy Provisions

<table>
<thead>
<tr>
<th>Description</th>
<th>$R_w + C_{tr}$ (not less than)</th>
<th>$R_w$ (not less than)</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single leaf of 110 mm clay brick masonry with:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) a row of 70 mm x 35 mm timber studs or 64 mm steel studs at 600 mm centres, spaced 20 mm from the masonry wall; and</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>(b) 50 mm thick mineral insulation or glass wool insulation with a density of 11 kg/m³ positioned between studs; and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) one layer of 13 mm plasterboard fixed to outside face of studs and outside face of masonry.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single leaf of 90 mm clay brick masonry with:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) a row of 70 mm x 35 mm timber studs or 64 mm steel studs at 600 mm centres, spaced 20 mm from each face of the masonry wall; and</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>(b) 50 mm thick mineral insulation or glass wool insulation with a density of 11 kg/m³ positioned between studs in each row; and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) one layer of 13 mm plasterboard fixed to studs on each outside face.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single leaf of 150 mm brick masonry with 13 mm cement render on each face.</td>
<td>-</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Single leaf of 220 mm brick masonry with 13 mm cement render on each face.</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>110 mm thick brick masonry with 13 mm cement render on each face.</td>
<td>-</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>110 mm thick concrete brickwork.</td>
<td>-</td>
<td>45</td>
<td></td>
</tr>
</tbody>
</table>
### Deemed-to-Satisfy Provisions

<table>
<thead>
<tr>
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<th>$R_w$ (not less than)</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wall construction type: Concrete</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150 mm thick plain off form concrete.</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>150 mm thick concrete panel with one layer of 10 mm plasterboard fixed to 28 mm metal furring channels on each face.</td>
<td>-</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>200 mm thick concrete panel with one layer of 13 mm plasterboard or 13 mm cement render on each face.</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>100 mm thick concrete panel with:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) a row of 64 mm steel studs at 600 mm centres, spaced 25 mm from the concrete panel; and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) 80 mm thick polyester insulation or 50 mm thick glass wool insulation with a density of 11 kg/m$^3$, positioned between studs; and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) two layers of 13 mm plasterboard fixed to outside face of studs and one layer of 13 mm plasterboard fixed to outside face of concrete panel.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>125 mm thick concrete panel with:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) a row of 64 mm steel studs at 600 mm centres, spaced 20 mm from the concrete panel; and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) 70 mm polyester insulation with a density of 9 kg/m$^3$, positioned between studs; and</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>(c) one layer of 13 mm plasterboard fixed to the outside face of the studs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>125 mm thick concrete panel.</td>
<td>-</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>
## Deemed-to-Satisfy Provisions

<table>
<thead>
<tr>
<th>Description</th>
<th>$R_w + C_{tr}$ (not less than)</th>
<th>$R_w$ (not less than)</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 mm concrete panel with 13 mm cement render or one layer of 13 mm plasterboard on each face.</td>
<td>-</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>190 mm thick concrete blockwork.</td>
<td>-</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>140 mm thick concrete blockwork, the face shell thickness of the blocks being not less than 44 mm and with:</td>
<td>-</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>(a) 50 mm x 50 mm timber battens spaced at not more than 610 mm centres screw-fixed on one face of the blocks into resilient plugs with rubber inserts between battens and the wall; and</td>
<td>-</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>(b) the face of the battens clad with 13 mm plasterboard.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-situ concrete- 100 mm thick.</td>
<td>-</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Precast concrete- 100 mm thick and without joints.</td>
<td>-</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td><strong>Wall construction type: Autoclaved aerated concrete</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75 mm thick autoclaved aerated concrete wall panel with:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) a row of 64 mm steel studs at 600 mm centres, spaced 20 mm from the autoclaved aerated concrete wall panel; and</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>(b) 75 mm thick glass wool insulation with a density of 11 kg/m$^3$ positioned between studs; and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) one layer of 10 mm moisture resistant plasterboard or 13 mm fire protective grade plasterboard fixed to outside face of studs and outside face of autoclaved aerated concrete wall panel.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Deemed-to-Satisfy Provisions**

<table>
<thead>
<tr>
<th>Description</th>
<th>( R_w + C_{tr} ) (not less than)</th>
<th>( R_w ) (not less than)</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 mm thick autoclaved aerated concrete wall panel with:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) a row of 64 mm steel studs at 600 mm centres, spaced 35 mm from the autoclaved aerated concrete panel wall; and</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>(b) 28 mm metal furring channels fixed to the outside face of the autoclaved aerated concrete wall panel, with 50 mm thick polyester insulation with a density of 9 kg/m(^3) positioned between furring channels and one layer of 13 mm fire protective grade plasterboard fixed to furring channels; and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) 105 mm thick glass wool insulation with a density of 7 kg/m(^3) positioned between studs; and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) one layer of 13 mm fire protective grade plasterboard fixed to the outside face of the studs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two leaves of 75 mm autoclaved aerated concrete wall panel with:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) a cavity not less than 30 mm between panels containing 50 mm glass wool insulation with a density of 11 kg/m(^3); and</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>(b) one layer of 10 mm plasterboard fixed to outside face of each panel.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75 mm thick autoclaved aerated concrete wall panel with:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) one layer of 10 mm moisture resistant plasterboard on one face; and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) 28 mm metal furring channels and resilient mounts, 75 mm polyester insulation with a density of 9 kg/m(^3) and 13 mm fire protective grade plasterboard fixed to the other face.</td>
<td>-</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>
### Deemed-to-Satisfy Provisions

<table>
<thead>
<tr>
<th>Description</th>
<th>( R_w + C_{tr} ) (not less than)</th>
<th>( R_w ) (not less than)</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wall construction type: Timber and steel framing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two rows of 90 x 35 mm timber studs or two rows of 64 mm steels studs at 600 mm centres with:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) an air gap not less than 20 mm between the rows of studs; and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) 50 mm thick glass wool insulation or 60 mm thick polyester insulation with a density of 11 ( \text{kg/m}^3 ); positioned between one row of studs, and</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>(c) two layers of 13 mm fire protective grade plasterboard or one layer of 6 mm fibre cement sheet and one layer of 13 mm fire protective grade plasterboard, fixed to outside face of studs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Two rows of 64 mm steel studs at 600 mm centres with:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) an air gap not less than 80 mm between the rows of studs; and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) 200 mm thick polyester insulation with a density of 14 ( \text{kg/m}^3 ); positioned between studs; and</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>(c) one layer of 13 mm fire-protective grade plasterboard and one layer 13 mm plasterboard on one outside face and one layer of 13 mm fire-protective grade plasterboard on the other outside face</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Deemed-to-Satisfy Provisions

<table>
<thead>
<tr>
<th>Description</th>
<th>$R_w + C_{tr}$ (not less than)</th>
<th>$R_w$ (not less than)</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>One row of 92 mm steel studs at 600 mm centres with:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) 50 mm thick glass wool insulation with a density of 11 kg/m$^3$ or 60 mm thick polyester insulation with a density of 8 kg/m$^3$, positioned between studs; and</td>
<td>-</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>(b) two layers of 13 mm fire protective grade plasterboard or one layer of 6 mm fibre cement sheet and one layer of 13 mm fire protective grade plasterboard, fixed to each face.</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One row of 64 mm steel studs with 2 layers of 16 mm fire-protective grade plasterboard fixed to each face.</td>
<td>-</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>One row of 64 mm steel studs with:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) 1 layer of 16 mm fire-protective grade plasterboard fixed to one face; and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) 50 mm thick mineral insulation or glass wool insulation with a density of 11 kg/m$^3$ positioned between the studs; and</td>
<td>-</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>(c) 2 layers of fire-protective grade plasterboard fixed to the other face, the inner layer being 16 mm thick and the outer layer being 13 mm.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One row of 64 mm steel studs with 2 layers of 13 mm plasterboard on each face.</td>
<td>-</td>
<td>45</td>
<td></td>
</tr>
</tbody>
</table>

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SUPERSEDED

BCA 2004 Volume One Australian Building Codes Board Page 301
Deemed-to-Satisfy Provisions

Table 3 ACCEPTABLE FORMS OF CONSTRUCTION FOR FLOORS

<table>
<thead>
<tr>
<th>Description</th>
<th>$R_w + C_{tr}$ (not less than)</th>
<th>$L_{n,w} + C_i$ (not more than)</th>
<th>$R_w$ (not less than)</th>
<th>Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Floor construction type: Concrete</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>150 mm thick concrete slab with:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) 28 mm metal furring channels and isolation mounts fixed to underside of slab, at 600 mm centres; and</td>
<td>50</td>
<td>62</td>
<td>50</td>
<td><img src="image" alt="Concrete Slab with Furring Channels" /></td>
</tr>
<tr>
<td>(b) 65 mm thick polyester insulation with a density of 8 kg/m³, positioned between furring channels; and</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>(c) one layer of 13 mm plasterboard fixed to furring channels.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200 mm thick concrete slab with carpet on underlay.</td>
<td>50</td>
<td>62</td>
<td>50</td>
<td><img src="image" alt="Concrete Slab with Carpet" /></td>
</tr>
<tr>
<td>100 mm thick concrete slab.</td>
<td>45</td>
<td>-</td>
<td>45</td>
<td><img src="image" alt="Concrete Slab" /></td>
</tr>
<tr>
<td><strong>Floor construction type: Autoclaved aerated concrete</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75 mm thick autoclaved aerated concrete floor panel with:</td>
<td></td>
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<tr>
<td>(a) 8 mm ceramic tiles with flexible adhesive and waterproof membrane, located above the slab; and</td>
<td></td>
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</tr>
<tr>
<td>(b) timber joists at 600 mm centres; and</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) R1.5 glass wool insulation positioned between timber joists; and</td>
<td>50</td>
<td>62</td>
<td>50</td>
<td><img src="image" alt="Concrete Slab with Furring Channels" /></td>
</tr>
<tr>
<td>(d) 28 mm metal furring channels and resilient mounts fixed to underside of joists; and</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e) two layers of 13 mm plasterboard fixed to furring channels.</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
Deemed-to-Satisfy Provisions

<table>
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<tr>
<th>Description</th>
<th>$R_w + C_{tr}$ (not less than)</th>
<th>$L_{n,w} + C_i$ (not more than)</th>
<th>$R_w$ (not less than)</th>
<th>Construction</th>
</tr>
</thead>
</table>

**Floor construction type: Timber**

19 mm thick chipboard floor sheeting with:

(a) 190 x 45 mm timber joists at 450 mm centres; and

(b) R2.5 glass wool insulation positioned between timber joists; and

(c) 28 mm metal furring channels and isolation mounts fixed to underside of joists, isolation mounts to be of natural rubber with a dynamic factor of not more than 1.1 and static deflection of not less than 3 mm at actual operating load; and

(d) two layers of 16 mm fire-protective grade plasterboard fixed to furring channels.

<table>
<thead>
<tr>
<th></th>
<th>50</th>
<th>62</th>
<th>50</th>
</tr>
</thead>
</table>

19 mm thick tongued and grooved boards with:

(a) timber joists not less than 175 mm x 50 mm; and

(b) 75 mm thick mineral insulation or glass wool insulation with a density of 11 kg/m$^3$ positioned between joists and laid on 10 mm thick plasterboard fixed to underside of joists; and

(c) 25 mm thick mineral insulation or glass wool insulation with a density of 11 kg/m$^3$ laid over entire floor, including tops of joists before flooring is laid; and

(d) secured to 75 mm x 50 mm battens; and

(e) the assembled flooring laid over the joists, but not fixed to them, with the battens lying between the joists.

<table>
<thead>
<tr>
<th></th>
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<th>45</th>
</tr>
</thead>
</table>
1. **Scope**

This Specification describes a method of test to determine the comparative resistance of walls to the transmission of impact sound.

2. **Construction to be tested**

   (a) The test is conducted on a specimen of prototype wall construction and on a specimen of one or other of the constructions specified in **Table 2 of Specification F5.2**.

   (b) The testing of a construction specified in **Table 2 of Specification F5.2** need not be repeated for subsequent comparisons provided complete records of the results, the test equipment and the technique of testing are kept so that identical equipment can be employed and an identical technique can be adopted in the testing of specimens of prototype wall construction.

3. **Method**

   (a) The wall constructions to be compared must be tested in accordance with AS 1191.

   (b) A horizontal steel platform 510 mm x 460 mm x 10 mm thick must be placed with one long edge in continuous and direct contact with the wall to be tested on the side of the wall on which the impact sound is to be generated.

   (c) A tapping machine complying with ISO 140/6—1998 (E) must be mounted centrally on the steel platform.

   (d) The sound transmission through the wall must be determined in accordance with AS 1191 except that the tapping machine as mounted on the steel platform must be used as the source of sound.

   (e) The impact sound pressure levels measured in the receiving room must be converted into normalised levels using a reference equivalent absorption area of 10 m².
ANCILLARY PROVISIONS

G1 Minor Structures and Components

G2 Heating Appliances, Fireplaces, Chimneys and Flues

G3 Atrium Construction

G4 Construction in Alpine Areas

G5 Construction of Bushfire Prone Areas
SECTION G ANCILLARY PROVISIONS

Part G1  Minor Structures and Components

Objective GO1
Functional Statements GF1.1 - GF1.3
Performance Requirements GP1.1 - GP1.4
G1.0 Deemed-to-Satisfy Provisions
G1.1 Swimming pools
G1.2 Refrigerated chambers, strong-rooms and vaults

Part G2  Heating Appliances, Fireplaces, Chimneys and Flues

Objective GO2
Functional Statements GF2.1 - GF2.2
Performance Requirements GP2.1 - GP2.2
G2.0 Deemed-to-Satisfy Provisions
G2.1 * * * * *
G2.2 Installation of appliances
G2.3 Open fireplaces
G2.4 Incinerator rooms

Part G3  Atrium Construction

G3.1 Atriums affected by this Part
G3.2 Dimensions of atrium well
G3.3 Separation of atrium by bounding walls
G3.4 Construction of bounding walls
G3.5 Construction at balconies
G3.6 Separation at roof
G3.7 Means of egress
G3.8 Fire and smoke control systems
Specification G3.8 Fire and Smoke Control Systems in Buildings Containing Atriums

Part G4  Construction in Alpine Areas

Objective GO4
Functional Statement GF4.1
Performance Requirements GP4.1 - GP4.4
G4.0 Deemed-to-Satisfy Provisions
G4.1 Application of Part
G4.2 * * * * *
G4.3 External doorways
G4.4 Emergency lighting
G4.5 External ramps
G4.6 Discharge of exits
G4.7 External trafficable structures
G4.8 Fire-fighting services and equipment
G4.9 Fire orders
Part G5  Construction in Bushfire Prone Areas

Objective GO5
Functional Statement GF5.1
Performance Requirement GP5.1
G5.0 Deemed-to-Satisfy Provisions
G5.1 Application of Part
G5.2 Protection

ACT Appendix (Additional provisions - refer to ACT Contents for full details)
ACT G1.103 Awnings and projections

NSW Appendix (Additional provisions - refer to NSW Contents for full details)
NSW G1.101 Provision for cleaning windows

Qld Appendix (Additional provisions - refer to Qld Contents for full details)
QLD Part G101 Certain Attachments

SA Appendix (Additional provisions - refer to SA Contents for full details)
SA Part G7 Access for Maintenance
SA Part G8 Miscellaneous Provisions

Tas Appendix (Additional provisions - refer to Tas Contents for full details)
TAS Part G101 Projections Over Ways
OBJECTIVE

GO1

The Objective of this Part is to—

(a) safeguard people from illness caused by the discharge of swimming pool waste water; and

(b) protect other property from damage caused by the discharge of swimming pool waste water; and

(c) safeguard young children from drowning or injury in a swimming pool; and

Application

GO1(a) and (b) do not apply in NT.

GO1(c) does not apply in NSW, NT, Qld and WA.

GO1(c), in ACT, SA and Tas, only applies to a swimming pool associated with a Class 2 or 3 building or Class 4 part, with a depth of water more than 300 mm.

GO1(c), in Vic, only applies to a swimming pool with a depth of water more than 300 mm, associated with—

(a) a Class 2 or 3 building or Class 4 part; or

(b) a children’s service.

TAS GO1(e), (f), (g)

(d) safeguard occupants from illness or injury resulting from being accidentally locked inside spaces which are designed to be entered for short periods of time only and in which occupation for longer periods may be hazardous.

FUNCTIONAL STATEMENTS

GF1.1

Adequate means for the disposal of swimming pool water and drainage is to be provided to a swimming pool.

Application

GF1.1 does not apply in NT.
GF1.2

A swimming pool is to be provided with a means of restricting access by young children to it.

**Application**

GF1.2 does not apply in NSW, NT, Qld and WA.

GF1.2, in ACT, SA and Tas, only applies to a swimming pool associated with a Class 2 or 3 building or Class 4 part, with a depth of water more than 300 mm.

GF1.2, in Vic, only applies to a swimming pool with a depth of water more than 300 mm, associated with—

(a) a Class 2 or 3 building or Class 4 part; or
(b) a children’s service.

GF1.3

**NSW GF1.4**

**TAS GF1.4–1.6**

**SA GF1.4**

Any refrigerated or cooling chamber, strong-room and vault or the like that is capable of accommodating a person is to have safety measures to facilitate escape and for alerting people outside such a space in the event of an emergency.

**PERFORMANCE REQUIREMENTS**

GP1.1

A swimming pool must have adequate means of draining the pool in a manner which will not—

(a) cause illness to people; or

(b) affect other property.

**Application**

GP1.1 does not apply in NT.

GP1.2

A barrier must be provided to a swimming pool and must—

(a) be continuous for the full extent of the hazard; and

(b) be of a strength and rigidity to withstand the foreseeable impact of people; and

(c) restrict the access of young children to the pool and the immediate pool surrounds; and

(d) have any gates and doors fitted with latching devices not readily operated by young children, and constructed to automatically close and latch.
ANCILLARY PROVISIONS

GP1.2

Application

GP1.2 does not apply in NSW, NT, Qld and WA.

GP1.2, in ACT, SA and Tas, only applies to a *swimming pool* associated with a Class 2 or 3 building or Class 4 part, with a depth of water more than 300 mm.

GP1.2, in Vic, only applies to a *swimming pool* with a depth of water more than 300 mm, associated with—

(a) a Class 2 or 3 building or Class 4 part; or
(b) a *children's service*.

GP1.3

Any refrigerated or cooling chamber, or the like which is of sufficient size for a person to enter must—

(a) have adequate means of communicating with or alerting other occupants in the building in the case of an emergency; and

(b) have a door which is—

(i) of adequate dimensions to allow occupants to readily escape; and

(ii) openable from inside without a key at all times.

GP1.4

Any strong-room, vault or the like which is of sufficient size for a person to enter must—

(a) have adequate means of communicating with or alerting other occupants in the building in the case of an emergency; and

(b) have internal lighting controllable only from within the room; and

(c) have an external indicator that the room is occupied.

NSW GP1.5

Tas GP1.5–1.9

SA GP1.5
G1.0 Deemed-to-Satisfy Provisions

(a) Performance Requirement GP1.1 must be complied with.

There is no Deemed-to-Satisfy Provision for this Performance Requirement.

NSW G1.0(b)
SA G1.0(b)
Tas G1.0(b)

(b) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirements GP1.2 to GP1.4 are satisfied by complying with G1.1 and G1.2.

(c) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of G1.1 and G1.2, the relevant Performance Requirements must be determined in accordance with A0.10.

G1.1 Swimming pools

(a) Application: The provisions or part provisions of this Clause do not apply in NSW, the Northern Territory, Queensland and Western Australia as follows:

(i) NSW—safety fencing: restriction of access to swimming pools is regulated under the Swimming Pools Act 1992.

(ii) Northern Territory—all provisions: swimming pools are controlled through Local Government by-laws, however Local Government Authorities are not responsible for building control.

(iii) Queensland—safety fencing: restriction of access to swimming pools is regulated under the Queensland Building Act 1975 and the Standard Building Regulation.


Vic G1.1(b)

(b) Safety fencing: A swimming pool associated with a Class 2 or 3 building or Class 4 part, with a depth of water more than 300 mm must have suitable barriers to restrict access by young children to the immediate pool surrounds in accordance with AS 1926 Parts 1 and 2.

ACT G1.1(c)–(d)
NSW G1.1(c)
SA G1.1(c), (d), (e)
Tas G1.1(c)–(i)

G1.2 Refrigerated chambers, strong-rooms and vaults

(a) A refrigerated or cooling chamber, strongroom or vault which is of sufficient size for a person to enter must have—

(i) a door which is capable of being opened by hand from inside without a key; and

(ii) internal lighting controlled only by a switch which is located adjacent to the entrance doorway inside the chamber, strongroom or vault; and

(iii) an indicator lamp positioned outside the chamber, strongroom or vault which is illuminated when the interior lights \textit{required} by (a)(ii) are switched on; and

(iv) an alarm that is—

(A) located outside but controllable only from within the chamber, strongroom or vault; and

(B) able to achieve a sound pressure level outside the chamber, strongroom or vault of 90 dB(A) when measured 3 m from the sounding device.

(b) A door required by (a)(i) in a refrigerated or cooling chamber must have a doorway with a clear width of not less than 600 mm and a clear height not less than 1.5 m.
**OBJECTIVE**

**GO2**

The *Objective* of this Part is to—

(a) safeguard occupants from illness or injury caused by—
   (i) fire from combustion appliances installed within a building; and
   (ii) malfunction of a pressure vessel installed within a building; and

(b) protect a building from damage caused by the malfunction of a pressure vessel installed within.

**FUNCTIONAL STATEMENTS**

**GF2.1**

Combustion appliances using controlled combustion located in a building are to be installed in a way which reduces the likelihood of fire spreading beyond the appliance.

**GF2.2**

Pressure vessels located in a building are to be installed in a manner which will provide adequate safety for occupants.

**PERFORMANCE REQUIREMENTS**

**GP2.1**

Where provided in a building, a combustion appliance and its associated components, including an open fire-place, chimney, flue, chute, hopper or the like, must be installed—

(a) to withstand the temperatures likely to be generated by the appliance; and

(b) so that it does not raise the temperature of any building element to a level that would adversely affect the element's physical or mechanical properties or function; and

(c) so that hot products of combustion will not—
   (i) escape through the walls of the associated components; and
(ii) discharge in a position that will cause fire to spread to nearby combustible materials or allow smoke to penetrate through nearby windows, ventilation inlets, or the like.

**GP2.2**

When located in a building, a pressure vessel must be installed to avoid, during reasonably foreseeable conditions, the likelihood of—

(a) leakage from the vessel which could cause damage to the building; and

(b) rupture or other mechanical damage of the vessel which could cause damage to the building or injury to occupants.
Deemed-to-Satisfy Provisions

G2.0 Deemed-to-Satisfy Provisions

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirements GP2.1 and GP2.2 are satisfied by complying with G2.1 to G2.4.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of G2.1 to G2.4, the relevant Performance Requirements must be determined in accordance with A0.10.

G2.1 *** ***

This clause has deliberately been left blank.

G2.2 Installation of appliances

The installation of a stove, heater or similar appliance in a building must comply with:

(a) Domestic oil-fired appliances—Installation: AS 1691.

(b) Domestic solid-fuel burning appliances—Installation: AS/NZS 2918.

(c) Pressure equipment: AS/NZS 1200.

*ACT G2.2(d), (e)*

G2.3 Open fireplaces

An open fireplace, or solid-fuel burning appliance in which the fuel-burning compartment is not enclosed must have—

(a) a hearth constructed of stone, concrete, masonry or similar non-combustible material so that—

(i) it extends not less than 300 mm beyond the front of the fireplace opening and not less than 150 mm beyond each side of that opening; and

(ii) it extends beyond the limits of the fireplace or appliance not less than 300 mm if the fireplace or appliance is free-standing from any wall of the room; and

(iii) its upper surface does not slope away from the grate or appliance; and

(iv) combustible material situated below the hearth but not below that part required to extend beyond the fireplace opening or the limits of the fireplace is not less than 150 mm from the upper surface of the hearth; and

(b) walls forming the sides and back of the fireplace up to not less than 300 mm above the underside of the arch or lintel which—

(i) are constructed in 2 separate leaves of solid masonry not less than 180 mm thick, excluding any cavity; and
Deemed-to-Satisfy Provisions

(ii) do not consist of concrete block masonry in the construction of the inner leaf; and

(c) walls of the chimney above the level referred to in (b)—

(i) constructed of masonry units with a net volume, excluding cored and similar holes, not less than 75% of their gross volume, measured on the overall rectangular shape of the units, and with an actual thickness of not less than 100 mm; and

(ii) lined internally to a thickness of not less than 12 mm with rendering consisting of 1 part cement, 3 parts lime, and 10 parts sand by volume, or other suitable material; and

(d) suitable damp-proof courses or flashings to maintain weatherproofing.

G2.4 Incinerator rooms

(a) If an incinerator is installed in a building any hopper giving access to a charging chute must be—

(i) non-combustible; and

(ii) gas-tight when closed; and

(iii) designed to return to the closed position after use; and

(iv) not attached to a chute that connects directly to a flue unless the hopper is located in the open air; and

(v) not located in a required exit.

(b) A room containing an incinerator must be separated from other parts of the building by construction with an FRL of not less than 60/60/60.
**ANCILLARY PROVISIONS**

**PART G3 ATRIUM CONSTRUCTION**

*Deemed-to-Satisfy Provisions*

**Note:**
Part G3 contains Deemed-to-Satisfy Provisions additional to those contained in Sections C, D and E for Atrium Construction.

**G3.1 Atriums affected by this Part**

This Part does not apply to an atrium which—

- (a) connects only 2 storeys; or
- (b) connects only 3 storeys if—
  - (i) each storey is provided with a sprinkler system complying with Specification E1.5 throughout; and
  - (ii) one of those storeys is situated at a level at which there is direct egress to a road or open space.

**G3.2 Dimensions of atrium well**

An atrium well must have a width throughout the well that is able to contain a cylinder having a horizontal diameter of not less than 6 m.

**G3.3 Separation of atrium by bounding walls**

An atrium must be separated from the remainder of the building at each storey by bounding walls set back not more than 3.5 m from the perimeter of the atrium well except in the case of the walls at no more than 3 consecutive storeys if—

- (a) one of those storeys is at a level at which direct egress to a road or open space is provided; and
- (b) the sum of the floor areas of those storeys that are contained within the atrium is not more than the maximum area that is permitted in Table C2.2.

**G3.4 Construction of bounding walls**

Bounding walls must—

- (a) have an FRL of not less than 60/60/60, and—
  - (i) extend from the floor of the storey to the underside of the floor next above or to the underside of the roof; and
  - (ii) have any door openings protected with self-closing or automatic –/60/30 fire doors; or
- (b) be constructed of fixed toughened safety glass, or wired safety glass in non-combustible frames, with—
  - (i) any door openings fitted with a self-closing smoke door complying with Specification C3.4; and
Deemed-to-Satisfy Provisions

(ii) the walls and doors protected with wall-wetting systems in accordance with Specification G3.8; and

(iii) a fire barrier with an FRL of not less than –/60/30 installed in any ceiling spaces above the wall.

G3.5 Construction at balconies

If a bounding wall separating an atrium from the remainder of the building is set back from the perimeter of the atrium well, a balustrade or other barrier that is imperforate and non-combustible, and not less than 1 m high must be provided.

G3.6 Separation at roof

In an atrium—

(a) the roof must have the FRL prescribed in Table 3 of Specification C1.1; or

(b) the roof structure and membrane must be protected by a sprinkler system complying with Specification E1.5.

G3.7 Means of egress

All areas within an atrium must have access to at least 2 exits.

G3.8 Fire and smoke control systems

Sprinkler systems, smoke control, fire detection and alarm systems, and emergency warning and intercommunication systems must be installed in compliance with Specification G3.8.
1. SCOPE

This Specification sets out the requirements for the design and operation of systems of fire and smoke control in buildings containing an atrium.

2. AUTOMATIC FIRE SPRINKLER SYSTEM

2.1 General requirement

A sprinkler system complying with Specification E1.5 must be installed in every building containing an atrium, except where varied or superseded by this Specification.

2.2 Roof protection

A roof of an atrium which does not have the FRL prescribed in Specification C1.1 or the Deemed-to-Satisfy Provisions of Part C2 must be protected by automatic sprinklers arranged to wet both the covering membrane and supporting structure if the roof is—

(a) less than 12 m above the floor of the atrium or the floor of the highest storey where the bounding construction is set back more than 3.5 m from the atrium well if a Class 2, 3, 5 or 9 part of a building is open to the atrium; or

(b) less than 20 m above the floor of the atrium or the floor of the highest storey where the bounding construction is set back more than 3.5 m from the atrium well if a Class 6, 7 or 8 part of a building is open to the atrium,

and the temperature rating of sprinkler heads providing roof protection must be within the range 79°C–100°C.

2.3 Atrium floor protection

The floor of the atrium must be protected by sprinklers with—

(a) the use of sidewall pattern sprinkler heads together with overhead sprinklers where dictated by the dimensions of the atrium; and

(b) sprinkler heads of the fast response type, installed with suitable non-combustible heat collector plates of 200 mm minimum diameter to ensure activation by a rising fire plume.

2.4 Sprinkler systems to glazed walls

2.4.1 Location of protection

Where an atrium is separated from the remainder of the building by walls or doors incorporating glazing, a wall wetting system with suitable non-combustible heat collector plates of 200 mm diameter must be provided to protect the glazing as follows:
Deemed-to-Satisfy Provisions

(a) On the atrium side of the glazing—to all glazed walls which are set back more than 3.5 m from the atrium well.

(b) On the atrium side of the glazing—to all glazed walls which are not set back, or are set back 3.5 m or less, from the atrium well, for all levels which are less than—

(i) 12 m above the floor of an atrium or the floor of the highest storey where the bounding wall is set back more than 3.5 m from the atrium well if a Class 2, 3, 5 or 9 part of the building is open to the atrium; or

(ii) 20 m above the floor of an atrium or the floor of the highest storey where the bounding wall is set back more than 3.5 m from the atrium well if a Class 6, 7 or 8 part of the building is open to the atrium.

(c) On the side of the glazing away from the atrium well—to all glazing forming part of the bounding wall at each storey.

2.4.2 Sprinkler head location
Sprinklers must be located in positions allowing full wetting of the glazing surfaces without wetting adjacent sprinkler heads.

2.4.3 Head rating and response time
Sprinkler heads must be of the fast response type and have a maximum temperature rating of 74°C.

2.4.4 Water discharge rate
The rate of water discharge to protect glazing must be not less than—

(a) on the atrium side of the glazing—

(i) 0.25 L/s.m² where glazing is not set back from the atrium well; or

(ii) 0.167 L/s.m² where glazing is set back from the atrium well; and

(b) on the side away from the atrium well—0.167 L/s.m².

2.4.5 Water supply
In addition to that of the basic sprinkler protection for the building, the water supply to required wall wetting systems must be of adequate capacity to accommodate the following on the atrium side of the glazing:

(a) Where the bounding walls are set back less than 3.5 m from the atrium well—wall wetting of a part not less than 6 m long for a height of not less than—

(i) 12 m above the floor of an atrium or the floor of the highest storey where the bounding wall is set back more than 3.5 m from the atrium well if a Class 2, 3, 5 or 9 part of the building is open to the atrium; or

(ii) 20 m above the floor of an atrium or the floor of the highest storey where the bounding wall is set back more than 3.5 m from the atrium well if a Class 6, 7 or 8 part of the building is open to the atrium; and

(b) Where the walls are set back 3.5 m or more from the atrium well—wetting of a part not less than 12 m long on one storey.
2.5 Stop valves

(a) Basic sprinkler and wall wetting systems protecting a building containing an atrium must be provided with easily accessible and identified stop valves.

(b) Sprinkler and wall wetting systems must be provided with independent stop valves.

(c) Sprinkler heads protecting the roof of the atrium must be provided with a stop valve.

(d) Stop valve to wall wetting and roof sprinklers may be of the gate type.

(e) All sprinkler and wall wetting stop valves must be monitored to detect unauthorised closure.

3. SMOKE CONTROL SYSTEM

3.1 General requirements

Except where varied or superseded by this Specification, mechanical air-handling systems in a building containing an atrium must comply with AS/NZS 1668.1.

3.2 Operation of atrium mechanical air-handling systems

Mechanical air-handling systems serving an atrium must be designed to operate so that during a fire—

(a) a tenable atmosphere is maintained in all paths of travel along balconies to required exits during the period of evacuation; and

(b) smoke exhaust fans serving the atrium are only activated when smoke enters the atrium; and

(c) central plant systems do not use the atrium as a return air path; and

(d) central plant systems which use return air paths remote from the atrium—

(i) cycle to the full outside air mode; and

(ii) stop supply air to the fire affected storey or fire compartment; and

(iii) continue to fully exhaust the fire affected storey or fire compartment and reduce the exhaust from other storeys or fire compartments by at least 75%; and

(iv) continue to supply air to fire compartments or storeys other than the fire affected storey or fire compartment; and

(e) fans performing relief or exhaust duty from the atrium stop normal operation; and

(f) floor by floor, or unitary, air-handling plant serving a single fire compartment or storey—

(i) ceases normal operation in the fire affected storey or fire compartment; and

(ii) commences full relief or exhaust from that fire affected storey or fire compartment; and

(iii) continue to supply air to fire compartments or storeys other than the fire affected storey or fire compartment.

3.3 Activation of smoke control system

(a) The smoke control system must be activated by—
ANCILLARY PROVISIONS

Deemed-to-Satisfy Provisions

(i) operation of an automatic fire alarm; or
(ii) operation of the sprinkler system; or
(iii) a manual start switch.

(b) All controls for the smoke control system must be located—
   (i) in the fire control room; or
   (ii) in the emergency control centre, (if any); or
   (iii) adjacent to the sprinkler control valves; or
   (iv) incorporated in the Fire Indicator Board.

3.4 Smoke exhaust system

A smoke exhaust system serving an atrium must be designed on the basis of—

(a) the sprinkler system limiting the size of a fire to—
   (i) a heat output of 1.5 MW and perimeter of 7.5 m if a Class 2, 3, 5 or 9 part of
       the building is open to the atrium; or
   (ii) a heat output of 5 MW and perimeter of 12 m if a Class 6, 7 or 8 part of the
       building is open to the atrium;

(b) a smoke plume reaching a level 3 m above the highest storey having a path of
    travel to a required exit along a balcony bounding the atrium well, and not less
    than—
    (i) 12 m above the floor of an atrium or the floor of the highest storey where the
         bounding wall is set back more than 3.5 m from the atrium well if a Class 2, 3,
         5 or 9 part of the building is open to the atrium; or
    (ii) 20 m above the floor of an atrium or the floor of the highest storey where the
         bounding construction is set back more than 3.5 m from the atrium well if a
         Class 6, 7 or 8 part of the building is open to the atrium; and

(c) the smoke exhaust system discharging smoke at a rate of not less than that shown
    in Figure 3.4 for the appropriate height of smoke plume and fire size—
    (i) from the top of the atrium; or
    (ii) horizontally where calculations of wind velocity induced pressure profiles for
         the building verify that the exhaust system will operate effectively for all wind
         directions.
3.5 Upward air velocity

Notwithstanding 3.4(c), the average upward air velocity in the atrium, due to the required smoke exhaust quantity must—

(a) be not less than 0.2 m/s at any level over an 18 m height above the floor of the atrium; and

(b) not exceed the following maximum velocities in atriums of constant cross sectional plan area—

(i) for occupancy classification qualifying for 1.5 MW fire size—3.5 m/s.

(ii) for occupancy classifications qualifying for 5 MW fire size—5 m/s.

3.6 Exhaust fans

(a) Smoke exhaust must be provided by fans capable of continuous and required operation for a period of not less than 1 hour when handling exhaust gases at 200°C.

(b) Where a Class 2, 3 or 9 part of a building adjoins an atrium, the atrium must be provided with a minimum of 3 fans each capable of 50% of the total required smoke exhaust capacity.

(c) Atriums other than those referred to in (b) must be provided with a minimum of 2 fans each capable of 50% of the total required smoke exhaust capacity.
Deemed-to-Satisfy Provisions

3.7 Smoke and heat vents

Notwithstanding Clause 3.6, automatic vents complying with AS 2665 may be used, except where a Class 6 part of a building adjoins the atrium, in lieu of exhaust fans provided that—

(a) the height from the atrium floor to the bottom of the highest vent is not more than 12 m; and

(b) the vents are fitted with a remote manual operation switch located adjacent to the sprinkler control valves or incorporated in the Fire Indicator Board.

3.8 Make-up air supply

(a) Uniformly distributed make-up air must be provided to the atrium exhaust system from—

(i) outside the atrium at or near the lowest storey level; and

(ii) relief air from non-fire storeys.

(b) A discharge volume sufficient to maintain a velocity of not less than 0.1 m/s towards the atrium well must be provided on all storeys where the bounding wall is set back from the atrium well.

(c) The requirements of (a)(i) are satisfied if make-up air is provided to the atrium exhaust system in such a manner as to prevent, as far as possible, disturbance of the smoke layer due to turbulence created by the incoming air, through—

(i) openings directly from the outside air to the atrium and located as close as practicable to the lowest level of the atrium; or

(ii) ducts from the outside air to the atrium which deliver air as close as practicable to the lowest level of the atrium and, where passing through any other fire compartment having an FRL of at least 60/60/60; or

(iii) a combination of (i) or (ii).

4. FIRE DETECTION AND ALARM SYSTEM

4.1 General requirements

Except where superseded by this Specification, automatic fire detection and alarm systems in a building containing an atrium must comply with AS 1670.1.

4.2 Smoke detection system

Smoke detection within an atrium—

(a) must be provided within all outside air intakes and at individual floor return air intakes of all air-handling systems to initiate automatic fire mode operation, and where applicable, comply with the restart facilities in AS/NZS 1668.1; and

(b) must operate at an obscuration level not greater than 0.5% per metre with compensation for external airborne contamination as necessary; and

(c) must sample air within the atrium and in storeys where the bounding wall is set back more than 3.5 m from the atrium well; and

(d) must be calibrated to compensate for smoke dilution where sampling occurs within return air path common to more than one room; and
**ANCILLARY PROVISIONS**

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Deemed-to-Satisfy Provisions

(e) may incorporate beam type detectors to sense smoke in an *atrium* in a Class 5, 6, 7 or 8 building with an *effective height* of not more than 25 m if—

(i) the beam detectors are located at intervals of not more than 3 *storeys*; and

(ii) arranged to scan at 90 degrees orientation to adjacent beam units.

4.3 Smoke detection in spaces separated from the atrium by bounding walls

Smoke detection systems must be located at all return and relief air openings associated with the building air-handling systems and be—

(a) of the sampling type system as *required* in 4.2; or

(b) of the point type optical smoke detector.

4.4 Alarm systems

(a) A break-glass fire alarm point must be provided at each door to a *fire-isolated stairway, fire-isolated ramp, or fire-isolated passageway*.

(b) A staged alarm must be provided where an air sampling type smoke detection system is provided for the *atrium*, and must operate as follows:

(i) Alert building management when abnormal smoke levels of 0.03% obscuration per metre are detected.

(ii) Initiate a second alarm to management and start all smoke control systems including pressurisation of escape routes when smoke levels of 0.07% obscuration per metre are detected.

(iii) Automatically call the *fire brigade*, activate the emergency warning and intercommunication systems, and de-activate all plant not necessary for fire safety within the building when smoke levels of 0.09% obscuration per metre are detected.

(c) Beam and point type smoke detectors *required* must simultaneously operate all functions referred to above and activate at the level set out in AS/NZS 1668.1.

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5. EMERGENCY WARNING AND INTERCOMMUNICATION SYSTEM

All buildings containing an *atrium* must be provided with an emergency warning and intercommunication system which—

(a) complies with AS 1670.4 and AS 4428.4; and

(b) incorporates visible warning signs that—

(i) operate upon the “action” signal; and

(ii) display the words “EVAC AREA” in red with letters conforming with the requirements of the *Deemed-to-Satisfy Provisions* of *Part E4* for exit signs.

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6. STANDBY POWER SYSTEM

(a) If a *required* path of travel to an *exit* is within an *atrium*, a suitable alternative power supply must be provided to operate *required* safety systems, including sprinkler systems and fire hydrant pumps, air handling systems, alarms, warning and communication systems and emergency lighting circuits.
Deemed-to-Satisfy Provisions

(b) The alternative power supply must—
   (i) be connected *automatically* if the normal power supply fails; and
   (ii) if located within the building, be separated from the remainder of the building by an enclosure with an FRL of at least 120/120/120; and
   (iii) be connected to the safety systems by means of cabling complying with C2.13(c)(iii) and (iv).

(c) The requirements of (a) are satisfied by—
   (i) a single medium voltage supply taken from an electricity substation situated within, or adjacent to, the building concerned where the power supply to the substation consists of two or more high voltage cables each taking electricity from separate transformers; or
   (ii) two or more medium voltage supplies each taking electricity from separate electricity substations situated—
      (A) outside the building concerned; and
      (B) at a suitable distance from each other; or
   (iii) a single medium voltage supply taken from an electricity substation together with an electricity generating plant capable of—
      (A) generating a medium voltage supply; and
      (B) starting and taking the *required* electrical load within a period of not more than 30 seconds from the time of normal supply failure.

7. SYSTEM FOR EXCLUDING SMOKE FROM FIRE-ISOLATED EXITS

*Required* fire-isolated *exits* in a building containing an *atrium* must be protected from the entry of smoke in accordance with E2.2.
OBJECTIVE

GO4
The Objective of this Part is to safeguard occupants in *alpine areas* from illness or injury from an emergency while evacuating a building.

Application
GO4 applies to a building constructed in an *alpine area* and overrules other provisions of the BCA.

FUNCTIONAL STATEMENT

GF4.1
A building in an *alpine area* is to be provided with additional measures in view of the increased difficulties in fire-fighting and maintaining access and means of egress in snow conditions.

Application
GF4.1 applies to a building constructed in an *alpine area* and overrules other provisions of the BCA.

PERFORMANCE REQUIREMENTS

GP4.1
An external doorway from a building in an *alpine area* must be installed so that opening the door is not obstructed by snow or ice.

Application
GP4.1 applies to a building constructed in an *alpine area* overrules other provisions of the BCA.
GP4.2

A building in an *alpine area* containing external trafficable structures forming part of the means of egress must be constructed so that those structures remain, as far as practicable, useable under snow conditions.

**Application**

GP4.2 applies to a building constructed in an *alpine area* and overrules other provisions of the BCA.

GP4.3

A building in an *alpine area* must be constructed so that snow or ice is not shed from the building onto the allotment, any adjoining allotment, road or public space in a location or manner that will—

(a) obstruct a means of egress from any building to a road or *open space*; or

(b) otherwise endanger people.

**Application**

GP4.3 applies to a building constructed in an *alpine area* and overrules other provisions of the BCA.

GP4.4

A building in an *alpine area* must have a *fire safety system* installed to—

(a) facilitate fire-fighting operations; and

(b) alert occupants in the event of an emergency.

**Application**

GP4.4 applies to a building constructed in an *alpine area* and overrules other provisions of the BCA.
ANCILLARY PROVISIONS

PART G4 CONSTRUCTION IN ALPINE AREAS

Deemed-to-Satisfy Provisions

G4.0 Deemed-to-Satisfy Provisions

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirements GP4.1 to GP4.4 are satisfied by complying with G4.1 to G4.9.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of G4.1 to G4.9, the relevant Performance Requirements must be determined in accordance with A0.10.

G4.1 Application of Part

(a) The Deemed-to-Satisfy Provisions of this Part apply to any building constructed in an alpine area in addition to other Deemed-to-Satisfy Provisions of the BCA.

(b) Where any Deemed-to-Satisfy Provisions are in conflict, the provisions of this Part take precedence.

G4.2 * * * * *

Note: This clause has deliberately been left blank.

G4.3 External doorways

(a) A door fitted to an external doorway which may be subject to the build-up of snow must—
   (i) only be capable of opening inwards; and
   (ii) be marked “OPEN INWARDS” on the inside face of the door in letters not less than 75 mm high and in a colour contrasting with that of the background; and
   (iii) if it serves a corridor or stairway, be positioned in an alcove or recess with—
      (A) no horizontal dimension less than twice the width of the door; and
      (B) the door positioned to open against a wall such that the distance from any part of its swing to the nearest point of entry of the stairway or corridor is not less than the width of the door.

(b) Every threshold of a required exit doorway must be located so that snow or ice is not deposited in a manner that will obstruct means of egress from that doorway.

G4.4 Emergency lighting

In a Class 2, 3, 5, 6, 7, 8 or 9 building or Class 4 part of a building, a system of emergency lighting must be installed in accordance with the Deemed-to-Satisfy Provisions of Part E4—

(a) in every stairway (other than those within a sole-occupancy unit in a Class 2 or 3 building or Class 4 part of a building); and

(b) in every public corridor or the like leading to an exit; and
ANCILLARY PROVISIONS

G4.4 Deemed-to-Satisfy Provisions

(c) externally above every doorway opening to a road or open space; and

(d) in any storey of the building if illumination sufficient for safe egress will not be available under conditions of emergency.

G4.5 External ramps

An external ramp serving as an exit must—

(a) where a ramp is also serving as an accessible ramp under Part D3, be in accordance with AS 1428.1; or

(b) in any other case, have a gradient not steeper than 1:12.

G4.6 Discharge of exits

A building in an alpine area must be so constructed that—

(a) if any part of an external wall is more than 3.6 m above the natural ground level—the distance of that part from a boundary other than a road alignment is not less than 2.5 m plus 100 mm for each 300 mm or part by which that part of the wall exceeds a height of 3.6 m; and

(b) if an exit doorway discharges into a court between wings of a building—the wings are not less than 6 m apart; and

(c) if an exit doorway is opposite a barrier which is more than 900 mm above the threshold of the doorway—the threshold is at a distance from that barrier of not less than twice the height of the barrier or 6 m, whichever is the lesser.

G4.7 External trafficable structures

External stairways, ramps, access bridges or other trafficable structures must have—

(a) a floor surface that consists of steel mesh or other suitable material if it is used as a means of egress; and

(b) any required balustrade or other barrier constructed so that its sides are not less than 75% open.

G4.8 Fire-fighting services and equipment

Every Class 2, 3, 5, 6, 7, 8 and 9 building must have—

(a) a manually operated fire alarm system with call-points complying with AS 1670.1; and

(b) fire hose reels and fire hydrants installed in accordance with the Deemed-to-Satisfy Provisions of Part E1.

G4.9 Fire orders

Every Class 2, 3 or 9 building must display a notice clearly marked “FIRE ORDERS” in suitable locations near the main entrance and on each storey, explaining—
ANCILLARY PROVISIONS

Deemed-to-Satisfy Provisions

(a) the method of operation of the fire alarm system and the location of all call-points; and

(b) the location and methods of operation of all fire-fighting equipment; and

(c) the location of all exits; and

(d) the procedure for evacuation of the building.
PART G5 CONSTRUCTION IN BUSHFIRE PRONE AREAS

OBJECTIVE

GO5

The *Objective* of this Part is to—
(a) safeguard occupants from injury; and
(b) protect buildings,
from the effects of a bushfire.

Application

GO5 only applies to a Class 2 or 3 building in a designated bushfire prone area and applies in addition to other provisions of the BCA.

FUNCTIONAL STATEMENT

GF5.1

A building constructed in a designated bushfire prone area is to provide a resistance to bushfires in order to reduce the danger to life and minimise the risk of the loss of the building.

Application

GF5.1 only applies to a Class 2 or 3 building in a designated bushfire prone area and applies in addition to other provisions of the BCA.

PERFORMANCE REQUIREMENT

GP5.1

A building that is constructed in a designated bushfire prone area must be designed and constructed to reduce the risk of ignition from a bushfire while the fire front passes.
## Application

GP5.1 only applies to a Class 2 and 3 building in a *designated bushfire prone area* and applies in addition to other provisions of the BCA.
G5.0  Deemed-to-Satisfy Provisions

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirements GP5.1 is satisfied by complying with G5.1 and G5.2.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of G5.1 and G5.2, the relevant Performance Requirements must be determined in accordance with A0.10.

G5.1  Application of Part

The Deemed-to-Satisfy Provisions of this Part apply to Class 2 and 3 buildings in designated bushfire prone areas.

G5.2  Protection

NSW G5.2
SA G5.3

A Class 2 or 3 building in a designated bushfire prone area must comply with AS 3959.
SPECIAL USE BUILDINGS

H1 Theatres, Stages and Public Halls
SECTION H SPECIAL USE BUILDINGS

Part H1 Theatres, Stages and Public Halls

H1.1 Application of Part
H1.2 Separation
H1.3 Proscenium wall construction
H1.4 Seating area
H1.5 Exits from theatre stages
H1.6 Access to platforms and lofts
H1.7 Aisle lights in theatres
Specification H1.3 Construction of Theatres with Proscenium Walls

NSW Appendix (Additional provisions - refer to NSW Contents for full details)

NSW Part H101 Places of Public Entertainment other that Temporary Structures and Drive-in Theatres
NSW Part H102 Temporary Structures
NSW Part H103 Drive-in Theatres

NT Appendix (Additional provisions - refer to NT Contents for full details)

NT Part H101 Food Premises
NT Part H102 Premises to be used for Activities Involving Skin Penetration
NT Part H103 Mortuaries

Qld Appendix (Additional provisions - refer to Qld Contents for full details)

QLD Part H101 Workplaces
QLD Part H102 Stables
QLD Part H103 Kiosks
QLD Part H104 * * * * *
QLD Part H105 * * * * *
QLD Part H106 Workplaces Involving Spray Painting
QLD Part H107 Foundries and Abrasive Blasting
QLD Part H108 Detention Centres
QLD Part H109 Premises used for the processing and retail sale of meat and meat products

SA Appendix (Additional provisions - refer to SA Contents for full details)

SA Part H2 Bulk grain storage facilities

Tas Appendix (Additional provisions - refer to Tas Contents for full details)

TAS Part H101 Workplaces
TAS Part H102 Food Premises
TAS Part H103 Dining Rooms and Bar Rooms
TAS Part H104 Bottle Shops at Licensed Premises
TAS Part H105 Accommodation Facilities
TAS Part H106 Meat Premises
TAS Part H107 Farm Dairy Premises
TAS Part H108 Pharmacies
TAS Part H109 Hospitals and Nursing Homes
TAS Part H110 Premises Used for Activities Involving Skin Penetration
TAS Part H111 Dental Surgeries and Chiropractors Premises
TAS Part H112 Mortuaries
TAS Part H113 Foundries
TAS Part H114 Premises for Manufacturing or Processing of Glass Reinforced Plastics
TAS Part H115 Premises for Production or Processing of Isocynates
TAS Part H116 Premises for Electro-Plating, Electro-Polishing, Anodising or Etching
TAS Part H117 Premises for lead Processing
TAS Part H118 Booths for Spray painting or Spray Coating
TAS Part H119 Electricity Distribution of Substations
TAS Part H120 Premises for Storage of Dangerous Goods
TAS Part H121 Hairdressers Premises

Vic Appendix (Additional provisions - refer to Vic Contents for full details)
Vic Part H101 Class 3 and Class 9a Residential Aged Care Buildings
Vic Part H102 Places of Public Entertainment
Vic Part H103 Fire Safety in Class 2 and Class 3 Buildings
Vic Part H104 Class 9b Childrens Services
PART H1 THEATRES, STAGES AND PUBLIC HALLS

Note.
Part H1 contains Deemed-to-Satisfy Provisions additional to those contained in Sections C, D and E for buildings containing theatres, stages and public halls.

H1.1 Application of Part

NSW H1.1
(a) The Deemed-to-Satisfy Provisions of this Part apply to every enclosed Class 9b building or part of a building which—
   (i) is a school assembly, church or community hall with a stage and any backstage area with a total floor area of more than 300 m²; or
   (ii) otherwise, has a stage and any backstage area with a total floor area of more than 200 m²; or
   (iii) has a stage with an associated rigging loft.
(b) Notwithstanding (a)—
   (i) H1.4 applies to every open or enclosed Class 9b building; and
   (ii) H1.7 applies to every enclosed Class 9b building.

H1.2 Separation

A theatre, public hall or the like must—
(a) have a sprinkler system complying with Specification E1.5; or
(b) have the stage, backstage area and accessible under-stage area separated from the audience by a proscenium wall in accordance with H1.3.

H1.3 Proscenium wall construction

A proscenium wall must comply with Specification H1.3.

H1.4 Seating area

In a seating area—
(a) the gradient of the floor surface must not be steeper than 1 in 8, or the floor must be stepped so that—
   (i) a line joining the nosings of consecutive steps does not exceed an angle of 30° to the horizontal; and
   (ii) the height of each step in the stepped floor is not more than 600 mm; and
   (iii) the height of any opening in such a step is not more than 125 mm; and
(b) if an aisle divides the stepped floor and the difference in level between any 2 consecutive steps—
(i) exceeds 230 mm but not 400 mm—an intermediate step must be provided in the aisle; and

(ii) exceeds 400 mm - 2 equally spaced intermediate steps must be provided in the aisle; and

(iii) the going of intermediate steps must be not less than 270 mm and such as to provide as nearly as practicable equal treads throughout the length of the aisle; and

(c) the clearance between rows of fixed seats used for viewing performing arts, sport or recreational activities must be not less than—

(i) 300 mm if the distance to an aisle is not more than 3.5 m; or

(ii) 500 mm if the distance to an aisle is more than 3.5 m.

H1.5 Exits from theatre stages

(a) The path of travel to an exit from a stage or performing area must not pass through the proscenium wall if the stage area is separated from the audience area with a proscenium wall.

(b) Required exits from backstage and under-stage areas must be independent of those provided for the audience area.

H1.6 Access to platforms and lofts

A stairway that provides access to a service platform, rigging loft, or the like, must comply with AS 1657.

H1.7 Aisle lights in theatres

In every enclosed Class 9b building, where in any part of the auditorium, the general lighting is dimmed or extinguished during public occupation and the floor is stepped or is inclined at a slope steeper than 1 in 12, aisle lights must be provided to illuminate the full length of the aisle and tread of each step.
1. **Scope**

This Specification contains the requirements for the construction of proscenium walls for theatres, public halls, or the like.

2. **Separation of stage areas, etc**

(a) Dressing rooms, scene docks, property rooms, workshops, associated store rooms and other ancillary areas must be—
   (i) located on the stage side of the proscenium wall; and
   (ii) separated from corridors and the like by construction having an FRL of not less than 60/60/60, and if of lightweight construction, complying with Specification C1.8.

(b) The stage and backstage must be separated from other parts of the building other than the audience seating area by construction having an FRL of not less than 60/60/60, and if of lightweight construction, complying with Specification C1.8.

(c) Any doorway in the construction referred to in paragraphs (a) and (b) must be protected by a self-closing - /60/30 fire door.

3. **Proscenium wall construction**

A proscenium wall must—

(a) extend to the underside of the roof covering or the underside of the structural floor next above; and

(b) have an FRL of not less than 60/60/60, and if of lightweight construction, comply with Specification C1.8.

4. **Combustible materials not to cross proscenium wall**

Timber purlins or other combustible material must not pass through or cross any proscenium wall.

5. **Protection of openings in proscenium wall**

Every opening in a proscenium wall must be protected—

(a) at the principal opening, by a curtain in accordance with Clause 6 which is—
Deemed-to-Satisfy Provisions

(i) capable of closing the proscenium opening within 35 seconds either by gravity slide or motor assisted mechanisms; and

(ii) operated by a system of automatic heat activated devices, manually operated devices or push button emergency devices; and

(iii) able to be operated from either the stage side or the audience side of the curtain; and

(b) at any doorway in the wall, by a self-closing -/60/30 fire door.

6. Proscenium curtains

A curtain required by Clause 5 must be—

(a) a fire safety curtain—

(i) made of non-combustible material; and

(ii) capable of withstanding a pressure differential of 0.5 kPa over its entire surface area; and

(iii) so fitted that when fully lowered it inhibits the penetration of smoke around the perimeter of the opening, from the stage; or

(b) a curtain—

(i) having a Spread-of-Flame Index not greater than 0 and a Smoke-Developed Index not greater than 3; and

(ii) protected by a deluge system of open sprinklers installed along the full width of the curtain.
# SECTION I CONTENTS

## SECTION I MAINTENANCE

<table>
<thead>
<tr>
<th>Part I1</th>
<th>Equipment and Safety Installations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Objective IO1</td>
</tr>
<tr>
<td></td>
<td>Functional Statement IF1.1</td>
</tr>
<tr>
<td></td>
<td>Performance requirement IP1.1</td>
</tr>
<tr>
<td></td>
<td>I1.0 Deemed-to-Satisfy Provisions</td>
</tr>
<tr>
<td></td>
<td>I1.1 Safety measures</td>
</tr>
<tr>
<td></td>
<td>I1.2 Mechanical ventilation and hot water, warm water and cooling water systems</td>
</tr>
</tbody>
</table>

SUPERSEDED
PART I
EQUIPMENT AND SAFETY INSTALLATIONS

OBJECTIVE

IO1
The Objective of this Part is to ensure that people are protected from illness, injury and loss of amenity throughout the life of the building.

FUNCTIONAL STATEMENT

IF1.1
Equipment and safety installations in a building are to safeguard people from illness or injury and prevent the loss of amenity.

PERFORMANCE REQUIREMENT

IP1.1
Safety measures must be capable of performing to a standard no less than that which they were originally required to achieve.

IP1.2
Mechanical ventilation and hot water, warm water and cooling water systems must be adequately maintained to safeguard people from illness or injury.
I1.0 Deemed-to-Satisfy Provisions

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions—
   (i) Performance Requirement IP1.1 is satisfied by complying with I1.1; and
   (ii) Performance Requirement IP1.2 is satisfied by complying with I1.2.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of I1.1 or I1.2, the relevant Performance Requirements must be determined in accordance with A0.10.

I1.1 Safety measures

NSW I1.1
NT I1.1
SA I1.1

Safety measures must—

(a) perform to a standard not less than they were originally required to achieve; and

(b) for those safety measures listed in Tables I1.1 to I1.13, perform to a standard not less than that determined using the corresponding BCA provisions.

Table I1.1 SAFETY MEASURES - BUILDING FIRE INTEGRITY

<table>
<thead>
<tr>
<th>Safety measure</th>
<th>BCA provisions for determining standard of performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building elements <em>required</em> to satisfy prescribed fire-resistance levels</td>
<td>Section C</td>
</tr>
<tr>
<td></td>
<td>D1.12</td>
</tr>
<tr>
<td>Materials and assemblies <em>required</em> to have fire hazard properties</td>
<td>C1.10</td>
</tr>
<tr>
<td>Elements <em>required</em> to be non-combustible, provide fire protection, compartmentation or separation</td>
<td>C2.5 to C2.14, C3.3, C3.11, D1.7, D1.8, E1.3, G3.4</td>
</tr>
<tr>
<td>Wall-wetting sprinklers (including doors and windows <em>required</em> in conjunction with wall-wetting sprinklers)</td>
<td>C3.4, C3.8, C3.11, D1.7, D1.8, G3.8</td>
</tr>
<tr>
<td>Fire doors (including sliding fire doors and their associated warning systems) and associated self-closing, automatic closing and latching mechanisms</td>
<td>C2.12, C2.13, C3.4 to C3.8, C3.10, C3.11, D1.7, D1.8, D1.12</td>
</tr>
</tbody>
</table>
### Table I1.2 SAFETY MEASURES - MEANS OF EGRESS

<table>
<thead>
<tr>
<th>Safety measure</th>
<th>BCA provisions for determining standard of performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paths of travel to exits</td>
<td>D1.6</td>
</tr>
<tr>
<td>Discharge from exits (including paths of travel from open spaces to the public roads to which they are connected)</td>
<td>D1.7, D1.9 to D1.11, D2.12, G4.3, G4.6, G4.7</td>
</tr>
<tr>
<td>Exits (including fire-isolated stairways and ramps, non-fire-isolated stairways and ramps, stair treads, balustrades and handrails associated with exits, and fire-isolated passageways)</td>
<td>D2.2, D2.3, D2.8 to D2.11, D2.13, D2.16, D2.17</td>
</tr>
<tr>
<td>Smoke lobbies to fire-isolated exits</td>
<td>D1.7, D2.6</td>
</tr>
<tr>
<td>Open access ramps or balconies for fire-isolated exits</td>
<td>D2.19 to D2.23</td>
</tr>
<tr>
<td>Doors (other than fire or smoke doors) in a <strong>required exit</strong>, forming part of a <strong>required exit</strong> or in a path of travel to a <strong>required exit</strong>, and associated self-closing, automatic closing and latching mechanisms</td>
<td>D1.6, D2.19 to D2.21, D2.23</td>
</tr>
</tbody>
</table>
### Table I1.3 SAFETY MEASURES - SIGNS

<table>
<thead>
<tr>
<th>Safety measure</th>
<th>BCA provisions for determining standard of performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exit signs (including direction signs)</td>
<td>D1.12, E4.5, E4.6, 4.8</td>
</tr>
<tr>
<td>Signs warning against the use of lifts in the event of fire</td>
<td>E3.3</td>
</tr>
<tr>
<td>Warning signs on sliding fire doors and doors to non-required stairways, ramps and escalators</td>
<td>C3.6, D1.12</td>
</tr>
<tr>
<td>Signs, intercommunication systems, or alarm systems on doors of fire-isolated exits stating that re-entry to a storey is available</td>
<td>D2.22</td>
</tr>
<tr>
<td>Signs alerting persons that operation of doors must not be impaired</td>
<td>D2.23</td>
</tr>
<tr>
<td>Signs required on doors, in alpine areas, alerting people that they open inwards</td>
<td>G4.3</td>
</tr>
<tr>
<td>Fire order notices required in alpine areas</td>
<td>G4.9</td>
</tr>
</tbody>
</table>

### Table I1.4 SAFETY MEASURES - LIGHTING

<table>
<thead>
<tr>
<th>Safety measure</th>
<th>BCA provisions for determining standard of performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency lighting</td>
<td>E4.2, E4.4</td>
</tr>
<tr>
<td>Artificial lighting required to assist occupant movement and egress</td>
<td>F4.4, H1.7</td>
</tr>
</tbody>
</table>

### Table I1.5 SAFETY MEASURES - FIRE FIGHTING SERVICES AND EQUIPMENT

<table>
<thead>
<tr>
<th>Safety measure</th>
<th>BCA provisions for determining standard of performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire hydrant system (including on-site pump set and fire-service booster connection)</td>
<td>E1.3</td>
</tr>
<tr>
<td>Fire hose reel system</td>
<td>E1.4</td>
</tr>
<tr>
<td>Sprinkler system</td>
<td>E1.5, G3.8, H1.2</td>
</tr>
<tr>
<td>Portable fire extinguishers</td>
<td>E1.6</td>
</tr>
<tr>
<td>Fire control centres (or rooms)</td>
<td>E1.8</td>
</tr>
<tr>
<td>Provisions for special hazards</td>
<td>E1.10</td>
</tr>
</tbody>
</table>
### Table I1.6 SAFETY MEASURES - AIR HANDLING SYSTEMS

<table>
<thead>
<tr>
<th>Safety measure</th>
<th>BCA provisions for determining standard of performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoke hazard management systems</td>
<td></td>
</tr>
<tr>
<td>· <em>Automatic</em> air pressurisation systems for fire-isolated exits</td>
<td>E2.2</td>
</tr>
<tr>
<td>· zone smoke control system</td>
<td></td>
</tr>
<tr>
<td>· <em>automatic</em> smoke exhaust system</td>
<td></td>
</tr>
<tr>
<td>· <em>automatic</em> smoke and heat vents</td>
<td></td>
</tr>
<tr>
<td>· air-handling systems that do not form part of smoke hazard management system and which may unduly contribute to the spread of smoke</td>
<td></td>
</tr>
<tr>
<td>· miscellaneous air-handling systems covered by Sections 5 and 11 of AS/NZS 1668.1 serving more than one fire compartment</td>
<td></td>
</tr>
<tr>
<td>· other air-handling systems</td>
<td></td>
</tr>
<tr>
<td>Carpark mechanical ventilation system</td>
<td>F4.11</td>
</tr>
<tr>
<td>Atrium smoke control system</td>
<td>Specification G3.8</td>
</tr>
</tbody>
</table>

### Table I1.7 SAFETY MEASURES - AUTOMATIC FIRE DETECTION AND ALARM SYSTEMS

<table>
<thead>
<tr>
<th>Safety measure</th>
<th>BCA provisions for determining standard of performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoke and heat alarm system</td>
<td>Clause 3 of Specification E2.2a</td>
</tr>
<tr>
<td>Smoke and heat detection system</td>
<td>Clause 4 of Specification E2.2a</td>
</tr>
<tr>
<td>Atrium fire detection and alarm systems</td>
<td>Clause 4 of Specification G3.8</td>
</tr>
</tbody>
</table>

### Table I1.8 SAFETY MEASURES - OCCUPANT WARNING SYSTEMS

<table>
<thead>
<tr>
<th>Safety measure</th>
<th>BCA provisions for determining standard of performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency warning and intercommunication system</td>
<td>E4.9</td>
</tr>
<tr>
<td></td>
<td>Clause 6 of Specification G3.8</td>
</tr>
<tr>
<td>Building occupant warning system</td>
<td>Clause 8 of Specification E1.5</td>
</tr>
<tr>
<td></td>
<td>Clause 6 of Specification E2.2a</td>
</tr>
</tbody>
</table>

### Table I1.9 SAFETY MEASURES - LIFTS

<table>
<thead>
<tr>
<th>Safety measure</th>
<th>BCA provisions for determining standard of performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stretcher facilities in lifts</td>
<td>E3.2</td>
</tr>
<tr>
<td>Emergency lifts</td>
<td>E3.4</td>
</tr>
</tbody>
</table>
Table I1.10 SAFETY MEASURES - STANDBY POWER SUPPLY SYSTEMS

<table>
<thead>
<tr>
<th>Safety measure</th>
<th>BCA provisions for determining standard of performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standby power supply system</td>
<td>E3.4</td>
</tr>
<tr>
<td></td>
<td>Clause 6 of Specification G3.8</td>
</tr>
</tbody>
</table>

Table I1.11 SAFETY MEASURES - BUILDING CLEARANCE AND FIRE APPLIANCES

<table>
<thead>
<tr>
<th>Safety measure</th>
<th>BCA provisions for determining standard of performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open space around large isolated buildings</td>
<td>C2.3, C2.4</td>
</tr>
<tr>
<td>Vehicular access around large isolated buildings</td>
<td>C2.3, C2.4</td>
</tr>
</tbody>
</table>

Table I1.12 SAFETY MEASURES - OTHER MEASURES

<table>
<thead>
<tr>
<th>Safety measure</th>
<th>BCA provisions for determining standard of performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glazed assemblies</td>
<td>B1.4</td>
</tr>
<tr>
<td></td>
<td>F1.13</td>
</tr>
<tr>
<td>Balconies</td>
<td>Part B1</td>
</tr>
<tr>
<td>Balustrades</td>
<td>Part B1</td>
</tr>
<tr>
<td></td>
<td>D2.16</td>
</tr>
<tr>
<td>Refrigerated chambers, strong rooms and vaults</td>
<td>G1.2</td>
</tr>
<tr>
<td>Bushfire protection measures</td>
<td>G5.2</td>
</tr>
</tbody>
</table>

Table I1.13 SAFETY MEASURES - BUILDING USE AND APPLICATION

<table>
<thead>
<tr>
<th>Safety measure</th>
<th>BCA provisions for determining standard of performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classification and use of building</td>
<td>A3.2 to A3.4</td>
</tr>
<tr>
<td>Occupancy hazard</td>
<td>E1.5, E1.6, E1.10</td>
</tr>
</tbody>
</table>

I1.2 Mechanical ventilation and hot water, warm water and cooling water systems

Mechanical ventilation and hot water, warm water and cooling water systems in a building other than a system only serving a single sole-occupancy unit in a Class 2 or 3 building or Class 4 part must be maintained in accordance with AS/NZS 3666.2.

*NSW I1.2*
AUSTRALIAN CAPITAL TERRITORY

INTRODUCTION

The Australian Capital Territory BCA Appendix forms part of the ACT Building Code published in accordance with the provisions of the ACT Building Act 1972. This Appendix contains variations and additions to the Building Code of Australia which are necessary for the effective application of the Code in the Australian Capital Territory.
# APPENDIX CONTENTS

## APPENDIX AUSTRALIAN CAPITAL TERRITORY

### Australian Capital Territory

#### A  GENERAL PROVISIONS
- ACT Specification A1.3 Standards Adopted by Reference
- ACT AO2 Objective
- ACT AF2.1 - AF2.3 Functional Statements
- ACT AP2.1 - ACT AP2.3 Performance Requirements
- ACT A2.0 Deemed-to-Satisfy Provisions
- ACT A2.101 Hazardous materials
- ACT A2.102 Control of litter on building sites
- ACT A2.103 Waste management

#### D  ACCESS AND EGRESS
- ACT D1.101 Notices on fire-isolated stairs

#### F  HEALTH AND AMENITY
- ACT FO3 Objective
- ACT FF3.2 Functional Statements
- ACT FP3.2 Performance Requirements
- ACT F3.0 Deemed-to-Satisfy Provisions
- ACT F3.101 Carparking facilities

### ACT PART F6  ENERGY EFFICIENCY
- ACT FO6 Objective
- ACT FF6.1 Functional Statement
- ACT FP6.1 Performance Requirement
- ACT F6.0 Deemed-to-Satisfy Provisions
- ACT F6.1 Energy efficient design
- ACT F6.2 Exemptions
- ACT F6.3 Fire resistance

#### G  ANCILLARY PROVISIONS
- ACT G1.1 Swimming Pools
- ACT G1.103 Awnings and projections
- ACT G2.2 Installation of appliances
- OTHER LEGISLATION AFFECTING BUILDINGS
## ACT Specification A1.3 STANDARDS ADOPTED BY REFERENCE

Insert in Table 1 of Specification A1.3 the following:

### ACT Table 1: SCHEDULE OF REFERENCED DOCUMENTS

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Title</th>
<th>BCA Clause(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS 1375</td>
<td>1985</td>
<td>Industrial fuel-fired appliances</td>
<td>ACT G2.2</td>
</tr>
<tr>
<td>Amdt No. 6</td>
<td></td>
<td>AS/NZS 1530</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Methods for fire tests on building materials components and structures</td>
<td></td>
</tr>
<tr>
<td>Part 3</td>
<td>1999</td>
<td>Simultaneous determination of ignitability, flame propagation, heat release and smoke release</td>
<td>ACT F6.3</td>
</tr>
<tr>
<td>Amdt No. 6</td>
<td></td>
<td>* * * * *</td>
<td></td>
</tr>
<tr>
<td>Amdt No. 1</td>
<td></td>
<td>AS 1692</td>
<td>ACT G2.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tanks for flammable and combustible liquids</td>
<td></td>
</tr>
<tr>
<td>AS 2890</td>
<td></td>
<td>Parking facilities</td>
<td></td>
</tr>
<tr>
<td>Part 1</td>
<td>1993</td>
<td>Off-street car parking</td>
<td>ACT F3.101</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Work Safe Australia Asbestos Code of Practice and Guidance Notes, August 1988</td>
<td>ACT A2.101</td>
</tr>
<tr>
<td>Amdt No. 9</td>
<td></td>
<td>Development Control Code for Best Practice Waste Management in the ACT 1999</td>
<td>ACT A2.103</td>
</tr>
</tbody>
</table>
PART A2  ACCEPTANCE OF DESIGN AND CONSTRUCTION

Add ACT AO2 as follows:

**OBJECTIVE**

**ACT AO2**

The *Objective* of this Part is to—

(a) safeguard people from illness resulting from exposure to asbestos-based building materials during removal and disposal; and

(b) prevent wind blown litter from building sites fouling roads and public land; and

(c) safeguard people from injury caused by infection or contamination from solid waste.

Add ACT AF2.1 to ACT AF2.3 as follows:

**FUNCTIONAL STATEMENTS**

**ACT AF2.1**

Asbestos-based building material shall be removed and disposed of in a safe manner.

**ACT AF2.2**

Building litter must be prevented from spreading around and beyond the *site* boundary.

**ACT AF2.3**

Buildings must be provided with space and facilities for the collection, and safe, hygienic holding prior to disposal of solid waste arising from the intended use of the building.

Add ACT AP2.1 to ACT AP2.3 as follows:

**PERFORMANCE REQUIREMENTS**

**ACT AP2.1**

When asbestos-based material in any form or in any mixture thereof, or any material containing loose asbestos including asbestos fluff insulation, asbestos sheeting, lagging, fire protection and the like is removed, it must be handled and disposed of safely.
ACT AP2.2

Sufficient containers must be provided on building sites to store building waste that is likely to become windblown.

ACT AP2.3

Provision must be made within buildings for the collection and temporary holding of solid waste. The design shall accommodate screening, volume of waste, disposal, logistics and access.

Add ACT A2.0 as follows:

ACT A2.0 Deemed-to-Satisfy Provisions

Performance Requirements ACT AP2.1 to ACT AP2.3 are satisfied by complying with ACT A2.101 to ACT A2.103.

Add ACT A2.101 to ACT A2.103 as follows:

ACT A2.101 Hazardous materials

Asbestos-based materials must be handled and disposed of in accordance with the Worksafe Australia Code of Practice and Guidance Notes.

ACT A2.102 Control of litter on building sites

(a) On site building waste must be stored in suitable size plastic or metal bins and removed from the site at regular intervals.

(b) For the purpose of this clause, building waste includes plastic containers, plastic and paper wrappings, or any waste that can be carried by wind.

ACT A2.103 Waste management

Garbage facilities must be designed and constructed in accordance with the Development Control Code for Best Practice Waste Management in the ACT.

SECTION D ACCESS AND EGRESS

PART D1 PROVISION FOR ESCAPE

Add ACT D1.101 as follows:

ACT D1.101 Notices on fire-isolated stairs

(a) Every fire-isolated stairway must have a notice displayed in a conspicuous position at the landing on each storey level to the effect of the following:

OFFENCES RELATING TO FIRE STAIRS

Under the Fire Brigade Act it is an offence to:

1. Place anything in this stairway or any associated passageway leading to the exterior of the building which may impede the free passage of persons;
2. Interfere with or cause obstruction or impediment to the normal operation of fire doors providing access to this stairway; or
3. Remove, damage or otherwise interfere with this notice

(b) In any notice displayed in accordance with (a)—
   (i) the words “OFFENCES RELATING TO FIRE STAIRS” must be in letters not less than 20 mm in height;
   (ii) all other letters and figures in the remainder of the notice must be not less than 3 mm in height; and
   (iii) the notice must be clearly legible with lettering of a colour contrasting with the background embossed or cast into a permanent plate securely and permanently fixed to the wall.

SECTION F HEALTH AND AMENITY

PART F3 ROOM SIZES

Delete FO3 and insert ACT FO3 as follows:

OBJECTIVE

ACT FO3

The Objective of this Part is to—
(a) safeguard occupants from injury or loss of amenity caused by inadequate height of a room or space; and
(b) safeguard people from injury resulting from the movement of vehicles into, within and out of buildings.

After FF3.1 insert ACT FF3.2 as follows:

FUNCTIONAL STATEMENTS

ACT FF3.2

Buildings shall be provided with reasonable and adequate access to enable safe and easy movement of vehicles.
After FP3.1 insert ACT FP3.2 as follows:

**PERFORMANCE REQUIREMENTS**

**ACT FP3.2**

Vehicle access routes within buildings and on the *site* must enable people to safely and easily—

(a) manoeuvre vehicles; and

(b) manoeuvre and park cars.

Delete F3.0 and insert ACT F3.0 as follows:

**ACT F3.0 Deemed-to-Satisfy Provisions**

*Performance Requirements* FP3.1 and *ACT FP3.2* are satisfied by complying with F3.1 and ACT F3.101.

After F3.1 insert ACT F3.101 as follows:

**ACT F3.101 Car parking facilities**

Parking spaces, aisle dimensions, parking arrangements, access signage, vehicle turning paths, ramp gradients, access driveways, approaches, queuing areas and headroom clearances must be designed in accordance with AS 2890.1.

Add Part F6 as follows:

**ACT PART F6 ENERGY EFFICIENCY**

**OBJECTIVE**

**ACT FO6**

The *Objective* of this Part is to facilitate efficient use of energy in a building.

**Application:**

ACT FO6 only applies to a Class 2 or Class 3 building or a Class 4 part of a building.
FUNCTIONAL STATEMENT

**ACT FF6.1**

A building is to be designed to achieve efficient use of energy for internal heating and cooling.

**Application:**

ACT FF6.1 only applies to a Class 2 or Class 3 building or a Class 4 part of a building.

PERFORMANCE REQUIREMENT

**ACT FP6.1**

A building must have an adequate level of thermal performance to ensure efficient use of energy for internal heating and cooling.

**Application:**

ACT FP6.1 only applies to a Class 2 or Class 3 building or a Class 4 part of a building.

**ACT F6.0 Deemed-to-Satisfy Provisions**

*Performance Requirement* ACT FP6.1 is satisfied by complying with ACT F6.1 to F6.3.

**ACT F6.1 Energy efficient design**

(a) A building must achieve an ACT House Energy Rating of 4 Stars as assessed by an accredited ACT House Energy Assessor.

(b) An addition must—

(i) achieve an ACT House Energy Rating of 4 Stars as assessed by an accredited ACT House Energy Assessor; or

(ii) comply with all of ACT Table F6 and have a—

(A) concrete floor; or

(B) timber floor with an R rating of 1 including carpet.

**ACT Table F6 MINIMUM INSULATION MATERIAL**

<table>
<thead>
<tr>
<th>Roofs</th>
<th>Walls</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) R3 insulation material in the ceiling space; or</td>
<td>R1.5 insulation material in the <em>external wall</em> space</td>
</tr>
<tr>
<td>(b) R2 insulation material in an exposed raked ceiling</td>
<td></td>
</tr>
</tbody>
</table>
ACT F6.2 Exemptions

The requirements of this Part do not apply to the following types of construction:

(a) Cavity brick, earthwall construction, ashlar stone or other masonry walls which have a thickness (excluding any cavity) of not less than 180 mm do not require wall insulation.

(b) Class 10 structures forming part of a Class 2 or 3 building or Class 4 part.

(c) * * * * *

This clause has been deliberately left blank.

ACT F6.3 Fire resistance

When tested in accordance with AS/NZS 1530.3 a thermal insulation material must have a Spread-of-Flame Index of 0 and a Smoke-Developed Index not greater than 4.

SECTION G  ANCILLARY PROVISIONS

PART G1  MINOR STRUCTURES AND COMPONENTS

Add ACT G1.1(c) and (d) as follows:

ACT G1.1 Swimming Pools

(c) Indoor or outdoor permanent bathing, wading and swimming pools must—

(i) where the capacity of the pool exceeds 10 m\(^3\)—

(A) be of the recirculation type in which the water circulation is maintained through the pool by pumps, the water drawn from the pool being clarified and disinfected before being returned to the pool;

(B) have an outlet sump with antivortex cover or grating and have a skimming weir or overflow gutter or channel at high water level; and

(C) have means of egress provided in the form of ladders, steps in the floor of the pool or a ramp;

(ii) be capable of being completely emptied and any discharge or overflow and pool backwash filter must be connected to the sewer drainage system;

(iii) be watertight with smooth surfaces of non-absorbent, non-slip material, light in colour and with rounded corners to facilitate cleaning;

(iv) have surrounding concourses graded away from the pool.

(d) Pools in or forming part of buildings other than Class 1 buildings—

(i) where in any part of the pool the depth is less than 1500 mm, the floor grade must not exceed a slope of 1 in 20;

(ii) permanent signs must be displayed on the side of the pool (or adjacent concourse for flush concourse waterline pools), showing the depth at 300 mm change intervals for the length of the pool and the depth at the deep and shallow ends.
Add ACT G1.103 as follows:

**ACT G1.103 Awnings and projections**

Every awning, projection or the like, attached to, or supported from a building other than a Class 1 or 10 building must—

(a) comply with Part B1;

(b) have all supporting members constructed of *non-combustible* material or be lined on the underside with *non-combustible* material;

(c) if it has a roof, be covered with *non-combustible* or fire-retardant material which is impervious to moisture;

(d) if projecting over a boundary onto or over unleased land—
   
   (i) in no part be less than 2.7 m above finished pavement or finished ground level; and
   
   (ii) be set back not less than 750 mm from any kerb or the edge of any place accessible to vehicles; and
   
   (iii) where the height to the underside of the awning is at least 3.8 m above finished pavement or ground level, the awning may align with, but not project beyond, the kerb or the edge of any place accessible to vehicles; and

(e) not have any signs or other attachments projecting lower than 2.3 m above the finished pavement or ground surface.

**PART G2 HEATING APPLIANCES, CHIMNEYS AND FLUES**

Add ACT G2.2 as follows:

**ACT G2.2 Installation of appliances**

(d) An industrial fuel-fired appliance: AS 1375.

(e) Storage tanks and other associated fittings: AS 1692.

**Footnote: OTHER LEGISLATION AFFECTING BUILDINGS**

In addition to the requirements of the ACT Building Act 1972 and the ACT Building Code, administered by ACT Building, Electrical and Plumbing Control, (BEPCON) builders and designers should be aware of other legislation which contains building requirements.

The following is a list of some of the other relevant legislation:

1. **Building Control Legislation**
   
   Public Health Regulations 2000 (Department of Health, Housing and Community Care (ACT Health))

2. **Fire Safety Regulations**
   
   Dangerous Goods Regulations (ACT WorkCover)

   Fire Brigade Act 1957 (ACT Fire Brigade, Justice and Community Safety (JACS))

   Fire Brigade Regulations (ACT Fire Brigade, JACS)

3. **Environmental Control and Emission Standards**
   
   Environmental Protection Act 1997 (DUS)
4. **Licensed Premises**  
   Food Act 1992 (ACT Health)  
   Liquor Act 1975 (JACS)  
   Licensing Standards Manual (JACS)

5. **Occupational Health and Safety**  
   ACT Safe Demolition Work Code of Practice (ACT WorkCover)  
   Occupational Health and Safety Act 1989 (ACT WorkCover)

6. **Public Housing**  
   Housing Assistance Act 1987 (ACT Housing, ACT Health)

7. **Scaffolding and Temporary Works**  
   Scaffolding and Lifts Regulations (ACT WorkCover)

8. **Urban Design Standards, Land Title and Tenure**  
   ACT (Planning and Land Management) Act 1988 (National Capital Authority (NCA))  
   City Area Leases Act 1936 (For leases before the Land Act commenced) (DUS)  
   Common Boundaries Act 1981 (DUS)  
   Land (Planning and Environment) Act 1991 (DUS)  
   Leases (Special Purposes) Act 1925 (For leases before the Land Act commenced) (DUS)  
   National Land Ordinance 1989 (NCA)  
   Unit Titles Act 1970 (DUS)

9. **Utility Services and Urban Infrastructure**  
   Gas Supply Act 1998 (ActewAGL)  
   Protection of Lands Act 1937 (DUS)  
   Roads and Public Places Act 1937 (DUS)  
   Utilities Act 2000 (Department of Treasury, DUS)  
   Water and Sewerage Act 2000 (BEPCON, DUS)
NEW SOUTH WALES

INTRODUCTION

The NSW Building Code technical package consists of-

(i) the Building Code of Australia (BCA) Volume One and Volume Two; and
(ii) the New South Wales BCA Appendix which contains variations to the requirements of the BCA and additional provisions applicable in New South Wales.

The technical package is accompanied by administrative provisions contained within the Environmental Planning and Assessment (EP & A) Act 1979 and the Environmental Planning and Assessment (EP & A) Regulation 2000.
APPENDIX CONTENTS

APPENDIX NEW SOUTH WALES

New South Wales

A GENERAL PROVISIONS

NSW A1.1 Definitions
NSW Specification A1.3 Standards Adopted by Reference

C FIRE RESISTANCE

NSW C1.10 Fire hazard properties
NSW C2.3 Large isolated buildings
NSW C2.5 Class 9a and 9c buildings
NSW C3.2 Protection of openings in external walls
NSW C3.11 Bounding construction: Class 2, 3, 4 and 9b buildings
NSW Specification C1.10 Fire Hazard Properties

D ACCESS AND EGRESS

NSW D1.2 Number of exits required
NSW D1.6 Dimensions of exits
NSW D1.10 Discharge from exits
NSW D2.1 Application of Part
NSW D2.13 Treads and risers
NSW D2.15 Thresholds
NSW D2.16 Balustrades or other barriers
NSW D2.19 Doorways and doors
NSW D2.21 Operation of latch
NSW D2.101 Doors in path of travel in a place of public entertainment

E SERVICES AND EQUIPMENT

Table E2.2b Specific Provisions
NSW Specification E2.2a Smoke Detectors and Alarm Systems
NSW E4.6 Direction signs

F HEALTH AND AMENITY

NSW FF2.1 Functional Statements
NSW FP2.6 Performance Requirements
NSW F2.7 Microbial (legionella) control
NSW F4.5 Ventilation of rooms

G ANCILLARY PROVISIONS

NSW GF1.4 Functional Statement
NSW GP1.5 Performance Requirement
NSW G1.0 Deemed-to-Satisfy Provisions
NSW G1.1 Swimming pools
NEW SOUTH WALES

H  SPECIAL USE BUILDINGS

NSW H1.1 Application of Part

NSW Part H101 PLACES OF PUBLIC ENTERTAINMENT OTHER THAN TEMPORARY STRUCTURES AND DRIVE-IN THEATRES

NSW H101.1 Application of Part
NSW H101.2 Fire separation
NSW H101.3 Foyer space
NSW H101.4 Sprinkler systems for common foyers
NSW H101.5 Conventional stages
NSW H101.6 Non-conventional stages
NSW H101.7 Flying scenery
NSW H101.8 Load notice
NSW H101.9 ** ** **
NSW H101.10 Safety curtains
NSW H101.11 Seating in rows
NSW H101.12 Continental seating
NSW H101.13 Provision of guardrails
NSW H101.14 Guardrails
NSW H101.15 Dressing rooms
NSW H101.16 Storerooms
NSW H101.17 Projection suites
NSW H101.18 Basement storeys
NSW H101.19 Electric mains installation
NSW H101.20 Lighting
NSW H101.21 ** ** **
NSW H101.22 Smoke control systems for small stages
NSW H101.23 Solid fuel burning stoves and open fire places
NSW H101.24 Fuel gas cylinders

NSW Part H102 TEMPORARY STRUCTURES

NSW H102.1 Application of Part
NSW H102.2 Exits—Exclusions
NSW H102.3 Location of exits
NSW H102.4 Exits to be provided
NSW H102.5 Vertical clearances for exits
NSW H102.6 Curtains across exits
NSW H102.7 Curtains and blinds
NSW H102.8 Fabrics
NSW H102.9 Guardrails
NSW H102.10 Seating
NSW H102.11 Sanitary accommodation
NSW H102.12 Projection suites
NSW H102.13 Fireplaces and heating
NSW H102.14 Electrical services
NSW H102.15 Artificial lighting
NSW H102.16 Exit signs
NSW H102.17 Fire-fighting services

NSW Part H103 DRIVE-IN THEATRES
| NSW H103.1 Application of Part |
| NSW H103.2 Speaker standards  |
| NSW H103.3 Electrical services |
| NSW H103.4 Vehicular entrances |
| NSW H103.5 Lighting            |

## I MAINTENANCE

- NSW I1.1 Essential fire safety measures
- NSW I1.2 Mechanical ventilation and hot water, warm water and cooling water systems

## J ENERGY EFFICIENCY

- NSW J01 Objective
- NSW JF1 Functional Statement
- NSW JP1 Performance Requirement
- NSW J1.0 Deemed-to-Satisfy Provisions
- NSW J1.1 Application of Part
- NSW J1.2 Insulation
- NSW J2.0 Deemed-to-Satisfy Provisions
- NSW J2.1 Application of Part
- NSW J2.2 Chimneys and flues
- NSW J2.3 Roof lights
- NSW J2.4 External windows and doors
- NSW J2.5 Exhaust fans
- NSW J2.6 Construction of roofs, walls and floors
- NSW J3.0 Deemed-to-Satisfy Provisions
- NSW J3.1 Application of Part
- NSW J3.2 Hot water supply system
- NSW J3.3 Air-conditioning ductwork
- NSW J3.4 Heating and cooling water system piping
- NSW Specification J3.3 Ductwork insulation and sealing
- NSW Specification J3.4 Ductwork insulation and sealing
SECTION A GENERAL PROVISIONS

PART A1 INTERPRETATION

NSW A1.1 Definitions

Insert definition for air-conditioning as follows:

Air-conditioning for the purposes of NSW Section J, means a service that actively cools, heats, humidifies or dehumidifies a space within a building, with or without forced air movement, in order to provide a suitable environment for the building occupants.

Insert definition for aisle as follows:

Aisle means a walkway at the end of rows of seating, not being continental seating, leading to a cross-over or to an egress doorway.

Insert definition for auditorium as follows:

Auditorium means such part of a place of public entertainment as is designed to accommodate the audience to an entertainment or public meeting.

Insert definition for climate zone as follows:

Climate zone for the purposes of NSW Section J, means an area defined in NSW Figure A1.1 and in NSW Table A1.1 for specific locations, having energy efficiency provisions based on a range of similar climatic characteristics.
This map can be viewed in enlargeable form on the energy efficiency page (under the What We're Doing/Core Projects menu) of the ABCB web site at www.abcb.gov.au.

<table>
<thead>
<tr>
<th>Location</th>
<th>Climate zone</th>
<th>Location</th>
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## New South Wales

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<td>2</td>
<td>Lord Howe Island</td>
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</tr>
<tr>
<td>Cobar</td>
<td>4</td>
<td>Moree</td>
<td>4</td>
</tr>
</tbody>
</table>

Insert definition for **common area** as follows:

**Common area** for the purposes of NSW Section J, means a room or enclosed space for use by residents, guests and other people in a Class 2 building, other than within a sole-occupancy unit, including a public corridor, public lobby, stairway or the like.

Insert definition for **conditioned space** as follows:

**Conditioned space** or the purposes of NSW Section J, means a space within a building that is air-conditioned by the building’s services; but excluding a non-habitable room in which a heater with a capacity of not more than 1.2 kW is installed.

Insert definition of **continental seating** as follows:

**Continental seating** means rows of seating in which the rows extend the full width of an auditorium without intervening aisles.

Insert definition of **cross-over** as follows:

**Cross-over** in relation to a place of public entertainment or temporary structure, means a walkway between aisles or between an aisle and an egress doorway.

Vary definition for **designated bushfire prone area** as follows:

**Designated bushfire prone area** means land that:

(a) has been designated under legislation; or

(b) has been identified under an environmental planning instrument, development control plan or in the course of processing and determining a development application, as land that can support a bushfire or is likely to be subject to bushfire attack.

Vary definition for **early childhood centre** as follows:

**Early childhood centre** means a preschool, kindergarten or child-minding centre for the care or training of more than 5 children.

Insert definition of **envelope** as follows:

**Envelope** for the purposes of NSW Section J, means the parts of a building’s **fabric** that separate a conditioned space from—

(a) the exterior of the building; or

(b) a non-conditioned space.

Insert definition of **fabric** as follows:
Fabric for the purposes of NSW Section J, means the basic building structural elements and components of a building including the roof, ceilings, walls and floors.

Insert definition of film as follows:

Film means a cinematograph film of a size of 35 mm or greater.

Insert definition of flying scenery as follows:

Flying scenery means scenery of a kind that is lifted above the stage floor by means of lines run from a grid.

Insert definition of grid as follows:

Grid means a framework from which lines are run for the purpose of lifting flying scenery above the stage floor.

Insert definition of minimum lateral clearance as follows:

Minimum lateral clearance means a permanently unobstructed space having a height above floor level of not less than 2000 mm and a width of not less than the specified measurement.

Insert definition of piping as follows:

Piping for the purposes of NSW Section J, means an assembly of pipes, with or without valves or other fittings, connected together for the conveyance of liquids.

Insert definition of place of public entertainment as follows:

Place of public entertainment means—

(a) a drive-in theatre; or
(b) an open-air theatre; or
(c) a theatre or public hall; or
(d) licensed premises providing entertainment.

Insert definition of projection suite as follows:

Projection suite means such part of a place of public entertainment as is designed to accommodate apparatus used for projecting films.

Insert definition of public entertainment as follows:

Public entertainment means entertainment to which admission may ordinarily be gained by members of the public on payment of money or other consideration.

Insert definition of reflective insulation as follows:

Reflective insulation for the purposes of NSW Section J, means a building membrane with a reflective surface such as a reflective foil laminate, reflective barrier, foil batt or the like capable of reducing radiant heat flow.

Insert definition of row as follows:

Row means a row of seating—

(a) between a wall or other barrier and an aisle; or
(b) between 2 aisles.

Insert definition of R-value as follows:

R-Value for the purposes of NSW Section J, means the thermal resistance (m².K/W) of a component calculated by dividing its thickness by its thermal conductivity.
Insert definition of *roof light* as follows:

**Roof light** for the purposes of NSW Section J, means a skylight, window or the like installed in a roof—
(a) to permit natural light to enter the room below; and
(b) at an angle between 0 and 70 degrees measured from the horizontal plane.

Insert definition of *service* as follows:

**Service** for the purposes of NSW Section J, means an engineering system of a building that uses energy or controls the use of energy on a day-to-day basis and—
(a) may include *air-conditioning*, ventilation, hot water supply, artificial lighting, electric power and vertical transport systems; but
(b) excluding emergency systems, cooking facilities and portable appliances.

Delete definition of *stage* and insert NSW definition of *stage* as follows:

**Stage** means such part of a *place of public entertainment* or other Class 9b building as is used by performers or speakers in an entertainment, public meeting or other such assembly.

Insert definition of *temporary structure* as follows:

**Temporary structure** means—
(a) a booth, tent or other temporary enclosure, whether or not a part of the booth, tent or enclosure is permanent; or
(b) a mobile structure.

Insert definition of *Total R-value* as follows:

**Total R-Value** for the purposes of NSW Section J, means the sum of the *R-Values* of the individual component layers in a composite element including any air spaces and associated surface resistances.

Insert definition of *Total U-value* as follows:

**Total U-Value** for the purposes of NSW Section J, means the thermal transmittance (W/m².K) of the composite element including any air spaces and associated surface transmittance.

Insert definition of *ventilation opening* as follows:

**Ventilation opening** for the purposes of NSW Section J, means an opening in the *external wall*, floor or roof of a building designed to allow air movement into or out of the building by natural means including a permanent opening, an openable part of a *window*, a door or other device which can be held open.

**NSW Specification A1.3  STANDARDS ADOPTED BY REFERENCE**

In Table 1, insert additional reference as follows:

**NSW Table 1: SCHEDULE OF REFERENCED DOCUMENTS**

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Title</th>
<th>BCA Clause</th>
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<tr>
<td>Amdt No. 13</td>
<td>AS 1926</td>
<td>Swimming pool safety</td>
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<td>Part 3 2003</td>
<td>Water recirculation systems</td>
<td>NSW G1.1</td>
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<td>Methods of test for textiles</td>
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<td>AS 2001</td>
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<td>Determination of dimensional change in laundering of textile fabrics and garments—Automatic machine method</td>
<td>NSW C1.10</td>
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<td>Part 5.4</td>
<td>1987</td>
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<td>BCA 2004</td>
<td>AS 2464</td>
<td>Method of testing thermal insulation</td>
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<td>Part 3</td>
<td>1983</td>
<td>Thermal resistance of low-density loose-fill insulation</td>
<td>NSW J1.2</td>
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<td>Part 5</td>
<td>1985</td>
<td>Steady-state thermal transmission properties by means of the heat flow meter</td>
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<td>1983</td>
<td>Steady-state thermal transmission properties by means of the guarded hot plate</td>
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<td>NSW H102.14</td>
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<td>AS 3002</td>
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<td>AS/NZS 3500</td>
<td>National plumbing and drainage code</td>
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<td>Heated water systems</td>
<td>NSW J3.4</td>
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<td>BCA 2004</td>
<td>AS/NZS 4859</td>
<td>Materials for the thermal insulation of buildings</td>
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<td>2002</td>
<td>General criteria and technical provisions</td>
<td>NSW J1.2, NSW Spec J3.2</td>
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<td>Amdt No. 12</td>
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<td>Planning for Bushfire Protection—A Guide for Councils, Planners, Fire Authorities, Developers and Home Owners</td>
<td>NSW G5.2</td>
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<td>NSW Rural Fire Service and PlanningNSW</td>
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<tr>
<td>Amdt No. 9</td>
<td>SSL</td>
<td>Appraisal Specification FAS102</td>
<td>NSW H101.17.1</td>
</tr>
<tr>
<td>SSL</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION C  FIRE RESISTANCE

PART C1  FIRE RESISTANCE AND STABILITY

Delete C1.10(b) and insert NSW C1.10(b) as follows:

NSW C1.10  Fire hazard properties

(b) Fire-retardant coatings must not be used in order to make a material comply with a required fire hazard property, except in respect of a material covered by Clause 4(d) and (e) of NSW Specification C1.10.

PART C2  COMPARTMENTATION AND SEPARATION

Delete C2.3(a) and substitute NSW C2.3(a)(i) and (ii) as follows:

NSW C2.3  Large isolated buildings

(a) the building does not exceed 18,000 m² in floor area nor exceed 108,000 m³ in volume, if—

(i) the building is Class 7 or 8, it contains not more than 2 storeys and is provided with open space complying with C2.4(a) not less than 18 m wide around the building; or

(ii) the building is a Class 5 to 9 and is protected throughout with a sprinkler system complying with Specification E1.5 and perimeter vehicular access complying with C2.4(b) is provided; or

Delete C2.5(b) and insert NSW C2.5(b) as follows:

NSW C2.5  Class 9a and 9c buildings

(b) A Class 9c aged care building must comply with the following:

(i) A building must be divided into areas not more than 500 m² by smoke proof walls complying with Specification C2.5.

(ii) A fire compartment must be separated from the remainder of the building by fire walls and notwithstanding Specification C1.1, floors with an FRL of not less than 60/60/60.

(iii) Except for walls provided in accordance with (b)(i) and (ii), non-loadbearing internal walls, and if a building is of Type C construction—all internal walls, between and bounding sole-occupancy-units and bounding a public corridor in a resident use area must:

(A) be lined on each side with standard grade plasterboard not less than 13 mm thick or a material with at least an equivalent level of fire protection; and

(B) if provided with cavity insulation, contain only non-combustible insulation; and

(C) extend to the underside of—

(aa) the floor next above; or

(bb) a ceiling lined with standard grade plasterboard not less than 13 mm thick or an equivalent non-combustible material; or

(cc) a non-combustible roof covering; and
(D) not incorporate any penetrations above door head height unless the penetrations are adequately stopped to prevent the free passage of smoke; and
(E) be smoke sealed with intumescent putty or other suitable material at any construction joint, space or the like between the top of the wall and the floor, ceiling or roof.

(iv) **Loadbearing internal walls** must comply with the requirements of **Specification C1.1** and paragraphs (iii)(B), (C), (D) and (E) above.

(v) The following ancillary use areas must be separated from the **sole-occupancy-units** by smoke proof walls complying with **Specification C2.5**:

(A) A kitchen and related food preparation areas having a combined floor area of more than 30 m².
(B) A laundry, where items of equipment are of the type that are potential fire sources (eg gas fire dryers).
(C) Storage rooms greater than 10 m² principally for the storage of administrative records.

(vi) Openings in **fire walls** must be protected as follows:

(A) Doorways—*self-closing* or *automatic* closing –/60/30 fire doors.
(B) Windows—*automatic* or permanently fixed closed –/60/– fire windows or –/60/– *automatic* fire shutters.
(C) Other openings—construction having an FRL not less than –/60/–.

**PART C3 PROTECTION OF OPENINGS**

Delete C3.2(a) as follows:

**NSW C3.2 Protection of openings in external walls**

(a) (deleted);

Delete C3.11(d) and substitute NSW C3.11(d) as follows:

**NSW C3.11 Bounding construction: Class 2, 3, 4 and 9b buildings**

(d) Protection for a doorway **required** under (a), (b) or (c) must be at least—

(i) in a building of Type A construction—a *self-closing* –/60/30 fire door; and
(ii) in a building of Type B or C construction—a *self-closing*, tight fitting, solid core door not less than 35 mm thick,

except

(iii) in a Class 3 building used as a **residential aged care building**—

(A) of Type A construction not protected by a sprinkler system—a –/60/30 fire door; or
(B) either—

(aa) of Type B or C construction; or
(bb) protected with a sprinkler system complying with **Specification E1.5**, a tight fitting, solid core door not less than 35 mm thick.

(iv) The doors referred to in (iii) must be—
(A) self-closing; or
(B) fitted with a free-arm action closing device which closes the door or causes the door to remain closed (without preventing manual re-opening), upon the detection of smoke by a detector located—

(aa) in a building protected with a sprinkler system complying with Specification E1.5—within the room; or
(bb) in a building not protected by a sprinkler system—within the room, and adjacent to the door in any common area or corridor to which the door opens.

Insert NSW C3.11(h) as follows:

(h) In a Class 9b building used as a place of public entertainment, openings in construction required to separate one space from another must be protected in accordance with C3.4.

NSW Specification C1.10
FIRE HAZARD PROPERTIES

Delete Clause 4(d) and insert new clause as follows:

4. Class 2, 3 and 9 buildings

(d) in a Class 9b building used as a place of public entertainment, and—

(i) it is used to cover closed back upholstered seats in any part available to the public where—

(A) smoking is permitted; or
(B) flame is exposed in connection with the preparation of meals,

have a Spread-of-Flame Index of not more than 6 and a Smoke-Developed Index of not more than 5;

(ii) it is used to form a cinematograph screen, have—

(A) a Flammability Index no greater than 12, a Spread-of-Flame Index of 0 and a Smoke-Developed Index of not more than 7; and
(B) such screen must also have a supporting frame of metal construction;

(iii) it is used as a curtain, blind or similar decor in any part available to the public, have a Flammability Index no greater than 6; and

(iv) it is used as a cinematograph screen, curtain, blind or similar decor in any part available to the public, have a label affixed to a representative sample of each different material indicating, in legible characters—

(A) name of manufacturer;
(B) trade name and description of materials composition;
(C) retardant treatment (if any), name of applicator and date of application;
(D) AS 1530 Part 2 and/or AS/NZS 1530 Part 3 test number and its Flammability, Spread-of-Flame and Smoke Developed Indices; and
(E) approved methods of cleaning.
(e) in the case of a material covered by 4(d) above, any fire-retardant coating used to make a material comply with a required Flammability Index, Spread-of-Flame Index or Smoke Developed Index must be—

(i) certified by its manufacturer or distributor as approved for use with the fabric to achieve the required indices; and

(ii) certified by its manufacturer or distributor to retain its retardancy effect after a minimum of 5 commercial dry cleaning or laundering operations carried out in accordance with AS 2001.5.4—1987, Procedure 7A, using ECE reference detergent; and

(iii) certified by the applicator as having been carried out in accordance with the manufacturer’s specification.

SECTION D ACCESS AND EGRESS

PART D1 PROVISION FOR ESCAPE

Add D1.2(d)(vii) as follows:

NSW D1.2 Number of exits required

(d)

(vii) any storey or mezzanine within an auditorium in a place of public entertainment.

Insert NSW D1.6(f)(vi), and (h) as follows:

NSW D1.6 Dimensions of exits

(f)

(vi) in a Class 9b building used as a place of public entertainment—

(A) in parts of the building used by the public, the width of the required exit or path of travel, and the unobstructed width of each doorway must not be less than 1 m and not more than 3 m; and

(B) in other parts of the building, doorways must comply with D1.6(f).

(h) in a Class 9b building used as a place of public entertainment—

(i) the aggregate width must be not less than 2 m plus 500 mm for every 50 persons or part in excess of 200; and

(ii) D1.6(b), (c) and (d) do not apply; and

(iii) where one or more paths of travel merge, the width of the combined path of travel must be not less than the sum of the required widths of those paths of travel; and

(iv) the required widths of the paths of travel connecting the exits from the building to a public road or open space must comply with (iii).
Delete D1.10(f) and insert NSW D1.10(f) as follows:

**NSW D1.10 Discharge from exits**

(f) In a Class 9b building used as a place of public entertainment, at least half of the required number of exits from each storey or mezzanine, and at least half of the aggregate width of such exits must discharge otherwise than through the main entrance, or the area immediately adjacent to the main entrance of the building.

Vary Table D1.13 as follows:

**NSW Table D1.13 AREA PER PERSON ACCORDING TO USE**

<table>
<thead>
<tr>
<th>Type of use</th>
<th>m² per person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delete “Theatres and public halls” and insert the following:</td>
<td></td>
</tr>
<tr>
<td>Places of public entertainment—</td>
<td></td>
</tr>
<tr>
<td>other than auditorium</td>
<td>1.2</td>
</tr>
<tr>
<td>Auditorium—</td>
<td></td>
</tr>
<tr>
<td>standing area</td>
<td>0.5</td>
</tr>
<tr>
<td>removable seating</td>
<td>1.0</td>
</tr>
<tr>
<td>fixed seating</td>
<td>count seats</td>
</tr>
<tr>
<td>bench seating</td>
<td>450 mm/person</td>
</tr>
</tbody>
</table>

**PART D2 CONSTRUCTION OF EXITS**

Delete D2.1 and insert NSW D2.1 as follows:

**NSW D2.1 Application of Part**

(a) Except for D2.13 and D2.16 the Deemed-to-Satisfy Provisions of this Part do not apply to the internal parts of a sole-occupancy unit in a Class 2 or 3 building or Class 4 part.

(b) In a Class 9b building used as a place of public entertainment—

(i) Clauses NSW D2.13(j), (k), and (l), NSW D2.15(c), NSW D2.16(f)(v), and NSW D2.19(b)(v) apply to only those parts of the building used by the public; and

(ii) the general requirements of Part D2 apply to all other parts of the building.

Insert NSW D2.13(j), (k) and (l) as follows:

**NSW D2.13 Treads and risers**

(j) conspicuous edges to the treads of steps in a Class 9b building used as a place of public entertainment; and

(k) in a Class 9b building used as a place of public entertainment, not more than one helical stairway serving as a required exit and that stairway must—

(i) have a width of not less than 1500 mm;

(ii) be of constant radius; and

(iii) be constructed so that each tread, when measured 500 mm in from its narrow end, has a width of at least 280 mm; and
(l) in a Class 9b building used as a place of public entertainment, in a curved stairway serving as a required exit— an internal radius of not less than twice the width of the stair.

Renumber D2.15(c) to (d) and insert NSW D2.15(c) as follows:

**NSW D2.15 Thresholds**

(c) in a Class 9b building used as a place of public entertainment, the door sill of a doorway opening to a road, open space, external stair landing or external balcony is not more than 50 mm above the finished floor level to which the doorway opens; or

(d) in other cases—

(i) the doorway opens to a road or open space, external stair landing or external balcony; and

(ii) the door sill is not more than 190 mm above the finished surface of the ground, balcony, or the like, to which the doorway opens.

Delete D2.16(f)(iv) and insert NSW D2.16(f)(iv) and (v) as follows:

**NSW D2.16 Balustrades or other barriers**

(f)

(iv) For a balustrade or other barrier provided under (e), the height above the floor must be not less than—

(A) 1 m; or

(B) 700 mm and a horizontal projection that extends not less than 1 m outwards from the top of the balustrade; or

(C) in a Class 9b building used as a place of public entertainment, the height prescribed for guardrails in NSW H101.14.2 and NSW H102.9.

(v) For a balustrade in a Class 9b building used as a place of public entertainment, the height above the nosings of the stair treads and the floors of ramps, and the floor of any access path, balcony, landing or the like, is not less than—

(A) 1 m when provided inside the building; and

(B) 1200 mm when provided externally to the building.

Insert NSW D2.19(b)(v) as follows:

**NSW D2.19 Doorways and doors**

(b)

(v) in a Class 9b building used as a place of public entertainment—

(A) must not be fitted with a collapsible gate, accordion door, turnstile or rigid barrier; and

(B) if fitted with a door, must be—

(aa) a swing door which opens in the direction of egress; and

(bb) doors hung in two folds where the unobstructed width of the doorway is more than 1 m; and

(C) a doorway or opening within sight of the audience but not intended for egress must have a notice displayed clearly indicating its purpose and such a notice must not be internally illuminated; and
(D) notwithstanding (b)(iii), a sliding door may be fitted where—

(aa) it leads directly to a road or open space and forms a main entrance; and

(bb) it is capable of swinging in the direction of egress when pressure is applied to the inside face of the door; and

(cc) the door is provided with signage that clearly indicates to persons seeking egress, the potential for swinging the door open in an emergency.

Add NSW D2.21(g) as follows:

**NSW D2.21 Operation of latch**

(g) it serves a Class 9b building used as a place of public entertainment where—

(i) the single device operating the latch or bolts on doors used by the public must be a panic bar if those doors are to be secured; or

(ii) an exit door or gate used by the public as the main entrance may be fitted only with key-operated fastenings, the tongues of which must be locked in the retracted position whenever the building is occupied by the public so the door or gate can yield to pressure from within.

Add NSW D2.101 as follows:

**NSW D2.101 Doors in path of travel in a place of public entertainment**

In a Class 9b building used as a place of public entertainment, a doorway in a path of travel must comply with NSW D2.19(b)(v).

**SECTION E SERVICES AND EQUIPMENT**

**PART E2 SMOKE HAZARD MANAGEMENT**

Delete Table E2.2b Class 9b Assembly buildings and substitute NSW Table E2.2b Class 9b buildings as follows:

**NSW Table E2.2b SPECIFIC PROVISIONS**

<table>
<thead>
<tr>
<th>CLASS 6 BUILDINGS - IN FIRE COMPARTMENTS MORE THAN 2000 m²:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The provisions of BCA Table E2.2b for Class 6 buildings are applicable in NSW.</td>
</tr>
<tr>
<td>CLASS 9b BUILDINGS</td>
</tr>
</tbody>
</table>

SUPERSEDED
The following provisions apply to all Class 9b assembly buildings:

(a) **Automatic shutdown:**

A building or part of a building used as an assembly building must be provided with automatic shutdown of any air-handling system (other than non-ducted individual room units with a capacity not more than 1000 l/s and miscellaneous exhaust air systems installed in accordance with Sections 5 and 11 of AS/NZS 1668.1) which does not form part of the smoke hazard management system, on the activation of—

<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>(i)</td>
<td>smoke detectors installed complying with Specification E2.2a; and</td>
</tr>
<tr>
<td>(ii)</td>
<td>any other installed fire detection and alarm system, including a sprinkler system complying with Specification E1.5.</td>
</tr>
</tbody>
</table>

(b) **Basements:**

A basement not counted in the rise in storeys in accordance with C1.2, less than 2000 m² used as an assembly building or part of an assembly building containing an auditorium or other public area, must be equipped with—

<p>| | |</p>
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<tbody>
<tr>
<td>(i)</td>
<td>an automatic smoke detection system in accordance with Specification E2.2a; or</td>
</tr>
<tr>
<td>(ii)</td>
<td>an automatic zone smoke control system in accordance with AS/NZS 1668.1 if the basement has more than one fire compartment; or if the basement forms part of a multi fire compartmented building served by the zone smoke control system; or</td>
</tr>
<tr>
<td>(iii)</td>
<td>a sprinkler system complying with Specification E1.5.</td>
</tr>
</tbody>
</table>

(c) **Stages and backstages:**

A building or part of a building used as an assembly building which has a stage—

<p>| | |</p>
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</thead>
<tbody>
<tr>
<td>(i)</td>
<td>with a floor area of more than 50 m² and not more than 150 m² must, over the stage, be provided with—</td>
</tr>
</tbody>
</table>
**NIGHT CLUBS, DISCOTHEQUES, AND OTHER LICENSED PREMISES PROVIDING ENTERTAINMENT**

A building or part of a building being a night club, discotheque, or other licensed premises providing entertainment, must be provided with—

(a) **in an auditorium**—

(i) an automatic smoke exhaust system complying with Specification E2.2b; or

(ii) roof mounted automatic smoke-and-heat vents complying with Specification E2.2c, in a single storey building or the top storey of a multi storey building; or

(iii) a sprinkler system complying with Specification E1.5 with fast response sprinkler heads; and

(b) **in all other areas**—

(i) where a building or part of a building has a floor area not more than 2000 m²—

(A) one of the smoke hazard management measures listed under (a) above; or

(B) an automatic smoke detection and alarm system complying with Specification E2.2a; or

(ii) where a building or part of a building has a floor area of more than 2000 m², smoke hazard management measures as provided for under ‘Other Assembly Buildings’ in NSW Table E2.2(b).
Note: Paragraph (a) applies only to an auditorium designed principally to accommodate an audience to an entertainment.

### EXHIBITION HALLS, MUSEUMS AND ART GALLERIES

A building or part of a building used as an exhibition hall, museum, art gallery or the like, must be provided with—

<table>
<thead>
<tr>
<th>(a)</th>
<th>where the floor area is more than 2000 m² and not more than 3500 m²—</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>an automatic smoke exhaust system complying with Specification E2.2b; or</td>
</tr>
<tr>
<td>(ii)</td>
<td>roof mounted automatic smoke-and-heat vents complying with Specification E2.2c in a single storey building or the top storey of a multi storey building; or</td>
</tr>
<tr>
<td>(iii)</td>
<td>a sprinkler system complying with Specification E1.5; and</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(b)</th>
<th>where the floor area is more than 3500 m², a sprinkler system complying with Specification E1.5 and—</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>an automatic smoke exhaust system complying with Specification E2.2b; or</td>
</tr>
<tr>
<td>(ii)</td>
<td>roof mounted automatic smoke-and-heat vents complying with Specification E2.2c, in a single storey building or the top storey of a multi storey building.</td>
</tr>
</tbody>
</table>

### OTHER ASSEMBLY BUILDINGS

(a) Unless otherwise described in (b), in a building or part of a building used as an assembly building (not being a night club, discotheque or other licensed premises providing entertainment; or an exhibition hall, museum or art gallery) where the floor area of a fire compartment is more than 2000 m², the fire compartment must be provided with—

<table>
<thead>
<tr>
<th>(a)</th>
<th>where the floor area is more than 2000 m² and not more than 5000 m² and the building has a rise in storeys of not more than 2—</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>an automatic smoke exhaust system complying with Specification E2.2b; or</td>
</tr>
<tr>
<td>(ii)</td>
<td>roof mounted automatic smoke-and-heat vents complying with Specification E2.2c, in a single storey building or the top storey of a multi storey building; or</td>
</tr>
<tr>
<td>(iii)</td>
<td>if the floor area of the fire compartment is not more than 5000 m² and the building has a rise in storeys of not more than 2—</td>
</tr>
<tr>
<td>(A)</td>
<td>an automatic smoke detection and alarm system complying with Specification E2.2a; or</td>
</tr>
</tbody>
</table>
(b) The following buildings are exempt from the provisions of (a):

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>Sporting complexes, (including sports halls, gymnasiums, swimming pools, ice and roller rinks, and the like) other than indoor sports stadiums with total spectator seating for more than 1000 persons.</td>
</tr>
<tr>
<td>(ii)</td>
<td>Churches and other places used solely for religious worship.</td>
</tr>
<tr>
<td>(iii)</td>
<td>School classrooms.</td>
</tr>
</tbody>
</table>

Note: Smoke hazard management provisions for an *assembly building* used for multiple purposes must comply with all the relevant provisions of NSW Table E2.2b according to usage.

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**NSW Specification E2.2a**

**SMOKE DETECTORS AND ALARM SYSTEMS**

Delete Clause 7(e) as follows:

7. **System Monitoring**

(e) (deleted)

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**PART E4 EMERGENCY LIGHTING, EXIT SIGNS AND WARNING SYSTEMS**

Delete E4.6 and insert NSW E4.6 as follows:

**NSW E4.6 Direction signs**

If an *exit* is not readily apparent to persons occupying or visiting the building, then *exit* signs must be installed—

(a) in appropriate positions in corridors, hallways, lobbies, foyers, auditoria, and the like, indicating the direction to a *required exit*; and

(b) in a Class 9b building used as a *place of public entertainment*—in any external egress path to a street where the *exit* does not open directly onto a street.
SECTION F    HEALTH AND AMENITY
PART F2     SANITARY AND OTHER FACILITIES

Delete FF2.1(b) and replace with NSW FF2.1(b):

FUNCTIONAL STATEMENTS

NSW FF2.1

(b) (deleted)

Note.
Paragraph (b) of this Functional Statement is deleted from the BCA in NSW, as the installation of hot water, warm water and cooling water systems (and their operation and maintenance) is regulated in the Public Health (Microbial Control) Regulation, 2000, as amended by the Public Health (Microbial Control) Amendment (Miscellaneous) Regulation, 2003, under the Public Health Act, 1991.

Delete FP2.6 (and Application) and replace with NSW FP2.6:

PERFORMANCE REQUIREMENTS

NSW FP2.6

(deleted).

Note.
This Performance Requirement is deleted from the BCA in NSW, as the installation of hot water, warm water and cooling water systems (and their operation and maintenance) is regulated in the Public Health (Microbial Control) Regulation, 2000, as amended by the Public Health (Microbial Control) Amendment (Miscellaneous) Regulation, 2003, under the Public Health Act, 1991.

Delete F2.7:

NSW F2.7 Microbial (legionella) control

(deleted).

Note.
This clause is deleted from the BCA in NSW, as the installation of hot water, warm water and cooling water systems (and their operation and maintenance) is regulated in the Public Health (Microbial Control) Regulation, 2000, as amended by the Public Health (Microbial Control) Amendment (Miscellaneous) Regulation, 2003, under the Public Health Act, 1991.
PART F4   LIGHT AND VENTILATION

Delete F4.5(b) and insert NSW F4.5(b) as follows:

NSW F4.5 Ventilation of rooms

(b) a mechanical ventilation or air-conditioning system complying with AS 1668.2.

Note.
The reference to AS/NZS 3666.1 is deleted from the BCA in NSW, as the need to comply with this standard is regulated in the Public Health (Microbial Control) Regulation, 2000, as amended by the Public Health (Microbial Control) Amendment (Miscellaneous) Regulation, 2003, under the Public Health Act, 1991.

SECTION G   ANCILLARY PROVISIONS

PART G1   MINOR STRUCTURES AND COMPONENTS

Add NSW GF1.4 as follows

NSW GF1.4 Functional Statement

A swimming pool must be provided with means to minimise the risk of entrapment or injury of young children using the pool.

Add NSW GP1.5 as follows:

NSW GP1.5 Performance Requirement

The water recirculation and filtration system in a swimming pool must incorporate safety measures to avoid entrapment of or injury to a young child.

Delete G1.0(b) and insert NSW G1.0(b) as follows:

NSW G1.0 Deemed-to-Satisfy Provisions

(b) Performance Requirements GP1.2 to GP1.5 are satisfied by complying with G1.1 and G1.2.

Add NSW G1.1(c) as follows:

NSW G1.1 Swimming pools

(c) Water recirculation and filtration system: A swimming pool water recirculation and filtration system must comply with AS 1926.3.

Add NSW G1.101 as follows:

NSW G1.101 Provision for cleaning windows

(a) A building must provide for a safe manner of cleaning any windows located 3 or more storeys above ground level.

(b) A building satisfies (a) where—

(i) the windows can be cleaned wholly from within the building; or
(ii) provision is made for the cleaning of the windows by a method complying with the Construction Safety Act 1912 and regulations made under that Act.

PART G5 CONSTRUCTION IN BUSHFIRE PRONE AREAS

Delete G5.2 and insert NSW G5.2 as follows:

NSW G5.2 Protection

A Class 2 or 3 building in a designated bushfire prone area must comply with the following:

(a) AS 3959 except for Section 2 “Site Bushfire Attack Assessment”, which is replaced by Planning for Bushfire Protection, Appendix 3 “Site Assessment for Bushfire Attack”, or

(b) subclause (a) as modified by the development consent following consultation with the NSW Rural Fire Service under section 79BA of the Environmental Planning and Assessment Act 1979; or

(c) subclause (a) as modified by development consent with a bushfire safety authority issued under section 100B of the Rural Fires Act 1997 for the purposes of integrated development.

SECTION H SPECIAL USE BUILDINGS

PART H1 THEATRES, STAGES AND PUBLIC HALLS

Delete H1.1 and insert NSW H1.1 as follows:

NSW H1.1 Application of Part

(a) For a Class 9b building or part of a building that is not a place of public entertainment—

(i) The Deemed-to-Satisfy Provisions of Part H1 apply to every enclosed Class 9b building or part of a building which—

(A) is a school assembly, church or community hall with a stage and any backstage area with a total floor area of more than 300m²; or

(B) otherwise, has a stage and any backstage area with a total floor area of more than 200m²; or

(C) has a stage with an associated rigging loft.

(ii) Notwithstanding (a)(i)—

(A) H1.4 applies to every open or enclosed Class 9b building; and

(B) H1.7 applies to every enclosed Class 9b building.

(b) For a Class 9b building that is a place of public entertainment, NSW Part H101, as follows, applies in replacement of Part H1:
NSW PART H101 PLACES OF PUBLIC ENTERTAINMENT OTHER THAN TEMPORARY STRUCTURES AND DRIVE-IN THEATRES

Note.

NSW Part H101 contains Deemed-to-Satisfy Provisions additional to those contained in Sections C, D, E, F and G for buildings containing or used as places of public entertainment other than temporary structures and drive-in theatres.

NSW H101.1 Application of Part

(a) This Part applies to every building used for public entertainment and for public meetings as described in the Local Government Act 1993.

(b) A reference to a theatre, stage or public hall in the BCA is a reference to a place of public entertainment as defined in NSW A1.1.

NSW H101.2 Fire separation

If a place of public entertainment forms part only of a building, then—

(a) the whole of the place of public entertainment; or

(b) the part containing the stage, backstage area and auditorium, must be separated from the other parts of the building by construction having an FRL of not less than 60/60/60.

NSW H101.3 Foyer space

Where a place of public entertainment is used principally for the purpose of—

(a) exhibiting films; or

(b) conducting live stage productions,

foyer space (excluding stairways and concession areas) must be provided on the basis of at least 0.25 m² for each person that the auditorium accommodates.

NSW H101.4 Sprinkler systems for common foyers

In a place of public entertainment, where multiple auditoriums have a foyer in common, the following applies—

(a) If the foyer serves not more than 2 auditoriums; that foyer must be separated from any adjoining foyer by construction having an FRL of not less than 60/60/60.

(b) If the foyer serves more than 2 auditoriums, a sprinkler system complying with Specification E1.5 must be installed—

(i) throughout the storey containing the foyer; and

(ii) throughout each storey in the building below that storey.
NSW H101.5 Conventional stages

This clause applies to a conventional stage, that is, a stage which is separated from the auditorium by a proscenium wall incorporating a proscenium opening.

NSW H101.5.1 Extent of stage area

If a room or area is not separated from the remainder of a conventional stage by construction having an FRL of not less than 60/60/60, the room or area is, for the purposes of this Part, to be taken to form part of the stage.

NSW H101.5.2 Small stages

A stage which is more than 50 m² but not more than 150 m² in area must have 2 or more means of egress from the stage and backstage area provided otherwise than through the proscenium wall.

NSW H101.5.3 Large stages

A stage which is more than 150 m² in area—

(a) must have installed directly above the stage a suitable sprinkler system complying with Specification E1.5; and

(b) must have the proscenium opening protected by a safety curtain that complies with NSW H101.10; and

(c) must have a line of open drenchers or open sprinklers provided above the proscenium opening on the stage side and in such a position as to be able to discharge over the inside face of the safety curtain; and

(d) must have 2 or more means of egress from the stage and backstage area provided otherwise than through the proscenium wall.

NSW H101.5.4 Fire separation of stages

A stage which is more than 50 m² in area, and all areas below such a stage, must (with the exception of the proscenium opening) be separated from the backstage and the remainder of the building by construction having an FRL of not less than 60/60/60.

NSW H101.6 Non-conventional stages

This clause applies to a stage that is not a conventional stage within the meaning of NSW H101.5.

NSW H101.6.1 Small stages

A stage which is more than 50 m² but not more than 150 m² in area must have at least 2 means of egress from the backstage area.

NSW H101.6.2 Large stages

A stage which is more than 150 m² in area must have at least 2 means of egress from the backstage area.
NSW H101.7 Flying scenery

Where there is a *grid* or other means of *flying scenery* over—

(a) a conventional *stage* or non-conventional *stage*—

(i) the *stage* must be provided with a sprinkler system complying with Specification E1.5; and

(ii) a fly gallery, bridge *grid*, rigging loft, tie gallery or electric light perch must—

(A) comply with AS 1657; and

(B) be of *non-combustible* construction;

(iii) a fly gallery must be provided with at least 2 means of egress, one on each side of the *stage*;

(iv) a *grid* or rigging loft must be provided with at least 2 means of egress;

(v) if exposed steel is used in the construction of a roof, fly or tie gallery, the roof, fly or tie gallery must be so designed that, in the event of its structural failure due to fire, the wall structure of the building will not be affected.

(vi) structural steel supporting the *stage* tower must be enclosed by masonry or concrete and have an FRL of not less than 120/120/120; and

(b) in the case of a conventional *stage*, the following additional requirements apply:

(i) The prosценium wall must—

(A) have an FRL of not less than 120/120/120; and

(B) have the prosценium opening protected by a rigid safety curtain in accordance with NSW H101.10.1;

(ii) the walls forming the *stage* area, and the area beneath the *stage*, must be constructed of masonry or concrete and have an FRL of not less than 120/120/120.

NSW H101.8 Load notice

A notice indicating the actual distributed and concentrated load for which the *stage* floor has been designed must be conspicuously and permanently displayed in a position adjacent to the *stage* floor.

This notice must be in legible letters and figures—

(a) at least 50 mm high; and

(b) on a contrasting background.

NSW H101.9 * * * * *

This clause has been deliberately left blank.

NSW H101.10 Safety curtains

A safety curtain required by NSW H101.5.3 must—

(a) be made of *non-combustible* material; and
(b) be so fitted that, when it is closed, it forms an efficient smoke seal between the stage and the auditorium; and
(c) be capable of withstanding a pressure differential of 0.5 kPa over its entire surface area; and
(d) be run on steel guides located on each side of the proscenium opening; and
(e) remain engaged in its guides if the guides, together with their fittings and attachments and that part of the curtain engaged in the guides, are subjected to a pressure differential of 1 kPa; and
(f) be of sufficiently robust construction to withstand damage by scenery, stage properties and falling debris; and
(g) be capable of closing the proscenium opening within 30 seconds, either by gravity slide or by motor assisted mechanisms; and
(h) have manual controls, located on each side of the stage, for the closing of the curtains; and
(i) have a notice displayed adjacent to the operating controls, in clear and legible letters and symbols of adequate size, indicating its use and operation; and
(j) when operated, actuate a distinctive warning alarm audible to persons on the stage and must not be reliant for its operation solely on the primary electricity supply; and
(k) have the words “Safety Curtain” exhibited on the curtain in clear and legible letters of adequate size to enable them to be read from all parts of the auditorium.

**NSW H101.10.1 Safety curtains—Additional requirements**

A rigid safety curtain required by NSW H101.7 must comply with the requirements of NSW H101.10 and it must—

(a) be vertically hung from steel cables;
(b) be framed with structural steel that complies with AS 4100;
(c) be sheeted and finished on both faces with sheet steel or other non-combustible material of such gauge, and so fastened to its frame, as to ensure that its frame is capable of withstanding distortion arising from heat; and
(d) when closed, overlap the proscenium opening by not less than 300 mm at each side and by not less than 600 mm at the top.

**NSW H101.11 Seating in rows**

This clause does not apply to continental seating or seating at tables.

**NSW H101.11.1 Number of seats**

Subject to NSW H101.11.5, where seating is arranged in rows, the maximum of seats in each row must not exceed—

(a) 8 where there is an aisle at one end only of the row; or
(b) 16 where there are aisles on both ends of the row.

**NSW H101.11.2 Chairs used for seating**

Chairs used for seating must—
(a) where they have arms, be at least 500 mm from centre to centre; and
(b) where they do not have arms, be at least 450 mm from centre to centre; and
(c) have a *minimum lateral clearance* of at least 300 mm between—
   (i) the front of each chair and the back of the chair in front; or
   (ii) if a guardrail is provided in front of the chairs, between the front of each chair and
        the guardrail; and
(d) have a distance of at least 950 mm between the back of each chair and the back of the
    chair in front.

**NSW H101.11.3 Chairs in auditoriums—Level floors**

Chairs in an *auditorium* that has a level floor must be—
(a) securely fastened to the floor; or
(b) secured together in groups of not less than 4 and not more than 16.

**NSW H101.11.4 Chairs in auditoriums—Sloping floors**

Chairs in an *auditorium* having a sloping floor, or having stepped or inclined platforms, must be
securely fastened to the floor or platform.

**NSW H101.11.5 Radiating aisles in seating areas**

Where seating is securely fastened to the floor and arranged in *rows* of concentric circles,
semi-circles or segments of circles, with radiating *aisles*—
(a) the number of seats in each row between 2 *aisles* must not exceed 24; and
(b) each seat must—
   (i) have a *minimum lateral clearance* of at least 325 mm between the front of the seat
       and the back of the seat in front; and
   (ii) have a distance of at least 975 mm between the back of the seat and the back of
        the seat in front; and
(c) the *rows* may be curved or straight.

**NSW H101.11.6 Aisles and cross-overs**

Where *aisles* and *cross-overs* are provided—
(a) each *aisle* must have a width of at least 1000 mm and each *cross-over* must have a width
    of at least 1500 mm; and
(b) the floor of each *aisle* must not have a grade of more than 1 in 8 at any part; and
(c) if there is a step from a *row* to an *aisle* or from a landing to an *aisle*, the step must not
    project into the *aisle*.

**NSW H101.11.7 Platforms and steps**

Where an *aisle* contains platforms or steps—
(a) the platforms and steps must extend for the full width of the *aisle*; and
(b) if there are no intervening steps between levels of platforms, the height of the platform riser must not be more than 200 mm; and

(c) if there are one or more intervening steps between levels of platforms—
   (i) each riser must be at least 100 mm but not more than 200 mm high; and
   (ii) each going must be at least 250 mm deep; and
   (iii) risers and goings must be uniform; and

(d) goings which are more than 450 mm deep at platform level must not have a grade of more than 1 in 50; and

(e) at the entrance from the aisle to each row there must be a clear level floor space, extending the full width of the aisle, of at least 300 mm, measured from the back of the row in front; and

(f) any going projecting in front of a seat adjacent to an aisle must be protected by a guardrail.

**NSW H101.11.8 Stepped platforms**

Where stepped platforms without chairs or stepped platforms with bench seats, are used for seating—

(a) each platform must be at least 700 mm deep; and

(b) each seating space must be at least 450 mm wide, measured along the front of the platform or bench seat; and

(c) each seating space must be numbered consecutively; and

(d) at the entrance from the aisle to each row there must be a clear level floor space, extending the full width of the aisle, of at least 300 mm, measured from the back of the row in front; and

(e) any going projecting in front of a seat adjacent to an aisle must be protected by a guardrail; and

(f) in the case of stepped platforms with bench seats, there must be at least 300 mm between the back of each seat and the front of the platform behind, or the front of the bench seat behind, whichever is the closer.

**NSW H101.12 Continental seating**

This Clause applies to continental seating.

**NSW H101.12.1 Seating to be fastened**

Seating must be securely fastened to the floor.

**NSW H101.12.2 Maximum seats per row**

The number of seats in a row must not exceed 120.

**NSW H101.12.3 Depths of seating rows**

The depth of each row of seating (that is, the distance between the back of the row in front or, if there is a guardrail in front, between the back of the row and the guardrail) must, in respect of a
row containing a number of seats specified in Column 1 of Table H101.12 be not less than the distance specified in Column 2 of that Table in respect of that number of seats.

NSW H101.12.4 Clearance between rows

The minimum lateral clearance between each row of seating must, in respect of a row containing a number of seats specified in Column 1 of Table H101.12 be not less than the clearance specified in Column 3 of that Table in respect of that number of seats.

NSW H101.12.5 Chairs used for seating

Chairs used for seating must comply with NSW H101.11.2(a) and (b).

NSW H101.12.6 Egress Doorways

Egress doorways through the walls of the auditorium—

(a) must have an aggregate width of at least twice the sum of the clearances specified in Column 3 of Table H101.12 for each row of the auditorium to be served by those doorways; and

(b) must be provided at each end of every fifth row, excluding the first 2 rows and the last 2 rows in the auditorium if those rows each contain no more than 16 seats; and

(c) must lead—

(i) directly to a road or open space; or

(ii) into a foyer or other area giving access to a road or open space; and

(d) must be provided with exit signs if the egress doorways are not sufficiently conspicuous.

NSW H101.12.7 Clear Areas

A clear area—

(a) must be provided from each end of each row to an egress doorway in the wall of the auditorium; and

(b) must have a width of at least—

(i) the sum of the clearances specified in Column 3 of Table H101.12 for each such row; or

(ii) 500 mm, whichever is the greater; and

(c) if it contains platforms or steps, must comply with NSW H101.11.7(a), (b), (c), (d) and (f).

NSW H101.12.8 Minimum clear space

At the entrance from a row to a clear area, there must be a clear level floor space having a width of at least the clearance specified for the row in Column 3 of Table H101.12.

NSW H101.12.9 Doors

A door fitted to the egress doorway in the wall of an auditorium must comply with NSW D2.15 and NSW D2.19.
### Table H101.12 SPACING OF AUDITORIUM SEATING

<table>
<thead>
<tr>
<th>Number of seats in Rows</th>
<th>Depth of Rows (mm)</th>
<th>Clearance between Rows (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not exceeding 16</td>
<td>950</td>
<td>300</td>
</tr>
<tr>
<td>17 - 30</td>
<td>975</td>
<td>325</td>
</tr>
<tr>
<td>31 - 45</td>
<td>1000</td>
<td>350</td>
</tr>
<tr>
<td>46 - 60</td>
<td>1025</td>
<td>375</td>
</tr>
<tr>
<td>61 - 75</td>
<td>1050</td>
<td>400</td>
</tr>
<tr>
<td>76 - 90</td>
<td>1075</td>
<td>425</td>
</tr>
<tr>
<td>91 - 105</td>
<td>1100</td>
<td>450</td>
</tr>
<tr>
<td>106 - 120</td>
<td>1125</td>
<td>475</td>
</tr>
</tbody>
</table>

### NSW H101.13 Provision of guardrails

#### NSW H101.13.1 Location
Guardrails must be provided—

(a) along the fascia of each balcony or box;
(b) if there is a stepped floor, along the front edge of each cross-over; and
(c) where NSW H101.13.2 and NSW H101.13.3 apply.

#### NSW H101.13.2 Fixed back seats
If seats with fixed backs are provided, guardrails that extend for the full width of the seating, must be provided at least 500 mm above the platform unless—

(a) fixed seat backs of the next lower level project at least 500 mm above the level of the stepped platform; and
(b) there is only one riser between the platform and the next lower cross-over.

#### NSW H101.13.3 Steps between platforms
If—

(a) there is more than one intervening step in an aisle between levels of platforms, a guardrail must be provided (at a vertical height of at least 660 mm measured above the nosing of each tread and of the upper platform) to the sides of the aisle adjacent to those steps; and

(b) there is more than one intervening step in an aisle between levels of platforms, and that aisle is along a wall, a continuous guardrail must be affixed to that wall at a height of at least 865 mm above the nosing of each tread; and

(c) the end of a platform or the back of the highest platform does not abut a wall that extends at least 660 mm above the floor level of the platform, a guard rail not less than 660 mm high must be provided—
(i) at the ends of the platform, extending from the front of the first riser to the back of the highest platform; and

(ii) at the back of the highest platform, extending the full width of the platform; and

(d) there is an inclined floor, the raised section of which is not bounded by walls at least 660 mm high, a guard rail must be provided that extends around the perimeter of the raised section at a height of at least 660 mm above the inclined floor level; and

(e) seating at tables is provided on a stepped platform, a guardrail at least 500 mm high must be provided along the front edge of the platform.

**NSW H101.14 Guardrails**

This clause applies to seating areas.

**NSW H101.14.1 Continental seating**

Where a guardrail is provided in front of a row of chairs—

(a) the distance between the back of each chair in that row, and the guardrail must be not less than the distance specified in Column 2 of Table H101.12 for the number of chairs in that row;

(b) the minimum lateral clearance between the front of each chair in that row and the guardrail must be not less than the clearance specified in Column 3 of Table H101.12 for the number of chairs in that row.

**NSW H101.14.2 Balconies and boxes**

A guardrail provided along the fascia of a balcony or box—

(a) if it is located at the foot of a stepped aisle, must have its top surface at least 900 mm above the floor of the balcony or box; and

(b) if it is not located at the foot of a stepped aisle, must have its top surface at least 750 mm above the floor; and

(c) if it has a ledge more than 70 mm wide, must have the top surface of the ledge sloping downwards towards the floor of the balcony or box at an angle of at least 30 degrees from the horizontal; and

(d) must have an unperforated kerb or toe guard extending for at least 300 mm above the floor.

**NSW H101.14.3 Cross-overs**

A guardrail provided along the front edge of a cross-over on a stepped floor—

(a) must be at least 750 mm high; and

(b) must extend for the full distance between aisles, or between a wall and an aisle, or for such other distance as considered necessary.

**NSW H101.15 Dressing rooms**

A dressing room or 2 or more adjoining dressing rooms, having a total floor area of more than 50 m², must—
(a) be separated from other parts of the building by construction having an FRL of not less than 60/60/60;

(b) have at least 2 means of egress as remote from each other as possible, one of which must discharge—
   (i) directly to a road or open space; or
   (ii) through a fire-isolated exit to a road or open space.

**NSW H101.16 Storerooms**

A storeroom must be separated from other parts of the building by construction having an FRL of not less than 60/60/60.

**NSW H101.17 Projection suites**

This clause applies to projection suites.

**NSW H101.17.1 Rooms to be provided**

A projection suite, in compliance with the staffing requirements of Schedule 2 of the Local Government (Approvals) Regulation 1993 must contain either—

(a) a projection room and sanitary accommodation comprising at least 1 closet pan and 1 washbasin, where the projection suite is continually staffed; or

(b) a projection room fitted with the following equipment—
   (i) an automatic fire suppression system in accordance with SSL Appraisal Specification FAS 102 or a sprinkler system complying with AS 2118; and
   (ii) a smoke detection system which will—
      (A) comply with AS 1670.1 except for the provisions of—
         (aa) Clause 4.3(f)—location where protection not required; and
         (bb) Clause 9.4(d)—logbook; and
      (B) be connected to a fire station or other approved monitoring service where arrangements are in place to initiate fire brigade response; and
      (C) close down all shutters fitted to projection or observation ports; and
      (D) activate sufficient general lighting to provide a minimum of 40 lux measured at floor level in any auditorium affected; and
      (E) operate a public address system to automatically announce a suitable message from the management of the premises; and
      (F) activate an audible alarm to immediately indicate to management the presence of smoke in the projection room.

**NSW H101.17.2 Fire separation**

A projection suite must be separated from all other internal parts of the building in which it is located by construction having an FRL of not less than 60/60/60.

**NSW H101.17.3 Concession for protection of some openings**

If a projection or observation port is not more than 0.1 m² in area—
(a) a metal shutter not less than 1.5 mm thick may be fitted thereto instead of the protection required under NSW C3.11; and

(b) any metal shutter or protection system provided must be equipped with a device to permit the closing of the shutter or protection system from easily accessible operating positions adjacent to each egress doorway from the projection room.

**NSW H101.18 Basement storeys**

Where a *place of public entertainment* includes not more than 2 basement *storeys*—

(a) all *required exits* from the basement must be enclosed in *non-combustible* construction, with the exception of the main entry or *exit*; and

(b) any *auditorium* and other public areas in the basement must be equipped with an air-handling system that complies with AS 1668.2.

**NSW H101.18.1 Basement storeys—More than two**

If the *place of public entertainment* includes more than 2 basement *storeys*—

(a) the construction must be of at least Type B; and

(b) all *required exits* from the basement must be enclosed in a *fire-resisting shaft* having an FRL as *required* by the relevant Type of construction; and

(c) the building must be equipped with a sprinkler system complying with Specification E1.5.

**NSW H101.19 Electric mains installation**

**NSW H101.19.1 Main switchboard**

The switchboard containing the main isolation switch must—

(a) be located in a position that is readily accessible to authorised persons, and to the Fire Brigade in the case of an emergency; and

(b) be enclosed by construction having an FRL not less than 60/60/60.

**NSW H101.19.2 Circuit protection**

Protection of a final sub-circuit originating at a switchboard or distribution board must be by means of circuit breakers.

**NSW H101.19.3 Separate sub-mains**

Where a *place of public entertainment* has its mains supply in common with that of another building or where it is a part of a building—

(a) the *place of public entertainment* must be served by a separate and independent sub-main from the main switchboard; and

(b) each such sub-main, the consumer's main and the supply authority's conductors within the building must be protected against fire by means of—

(i) mineral-insulated metal-sheathed cables or other cables that provide at least 2 hours' fire protection; or

(ii) heavy-duty PVC conduit or metallic pipe, concrete encased in walls or slabs with a minimum of 50 mm cover; or
(iii) heavy-duty PVC conduit or metallic pipe, buried at least 500 mm below ground level, for underground cabling.

NSW H101.20 Lighting

NSW H101.20.1 Lighting switches

(a) Any switch controlling the lighting system must not be accessible.

(b) Where, during normal use, general lighting may be dimmed or switched off, an override switch to switch on all the general lighting instantaneously must be installed in the auditorium in a position accessible to management.

NSW H101.20.2 Lighting levels

Where the lamps utilised in the general lighting are of a type that will not relight immediately after the restoration of the primary electricity supply to those lamps—

(a) a time delay or other suitable means must be provided to maintain the emergency lighting for a period not less than that necessary to allow the general lighting lamps to restrike; or

(b) lamps of a type that will provide immediate lighting must be installed and—
   (i) arranged in such a manner as to ensure visual conditions not inferior to those required to be provided by the emergency lighting; and
   (ii) capable of being switched in common with the general lighting and of being controlled also by the override switch required by NSW H101.20.1(b).

NSW H101.20.3 Provision of aisle lighting

Where general lighting is to be either dimmed or extinguished when the public is in attendance and where the floor is stepped or at an inclination greater than 1 in 12, aisle lights must be provided to illuminate the length of each aisle and the tread of each step therein.

NSW H101.20.4 Aisle lighting power supply

Where an aisle light is installed in a seat frame, it must be supplied at a voltage of not more than 32 volts AC or 115 volts DC.

NSW H101.20.5 Aisle lighting alternative power supply

Aisle lighting must be provided with an alternative electricity supply that—

(a) is capable of being automatically energised in the event of failure of the primary lighting electricity supply; and

(b) complies with the provisions applying to emergency lighting.

NSW H101.21 * * * * *

This clause has deliberately been left blank.

NSW H101.22 Automatic smoke-and-heat vents for stages

An automatic smoke-and-heat vent system required by NSW Table E2.2b “Stages and backstage” must—
(a) be capable of automatic operation by the inclusion of a heat sensing device designed to activate the system at a temperature of not more than 71°C; and

(b) be capable of being released manually from positions at each side of the stage and of being fully activated from either position; and

(c) have a notice, prominently displayed at each position referred to in (b), clearly indicating the method of activation; and

(d) have an openable area of not less than 1/10 of the total area of the stage.

**NSW H101.23 Solid fuel burning stoves and open fire places.**

Solid fuel burning stoves and open fire places must not be installed in premises designed for the purpose of—

(a) exhibiting films; or

(b) conducting live theatre productions.

**NSW H101.24 Fuel gas cylinders**

**NSW H101.24.1 General**

Fuel gas cylinders must—

(a) be housed in an enclosure that is located outside the building; and

(b) comply with Clause B3.2 of the Australian LP Gas Installation Code.

**NSW H101.24.2 Fuel gas cylinder enclosures**

An enclosure referred to in **NSW H101.24.1**—

(a) must be located not less than 3 m from any window, door, vent or other opening; and

(b) if located 3 m or more from a building must—

   (i) have a concrete base; and

   (ii) be constructed from heavy-gauge chain-wire mesh or other suitable material; and

   (iii) be at least 1.8 m high; and

   (iv) be so designed as to securely contain the fuel gas cylinders in a single line; and

   (v) must be so designed as to allow cross ventilation; and

(c) if located less than 3 m from a building must—

   (i) have a concrete base; and

   (ii) have 3 sides constructed from concrete or masonry; and

   (iii) have a concrete roof; and

   (iv) be so designed as to securely contain the fuel gas cylinders in a single line; and

   (v) have a hinged, heavy-gauge chain-wire door capable of being secured against unauthorised entry; and

   (vi) have its roof at least 600 mm above the uppermost fitting on any fuel gas cylinder housed therein.
NEW SOUTH WALES

NSW PART H102  TEMPORARY STRUCTURES

NSW H102.1 Application of Part

This Part applies to temporary structures used as places of public entertainment as described in the Local Government Act 1993.

NSW H102.2 Exits—Exclusions

In this clause, a reference to an entrance or exit does not include a reference to an entrance or exit provided for persons or animals performing in a temporary structure.

NSW H102.3 Location of exits

Exits must be so provided and arranged as to afford a ready means of egress from all parts of a temporary structure.

NSW H102.4 Exits to be provided

Without limiting the generality of NSW H102.3—

(a) the number of exits to be provided for a temporary structure designed to accommodate a number of persons specified in Column 1 of Table H102.4 must be not less than the number of exits specified in Column 2 of that Table in respect of that number of persons; and

(b) the aggregate width of the exits to a temporary structure designed to accommodate a number of persons specified in Column 1 of Table H102.4 must not be less than the width specified in Column 3 of that Table in respect of that number of persons.

NSW H102.5 Vertical clearances for exits

Every part of an entrance or exit must provide a minimum unobstructed height of 2000 mm and, where the entrance or exit is beneath a stepped seating platform, infilled risers or other approved overhead protection must be provided above the entrance or exit.

NSW H102.6 Curtains across exits

A flap or curtain used to cover an exit must be so designed that, when it is secured, it will not obstruct or impede egress.

NSW H102.7 Curtains and blinds

Curtains and blinds for use in a temporary structure must comply with clause 4 of NSW Specification C1.10.

Table H102.4 NUMBER OF EXITS AND WIDTHS

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accommodation provided</td>
<td>Number of exits required</td>
<td>Aggregate width of exits</td>
</tr>
<tr>
<td>1-25 persons</td>
<td>'1-2</td>
<td>1 000</td>
</tr>
<tr>
<td>26-50 persons</td>
<td>2</td>
<td>1 500</td>
</tr>
</tbody>
</table>
### NSW H102.7

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accommodation provided</strong></td>
<td><strong>Number of exits required</strong></td>
<td><strong>Aggregate width of exits</strong></td>
</tr>
<tr>
<td>51-75 persons</td>
<td>2</td>
<td>2 000</td>
</tr>
<tr>
<td>76-100 persons</td>
<td>2</td>
<td>2 500</td>
</tr>
<tr>
<td>100-200 persons</td>
<td>2</td>
<td>3 000</td>
</tr>
<tr>
<td>201-400 persons</td>
<td>3</td>
<td>4 500</td>
</tr>
<tr>
<td>401-600 persons</td>
<td>4</td>
<td>6 000</td>
</tr>
<tr>
<td>601-800 persons</td>
<td>5</td>
<td>7 500</td>
</tr>
<tr>
<td>801-1000 persons</td>
<td>5</td>
<td>9 000</td>
</tr>
<tr>
<td>over 1000 persons</td>
<td>5 plus one additional exit for each additional 450 persons or part thereof.</td>
<td>9 000 plus 500 mm for each additional 50 persons or part thereof.</td>
</tr>
</tbody>
</table>

*Note:*

(a) Where only one exit is provided that exit must be at least 1000 mm wide.

(b) Where 2 exits are provided each must be at least 500 mm wide.

### NSW H102.8  Fabrics

Fabric that is used in the construction of a temporary structure must have—

(a) a Flammability Index of not more than 6 where used—

   (i) within a height of 4 m of the base of the temporary structure; or

   (ii) in an air-supported temporary structure without other supporting framework; and

(b) a Flammability Index of not more than 25 in every other case.

### NSW H102.9  Guardrails

A rigid guardrail must—

(a) be provided at each end of a stepped or inclined platform, at least 750 mm high above the floor of the platform, and must extend—

   (i) in the case of a stepped platform, from the front of the first riser; and

   (ii) in the case of an inclined platform, from the front of the first row of seating,

   to the back of the highest platform and along the rear of that platform for its full width; and

(b) not obstruct any aisle, cross-over or exit.

### NSW H102.10  Seating

Seating must be provided in accordance with NSW H101.11.1, NSW H101.11.2, NSW H101.11.3(b), NSW H101.11.5(a), (c), NSW H101.11.6(a) and NSW H101.11.8(a), (b), (c) and (d).
NSW H102.11 Sanitary accommodation

Suitable sanitary accommodation must be provided at a location convenient to the temporary structure.

NSW H102.12 Projection suites

Any projection suite must comply with NSW H101.17.2 and NSW H101.17.3.

NSW H102.13 Fireplaces and heating

No fireplace or other form of heating equipment may be installed in a temporary structure, without the consent of the approval authority.

NSW H102.14 Electrical services

Electrical services connected to the local supply authority's mains, to a generating plant or to a battery supply must comply with—
(a) the requirements of the local supply authority; and
(b) AS 3002; and
(c) where applicable, AS/NZS 3000; and
(d) NSW H101.19.1(a) and NSW H101.19.3(a).

NSW H102.15 Artificial lighting

Artificial lighting must be provided, and must comply with NSW H101.20.1 and NSW H101.20.2.

NSW H102.15.1 Emergency lighting levels

Emergency lighting must be provided to the areas provided with artificial lighting under NSW H102.15 and must include a sufficient number of lamps to give a minimum illumination of 0.2 lux at floor level.

NSW H102.15.2 Emergency lighting power supply

Where emergency lighting is provided, the capacity of the battery and charging system must be sufficient to provide the illumination required by NSW H102.15.1 for—
(a) half an hour, in respect of a temporary structure designed to accommodate not more than 1000 persons; and
(b) 1 hour, in respect of a temporary structure designed to accommodate more than 1000 persons.

NSW H102.16 Exit signs

Exit signs must be provided above all exits and in such other locations as may be required by NSW E4.6 and must comply with E4.5 and E4.8.
 NSW H102.17 Fire-fighting services  

(a) Fire-fighting services and appliances must be so provided as to afford adequate protection and must be so located as the approving authority, on the advice of the Director-General of New South Wales Fire Brigades, may require.  

(b) Where required by the approving authority, the fire-fighting services and appliances must comply with Part E1.

 NSW PART H103 DRIVE-IN THEATRES  

 NSW H103.1 Application of Part  

This Part applies to drive-in theatres.

 NSW H103.2 Speaker standards  

Speaker standards must—

(a) be placed at a minimum of 5.5 m centres in a line along each parking ramp; and  

(b) be capable of being illuminated throughout any performance so as to be easily distinguishable at all times.

 NSW H103.2.1 Lines of speaker standards  

Lines of speaker standards along parking ramps must be placed at a distance of not less than 12.2 m apart.

 NSW H103.3 Electrical services  

The following electrical services must be installed underground—

(a) the supply authority's conductors within the site and the consumer's mains, unless otherwise approved;  

(b) electrical wiring external to any building on the site; and  

(c) all wiring to the speaker standards.

 NSW H103.4 Vehicular entrances  

Each public vehicular entrance to or exit from the drive-in theatre must be capable of being fully illuminated by flood lights that are so placed and so focussed as not to interfere with the vision of the driver of any motor vehicle.

 NSW H103.5 Lighting  

(a) Driveways— Entrance and exit driveways, and the perimeter of the holding area, must be capable of being continuously illuminated by lamps capable of producing a minimum illumination of 0.5 lux at ground level.  

(b) Ramp areas— The whole of the ramp area of a drive-in theatre must be capable of being floodlit by means of area flood lights to an illumination of at least 10 lux.
SECTION I  MAINTENANCE

PART I1  EQUIPMENT AND SAFETY INSTALLATIONS

Delete I1.1 and insert NSW I1.1 as follows:

NSW I1.1 Essential fire safety measures

Essential fire or other safety measures must be maintained and certified on an ongoing basis, in accordance with the provisions of the Environmental Planning and Assessment Regulation, 2000.

Delete I1.2:

NSW I1.2 Mechanical ventilation and hot water, warm water and cooling water systems

(deleted).

Note.
This clause is deleted from the BCA in NSW, as the maintenance of mechanical ventilation and hot water, warm water and cooling water systems, for the purposes of public health, is regulated in the Public Health (Microbial Control) Regulation, 2000, as amended by the Public Health (Microbial Control) Amendment (Miscellaneous) Regulation, 2003, under the Public Health Act, 1991.

SECTION J  ENERGY EFFICIENCY

OBJECTIVE

NSW JO1

The Objective of this Section is to reduce greenhouse gas emissions by efficiently using energy.

Application:

NSW JO1 only applies to a Class 2 building or Class 4 part.

FUNCTIONAL STATEMENT

NSW JF1

A building, including its services, is to be capable of efficiently using energy.
Application:
NSW JF1 only applies to a Class 2 building or Class 4 part.

PERFORMANCE REQUIREMENT

NSW JP1
Insulation in a building must be installed in a manner and have characteristics, which facilitate the efficient use of energy for artificial heating and cooling.

Application:
(a) NSW JP1 only applies to thermal insulation in a Class 2 building or Class 4 part of a building where a development consent, complying development certificate, or an environmental planning instrument specifies that the insulation is to be provided as part of the development.
(b) In (a), development consent, complying development certificate, environmental planning instrument and development, have the meaning given to these terms by the Environmental Planning and Assessment Act 1979.

NSW JP2
A building must have, to the degree necessary, a level of building sealing against air leakage to facilitate the efficient use of energy for artificial heating and cooling appropriate to—
(a) the function and use of the building; and
(b) the internal environment; and
(c) the geographic location of the building.

Application:
NSW JP2 only applies to a Class 2 building or Class 4 part, except -
(a) parts that cannot be fully enclosed; and
(b) a building ventilation opening that is necessary for the safe operation of a gas appliance.

NSW JP3
A building’s domestic services, including any associated distribution system and components must have features that, to the degree necessary, facilitate the efficient use of energy appropriate to—
(a) the domestic service and its usage; and
(b) the geographic location of the building; and
(c) the location of the domestic service; and
(d) the energy source.
Application:
NSW JP3 only applies to a Class 2 building or Class 4 part.
NSW PART J1 BUILDING FABRIC

NSW J1.0 Deemed-to-Satisfy Provisions

Performance Requirement NSW JP1 is satisfied by complying with NSW J1.1 and NSW J1.2

NSW J1.1 Application of Part

(a) The Deemed-to-Satisfy Provisions of this Part only apply to thermal insulation in a Class 2 building or Class 4 part of a building where a development consent, complying development certificate, or an environmental planning instrument specifies that the insulation is to be provided as part of the development.

(b) In (a), development consent, complying development certificate, environmental planning instrument and development, have the meaning given to these terms by the Environmental Planning and Assessment Act 1979.

NSW J1.2 Insulation

(a) All insulation must—

(i) comply with—

(A) AS/NZS 4859.1; or

(B) AS 2464.3 for loose fill insulation; or

(C) AS 2464.5 where a heat flow meter is used to determine the thermal transmission properties; or

(D) AS 2464.6 where a guarded hot plate is used to determine the thermal transmission properties; and

(ii) be installed so that it forms a continuous barrier with ceilings, walls, bulkheads, floors or the like that inherently contribute to the thermal barrier; and

(b) Bulk insulation must be installed so that—

(i) it maintains its position and thickness; and

(ii) it abuts other bulk insulation or building members to ensure there are no voids in the envelope, other than around a domestic service or fitting where insulation may affect their safe or effective operation; and

(iii) where there is no bulk insulation or reflective insulation in a wall, ceiling insulation overlaps the wall member by not less than 50 mm.

(c) (b)(i) does not apply to foil blacked blanket bulk insulation under metal deck roofing.

(d) An reflective insulation must be installed with—

(i) an airspace, specified in accordance with AS/NZS 4859.1, AS 2464.3, AS 2464.5 or AS 2464.6 as determined under (a)(i) above, between a reflective side of the reflective insulation and the building lining or cladding; and

(ii) the reflective insulation closely fitted against any door or window opening or any other penetration, other than around a domestic service or fitting where the reflective insulation may affect their safe or effective operation; and
(iii) the *reflective insulation* adequately supported by framing members; and

(iv) each adjoining sheet of roll membrane being

(A) overlapped not less than 50 mm; or

(B) taped together.
NSW PART J2 BUILDING SEALING

NSW J2.0 Deemed-to-Satisfy Provisions

Performance Requirement NSW JP.2 is satisfied by complying with NSW J2.1 to NSW J2.6

NSW J2.1 Application of Part

The Deemed-to-Satisfy Provisions of this Part apply to a Class 2 building and a Class 4 part of a building, but exclude the following:

(a) parts of those buildings that cannot be fully enclosed; and

(b) a building ventilation opening that is necessary for the safe operation of a gas appliance.

NSW J2.2 Chimneys and flues

The chimney or flue of an open solid-fuel burning appliance must be provided with a damper or flap that can be closed to seal the chimney or flue.

NSW J2.3 Roof lights

(a) A roof light must be sealed, or capable of being sealed, in accordance with (b) to minimise air leakage when serving—

   (i) a conditioned space; or

   (ii) a habitable room in climate zones 4, 6, 7 and 8.

(b) A roof light required by (a) to be sealed or capable of being sealed must be constructed with—

   (i) an imperforate ceiling diffuser or the like installed at the ceiling or internal lining level; or

   (ii) a shutter system readily operated either manually, mechanically or electronically by the building occupant; or

   (iii) if it is a roof window, a foam or rubber compressible strip, fibrous seal or the like.

NSW J2.4 External windows and doors

(a) A seal to restrict air infiltration must be fitted to each edge of an external door, openable external window and other such opening—

   (i) when serving a conditioned space; or

   (ii) in climate zones 4, 6, 7 and 8 when serving a habitable room.

(b) The requirements of (a) do not apply to the following:

   (i) A window complying with AS 2047.

   (ii) A glazed assembly exempt from compliance with AS 2047 under F1.13

(c) A seal required by (a) may be a foam or rubber compressible strip, fibrous seal or the like.
NSW J2.5 Exhaust fans

An exhaust fan must be fitted with a sealing device such as a self-closing damper, filter or the like when serving—

(a) a *conditioned space*; or

(b) a *habitable room* in climate zones 4, 6, 7 and 8.

NSW J2.6 Construction of roofs, walls and floors

(a) Roofs, *external walls*, external floors and any opening such as a window, door or the like in the external fabric must be constructed to minimise air leakage in accordance with (b) when forming part of the external fabric of—

(i) when serving a *conditioned space*; or

(ii) a *habitable room* in climate zones 4, 6, 7 and 8.

(b) Construction *required by* (a) must be

(i) enclosed by internal lining systems that are close fitting at ceiling, wall and floor junctions; or

(ii) sealed by caulking, skirting, architraves, cornices or the like.
NSW PART J3 SERVICES

NSW J3.0 Deemed-to-Satisfy Provisions
Performance Requirement NSW JP3 is satisfied by complying with NSW J3.1 to NSW J3.4

NSW J3.1 Application of Part
The Deemed-to-Satisfy Provisions of this Part apply to a Class 2 building and a Class 4 part of a building.

NSW J3.2 Hot water supply system
A hot water supply system must be designed and installed in accordance with Section 8 of AS/NZS 3500.4.

NSW J3.3 Air-conditioning ductwork
An air-conditioning unit or system must have any ductwork insulated and sealed in accordance with NSW Specification J3.3.

NSW J3.4 Heating and cooling water system piping
(a) Systems that provide heating water or cooling water for air-conditioning must have any piping insulated in accordance with NSW Specification J3.4, except that cold water supply piping and pressure relief piping need only be insulated within 500 mm of the connection to the heating or cooling system.

(b) The requirements of (a) do not apply to piping providing heating and cooling water if it is—
   (i) located within the space being heated where the piping is to provide the heating to that space; or
   (ii) encased within a concrete floor slab which is part of a floor heating system.
1. Scope

This Specification contains the requirements for the sealing and the insulating of ductwork used to heat or cool a building.

2. Ductwork sealing

(a) Heating or cooling ductwork and fittings must be sealed against air loss—
   (i) by closing all openings in the surface, joints and seams of ductwork with adhesives, mastics, sealants or gaskets in accordance with AS 4254 for the static pressure in the system; or
   (ii) for flexible ductwork at an operating static pressure of less than 500 Pa, with a sealant and draw band encased with adhesive tape.

(b) The requirements of (a) do not apply to ductwork and fittings located within a sole-occupancy unit or within a space that is air-conditioned where the ductwork only serves that space.

3. Ductwork insulation

(a) Ductwork and fittings for heating or cooling must—
   (i) be thermally insulated to achieve the minimum Total R-Value specified in Table 3(i) and 3(ii); and
   (ii) use insulation material that is in accordance with—
        (A) AS/NZS 4859.1; or
        (B) AS 2464.5 where a heat flow meter is used to determine the thermal transmission properties; or
        (C) AS 2464.6 where a guarded hot plate is used to determine the thermal transmission properties; and

(b) Insulation on cooling ductwork and fittings must be protected by a vapour barrier on the outside of the insulation.

(c) Ductwork insulation that is exposed to the effects of the weather must—
   (i) be protected by a water resistant outer sleeve of sheeting to prevent the insulation becoming wet or damp; and
   (ii) have the outer protective sleeve sealed with adhesive tape not less than 48 mm wide creating an airtight and waterproof seal.

(d) The requirements of (a) do not apply to heating and cooling ductwork and fittings located within the envelope of a sole-occupancy unit or within the space being air-conditioned.
Table 3(i) - DUCTWORK - MINIMUM INSULATION (for systems of no more than 65 kW capacity)

<table>
<thead>
<tr>
<th>Location and element</th>
<th>Minimum Total R-Value for ductwork</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Evaporative cooler</td>
</tr>
<tr>
<td></td>
<td>All climate zones</td>
</tr>
<tr>
<td></td>
<td>2, 4, 6 and 7</td>
</tr>
<tr>
<td>1. Under an enclosed suspended floor and in a roof spaces</td>
<td>Ductwork</td>
</tr>
<tr>
<td></td>
<td>Metal heating fittings</td>
</tr>
<tr>
<td>2. External to the building and under open suspended floor</td>
<td>Ductwork</td>
</tr>
</tbody>
</table>

Table 3(ii) - DUCTWORK - MINIMUM INSULATION (for systems greater than 65 kW capacity)

<table>
<thead>
<tr>
<th>Location</th>
<th>Minimum Total R-Value for ductwork</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Evaporative cooler</td>
</tr>
<tr>
<td></td>
<td>All climate zones</td>
</tr>
<tr>
<td></td>
<td>2 and 4</td>
</tr>
<tr>
<td>1. Within a <em>conditioned space</em> other than where the space is the only space served</td>
<td>Nil</td>
</tr>
<tr>
<td>2. In a roof space, under an enclosed suspended floor or in a plant room</td>
<td>0.6</td>
</tr>
<tr>
<td>3. External to the building and under open suspended floors</td>
<td>0.6</td>
</tr>
</tbody>
</table>
1. Scope

This Specification contains the requirements for the insulating of heating water piping and cooling water piping.

2. Piping insulation

(a) Insulation for heating water piping and cooling water piping must—
   (i) be protected against the effects of weather and sunlight; and
   (ii) be able to withstand the temperatures within the piping; and
   (iii) achieve the minimum Total R-Value in Table 2.

(b) Insulation on cooling pipework and fittings must be protected by a vapour barrier on the outside of the insulation.

Table 2 - HEATING AND COOLING WATER PIPING - MINIMUM INSULATION

<table>
<thead>
<tr>
<th>Location and element</th>
<th>Minimum Total R-Value for piping in each climate zone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2, and 5</td>
</tr>
<tr>
<td>1. Heating water piping for systems of no more than 65 kW capacity</td>
<td></td>
</tr>
<tr>
<td>(a) Internal piping</td>
<td>0.2</td>
</tr>
<tr>
<td>(b) Piping located within a ventilated wall space, an enclosed sub-floor area or a roof space</td>
<td>0.3</td>
</tr>
<tr>
<td>(c) Piping located outside the building or in an unenclosed sub-floor area or roof space</td>
<td>0.3</td>
</tr>
<tr>
<td>2. Heating water piping for systems of more than 65 kW capacity</td>
<td></td>
</tr>
<tr>
<td>(a) Internal piping</td>
<td>0.5</td>
</tr>
<tr>
<td>(b) Piping located within a ventilated wall space, an enclosed sub-floor area or a roof space</td>
<td>0.6</td>
</tr>
<tr>
<td>(c) Piping located outside the building or in an unenclosed sub-floor area or roof space</td>
<td>0.7</td>
</tr>
</tbody>
</table>
### Cooling water piping for systems of more than 65 kW capacity but less than 250 kW capacity

<table>
<thead>
<tr>
<th></th>
<th>Internal piping</th>
<th>Piping located within a ventilated wall space, an enclosed sub-floor area or a roof space</th>
<th>Piping located outside the building or in an unenclosed sub-floor area or roof space</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a)</td>
<td>Internal piping</td>
<td>0.8</td>
<td>0.9</td>
</tr>
<tr>
<td>(b)</td>
<td>Piping located within a ventilated wall space, an enclosed sub-floor area or a roof space</td>
<td>0.9</td>
<td>1.0</td>
</tr>
<tr>
<td>(c)</td>
<td>Piping located outside the building or in an unenclosed sub-floor area or roof space</td>
<td>1.0</td>
<td>1.1</td>
</tr>
</tbody>
</table>

### Cooling water piping for systems of more than 250 kW capacity

<table>
<thead>
<tr>
<th></th>
<th>Internal piping</th>
<th>Piping located within a ventilated wall space, an enclosed sub-floor area or a roof space</th>
<th>Piping located outside the building or in an unenclosed sub-floor area or roof space</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a)</td>
<td>Internal piping</td>
<td>1.0</td>
<td>1.2</td>
</tr>
<tr>
<td>(b)</td>
<td>Piping located within a ventilated wall space, an enclosed sub-floor area or a roof space</td>
<td>1.1</td>
<td>1.5</td>
</tr>
<tr>
<td>(c)</td>
<td>Piping located outside the building or in an unenclosed sub-floor area or roof space</td>
<td>1.3</td>
<td>1.8</td>
</tr>
</tbody>
</table>
This Appendix contains variations and additions to the Building Code of Australia (BCA) provisions which are considered necessary for the effective application of the Code in the Northern Territory.
# APPENDIX CONTENTS

## APPENDIX NORTHERN TERRITORY

### Northern Territory

**A  GENERAL PROVISIONS**
- NT Specification A1.3 Standards Adopted by Reference

**B  STRUCTURE**
- NT B1.2 Determination of individual actions
- NT B1.3 Loads
- NT B1.4 Determination of structural resistance of materials and forms of construction
- NT Specification B1.2 Design of Buildings in Cyclonic Areas

**E  SERVICES AND EQUIPMENT**
- NT E1.5 Sprinklers

**F  HEALTH AND AMENITY**
- NT FO5 Objective
- NT FF5.1 Functional Statement
- NT FP5.1 - NT FP5.4 Performance Requirements
- NT F5.0 Deemed-to-Satisfy Provisions
- NT F5.1 Application of Part
- NT F5.2 Weighted sound reduction index: Interpretation
- NT F5.3 Sound insulation of floors between units
- NT F5.4 Sound insulation of walls between units
- NT F5.5 Walls between a bathroom, sanitary compartment, laundry or kitchen and a habitable room in adjoining unit
- NT F5.6 Soil and waste pipes to be separated
- NT F5.7 Isolation of pumps
- NT F5.8 Walls between a bedroom and kitchen or laundry in a Class 9c building
- NT Specification F5.2 Sound Insulation for Building Elements
- NT Specification F5.5 Impact Sound - Test of Equivalence

**H  SPECIAL USE BUILDINGS**

### NT Part H101  Food Premises
- NT H101.1 Application of Part
- NT H101.2 Floors, walls and ceilings
- NT H101.3 Pests and contaminants
- NT H101.4 Washbasins
- NT H101.5 Sinks
- NT H101.6 Installation of equipment and fittings
- NT H101.7 Drains
- NT H101.8 Concealment of pipes
NT H101.9 Storage of materials and equipment
NT H101.10 Separation of work place
NT H101.11 Offensive material and trade waste
NT H101.12 Mechanical ventilation of kitchens

**NT Part H102 Premises to be used for Activities Involving Skin Penetration**

NT H102.1 Application of Part
NT H102.2 Sanitary facilities
NT H102.3 Washbasins

**NT Part H103 Mortuaries**

NT H103.1 Application of Part
NT H103.2 Layout of mortuary
NT H103.3 Construction of body preparation room
NT H103.4 Water supply and sewerage

**I MAINTENANCE**

NT I1.1 Safety installations
### NT Table 1 SCHEDULE OF REFERENCED DOCUMENTS

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Title</th>
<th>BCA Clause(s)</th>
</tr>
</thead>
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<tr>
<td>Amdt No. 11</td>
<td>AS/NZS 1170</td>
<td>Structural design actions</td>
<td>NT B1.2, NT Spec B1.2</td>
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<td></td>
<td>Part 2 2002</td>
<td>Wind actions</td>
</tr>
<tr>
<td>Amdt No. 12</td>
<td>AS 1170</td>
<td>Minimum design loads on structures</td>
<td>NT B1.3, NT Spec B1.2</td>
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<td></td>
<td></td>
<td>Part 2 1989</td>
<td>Wind loads</td>
</tr>
<tr>
<td>Amdt No. 2</td>
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<td></td>
<td>* * * *</td>
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<tr>
<td>AS 1851</td>
<td></td>
<td>Maintenance of fire protection equipment</td>
<td>NT I1.1</td>
</tr>
<tr>
<td></td>
<td>Part 1 1995</td>
<td>Portable fire extinguishers and fire blankets</td>
<td>NT I1.1</td>
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<td></td>
<td>Part 2 1995</td>
<td>Fire hose reels</td>
<td>NT I1.1</td>
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<tr>
<td>Amdt No. 10</td>
<td>Part 3 1997</td>
<td>Automatic fire sprinkler systems</td>
<td>NT I1.1</td>
</tr>
<tr>
<td></td>
<td>Part 4 1992</td>
<td>Fire hydrant installations</td>
<td>NT I1.1</td>
</tr>
<tr>
<td></td>
<td>Part 5 1981</td>
<td>Automatic smoke/heat venting systems</td>
<td>NT I1.1</td>
</tr>
<tr>
<td>Amdt No. 10</td>
<td>Part 6 1997</td>
<td>Management procedures for maintaining the fire precaution features of air-handling systems</td>
<td>NT I1.1</td>
</tr>
<tr>
<td></td>
<td>Part 7 1984</td>
<td>Fire-resistant doorsets</td>
<td>NT I1.1</td>
</tr>
</tbody>
</table>
SECTION B    STRUCTURE

PART B1    STRUCTURAL PROVISIONS

Delete B1.2(c)(ii) and insert NT B1.2(c)(ii) as follows:

**NT B1.2 Determination of individual actions**

(c)

(ii) Wind loads: AS/NZS 1170.2 and **NT Specification B1.2**.

(iii) AS 1170.3 and AS 1170.4 as appropriate.

Delete B1.3(b) and insert NT B1.3(b) as follows:

**NT B1.3 Loads**

(b) Wind loads: AS 1170.2 and NT Specification B1.2.

Delete B1.4(i) and insert NT B1.4(i) as follows:

**NT B1.4 Determination of structural resistance of materials and forms of construction**

(i) Termite risk management: where a *primary building element* is subject to attack by subterranean termites—

(ii) AS 3660.1 with additional protection measures to be used in areas where Mastotermes Darwiniensis are prevalent; and
(ii) for the purpose of this provision, a primary building element consisting entirely of, or a combination of, any of the following materials is considered not to be subject to termite attack:

(A) Steel, aluminium or other metals.
(B) Concrete.
(C) Masonry.
(D) Fibre-reinforced cement.
(E) Timber in areas where Mastotermes Darwiniensis are not prevalent—naturally termite resistant in accordance with Appendix C of AS 3660.1.
(F) Timber—preservative treated in accordance with Appendix D of AS 3660.1; and

(iii) where a termite risk management system in accordance with AS 3660.1 is used, a durable notice must be permanently fixed to the building in a prominent location, such as a meter box or the like, indicating—

(A) the method of termite risk management; and
(B) the date of installation of the system; and
(C) where a chemical barrier is used, its life expectancy as listed on the National Registration Authority label; and
(D) the installer’s or manufacturer’s recommendations for the scope and frequency of future inspections for termite activity.

NT Specification B1.2
DESIGN OF BUILDINGS IN CYCLONIC AREAS

1. Scope

This specification contains requirements for the design of buildings in cyclonic areas in addition to the requirements of AS/NZS 1170.2 and AS 1170.2.

2. Roof cladding

Test for strength- Metal roofing and its fitments should be capable of withstanding without failure, the test application of 10 000 cycles of working load from zero to that maximum at a rate of 3 Hz, followed by a static load test of 1.8 times the working load.

3. Strengthened area

Where a residential building of Class 2, 3, 9a or 9c, in Region C as defined by AS/NZS 1170.2, is designed to be used by the Aged or Infirm it shall incorporate a “strengthened area” for use as shelter during cyclonic conditions and must comply with the following criteria:

(“strengthened area” is defined as the strengthening of an area to increase its potential to facilitate debris protection)

(a) The floor area of the “strengthened area” is to be calculated at the rate of 1.2 m² per person normally accommodated within the building.
(b) The minimum standard of debris protection to be achieved is represented by the following construction:

(i) 200 mm masonry block walls reinforced in accordance with the Northern Territory Deemed to Comply Standards (DTC) and core filled every core; or
Timber or steel framed walls clad internally and externally with 18 mm structural ply, screw fixed at 150 mm centres to studs, plates and noggins; and

(ii) Ceiling battens strapped to truss bottom chords or ceiling joists in accordance with the DTC Standard; and
18 mm structural ply screw fixed to ceiling battens at 150 mm centres; and

(iii) All doors serving the strengthened area are to be internal and are to be solid core, inward opening with barrel bolts fitted to the top and bottom; and

(iv) All windows protected with debris screens in accordance with DTC Standards.

4. Masonry veneer construction

Masonry veneer construction must be designed so that the structural framing, to which the masonry veneer is tied, will ensure the stability of the masonry veneer.

SECTION E SERVICES AND EQUIPMENT

PART E1 FIRE-FIGHTING EQUIPMENT

NT E1.5 Sprinklers

Insert provisions for Class 9a buildings in Table E1.5 as follows:

<table>
<thead>
<tr>
<th>Occupancy</th>
<th>When sprinklers are required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 9a</td>
<td>if more than one storey</td>
</tr>
</tbody>
</table>
SECTION F   HEALTH AND AMENITY

PART F5   SOUND TRANSMISSION AND INSULATION

Delete Part F5 and insert NT Part F5 as follows:

OBJECTIVE

NT FO5

The **Objective** of this Part is to safeguard occupants from illness or loss of amenity as a result of undue sound being transmitted—

(a) between adjoining *sole-occupancy units*; and
(b) from common spaces to *sole-occupancy units*.

**Application:**

NT FO5 only applies to a Class 2 or 3 building or a Class 9c *aged care building*.

FUNCTIONAL STATEMENT

NT FF5.1

A building element which separates *sole-occupancy units*, or separates a *sole-occupancy unit* from a common space within the building, is to be constructed to prevent undue sound transmission.

**Application:**

NT FF5.1 only applies to a Class 2 or 3 building or a Class 9c *aged care building*.

PERFORMANCE REQUIREMENTS

NT FP5.1

Floors separating *sole-occupancy units* must provide insulation against the transmission of airborne and impact generated sound sufficient to prevent illness or loss of amenity to the occupants.

**Application:**

NT FP5.1 only applies to a Class 2 or 3 building or a Class 9c *aged care building*.
NT FP5.2

Walls separating—

(a) sole-occupancy units; or

(b) a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like,

must provide insulation against the transmission of airborne and impact generated sound sufficient to prevent illness or loss of amenity to the occupants.

**Application:**

NT FP5.2 only applies to a Class 2 or 3 building.

NT FP5.3

The required sound insulation of floors or walls must not be compromised by the incorporation or penetration of a pipe or other service element.

**Application:**

NT FP5.3 only applies to a Class 2 or 3 building or a Class 9c aged care building.

NT FP5.4

Walls separating—

(a) sole-occupancy units; or

(b) a sole-occupancy unit from a kitchen, bathroom, sanitary compartment (not being an associated ensuite), laundry, plant room or utilities room,

must provide insulation against the transmission of airborne sound sufficient to prevent illness or loss of amenity to the occupants, and

(c) a sole-occupancy unit from a kitchen or laundry,

must provide insulation against the transmission of impact generated sound sufficient to prevent illness or loss of amenity to the occupants.

**Application:**

NT FP5.4 only applies to a Class 9c aged care building.

NT F5.0 Deemed-to-Satisfy Provisions

(a) Where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions, Performance Requirements NT FP5.1 to NT FP5.4 are satisfied by complying with NT F5.1 to NT F5.8.

(b) Where a Building Solution is proposed as an Alternative Solution to the Deemed-to-Satisfy Provisions of NT F5.1 to NT F5.8, the relevant Performance Requirements must be determined in accordance with A0.10.
NT F5.1 Application of Part

The Deemed-to-Satisfy Provisions of this Part apply to Class 2 and 3 buildings and Class 9c aged care buildings.

NT F5.2 Weighted sound reduction index: Interpretation

A form of construction required to have a certain weighted sound reduction index ($R_w$) must—

(a) have the required value determined under AS/NZS 1276.1, or ISO 717.1; or

(b) comply with NT Specification F5.2.

NT F5.3 Sound insulation of floors between units

A floor separating sole-occupancy units must have an $R_w$ not less than 45.

NT F5.4 Sound insulation of walls between units

A wall must have an $R_w$ not less than 45 if it separates—

(a) sole-occupancy units; or

(b) a sole-occupancy unit not within a Class 9c aged care building from a plant room, lift shaft, stairway, public corridor, hallway or the like,

(c) a sole-occupancy unit in a Class 9c aged care building from a kitchen, bathroom, sanitary compartment (not being an associated ensuite), laundry, plant room or utilities room.

NT F5.5 Walls between a bathroom, sanitary compartment, laundry or kitchen and a habitable room in adjoining unit

(a) Except for a Class 9c aged care building, a wall separating a bathroom, sanitary compartment, laundry or kitchen in one sole-occupancy unit from a habitable room (other than a kitchen) in an adjoining unit must—

(i) have an $R_w$ of not less than 50; and

(ii) provide a satisfactory level of insulation against impact sound; and

(iii) not incorporate a duct which reduces the $R_w$ of the wall to less than 50.

(b) A wall satisfies (a)(i) and (a)(ii) if it is—

(i) in accordance with NT Table F5.5; or

(ii) for other than masonry, in 2 or more separate leaves without rigid mechanical connection except at their periphery; or

(iii) identical with a prototype that is no less resistant to the transmission of impact sound when tested in accordance with NT Specification F5.5 than a wall listed in NT Table F5.5.

NT Table F5.5 CONSTRUCTION OF WALLS TO REDUCE IMPACT SOUND

<table>
<thead>
<tr>
<th>Cavity brickwork —</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two leaves of 90 mm brick masonry with—</td>
</tr>
<tr>
<td>(i) all joints filled solid with mortar; and</td>
</tr>
</tbody>
</table>
(ii) an air space not less than 40 mm between the leaves; and
(iii) the leaves connected only by ties in accordance with AS 3700.

### Single leaf brickwork—

110 mm thick brick masonry with—

(i) each face rendered 13 mm thick; and

(ii) 50 mm x 12 mm thick timber battens at not more than 610 mm centres fixed to each face but not recessed into the render; and

(iii) one layer of 12 mm thick softboard nailed to the battens; and

(iv) 6 mm thick medium density hardboard adhesive-fixed to the softboard.

### Concrete blockwork—

190 mm thick concrete block masonry with—

(i) each face of the blocks fitted with 50 mm x 50 mm timber battens, spaced at not more than 610 mm centres, screw-fixed into resilient plugs with rubber inserts; and

(ii) the space between the battens completely filled with mineral or glass wool blanket or batts not less than 50 mm thick; and

(iii) the outer face of the battens finished with plasterboard not less than 10 mm thick or other material with a mass per unit area not less than 7.3 kg/m².

### NT F5.6 Soil and waste pipes to be separated

If a soil or waste pipe, including a pipe that is embedded in or passes through a floor, serves or passes through more than one sole-occupancy unit—

(a) the pipe must be separated from the rooms of any sole-occupancy unit by construction with an $R_w$ not less than—

   (i) 45 if the adjacent room is a habitable room (other than a kitchen); or

   (ii) 30 if the adjacent room is a kitchen or any other room; and

(b) a door or panel providing access to the pipe must not open into any habitable room (other than a kitchen); and

(c) an access door or panel in any other part must be firmly fixed so as to overlap the frame or rebate of the frame by not less than 10 mm, be fitted with a sealing gasket along all edges and constructed of—

   (i) wood, particleboard or blockboard not less than 38 mm thick; or

   (ii) compressed fibre reinforced cement sheeting not less than 9 mm thick; or

   (iii) other suitable material with a mass per unit area not less than 24.4 kg/m².

### NT F5.7 Isolation of pumps

A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating or other pump.
NT F5.8 Walls between a bedroom and kitchen or laundry in a Class 9c building

In addition to NT F5.4, a wall separating a sole-occupancy unit in a Class 9c aged care building from a kitchen or laundry must—

(a) for other than masonry, be two or more separate leaves without rigid mechanical connection except at their periphery; or

(b) be identical with a prototype that is no less resistant to the transmission of impact sound when tested in accordance with NT Specification F5.5 than a wall listed in Table 2 of NT Specification F5.2.
1. **Scope**

This Specification lists the weighted sound reduction index ($R_w$) for some common forms of construction.

2. **Construction deemed-to-satisfy**

The forms of construction listed in NT Table 2 are considered to have the $R_w$ stated in that Table if installed as follows:

   (a) **Masonry**—Units must be laid with all joints filled solid, including those between the masonry and any adjoining construction.

   (b) **Concrete slabs**—Joints between concrete slabs and any adjoining construction must be filled solid.

   (c) **Plasterboard**—

      (i) if one layer is *required* under this Specification, it must be screw-fixed to the studs with joints staggered on opposite faces; and

      (ii) if 2 layers are *required*, the first layer must be fixed according to (i) and the second layer must be fixed to the first layer with nails, screws or adhesive so that the joints do not coincide with those of the first layer; and

      (iii) joints between sheets or between sheets and any adjoining construction must be taped and filled solid; and

      (iv) fire-protective grade plasterboard must be the special grade manufactured for use in *fire-resisting construction*.

   (d) **Steel studs and perimeter members**—

      (i) the section of steel must be not less than 0.6 mm thick; and

      (ii) studs must be not less than 63 mm in depth unless another depth is listed in the Table; and

      (iii) studs must be fixed to steel top and bottom plates of sufficient depth to permit secure fixing of the plasterboard; and

      (iv) all steel members at the perimeter of the wall must be securely fixed to the adjoining structure and bedded in resilient compound or the joints must be caulked so that there are no voids between the steel members and the wall.
Deemed-to-Satisfy Provisions

Table 2 $R_w$ APPLICABLE TO CONSTRUCTION

<table>
<thead>
<tr>
<th>Construction</th>
<th>$R_w$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(not less than)</td>
</tr>
<tr>
<td><strong>WALLS</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Clay brickwork—</strong></td>
<td></td>
</tr>
<tr>
<td>(a) 230 mm thick in one or more leaves and with a mass per unit area of not less than 290 $\text{kg/m}^2$</td>
<td>45</td>
</tr>
<tr>
<td>(b) 110 mm thick rendered 13 mm thick on both sides with a mass per unit area of the unrendered wall being not less than 190 $\text{kg/m}^2$</td>
<td>45</td>
</tr>
<tr>
<td>(c) 110 mm thick, of semi-dry-pressed bricks and rendered 13 mm on one side, the mass per unit area of the unrendered wall being not less than 215 $\text{kg/m}^2$</td>
<td>45</td>
</tr>
<tr>
<td>(d) 110 mm thick, of extruded brick and rendered 13 mm on one side, the mass per unit area of the unrendered wall being not less than 180 $\text{kg/m}^2$</td>
<td>45</td>
</tr>
<tr>
<td><strong>Concrete brickwork—</strong> 110 mm thick with a mass per unit area of not less than 195 $\text{kg/m}^2$</td>
<td>45</td>
</tr>
<tr>
<td><strong>Concrete blockwork—</strong></td>
<td></td>
</tr>
<tr>
<td>(a) 190 mm thick with a mass per unit area of not less than 215 $\text{kg/m}^2$</td>
<td>45</td>
</tr>
<tr>
<td>(b) 140 mm thick, the wall thickness of the blocks being not less than 44 mm and with—</td>
<td></td>
</tr>
<tr>
<td>(i) 50 mm x 50 mm timber battens spaced at not more than 610 mm centres screw-fixed on one face of the blocks into resilient plugs with rubber inserts between battens and the wall;</td>
<td></td>
</tr>
<tr>
<td>(ii) the face of the battens clad with 13 mm thick standard plasterboard; and</td>
<td></td>
</tr>
<tr>
<td>(iii) a mass per unit area of the whole system of not less than 220 $\text{kg/m}^2$</td>
<td>45</td>
</tr>
<tr>
<td><strong>Concrete—</strong></td>
<td></td>
</tr>
<tr>
<td>(a) In-situ concrete— 125 mm thick and with a density of not less than 2200 $\text{kg/m}^3$</td>
<td>45</td>
</tr>
<tr>
<td>(b) In-situ concrete— 100 mm thick and with a density of not less than 2500 $\text{kg/m}^3$</td>
<td>45</td>
</tr>
<tr>
<td>(c) Precast concrete— 100 mm thick and without joints</td>
<td>45</td>
</tr>
<tr>
<td><strong>Steel stud walling—</strong></td>
<td></td>
</tr>
<tr>
<td>(a) with 2 layers of 16 mm thick fire-protective grade plasterboard fixed to each face</td>
<td>45</td>
</tr>
</tbody>
</table>
### Deemed-to-Satisfy Provisions

<table>
<thead>
<tr>
<th>Construction</th>
<th>$R_w$ (not less than)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) with—</td>
<td></td>
</tr>
<tr>
<td>(i) 1 layer of 13 mm thick fire-protective grade plasterboard fixed to one face, and before fixing, 50 mm thick mineral or glass wool blanket or batts stapled to the back of each sheet so that the sheet is completely covered; and</td>
<td>45</td>
</tr>
<tr>
<td>(ii) 2 layers of 13 mm thick fire-protective grade plasterboard fixed to the other face</td>
<td></td>
</tr>
<tr>
<td>(c) with—</td>
<td>45</td>
</tr>
<tr>
<td>(i) 1 layer of 16 mm fire-protective grade plasterboard fixed to one face; and</td>
<td></td>
</tr>
<tr>
<td>(ii) 50 mm thick mineral or glass wool blanket or batts wedged firmly between the studs; and</td>
<td></td>
</tr>
<tr>
<td>(iii) 2 layers of fire-protective grade plasterboard fixed to the other face, the inner layer being 16 mm thick and the outer layer being 13 mm</td>
<td></td>
</tr>
<tr>
<td>(d) with 2 layers of 13 mm plasterboard on both sides of 75 mm studs</td>
<td>45</td>
</tr>
</tbody>
</table>

### FLOORS—

<table>
<thead>
<tr>
<th>Concrete—</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) In-situ concrete slab— 125 mm thick and with a density of not less than 2200 kg/m$^3$</td>
<td>45</td>
</tr>
<tr>
<td>(b) In-situ concrete slab— 100 mm thick and with a density of not less than 2500 kg/m$^3$</td>
<td>45</td>
</tr>
<tr>
<td>(c) Pre-cast concrete slab— 100 mm thick and without joints</td>
<td>45</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Timber—comprising—</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) timber joists not less than 175 mm x 50 mm; and</td>
<td>45</td>
</tr>
<tr>
<td>(b) 75 mm thick mineral or glass wool blanket or batts cut to fit tightly between joists and laid on 10 mm thick plasterboard fixed to underside of joists; and</td>
<td></td>
</tr>
<tr>
<td>(c) 25 mm thick mineral or glass wool blanket or batts laid over entire floor, including tops of joists before flooring is laid; and</td>
<td></td>
</tr>
<tr>
<td>(d) tongued-and-grooved boards not less than 19 mm thick, secured to 75 mm x 50 mm battens; and</td>
<td></td>
</tr>
<tr>
<td>(e) the assembled flooring laid over the joists, but not fixed to them, with the battens lying between the joists</td>
<td></td>
</tr>
</tbody>
</table>

### DUCTS OR OTHER CONSTRUCTION SEPARATING SOIL AND WASTE PIPES FROM UNITS

| Masonry— | not less than 90 mm thick | 30 |
Deemed-to-Satisfy Provisions

<table>
<thead>
<tr>
<th>Construction</th>
<th>( R_w ) (not less than)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plasterboard</strong>— 2 layers of plasterboard—</td>
<td></td>
</tr>
<tr>
<td>(a) each 10 mm thick, fixed to timber studs not less than 75 mm x 50 mm and spaced at not more than 400 mm centres</td>
<td>30</td>
</tr>
<tr>
<td>(b) each 13 mm thick, one on each side of steel studs not less than 50 mm deep and spaced at not more than 400 mm centres</td>
<td>30</td>
</tr>
</tbody>
</table>
1. Scope
This Specification describes a method of test to determine the comparative resistance of walls to the transmission of impact sound.

2. Construction to be tested
(a) The test is conducted on a specimen of prototype wall construction and on a specimen of one or other of the constructions specified in NT Table F5.5.
(b) The testing of a construction specified in NT Table F5.5 need not be repeated for subsequent comparisons provided complete records of the results, the test equipment and the technique of testing are kept so that identical equipment can be employed and an identical technique can be adopted in the testing of specimens of prototype wall construction.

3. Method
(a) The wall constructions to be compared must be tested in accordance with AS 1191.
(b) A horizontal steel platform 510 mm x 460 mm x 10 mm thick must be placed with one long edge in continuous and direct contact with the wall to be tested on the side of the wall on which the impact sound is to be generated.
(c) A tapping machine complying with ISO 140/6—1998 (E) must be mounted centrally on the steel platform.
(d) The sound transmission through the wall must be determined in accordance with AS 1191 except that the tapping machine as mounted on the steel platform must be used as the source of sound.
(e) The impact sound pressure levels measured in the receiving room must be converted into normalised levels using a reference equivalent absorption area of 10 m².

SECTION H SPECIAL USE BUILDINGS
Insert NT Part H101 as follows:
NT PART H101 FOOD PREMISES

NT H101.1 Application of Part

(a) This Part applies to all premises, rooms, compartments, or places used for the sale, preparation, packing, storing, handling, serving, supplying or conveying for sale of food.

(b) This Part does not apply to tents, buildings or other structures used temporarily for serving meals to the public at any fair, show, race meeting or other public sports, games or amusements.

NT H101.2 Floors, walls and ceilings

(a) Each floor, wall and ceiling of the premises must have a surface that is—

(i) durable, rigid, impervious to water, non-absorbent, non-toxic and smooth enough to be easily cleaned; and

(ii) free from cracks, crevices and other defects.

(b) If the floor is subject to wet cleaning by hosing down or if activities are carried out where liquids are discharged on to the floor, the floor must be graded to trapped floor waste outlets connected to a drainage installation.

(c) Each wall must be free from skirtings, architraves, picture rails or other ledges that could provide lodgement for dirt.

(d) All angles between the walls and the floor must be coved to permit easy cleaning.

(e) All angles between walls and all joints in walls must be sealed.

(f) All walls and ceilings must be finished in light colour.

(g) Subclauses (a), (b), (c), (d), (e) and (f) do not apply to areas used only by customers and they do not apply to walls and ceilings in a premises or place—

(i) used for the storage or display for sale of food that is wholly enclosed in protective packages;

(ii) used for the storage for sale of fruit and vegetables; or

(iii) in which all food for sale is completely enclosed and otherwise protected from contamination by processing plants, other appliances, or other means.

NT H101.3 Pests and contaminants

(a) The exterior of a food premises must be constructed to exclude pests and contaminants.

(b) Premises which are provided with—

(i) fly proof, external windows and self-closing, fly-proof doors, or

(ii) if customers are served outside the premises through an opening, an appliance for the elimination of flies and mechanical ventilation adequate to exhaust air through the opening at a rate of not less than 5 litres per second for each square metre of opening, satisfy (a) as it applies to insects.

NT H101.4 Washbasins

Each premises or place for preparation or storage of food for sale must be provided with not less than one washbasin, supplied with hot and cold water, in or within reasonable proximity of
those areas where the nature of the activities performed is such that hands are likely to be a source of contamination of food.

**NT H101.5 Sinks**

(a) Each premises must be provided with a double bowl sink or tub of stainless steel supplied with—
   (i) hot and cold water; and
   (ii) an integral drainer on at least one side.

(b) If a sink is installed within 300 mm of a vertical adjacent surface it must be fitted with an integral flashing to that vertical, adjacent surface to a height of not less than 150 mm.

**NT H101.6 Installation of equipment and fittings**

(a) Each item of equipment or fitting in a premises which is not capable of being moved easily must be installed—
   (i) so that the area underneath the item can be easily cleaned; or
   (ii) on a solid base or plinth constructed of impervious material similar to the flooring material.

(b) A plinth must be—
   (i) not less than 75 mm high; and
   (ii) finished to a smooth even surface and rounded at exposed edges to facilitate cleaning; and
   (iii) coved at intersections with floor and walls.

**NT H101.7 Drains**

A grease trap or an untrapped opening connected directly with a drain or sewer, must not be installed in a room used for preparation, processing, packing or storing of food.

**NT H101.8 Concealment of pipes**

Where practicable, service pipes should be concealed beneath the surface of walls, floors, or ceilings, otherwise pipes are to be fixed clear of the wall, floor, or ceiling, at such distance as to facilitate cleaning.

**NT H101.9 Storage of materials and equipment**

Separate areas for the storage of fuel, cleaning compounds and general maintenance equipment must be provided so as to prevent the contamination of the product in the event of a spillage or any other form of breakdown.

**NT H101.10 Separation of work place**

Food premises must not have direct communication with a room containing sanitary facilities, sleeping quarters, laundry, bathroom or garage or a room where animals are housed.

**NT H101.11 Offensive material and trade waste**

If offensive material or trade waste is stored, a separate area must be provided which—
(a) is easily cleanable; and
(b) is graded to drain to a suitable drainage system; and
(c) has available a supply of water under pressure.

**NT H101.12 Mechanical ventilation of kitchens**

In a commercial kitchen where food is prepared for sale, a mechanical ventilating exhaust system must be installed in accordance with Part F4.12.

Insert NT Part H102 as follows:

**NT PART H102 PREMISES TO BE USED FOR ACTIVITIES INVOLVING SKIN PENETRATION**

**NT H102.1 Application of Part**

This part applies to premises for tattooing, ear-piercing, acupuncture and like activities.

**NT H102.2 Sanitary facilities**

(a) Sanitary facilities for customers must be provided and must include not less than—
   (i) one water closet; and
   (ii) one washbasin.

(b) Sanitary facilities must be separated from the workroom by—
   (i) an air lock with self-closing entry door; or
   (ii) a self-closing door.

**NT H102.3 Washbasins**

The area in which skin penetration is done must be provided with—

(a) one wash basin for each 10, or part of 10 employees; and

(b) an adequate supply of hot and cold water controlled by foot-operated or elbow-operated taps.

Insert NT Part H103 as follows:

**NT PART H103 MORTUARIES**

**NT H103.1 Application of Part**

This Part applies to any premises used for storage or preparation for burial, cremation or disposal by other means, of bodies of deceased persons.

**NT H103.2 Layout of mortuary**

(a) A mortuary may be integral with the remainder of a building but must be separated physically from all public areas of that building.
(b) Each mortuary at which bodies are prepared for burial, cremation or other disposal must be provided with a body preparation room—
   (i) capable of being isolated from the remainder of the premises; and
   (ii) having a floor area not less than 10 m².

(c) A vehicle reception area or garage must be provided adjacent to and with direct access to the storage room or body preparation room to ensure that the transfer of uncoffined bodies is screened from public view.

(d) Access to toilet and shower facilities from any other part of the mortuary premises must be only by way of an air lock.

**NT H103.3 Construction of body preparation room**

(a) The floor must be—
   (i) of impervious material with a smooth, unbroken surface; and
   (ii) uniformly graded to a floor drain.

(b) All walls and partitions must be of concrete or masonry with a smooth, unbroken finish for ease of cleaning.

(c) All joints between the floor, walls, partitions, ceiling, ventilation grilles, fittings, pipework, windows and light fittings must be sealed with impervious material for ease of cleaning.

(d) All joints between the floor and walls or partitions must be coved for ease of cleaning.

(e) The body preparation room must be provided with at least one washbasin, fitted with elbow or foot-operated taps, and an adequate supply of hot and cold water.

(f) The body preparation room must be provided with refrigerated storage facilities—
   (i) with sufficient capacity for the storage of at least two adult bodies; and
   (ii) capable of maintaining an internal temperature between 1°C and 5°C.

**NT H103.4 Water supply and sewerage**

Each mortuary with a body preparation room must be connected to—

(a) a permanent water supply with a physical discontinuity between the water supply and all equipment, appliances, fittings and areas in the mortuary; and

(b) a water carriage sewerage system.

**SECTION I MAINTENANCE**

**PART I1 EQUIPMENT AND SAFETY INSTALLATIONS**

Delete I1.1 and insert NT I1.1 as follows:

**NT I1.1 Safety Measures**

Safety measures in buildings must be maintained in accordance with the requirements of the following Australian Standards as appropriate:

(a) AS 1851.1 Portable fire extinguishers

(b) AS 1851.2 Fire hose reels
(c) AS 1851.3 Automatic fire sprinkler systems
(d) AS 1851.4 Fire hydrant installations
(e) AS 1851.5 Automatic smoke/heat venting systems
(f) AS 1851.6 Management procedures for maintaining the fire precaution features of air-handling systems
(g) AS 1851.7 Fire-resistant door sets
(h) AS 1851.8 Automatic fire detection and alarm systems
(i) AS 1851.10 Emergency warning and intercommunication systems
(j) AS/NZS 2293.2 Emergency evacuation lighting for buildings, Part 2 Inspection and maintenance
QUEENSLAND

INTRODUCTION

This Appendix contains variations and additions to the Building Code of Australia (BCA) provisions which are considered necessary for the effective application of the Code in Queensland and shall be treated as amendments to the Code.
APPENDIX CONTENTS

APPENDIX QUEENSLAND

Queensland

A  GENERAL PROVISIONS
Qld Specification A1.3 Standards Adopted by Reference

B  STRUCTURE
Qld B1.4 Determination of structural resistance of materials and forms of construction

F  HEALTH AND AMENITY
Qld F1.101 Flashings to narrow spaces
Qld FO5 Objective
Qld FF5.1 Functional Statement
Qld FP5.1 Performance Requirements
Qld F5.0 Deemed-to-Satisfy Provisions
Qld F5.1 Application of Part
Qld F5.2 Weighted sound reduction index: Interpretation
Qld F5.3 Sound insulation of floors between units
Qld F5.4 Sound insulation of walls between units
Qld F5.5 Walls between a bathroom, sanitary compartment, laundry or kitchen and a habitable room in adjoining unit
Qld F5.6 Soil and waste pipes to be separated
Qld-F5.7 Isolation of pumps
Qld F5.8 Walls between a bedroom and kitchen or laundry in a Class 9c building
Qld Specification F5.2 Sound Insulation for Building Elements
Qld Specification F5.5 Impact Sound - Test of Equivalence

QLD PART F101  VERMIN CONTROL
Qld F101.1 Control of vermin

G  ANCILLARY PROVISIONS
Qld Part G101  CERTAIN ATTACHMENTS
Qld G101.1 Prevention of falls from buildings or structures

H  SPECIAL USE BUILDINGS
QLD Part H101  * * * *

QLD Part H102  STABLES
Qld H102.1 Construction of stables

QLD Part H103  KIOSKS
Qld H103.1 Construction of kiosks

QLD Part H104  * * * * *
QLD Part H105  * * * * *
QLD Part H106  * * * * *
QLD Part H107  * * * * *
QLD Part H108  * * * * *
QLD Part H109  * * * * *

QLD Part H110  PRIVATE HEALTH FACILITIES

  Objective Qld H110 O1
  Performance Requirement Qld H110 P1
  Qld H110.0 Application of Part
  Qld H110.1 Deemed-to-Satisfy Provision
SECTION A   GENERAL PROVISIONS

Qld Specification A1.3  STANDARDS ADOPTED BY REFERENCE

Insert in Table 1 of Specification A1.3 additional standards as follows:

Qld Table 1  SCHEDULE OF REFERENCED DOCUMENTS

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Title</th>
<th>BCA clause(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS 2626</td>
<td>1983</td>
<td>Industrial safety belts and harness—Selection, use and maintenance</td>
<td>G101.1</td>
</tr>
</tbody>
</table>

Queensland Forest Service of the Department of Primary Industries Technical Pamphlet No.1 Building Timbers, Properties and Recommendations for their use in Queensland.  | Qld B1.4 |

Queensland Department of Health—Vermin Control Regulations.  | Qld F101.1 |

SECTION B    STRUCTURE

PART B1    STRUCTURAL PROVISIONS

After B1.4(f)(iii) insert Qld B1.4(f)(iv) as follows:

Qld B1.4 Determination of structural resistance of materials and forms of construction

(f) Timber Construction:

(iv) Timber used for structural purposes: a species scheduled for the appropriate use in Schedules A, B or C in Queensland Forest Service of the Department of Primary Industries Technical Pamphlet No. 1—Building Timbers, Properties and Recommendations for their Use in Queensland.

SECTION F    HEALTH AND AMENITY

PART F1    DAMP AND WEATHERPROOFING

Add Qld F1.101 as follows:

Qld F1.101 Flashings to narrow spaces

Spaces between buildings on adjoining sites which are narrower than 600 mm must be sealed off and flashed over to prevent the entrance of weather and vermin.
PART F5    SOUND TRANSMISSION AND INSULATION

Delete Part F5 and insert Qld Part F5 as follows:

OBJECTIVE

Qld FO5

The Objective of this Part is to safeguard occupants from illness or loss of amenity as a result of undue sound being transmitted—

(a) between adjoining sole-occupancy units; and
(b) from common spaces to sole-occupancy units.

Application:
Qld FO5 only applies to a Class 2 or 3 building or a Class 9c aged care building.

FUNCTIONAL STATEMENT

Qld FF5.1

A building element which separates sole-occupancy units, or separates a sole-occupancy unit from a common space within the building, is to be constructed to prevent undue sound transmission.

Application:
Qld FF5.1 only applies to a Class 2 or 3 building or a Class 9c aged care building.

PERFORMANCE REQUIREMENTS

Qld FP5.1

Floors separating sole-occupancy units must provide insulation against the transmission of airborne and impact generated sound sufficient to prevent illness or loss of amenity to the occupants.

Application:
Qld FP5.1 only applies to a Class 2 or 3 building or a Class 9c aged care building.

Qld FP5.2

Walls separating—
(a) sole-occupancy units; or

(b) a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like,

must provide insulation against the transmission of airborne and impact generated sound sufficient to prevent illness or loss of amenity to the occupants.

Application:
Qld FP5.2 only applies to a Class 2 or 3 building.

Qld FP5.3

The required sound insulation of floors or walls must not be compromised by the incorporation or penetration of a pipe or other service element.

Application:
Qld FP5.3 only applies to a Class 2 or 3 building or a Class 9c aged care building.

Qld FP5.4

Walls separating—

(a) sole-occupancy units; or

(b) a sole-occupancy unit from a kitchen, bathroom, sanitary compartment (not being an associated ensuite), laundry, plant room or utilities room,

must provide insulation against the transmission of airborne sound sufficient to prevent illness or loss of amenity to the occupants, and

(c) a sole-occupancy unit from a kitchen or laundry,

must provide insulation against the transmission of impact generated sound sufficient to prevent illness or loss of amenity to the occupants.

Application:
Qld FP5.4 only applies to a Class 9c aged care building.

Qld F5.0 Deemed-to-Satisfy Provisions

Performance Requirements Qld FP5.1 to Qld FP5.4 are satisfied by complying with Qld F5.1 to Qld F5.8.

Qld F5.1 Application of Part

The Deemed-to-Satisfy Provisions of this Part apply to Class 2 and 3 buildings and Class 9c aged care buildings

Qld F5.2 Weighted sound reduction index: Interpretation

A form of construction required to have a certain weighted sound reduction index ($R_w$) must—

(a) have the required value determined under AS/NZS 1276.1, or ISO 717.1; or
(b) comply with Qld Specification F5.2.

Qld F5.3 Sound insulation of floors between units
A floor separating sole-occupancy units must have an $R_w$ not less than 45.

Qld F5.4 Sound insulation of walls between units
A wall must have an $R_w$ not less than 45 if it separates—

(a) sole-occupancy units; or

(b) a sole-occupancy unit not within a Class 9c aged care building from a plant room, lift shaft, stairway, public corridor, hallway or the like.

(c) a sole-occupancy unit in a Class 9c aged care building from a kitchen, bathroom, sanitary compartment (not being an associated ensuite), laundry, plant room or utilities room.

Qld F5.5 Walls between a bathroom, sanitary compartment, laundry or kitchen and a habitable room in adjoining unit

(a) Except for a Class 9c aged care building, a wall separating a bathroom, sanitary compartment, laundry or kitchen in one sole-occupancy unit from a habitable room (other than a kitchen) in an adjoining unit must—

(i) have an $R_w$ of not less than 50; and

(ii) provide a satisfactory level of insulation against impact sound; and

(iii) not incorporate a duct which reduces the $R_w$ of the wall to less than 50.

(b) A wall satisfies (a)(i) and (a)(ii) if it is—

(i) in accordance with Qld Table F5.5; or

(ii) for other than masonry, in 2 or more separate leaves without rigid mechanical connection except at their periphery; or

(iii) identical with a prototype that is no less resistant to the transmission of impact sound when tested in accordance with Qld Specification F5.5 than a wall listed in Qld Table F5.5.

Qld Table F5.5 CONSTRUCTION OF WALLS TO REDUCE IMPACT SOUND

<table>
<thead>
<tr>
<th>Cavity brickwork—</th>
<th>Two leaves of 90 mm brick masonry with—</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>all joints filled solid with mortar; and</td>
</tr>
<tr>
<td>(ii)</td>
<td>an air space not less than 40 mm between the leaves; and</td>
</tr>
<tr>
<td>(iii)</td>
<td>the leaves connected only by ties in accordance with AS 3700.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Single leaf brickwork—</th>
<th>110 mm thick brick masonry with—</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td>each face rendered 13 mm thick; and</td>
</tr>
<tr>
<td>(ii)</td>
<td>50 mm x 12 mm thick timber battens at not more than 610 mm centres fixed to each face but not recessed into the render; and</td>
</tr>
</tbody>
</table>
Qld F5.5

(iii) one layer of 12 mm thick softboard nailed to the battens; and
(iv) 6 mm thick medium density hardboard adhesive-fixed to the softboard.

Concrete blockwork—
190 mm thick concrete block masonry with—
(i) each face of the blocks fitted with 50 mm x 50 mm timber battens, spaced at not more than 610 mm centres, screw-fixed into resilient plugs with rubber inserts; and
(ii) the space between the battens completely filled with mineral or glass wool blanket or batts not less than 50 mm thick; and
(iii) the outer face of the battens finished with plasterboard not less than 10 mm thick or other material with a mass per unit area not less than 7.3 kg/m².

Qld F5.6 Soil and waste pipes to be separated
If a soil or waste pipe, including a pipe that is embedded in or passes through a floor, serves or passes through more than one sole-occupancy unit—
(a) the pipe must be separated from the rooms of any sole-occupancy unit by construction with an $R_w$ not less than—
   (i) 45 if the adjacent room is a habitable room (other than a kitchen); or
   (ii) 30 if the adjacent room is a kitchen or any other room; and
(b) a door or panel providing access to the pipe must not open into any habitable room (other than a kitchen); and
(c) an access door or panel in any other part must be firmly fixed so as to overlap the frame or rebate of the frame by not less than 10 mm, be fitted with a sealing gasket along all edges and constructed of—
   (i) wood, particleboard or blockboard not less than 38 mm thick; or
   (ii) compressed fibre reinforced cement sheeting not less than 9 mm thick; or
   (iii) other suitable material with a mass per unit area not less than 24.4 kg/m².

Qld F5.7 Isolation of pumps
A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating or other pump.

Qld F5.8 Walls between a bedroom and kitchen or laundry in a Class 9c building
In addition to Qld F5.4, a wall separating a sole-occupancy unit in a Class 9c aged care building from a kitchen or laundry must—
(a) for other than masonry, be two or more separate leaves without rigid mechanical connection except at their periphery; or
(b) be identical with a prototype that is no less resistant to the transmission of impact sound when tested in accordance with Qld Specification F5.5 than a wall listed in Table 2 of Qld Specification F5.2.
1. **Scope**

This Specification lists the weighted sound reduction index ($R_w$) for some common forms of construction.

2. **Construction deemed-to-satisfy**

The forms of construction listed in Qld Table 2 are considered to have the $R_w$ stated in that Table if installed as follows:

(a) **Masonry**—Units must be laid with all joints filled solid, including those between the masonry and any adjoining construction.

(b) **Concrete slabs**—Joints between concrete slabs and any adjoining construction must be filled solid.

(c) **Plasterboard**—
   (i) if one layer is *required* under this Specification, it must be screw-fixed to the studs with joints staggered on opposite faces; and
   (ii) if 2 layers are *required*, the first layer must be fixed according to (i) and the second layer must be fixed to the first layer with nails, screws or adhesive so that the joints do not coincide with those of the first layer; and
   (iii) joints between sheets or between sheets and any adjoining construction must be taped and filled solid; and
   (iv) fire-protective grade plasterboard must be the special grade manufactured for use in *fire-resisting construction*.

(d) **Steel studs and perimeter members**—
   (i) the section of steel must be not less than 0.6 mm thick; and
   (ii) studs must be not less than 63 mm in depth unless another depth is listed in the Table; and
   (iii) studs must be fixed to steel top and bottom plates of sufficient depth to permit secure fixing of the plasterboard; and
   (iv) all steel members at the perimeter of the wall must be securely fixed to the adjoining structure and bedded in resilient compound or the joints must be caulked so that there are no voids between the steel members and the wall.
### Deemed-to-Satisfy Provisions

#### Qld Table 2 $R_w$ APPLICABLE TO CONSTRUCTION

<table>
<thead>
<tr>
<th>Construction</th>
<th>$R_w$ (not less than)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WALLS</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Clay brickwork—</strong></td>
<td></td>
</tr>
<tr>
<td>(a) 230 mm thick in one or more leaves and with a mass per unit area of not less than 290 kg/m²</td>
<td>45</td>
</tr>
<tr>
<td>(b) 110 mm thick rendered 13 mm thick on both sides with a mass per unit area of the unrendered wall being not less than 190 kg/m²</td>
<td>45</td>
</tr>
<tr>
<td>(c) 110 mm thick, of semi-dry-pressed bricks and rendered 13 mm on one side, the mass per unit area of the unrendered wall being not less than 215 kg/m²</td>
<td>45</td>
</tr>
<tr>
<td>(d) 110 mm thick, of extruded brick and rendered 13 mm on one side, the mass per unit area of the unrendered wall being not less than 180 kg/m²</td>
<td>45</td>
</tr>
<tr>
<td><strong>Concrete brickwork—</strong></td>
<td>110 mm thick with a mass per unit area of not less than 195 kg/m²</td>
</tr>
<tr>
<td>(a) 190 mm thick with a mass per unit area of not less than 215 kg/m²</td>
<td>45</td>
</tr>
<tr>
<td>(b) 140 mm thick, the wall thickness of the blocks being not less than 44 mm and with—</td>
<td></td>
</tr>
<tr>
<td>(i) 50 mm x 50 mm timber battens spaced at not more than 610 mm centres screw-fixed on one face of the blocks into resilient plugs with rubber inserts between battens and the wall;</td>
<td></td>
</tr>
<tr>
<td>(ii) the face of the battens clad with 13 mm thick standard plasterboard; and</td>
<td></td>
</tr>
<tr>
<td>(iii) a mass per unit area of the whole system of not less than 220 kg/m²</td>
<td>45</td>
</tr>
<tr>
<td><strong>Concrete—</strong></td>
<td></td>
</tr>
<tr>
<td>(a) In-situ concrete— 125 mm thick and with a density of not less than 2200 kg/m³</td>
<td>45</td>
</tr>
<tr>
<td>(b) In-situ concrete— 100 mm thick and with a density of not less than 2500 kg/m³</td>
<td>45</td>
</tr>
<tr>
<td>(c) Precast concrete— 100 mm thick and without joints</td>
<td>45</td>
</tr>
<tr>
<td><strong>Steel stud walling—</strong></td>
<td></td>
</tr>
<tr>
<td>(a) with 2 layers of 16 mm thick fire-protective grade plasterboard fixed to each face</td>
<td>45</td>
</tr>
</tbody>
</table>
### Deemed-to-Satisfy Provisions

#### Construction

| Construction | \( R_w \) \\n|-------------|-----------|
| (b) with— | (not less than) |
| (i) 1 layer of 13 mm thick fire-protective grade plasterboard fixed to one face, and before fixing, 50 mm thick mineral or glass wool blanket or batts stapled to the back of each sheet so that the sheet is completely covered; and | 45 |
| (ii) 2 layers of 13 mm thick fire-protective grade plasterboard fixed to the other face | \
| (c) with— | 45 |
| (i) 1 layer of 16 mm fire-protective grade plasterboard fixed to one face; and | \
| (ii) 50 mm thick mineral or glass wool blanket or batts wedged firmly between the studs; and | \
| (iii) 2 layers of fire-protective grade plasterboard fixed to the other face, the inner layer being 16 mm thick and the outer layer being 13 mm | \
| (d) with 2 layers of 13 mm plasterboard on both sides of 75 mm studs | 45 |

#### FLOORS—

##### Concrete—

<table>
<thead>
<tr>
<th>Concrete</th>
<th>( R_w )</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) In-situ concrete slab— 125 mm thick and with a density of not less than 2200 kg/m³</td>
<td>45</td>
</tr>
<tr>
<td>(b) In-situ concrete slab— 100 mm thick and with a density of not less than 2500 kg/m³</td>
<td>45</td>
</tr>
<tr>
<td>(c) Pre-cast concrete slab— 100 mm thick and without joints</td>
<td>45</td>
</tr>
</tbody>
</table>

##### Timber—comprising—

<table>
<thead>
<tr>
<th>Timber</th>
<th>( R_w )</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) timber joists not less than 175 mm x 50 mm; and</td>
<td>45</td>
</tr>
</tbody>
</table>
| (b) 75 mm thick mineral or glass wool blanket or batts cut to fit tightly between joists and laid on 10 mm thick plasterboard fixed to underside of joists; and | \
| (c) 25 mm thick mineral or glass wool blanket or batts laid over entire floor, including tops of joists before flooring is laid; and | \
| (d) tongued-and-grooved boards not less than 19 mm thick, secured to 75 mm x 50 mm battens; and | \
| (e) the assembled flooring laid over the joists, but not fixed to them, with the battens lying between the joists | \

#### DUCTS OR OTHER CONSTRUCTION SEPARATING SOIL AND WASTE PIPES FROM UNITS

<table>
<thead>
<tr>
<th>Masonry</th>
<th>( R_w )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masonry— not less than 90 mm thick</td>
<td>30</td>
</tr>
</tbody>
</table>
## Deemed-to-Satisfy Provisions

<table>
<thead>
<tr>
<th>Construction</th>
<th>$R_w$ (not less than)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plasterboard— 2 layers of plasterboard—</td>
<td></td>
</tr>
<tr>
<td>(a) each 10 mm thick, fixed to timber studs not less than 75 mm x 50 mm and spaced at not more than 400 mm centres</td>
<td>30</td>
</tr>
<tr>
<td>(b) each 13 mm thick, one on each side of steel studs not less than 50 mm deep and spaced at not more than 400 mm centres</td>
<td>30</td>
</tr>
</tbody>
</table>
1. **Scope**

This Specification describes a method of test to determine the comparative resistance of walls to the transmission of impact sound.

2. **Construction to be tested**

(a) The test is conducted on a specimen of prototype wall construction and on a specimen of one or other of the constructions specified in Qld Table F5.5.

(b) The testing of a construction specified in Qld Table F5.5 need not be repeated for subsequent comparisons provided complete records of the results, the test equipment and the technique of testing are kept so that identical equipment can be employed and an identical technique can be adopted in the testing of specimens of prototype wall construction.

3. **Method**

(a) The wall constructions to be compared must be tested in accordance with AS 1191.

(b) A horizontal steel platform 510 mm x 460 mm x 10 mm thick must be placed with one long edge in continuous and direct contact with the wall to be tested on the side of the wall on which the impact sound is to be generated.

(c) A tapping machine complying with ISO 140/6—1998 (E) must be mounted centrally on the steel platform.

(d) The sound transmission through the wall must be determined in accordance with AS 1191 except that the tapping machine as mounted on the steel platform must be used as the source of sound.

(e) The impact sound pressure levels measured in the receiving room must be converted into normalised levels using a reference equivalent absorption area of 10 m².

---

**QLD PART F101 VERMIN CONTROL**

Add Part F101 as follows:

**Qld F101.1 Control of vermin**

Buildings must be constructed to prevent the entry of vermin in accordance with Part 17 (Vermin Control) of the Health Regulation 1996.
SECTION G    ANCILLARY PROVISIONS
Add Qld Part G101 as follows:

QLD PART G101    CERTAIN ATTACHMENTS

Qld G101.1 Prevention of falls from buildings or structures
Where a person is exposed to the hazard of falling from a building or structure while cleaning or maintenance work is being carried out—
(a) a work system designed to prevent such falls must be used; and
(b) where safety belt anchorage points are used they must be positioned on the building or structure so that a lifeline or safety harness may be attached before proceeding to a point where it is possible to fall; and
(c) anchorage points for the attachment of safety harnesses must comply with AS 2626.

SECTION H    SPECIAL USE BUILDINGS

QLD PART H101    * * * * *
This clause has deliberately been left blank.

Add Qld Part H102 as follows:

QLD PART H102    STABLES

Qld H102.1 Construction of stables
A building used for the keeping of animals and enclosed on 3 or more sides must have—
(a) a suitably drained stable floor constructed of concrete, masonry or the like which is impervious to moisture; and
(b) every room, other than a store room, constructed over or adjoining the stable, separated from the stable by walls or floor or both, as the case may be, of concrete, masonry or the like which is impervious to moisture; and
(c) a suitable manure container constructed of impervious material and fitted with covers provided adjacent to the stable.

Add Qld Part H103 as follows:
QLD PART H103  KIOSKS

Qld H103.1 Construction of kiosks

(a) For the purposes of this clause, kiosk means a stall or a compartment enclosed by walls, which the public does not enter, and which is used for the sale or distribution of goods or services.

(b) A kiosk must not be erected unless—
   (i) it is situated at least 1.5 m from a road or, if it is constructed as a compartment enclosed by walls, it may be situated at a lesser suitable distance;
   (ii) it is in an arcade or, if it is not in an arcade, it must have minimum ceiling height of 2400 mm;
   (iii) every internal dimension is 1 m or more;
   (iv) it has a *floor area* of at least 1.5 m² if it is to be occupied by one person, or of at least 2 m² per person if it is to be occupied by 2 or more persons; and
   (v) it has ventilation in accordance with F4.5.

QLD PART H104  * * * * *

This clause has deliberately been left blank.

QLD PART H105  * * * * *

This clause has deliberately been left blank.

QLD PART H106  * * * * *

This clause has deliberately been left blank.

QLD PART-H107  * * * * *

This clause has deliberately been left blank.
QLD PART H108  *** ***

This clause has deliberately been left blank.

QLD PART H109  *** ***

This clause has deliberately been left blank.

Add Qld Part H110 as follows:

QLD PART H110  PRIVATE HEALTH FACILITIES

OBJECTIVE

Qld H110 O1

The Objective of this Part is to facilitate the safety and care of patients, and the safety of staff and the public in private health facilities.

Application

Qld H110 O1 is applicable to private hospitals and day hospitals required to be licenced under the Queensland Private Health Facilities Act 1999.

PERFORMANCE REQUIREMENT

Qld H110 P1

A private health facilities building is to be constructed and provided with facilities to enable the safety and care of patients, and the safety of staff and the public in accordance with the performance criteria contained in the Queensland Development Code, Part A7.

Application

Qld H110 P1 is applicable to private hospitals and day hospitals required to be licenced under the Queensland Private Health Facilities Act 1999.
DEEMED-TO-SATISFY PROVISIONS

Qld H110.0 Application of Part

This Part is applicable to private hospitals and day hospitals required to be licenced under the Queensland Private Health Facilities Act 1999.

Qld H110.1 Deemed-to-Satisfy Provision

*Performance Requirement* Qld H110 P1 is satisfied by complying with the acceptable solutions of the Queensland Development Code, Part A7.

Explanatory Information

*Alternative Solutions* to the *Deemed-to-Satisfy Provisions* contained in Qld H110.1 may be approved by the chief health officer of the Queensland Department of Health as a concurrence agency under the Integrated Planning Act 1997.
SOUTH AUSTRALIA

INTRODUCTION

This Appendix contains variations and additions to the BCA provisions which are considered necessary for the effective application of the Code in South Australia.

These variations and additions are to be treated as amendments to the BCA and apply to the construction or alteration of all buildings requiring approval under the Development Act and Regulations 1993.
APPENDIX SOUTH AUSTRALIA

INTRODUCTION

A GENERAL PROVISIONS
SA Specification A1.3 Standards Adopted by Reference

D ACCESS AND EGRESS
SA DP1 - SA DP7 Performance Requirements
SA D3.1 Application of Part
SA Table D3.2 Requirements for Access for People with Disabilities
SA D3.4 Concessions

E SERVICES AND EQUIPMENT
SA E1.3 Fire hydrants
SA E1.4 * * * * *

F HEALTH AND AMENITY
SA FP1.5, SA FP 1.6 and SA FP1.8 Performance Requirements
SA F1.0 Deemed-to-Satisfy Provisions
SA F1.7 Water proofing of wet areas in buildings
SA F1.9 Damp-proofing
SA F1.10 Damp-proofing of floors on the ground
SA F1.11 Provision of floor wastes
SA F2.3 Facilities for Class 3 to 9 buildings
SA Table F2.3 Sanitary Facilities in Class 3, 5, 6, 7, 8 and 9 buildings
SA F2.4 Facilities for people with disabilities
SA Table F2.4 Sanitary Facilities for people with disabilities

G ANCILLARY PROVISIONS
SA GF1.4 Functional Statement
SA GP1.5 Performance Requirement
SA G1.0 Deemed-to-Satisfy Provisions
SA G1.1 Swimming pools
SA G5.3 Additional Protection

SA Part G7 ACCESS FOR MAINTENANCE
SA GO7 Objective
SA GF7.1 and SA GF7.2 Functional Statements
SA GP7.1 and SA GP7.2 Performance Requirements
SA G7.0 Deemed-to-Satisfy Provisions
SA G7.1 Application of Part
SA G7.2 Access for window cleaning
SA G7.3 Access for inspection and maintenance between buildings
SA Part G8 MISCELLANEOUS PROVISIONS

SA GO8 Objective
SA GF8.1 Functional Statement
SA GP8.1 Performance Requirement
SA G8.0 Deemed-to-Satisfy Provisions
SA G8.1 Application of Part
SA G8.2 Attachments to buildings

H   SPECIAL USE BUILDINGS

SA Part H2 BULK GRAIN STORAGE FACILITIES

SA H3.1 Application of Part
SA H3.2 Concessions and additions for farm buildings

SA Part H3 FARM BUILDINGS

SA H3.1 Application of Part
SA H3.2 Concessions and additions for farm buildings

I   MAINTENANCE

SA I1.1 Safety installations
SA I1.2 Mechanical ventilation and hot water, warm water and cooling water systems
SECTION A    GENERAL PROVISIONS

PART A1    INTERPRETATION

Insert in Table 1 of Specification A1.3 additional standards as follows:

SA Specification A1.3 STANDARDS ADOPTED BY REFERENCE

SA Table 1 SCHEDULE OF REFERENCED DOCUMENTS

<table>
<thead>
<tr>
<th>No</th>
<th>Date</th>
<th>Title</th>
<th>BCA clause(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS/NZS 1891</td>
<td></td>
<td>Industrial fall-arrest systems and devices</td>
<td></td>
</tr>
<tr>
<td>Part 4</td>
<td>2000</td>
<td>Selection, use and maintenance</td>
<td>SA G7.2</td>
</tr>
<tr>
<td>AS 1926</td>
<td></td>
<td>Swimming pool safety</td>
<td></td>
</tr>
<tr>
<td>Part 3</td>
<td>2003</td>
<td>Water reticulation systems</td>
<td>SA G1.1(c)</td>
</tr>
<tr>
<td>Minister's Specifications</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA F1.7</td>
<td>2004</td>
<td>Water proofing of wet areas in buildings- Additional requirements</td>
<td>SA F1.7, SA F1.11</td>
</tr>
<tr>
<td>SA H2.2</td>
<td>1997</td>
<td>Construction of bulk grain storage facilities</td>
<td>SA H2.2</td>
</tr>
<tr>
<td>SA H3.2</td>
<td>2004</td>
<td>Concessions and additional requirements for farm buildings</td>
<td>SA H3.2</td>
</tr>
<tr>
<td>SA 76</td>
<td>2000</td>
<td>Maintenance and testing of safety installations. Schedule of essential safety provisions</td>
<td>SA I1.1, SA I1.2</td>
</tr>
</tbody>
</table>

SECTION D    ACCESS AND EGRESS

PART D1    PROVISION FOR ESCAPE

PERFORMANCE REQUIREMENT

SA DP1

Substitute application of Performance Requirement DP1 as follows:

Application:

DP1(b), with respect to people with disabilities, only requires special provisions in—

(a) A Class 3, 5, 6, 8 or 9 building; or

(b) a Class 7 building other than a Class 7a carpark associated with a Class 2 building; or
(c) a Class 10a building other than a Class 10a building associated with a Class 1 or 2 building or Class 4 part of a building; or

(d) certain Class 2 buildings in developments consisting of 20 or more residential sole-occupancy units.

SA DP7

Substitute application of Performance Requirement DP7 as follows:

Application:

DP7 only applies to—

(a) A Class 3, 5, 6, 8 or 9 building; or

(b) a Class 7 building other than a Class 7a carpark associated with a Class 2 building; or

(c) a Class 10a building other than a Class 10a building associated with a Class 1 or 2 building or Class 4 part of a building; or

(d) certain Class 2 buildings in developments consisting of 20 or more residential sole-occupancy units.

PART D3 ACCESS FOR PEOPLE WITH DISABILITIES

Delete D3.1 and substitute:

SA D3.1 Application of Part

This Part applies to all Class 3, 5, 6, 7, 8, 9 and 10a buildings and to certain Class 2 buildings where expressly referred to in SA Table D3.2.

Insert in Table D3.2 the following:

SA Table D3.2 Requirements for Access for People with Disabilities

<table>
<thead>
<tr>
<th>Class of building</th>
<th>Provision for access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 2</td>
<td>To and within one residential sole-occupancy unit or 5% of the total number of residential sole-occupancy units provided, whichever is the greater</td>
</tr>
<tr>
<td>In developments consisting of 20 or more residential sole-occupancy units</td>
<td></td>
</tr>
</tbody>
</table>

Add SA D3.4(e) as follows:

SA D3.4 Concessions

(e) the whole of a Class 5, 6, 7 and 8 building if one or more storeys in the building is provided with access facilities as specified in Table D3.2, and parts of those storeys are approved for the purpose of a person with disabilities having business in that building.
SECTION E SERVICES AND EQUIPMENT

PART E1 FIRE FIGHTING EQUIPMENT

Delete E1.3(b)(iii)(C) and insert SA E1.3(b)(iii)(C) as follows:

SA E1.3 Fire hydrants

(b)

(iii)

(C) if connected to a reticulated water supply and installed in a building not greater than 25 m in effective height, one pump driven by—

(aa) a compression ignition engine; or

(bb) an electric motor supplied from an emergency power generator; or

(cc) an electric motor connected to two completely independent power sources through an automatic change-over facility,

except that Class 2, 3, 5 and 9 buildings of not more than 2 000 m² fire compartments and up to 12.5 m effective height may be served by a booster for use by the attending Fire Authorities; and

SA E1.4 deleted by Amdt No. 10

SA E1.4 * * * * *

SECTION F HEALTH AND AMENITY

PART F1 DAMP AND WEATHERPROOFING

Delete FP1.5 and add SA FP1.5 as follows:

**PERFORMANCE REQUIREMENTS**

SA FP1.5

(a) Moisture from the ground must be prevented from causing—

(i) undue dampness or deterioration of building elements; and

(ii) unhealthy or dangerous conditions, or loss of amenity for occupants.

(b) Barriers installed to prevent transfer of moisture from the ground must have—

(i) high resistance to moisture penetration; and

(ii) high resistance to damage during construction; and

(iii) high resistance to degradation by dissolved salts.
Delete FP1.6 add SA FP1.6 as follows:

**SA FP1.6**

Accidental water overflow from a bathroom, laundry facility or the like must be prevented from penetrating to adjoining rooms or spaces.

After FP1.7 add SA FP1.8 as follows:

**SA FP1.8**

In laundries, bathrooms or rooms containing shower facilities the floors must be installed in a manner that will prevent accumulation of surface water which could create unhealthy or hazardous conditions.

Delete F1.0(b) and add SA F1.0(b) as follows:

**SA F1.0 Deemed-to-Satisfy Provisions**

(b) With the exception of (a), *Performance Requirements* FP1.1 to FP1.4, SA FP1.5, SA FP1.6, FP1.7 and SA FP1.8 are satisfied by complying with F1.1 to F1.6, SA F1.7, SA F1.9 to SA F1.11, F1.12 and F1.13.

Delete F1.7 and insert SA F1.7 as follows:

**SA F1.7 Water proofing of wet areas in buildings**

Water-proofing of wet areas in buildings must comply with AS 3740 and the additional requirements of Minister’s Specification SA F1.7.

Delete F1.9(b) and insert SA F1.9(b) as follows:

**SA F1.9 Damp-proofing**

(b) Damp-proof courses must exhibit long term resistance to degradation by dissolved salts in groundwater and consist of—

(i) embossed black polyethylene film meeting the requirements of clause 7.6 of AS/NZS 2904; or

(ii) polyethylene coated aluminium meeting the requirements of clause 7.4 of AS/NZS 2904; or

(iii) bitumen impregnated materials of not less than 2.5 mm thickness, meeting the requirements of clause 7.5 of AS/NZS 2904, when used in walls not higher than 7.8 m above the level of the damp-proof course.

Delete F1.10 and insert SA F1.10 as follows:

**SA F1.10 Damp-proofing of floors on the ground**

(a) If a floor of a room is laid on the ground or on fill, a damp-proofing membrane complying with Section 5.3.3 of AS 2870 must be installed.

(b) A damp-proofing membrane need not be provided if—

(i) weatherproofing is not *required*; or
(ii) the floor is the base of a stair, lift or similar shaft which is adequately drained by gravitation or mechanical means.

Delete F1.11 and insert SA F1.11 as follows:

**SA F1.11 Provision of floor wastes**

Grading and draining of wet area floors must comply with Minister’s Specification SA F1.7.

**PART F2 SANITARY AND OTHER FACILITIES**

Delete F2.3(a) and insert SA F2.3(a) as follows:

**SA F2.3 Facilities for Class 3 to 9 buildings**

(a) Sanitary facilities must be provided—

(i) for Class 3, 5, 6, 7, 8 and 9 buildings in accordance with Table F2.3, with the exception of Class 9b schools; and

(ii) for Class 9b schools in accordance with SA Table F2.3.

Vary Table F2.3 by deleting section 9b-Schools and replacing it with the following:

**SA Table F2.3 Sanitary Facilities in Class 3,5,6,7,8 and 9 Buildings**

<table>
<thead>
<tr>
<th>Class of Building</th>
<th>User</th>
<th>Max Number Served by</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Closet Fixture(s)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>9b—Schools, not being primary or secondary schools</td>
<td>Employees</td>
<td>Males</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Females</td>
</tr>
<tr>
<td></td>
<td>Students</td>
<td>Males</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Females</td>
</tr>
<tr>
<td>9b—schools being primary and secondary schools</td>
<td>Employees</td>
<td>Males</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Females</td>
</tr>
<tr>
<td></td>
<td>Students</td>
<td>Males</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Females</td>
</tr>
</tbody>
</table>
SA Table F2.3

<table>
<thead>
<tr>
<th>Class of Building</th>
<th>Max Number Served by</th>
<th>User</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Closet Fixture(s)</td>
<td>Urinal(s)</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2 Each Extra-up to 100</td>
</tr>
</tbody>
</table>

Add the following notes to Table F2.3 and SA Table F2.3:

**Additional NOTES to Table F2.3 and SA Table F2.3:**

A unisex facility shall comprise of one closet pan, one washbasin and means of disposal of sanitary towels.

Buildings of more than one storey—in a building of more than one storey—

(a) where more than 50 persons are employed in a single storey, sanitary facilities must be provided on that storey.

(b) sanitary facilities must not be more than one storey away from any work area.

Other facilities—Occupational Health, Safety & Welfare Regulations require that showers and changing facilities be provided in some work places, depending on the nature of the work and working conditions of the employees.

Delete F2.4(a)(i) and insert SA F2.4(a)(i) as follows:

**SA F2.4 Facilities for people with disabilities**

(a) Sanitary facilities must be provided in accordance with **SA Table 2.4** for—

(i) every Class 2, 3, 5, 6, 7, 8 and 9 building that is required by the Deemed-to-Satisfy Provisions of **Part D3** to be accessible to people with disabilities and may be calculated as part of the number of facilities required by **Table F2.3**; and

Delete Section of **Table F2.4** referring to Class 3 buildings and insert **SA Table F2.4** as follows:

**SA Table F2.4 Sanitary Facilities for people with disabilities**

<table>
<thead>
<tr>
<th>Class of building</th>
<th>Minimum facility for use by people with disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Classes 2 and 3</strong>—In every sole-occupancy unit to which access for people with disabilities is required</td>
<td>(a) One closet pan and washbasin; and (b) one shower.</td>
</tr>
</tbody>
</table>
SECTION G    ANCILLARY PROVISIONS

PART G1    MINOR STRUCTURES AND COMPONENTS

After GF1.3 add SA GF1.4 as follows:

FUNCTIONAL STATEMENT

SA GF1.4

A swimming pool must not allow a young child to be trapped or injured due to suction by pump intakes.

After GP1.4 add SA GP1.5 as follows:

PERFORMANCE REQUIREMENT

SA GP1.5

Pump intakes to swimming pools must incorporate safety protection measures to prevent injury to a young child due to entrapment by suction.

Delete G1.0(b) and insert SA G1.0(b) as follows:

SA G1.0 Deemed-to-Satisfy Provisions

(b) Performance Requirements GP1.2 to GP1.4 and SA GP1.5 are satisfied by complying with G1.1 and G1.2.

After G1.1(b) insert SA G1.1(c) as follows:

SA G1.1 Swimming pools

(c) Pump Intakes: A swimming pool water recirculation and filtration system must comply with AS 1926.3.

(d) Warning Notice Wherever a manual shut-off value is fitted to a secondary outlet from a swimming pool, a permanent label must be fixed to the valve.

(e) a label referred to in (d) must be in capital letters not less than 2.5 mm high in a colour contrasting with the background, and printing that is resistant to ultra-violet light, water and pool chemicals, and state:

WARNING
RE-OPEN THIS VALVE IMMEDIATELY AFTER USING A VACUUM CLEANER
THE POOL MUST NOT BE USED WHILE A VACUUM CLEANER IS IN USE
PART G5 CONSTRUCTION IN BUSHFIRE PRONE AREAS

Add SA G5.3 as follows:

SA G5.3 Additional Protection

Additional bushfire protection shall be provided in medium, high and extreme attack categories (as determined from AS 3959) as follows:

(a) A framed floor, the underside of which is greater than 600 mm above ground level shall have the sub-floor space completely protected by—
   (i) a wall complying with AS 3959; or
   (ii) a non-combustible sheet material; or
   (iii) a vertical non-combustible sheet material that extends around the perimeter of the floor from the underside of the lowest framing member to ground level; and
   (iv) if fibre reinforced sheets are used as a non-combustible sheet material they must have a minimum thickness of 6 mm.

(b) Wall cladding of non-combustible material or fire-retardant timber shall be provided within 400 mm of finished ground level, paving level or any balcony or deck with solid flooring.

(c) Penetrations through the roof cladding of vent pipes and the like shall be sealed with a non-combustible collar or fire-retardant sealant.

(d) Where a garage, carport, verandah or similar structure is attached to or shares a common roof space with a building required to comply with AS 3959, it must also comply with AS 3959.

Add SA Part G7 as follows:

SA PART G7 ACCESS FOR MAINTENANCE

OBJECTIVE

SA GO7

The Objectives of this Part are—

(a) to safeguard people from injury while cleaning windows; and

(b) to safeguard people from injury or illness resulting from the creation of hazardous spaces between buildings.

FUNCTIONAL STATEMENTS

SA GF7.1

A building is to provide people with safe conditions for carrying out window cleaning operations.
SA GF7.2
The space between buildings must not allow hazardous conditions to arise due to accumulation of rubbish that cannot readily be removed.

PERFORMANCE REQUIREMENTS

SA GP7.1
Where any part of a window in a building is more than 5.5 m above ground level, provision must be made for safe access to the external surface of the window for minor maintenance and cleaning.

SA GP7.2
The space between buildings must be sufficient to allow access for inspection and maintenance, to avoid hazardous conditions arising due to accumulation of rubbish that could—

(a) bridge termite barriers; or
(b) harbour vermin; or
(c) create a fire hazard.

SA G7.0 Deemed-to-Satisfy Provisions
Performance Requirements SA GP7.1 and SA GP7.2 are satisfied by complying with SA G7.1 to SA G7.3.

SA G7.1 Application of Part
The following provisions apply to Class 2 to 9 buildings.

SA G7.2 Access for window cleaning
Where any part of a window in a building is more than 5.5 m above ground level, access to the external surface of the window for minor maintenance and cleaning must be provided. Any of the following methods are acceptable—

(a) by means of a moveable gantry; or
(b) by means of reversible pivoting sashes, each of which has catches that secure the sash in either the normal or reversed position and give visual indication that the window is secure, provided that where a window sill is less than 900 mm above floor level, safety anchorages are provided; or
(c) by means of safety harness, having all anchorages—
   (i) designed and installed in accordance with AS/NZS 1891.4; and
   (ii) constructed of approved corrosion resistant metal; or
(d) by means of opening sashes, in which case the maximum reach to the farthest part of the window must not exceed 500 mm upwards or 1 m sideways or downwards and provided
that where the window sill is less than 900 mm above floor level, safety anchorages are provided.

SA G7.3 Access for inspection and maintenance between buildings

Every part of an external wall of a building must be not less than 600 mm from—

(a) the external wall of any other building on the same allotment, unless the two buildings are abutting; or

(b) any boundary of the allotment, unless that wall is on or abutting that boundary, unless the space between external columns is not infilled.

Add SA Part G8 as follows:

SA PART G8 MISCELLANEOUS PROVISIONS

OBJECTIVE

SA GO8

The Objective of this Part is to safeguard people from injury resulting from hazardous conditions being created by building attachments.

FUNCTIONAL STATEMENT

SA GF8.1

A building is to be provided with safeguards to prevent a building attachment—

(a) collapsing; and

(b) creating hazardous conditions by its water run-off; and

(c) affecting adjacent road safety conditions by its projection; and

(d) creating a fire hazard above a street.

PERFORMANCE REQUIREMENT

SA GP8.1

An attachment to a building must incorporate features that will—

(a) protect it against corrosion; and

(b) collect and discharge its rainwater run-off safely; and
(c) prevent its projection affecting adjacent road safety conditions or pedestrian traffic; and
(d) provide resistance to the spread of fire if it overhangs a street boundary,
to a degree necessary to avoid creating hazardous conditions that may cause injury to people passing below or driving past.

**SA G8.0 Deemed-to-Satisfy Provisions**

*Performance Requirement* SA GP8.1 is satisfied by complying with SA G8.1 and SA G8.2.

**SA G8.1 Application of Part**
The following provisions apply to Class 2 to 9 buildings.

**SA G8.2 Attachments to buildings**

(a) An attachment to a building that is in the nature of a balcony or awning, bridge, gangway, hoarding or trade sign, sky sign, mast, flagpole, tower, aerial or antenna, lantern, cathead, crane, chimney, flue or duct, or an installation for cleaning and maintenance access must—
   (i) have all metal parts of corrosion resistant metal, or other metal suitably protected;
   (ii) not overhang any street boundary at a height less than 2.5 m above the footpath, or 4 m above the roadway; and
   (iii) be provided with drainage to prevent rainwater or condensate falling onto or running across the footpath, unless either it is a retractable awning in the nature of a sun blind, or unless the total catchment area for run-off is less than 1.5 m².

(b) A balcony or awning that overhangs a street boundary—
   (i) must not extend closer than 450 mm to the kerb of the roadway; and
   (ii) must be constructed of *non-combustible* or fire-retardant materials throughout, except that timber battens may be used to support the soffit lining.

**SECTION H SPECIAL USE BUILDINGS**

**SA PART H2 BULK GRAIN STORAGE FACILITIES**

**SA H2.1 Application of Part**
This Part applies to certain Class 7 buildings erected for commercial bulk handing and storage of granular materials such as grain, ore, or the like, where only a small number of occupants are present at one time.

**SA H2.2 Concessions for bulk grain storage facilities**
Compliance with Minister's Specification SA H2.2—“Construction of bulk grain storage facilities” is deemed-to-satisfy the *Performance Requirements* of Sections C, D, E and F, as applicable, for cell type silos and large grain storage and handling sheds.
SA PART H3  FARM BUILDINGS

SA H3.1 Application of Part

This Part applies to Class 7 or 8 buildings used for certain farming purposes.

SA H3.2 Concessions and additions for farm buildings

Class 7 and 8 farm buildings complying with Minister’s Specification SA H3.2 – ‘Concessions and additional requirements for farm buildings’ and all other relevant BCA Deemed-to-Satisfy Provisions not varied by the Minister’s Specification are deemed to satisfy the Performance Requirements of the BCA.

SECTION I  MAINTENANCE

PART I1  EQUIPMENT AND SAFETY INSTALLATIONS

Delete I1.1 and insert SA I1.1 as follows:

SA I1.1 Safety installations

Safety measures must—

(a) perform to a standard not less than the standard they were originally required to achieve; and

(b) for those safety measures listed in Tables I1.1 to I1.13, perform to a standard not less than that determined using the corresponding BCA provisions as required at installation; and

(c) safety measures identified as ‘essential safety provisions’ must be maintained in accordance with regulation 76 of the Development Regulations 1993; and

(d) Compliance with Minister’s Specification SA 76 is deemed-to-satisfy (a), (b) and (c).

Delete I1.2 and insert SA I1.2 as follows:

SA I1.2 Mechanical ventilation and hot water, warm water and cooling water systems

Mechanical ventilation and hot water, warm water and cooling water systems in a building other than a system only serving a single sole-occupancy unit in a Class 2 or 3 building or Class 4 part must be maintained in accordance with item 3.6(f) of Minister’s Specification SA 76.
INTRODUCTION

The Tasmania BCA Appendix includes variations from the requirements of the 2004 edition of the Building Code of Australia (BCA) and additional requirements resulting from the consolidation in Tasmania of all building-related regulations into the BCA.

The variations from the requirements of the BCA apply to the construction or alteration of all buildings in Tasmania and the extra requirements apply to all workplaces and special-use buildings.
APPENDIX TASMANIA

Tasmania

A GENERAL PROVISIONS
Tas A1.1 Definitions
Tas Specification A1.3 Standards Adopted By Reference

E SERVICES AND EQUIPMENT
Tas EO1 Objectives
Tas EF1.2 Functional Statements
Tas EP1.7 Performance Requirements
Tas E1.0 Deemed-to-Satisfy Provisions
Tas E1.101 Fire detection and alarm system

F HEALTH AND AMENITY
Tas F2.101 Non-flushed Urinals
Tas F2.102 Installation of Closet Fixtures
Tas F4.101 Fixed Natural Ventilation

G ANCILLARY PROVISIONS
Tas GO1 Objectives
Tas GF1.4 to GF1.6 Functional Statements
Tas GP1.5 to GP1.9 Performance Requirements
Tas G1.0 Deemed-to-Satisfy Provisions
Tas G1.1 Swimming Pools

TAS PART G101 PROJECTIONS OVER WAYS
Tas G101.1 Construction and location of projections over ways
Tas G101.2 Protection of Ways

H SPECIAL USE BUILDINGS
Objectives

TAS PART H101 WORKPLACES
Tas H101.1 Application of Part
Tas H101.2 Floor area
Tas H101.3 Floor surfaces
Tas H101.4 Floor drainage
Tas H101.5 Floor covering
Tas H101.6 Overhead clearance
Tas H101.7 Lighting
Tas H101.8 Ventilation
Tas H101.9 Toilet facilities
Tas H101.10 Hand washing facilities
Tas H101.11 Shower facilities
Tas H101.12 Change rooms
Tas H101.13 Dining rooms
Tas H101.14 Rest rooms
Tas H101.15 First aid rooms and health centres
Tas H101.16 Doors

TAS PART H102 FOOD PREMISES
Tas H102 O1 Objective
Tas H102 F1 Functional Statement
Tas H102 P1 to H102 P12 Performance Requirements
Tas H102.0 Application of Part
Tas H102.1 Deemed-to-Satisfy Provisions
Tas H102.2 General Requirements
Tas H102.3 Pests and contaminants
Tas H102.4 Drains and Pipes
Tas H102.5 Offensive material and trade waste
Tas H102.6 Ventilation
Tas H102.7 Lighting
Tas H102.8 Floors, walls and ceilings
Tas H102.9 Separation of work place
Tas H102.10 Washbasins
Tas H102.11 Sinks
Tas H102.12 Installation of equipment and fittings
Tas H102.13 Storage of materials and equipment
Tas H102.14 Food store
Tas H102.15 Meat Premises
Tas H102.16 Dairy produce
Tas H102.17 Refrigerated and cooling chambers

TAS PART H103 DINING ROOMS AND BAR ROOMS
Tas H103.1 Application of Part
Tas H103.2 Sanitary facilities
Tas H103.3 Separation from other areas

TAS PART H104 BOTTLE SHOPS AT LICENSED PREMISES
Tas H104.1 *

TAS PART H105 ACCOMMODATION FACILITIES
Tas H105.1 Application of Part
Tas H105.2 Definitions
Tas H105.3 Floor area of bedrooms and dormitories
Tas H105.4 General Requirements for bedrooms and dormitories
Tas H105.5 Eating areas
Tas H105.6 Cooking areas
Tas H105.7 Communal common rooms and dining rooms
Tas H105.8 Sanitary facilities
Tas H105.9 Communal sanitary facilities
Tas H105.10 General requirements for communal bathing and toilet facilities
Tas H105.11 Location of communal facilities
Tas H105.12 Doors and windows on communal facilities
Tas H105.13 Laundry facilities
Tas H105.14 Insect proofing
Tas H105.15 Doors on accommodation facilities
Tas H105.16 Lighting
Tas H105.17 Caravan Parks
Tas H105.18 Dump points in caravan parks
Tas H105.19 Unregisterable relocatable dwellings

TAS PART H106 MEAT PREMISES
Tas H106.1 Application of Part
Tas H106.2 Premises Processing Meat

TAS PART H107 FARM DAIRY PREMISES
Tas H107.1 Application of this Part
Tas H107.2 Milking Sheds and Holding Yards
Tas H107.3 Milk Receiving Area and Milk Storage Room
Tas H107.4 Water supply

TAS PART H108 PHARMACIES
Tas H108.1 Application of Part
Tas H108.2 Definition
Tas H108.3 Pharmacy premises
Tas H108.4 Dispensary
Tas H108.5 Security of dispensary

TAS PART H109 HOSPITALS AND NURSING HOMES
Tas H109.1 Application of Part
Tas H109.2 Floor area of wards and bedrooms
Tas H109.3 Floor and walls
Tas H109.4 Grab rails and handrails
Tas H109.5 Insect proofing
Tas H109.6 Water temperature

TAS PART H110 PREMISES USED FOR ACTIVITIES INVOLVING SKIN PENETRATION
Tas H110.1 Application of Part
Tas H110.2 Sanitary facilities
Tas H110.3 Washbasins

TAS PART H111 DENTAL SURGERIES AND CHIROPRACTORS
Tas H111.1 Application of Part
Tas H111.2 Waiting room
Tas H111.3 Floor, walls and ceiling
Tas H111.4 Disposal of liquid wastes

TAS PART H112 MORTUARIES
Tas H112.1 Application of Part
Tas H112.2 Layout of mortuary
Tas H112.3 Construction of body preparation room
Tas H112.4 Water supply and sewerage
TAS PART H113 FOUNDRIES

Tas H113.1 Application of Part
Tas H113.2 General
Tas H113.3 Cupola charging platform
Tas H113.4 Deep moulds and pits
Tas H113.5 Pot furnaces

TAS PART H114 PREMISES FOR MANUFACTURE OR PROCESSING OF GLASS REINFORCED PLASTICS

Tas H114.1 Application of Part
Tas H114.2 Separation from other buildings
Tas H114.3 Rise in storeys
Tas H114.4 Maximum floor areas
Tas H114.5 Required exits
Tas H114.6 Hand laminating and spray depositing
Tas H114.7 Ventilation
Tas H114.8 Smoke and heat roof vents

TAS PART H115 PREMISES FOR PRODUCTION OR PROCESSING OF ISOCYANATES

Tas H115.1 Application of Part
Tas H115.2 Areas of work places
Tas H115.3 Separation from other areas and buildings
Tas H115.4 Rise in storeys
Tas H115.5 Maximum floor areas
Tas H115.6 Required exits
Tas H115.7 Bulk stores for polyols and isocyanates
Tas H115.8 Curing room

TAS PART H116 PREMISES FOR ELECTRO-PLATING ELECTRO-POLISHING, ANODISING OR ETCHING

Tas H116.1 Application of Part
Tas H116.2 Floors
Tas H116.3 Height of plating area
Tas H116.4 Air space
Tas H116.5 Ceiling construction

TAS PART H117 PREMISES FOR LEAD PROCESSING

Tas H117.1 Application of Part
Tas H117.2 Floors
Tas H117.3 Height of lead processing areas
Tas H117.4 Air space and floor space
Tas H117.5 Interior of lead processing areas
Tas H117.6 Dust collection
Tas H117.7 Isolation of certain processes
Tas H117.8 Drying room shelves
Tas H117.9 Washing facilities
Tas H117.10 Change rooms

TAS PART H118 BOOTHS FOR SPRAY PAINTING OR SPRAY COATING

Tas H118.1 Application of Part
Tas H118.2 Design and construction of booths
TAS PART H119  ELECTRICITY DISTRIBUTION SUBSTATIONS
  Tas H119.1 Application of Part
  Tas H119.2 Building-type substations

TAS PART H120  PREMISES FOR STORAGE OF DANGEROUS GOODS
  Tas H120.1 Application of Part
  Tas H120.2 Interpretation
  Tas H120.3 Class of dangerous goods
  Tas H120.4 Premises for storage of dangerous goods
  Tas H120.5 Workrooms
  Tas H120.6 Exits
  Tas H120.7 Explosion vents
  Tas H120.8 Spill Collection Bunds
  Tas H120.9 Electrical equipment

TAS PART H121  HAIRDRESSERS PREMISES
  Tas H121.1 Application of Part
  Tas H121.2 Size of operating section
  Tas H121.3 Premises in a residence
  Tas H121.4 Sanitary facilities

TAS PART H122  CENTRE-BASED CHILD CARE FACILITIES
  Tas H122 O1 Objective
  Tas H122 F1 Functional Statement
  Tas H122 P1 to H122 P3 Performance Requirements
  Tas H122.0 Application of Part
  Tas H122.1 Deemed-to-Satisfy Provisions
  Tas H122.2 Indoor play space
  Tas H122.3 Outdoor play space
  Tas H122.4 Sleep space
  Tas H122.5 Sanitary facilities
  Tas H122.6 Nappy changing facilities
  Tas H122.7 Laundry facilities
  Tas H122.8 Floor surfaces
  Tas H122.9 Food preparation facilities
  Tas H122.10 Reception, administration and staff respite areas
  Tas H122.11 Storage facilities
  Tas H122.12 Lighting and ventilation
  Tas H122.13 Fire safety
  Tas H122.14 Glazing and windows
  Tas H122.15 Heating and Cooling
  Tas H122.16 Fences and barriers

TAS PART H123  TEMPORARY STRUCTURES
  Tas H123 O1 Objective
  Tas H123 F1 Functional Statement
  Tas H123 P1 to H123 P14 Performance Requirements
  Tas H123.0 Application of Part
  Tas H123.1 Deemed-to-Satisfy Provisions
  Tas H123.2 Structure
  Tas H123.3 Fire resisting material
<table>
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<th>Section</th>
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<tbody>
<tr>
<td>Tas H123.4 Access</td>
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<tr>
<td>Tas H123.5 Exits and entrances</td>
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<tr>
<td>Tas H123.6 Barriers</td>
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<tr>
<td>Tas H123.7 Emergency lighting</td>
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<td>Tas H123.8 Exit signs</td>
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<td>Tas H123.9 Fire fighting equipment</td>
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<td>Tas H123.15 Seating</td>
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SUPERSEDED
SECTION A  GENERAL PROVISIONS

PART A1    INTERPRETATION

Tas A1.1 Definitions

Insert definition of centre-based care class 1 facility as follows:

Centre-based care class 1 facility is a facility for children under 5 years.

Insert definition for child-based child care facility as follows:

Child-based child care facility means a centre-based care class 1 facility.

Vary the definition for early childhood centre as follows:

Early childhood centre means a preschool, kindergarten or centre-based child care facility.

Insert definition for public as follows:

Public includes any person working in an enclosed public place.

Insert definition for temporary structure as follows:

Temporary structure includes any—

(a) booth, tent or other temporary enclosure, whether or not part of the booth, tent or enclosure is permanent; or

(b) temporary seating structure; or

(c) other structure prescribed under the Building Act 2000.

Tas Specification A1.3 STANDARDS ADOPTED BY REFERENCE

Insert in Table 1 the following:

TAS Table 1 SCHEDULE OF REFERENCED DOCUMENTS

<table>
<thead>
<tr>
<th>No.</th>
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<tr>
<td>Amdt No. 9</td>
<td>AS 1187</td>
<td>Refrigerated bulk milk tanks</td>
<td>Tas H107.3</td>
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<td>Amdt No. 8</td>
<td>AS/NZS 1596</td>
<td>The storage and handling of LP Gas</td>
<td>Tas H120.4</td>
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<td>AS 1657</td>
<td>Fixed platforms, walkways, stairways and ladders—Design, construction and installation</td>
<td>Tas H113.3</td>
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<td>AS/NZS 1668</td>
<td>The use of ventilation and air-conditioning in buildings</td>
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<td>Part 1</td>
<td>Fire and smoke control in multi-compartment buildings</td>
<td>Tas H102.6</td>
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<td>Amdt No. 9</td>
<td>AS 1668</td>
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<td>1997</td>
<td>Industrial tasks and processes Amdt 1, Sept. 1998</td>
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<td>1997</td>
<td>Hospitals and medical tasks</td>
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<td>1993</td>
<td>Circulation spaces and other general areas</td>
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<td>Tas H120.9</td>
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<td>1999</td>
<td>General requirements</td>
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<td>1993</td>
<td>Flameproof enclosure Amdt 1, June 1995</td>
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<td>Classification of hazardous areas</td>
<td>Tas H120.5</td>
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<td>AS 2507</td>
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<td>AS 2658</td>
<td>2003 LP Gas - Portable and mobile appliances</td>
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<td>The storage and handling of hazardous chemical materials—Class 5.2 substances—Organic peroxides</td>
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<td>AS/NZS 2927</td>
<td>2001 The storage and handling of liquefied chlorine gas Amdt 1, Nov 2001</td>
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<td>AS 3780</td>
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## SECTION E SERVICES AND EQUIPMENT

### PART E1 FIRE FIGHTING EQUIPMENT

After EO1(c) insert *Objective* Tas EO1(d) as follows:

### OBJECTIVES

**Tas EO1**

(d) limit property and environmental damage caused by a fire.
After EF1.1 insert *Functional Statement* Tas EF1.2 as follows:

**FUNCTIONAL STATEMENTS**

**Tas EF1.2**
A building is to be provided with a system to alert the fire *brigade* of a fire in the building.

After EP1.6 insert *Performance Requirement* Tas EP1.7 as follows:

**PERFORMANCE REQUIREMENTS**

**Tas EP1.7**
An *automatic* fire detection system must be installed to the degree necessary to alert the *fire brigade* of fire so that fire fighting operations may be undertaken at the earliest possible time appropriate to—
(a) the building functions and use; and
(b) the *fire hazard*; and
(c) the height of the building; and
(d) the building *floor area*.

**Limitation:**
**Tas EO1(d), Tas EF1.2 and Tas EP1.7** only applies to:
(a) a Class 5 building or Class 6 building having an aggregate *floor area* of more than 1000 m²; and
(b) a Class 7 building having a *floor area* of more than 1000 m² in which furniture is stored; and
(c) a Class 8 building which is a special *fire hazard* building and in which more than 25 persons are employed; and
(d) a Class 9b building which is a *school* or *early childhood centre* or a creche which—
   (A) is of more than 1 *storey*; or
   (B) has a storey with a *floor area* more than 500 m²; and
(e) a Class 9b building which is a theatre.

Delete E1.0 and insert *Tas E1.0* as follows:

**Tas E1.0 Deemed-to-Satisfy Provisions**
*Performance Requirements* EP1.1 to EP 1.6 and *Tas EP1.7* are satisfied by complying with E1.1 to E1.10 and *Tas E1.101*. 
After E1.10 insert Tas E1.101 as follows:

**Tas E1.101 Fire detection and alarm system**

An *automatic* fire detection and alarm system must comply with Clauses 4 and 7 of Specification E2.2a.

**SECTION F HEALTH AND AMENITY**

**PART F2 SANITARY FACILITIES**

After F2.8 insert Tas F2.101 as follows:

**Tas F2.101 Non-flushed Urinals**

Non-flushed urinals not connected to a sewerage system must comply with **Tas F2.102**.

After Tas F2.101 insert Tas F2.102 as follows:

**Tas F2.102 Installation of Closet Fixtures**

(a) If a sufficient sewerage system is not available, an authorised alternative means of disposal of sewage, may be installed.

(b) If sanitary facilities are not water-flushed, the following provisions apply:

(i) A pit latrine, an incinerating toilet, a chemical toilet, a removable pan or a non-flushing urinal must not be within 2 m of a building containing habitable rooms.

(ii) The floor on which a removable pan is placed must be impervious.

(iii) A room containing a composting toilet must be separated from habitable rooms by way of a permanently ventilated air lock (which may be a circulation space).

(iv) The minimum ventilation *required* under (iii) shall be the greater of—

(A) 8000 mm²; or

(B) 1/500th of the *floor area* of the circulation space.

(v) Access for maintenance or removal of waste from a composting toilet must be by way of an access door which opens directly to the outside of the building.

**PART F4 LIGHT AND VENTILATION**

After F4.12 insert Tas F4.101 as follows:

**Tas F4.101 Fixed Natural Ventilation**

(a) Except if mechanical ventilation or air-conditioning is provided, in rooms and areas listed in **Tas Table F4.101**, a fixed opening, of aggregate size not less than that shown in the Table, must be provided in addition to any adjustable opening.
### TAS TABLE F4.101 FIXED NATURAL VENTILATION

<table>
<thead>
<tr>
<th>Building Class</th>
<th>Room to be ventilated</th>
<th>Size of fixed opening/floor area</th>
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<tr>
<td>2, 3 and 4</td>
<td>(i) Common stairways</td>
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<td></td>
<td>(ii) Communal laundries</td>
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<tr>
<td>7</td>
<td>(i) Rooms for storage of polluting or noxious substances</td>
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<tr>
<td>8</td>
<td>All rooms</td>
<td>1/500*</td>
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<tr>
<td>9a</td>
<td>Store rooms</td>
<td>1/500</td>
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<tr>
<td>9b</td>
<td>(i) Assembly halls in schools</td>
<td>1/250</td>
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<td></td>
<td>(ii) Workshops in schools</td>
<td>1/250</td>
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<tr>
<td>Other than Class 2, 4</td>
<td>(i) Pantries for food preparation rooms</td>
<td>1/500</td>
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<td></td>
<td>(ii) Washrooms</td>
<td>1/500*</td>
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<td></td>
<td>(iii) Sanitary compartments</td>
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<td></td>
<td>(iv) Locker, meal and change rooms</td>
<td>1/500*</td>
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<td></td>
<td>(v) Boiler rooms</td>
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<td>(vi) Plant, machinery rooms</td>
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<td>(vii) Electrical switchboard rooms</td>
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<td></td>
<td>(viii) Battery rooms (other than lead acid)</td>
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</tbody>
</table>

Note: Not less than half of the fixed natural ventilation must be provided as high in the room as possible but not less than 2 m above the floor.

(b) Fixed natural ventilation may be provided by means of—

(i) openings in walls, clear of obstructions other than louvres or grilles; or

(ii) ceiling ventilators, including skylights and roof ventilators.

(c) Where a fixed ventilation opening is associated with a duct, that duct must have a clear open way at least twice the required area of the opening.

(d) Openings for fixed natural ventilation must be placed so as to let air out and, if the air entering by or around doors or by other openings is insufficient for adequate ventilation, additional openings for the entry of air must be provided.
SECTION G    ANCILLARY PROVISIONS

PART G1    MINOR STRUCTURES AND COMPONENTS

After GO1(d) insert Objective Tas GO1(e), (f) and (g) as follows:

OBJECTIVES

**Tas GO1(e)**

safeguard people from illness or injury arising from the use of a *swimming pool*.

**Tas GO1(f)**

safeguard people from illness or injury when using a way.

**Tas GO1(g)**

protect a way.

After GF1.3 insert Functional Statements Tas GF1.4, Tas GF1.5 and Tas GF1.6 as follows:

FUNCTIONAL STATEMENTS

**Tas GF1.4**

*Swimming pools* must provide for the health and safety of swimmers and others.

**Tas GF1.5**

Projections over ways must not pose a danger to persons using the way nor to adjoining buildings.

**Tas GF1.6**

Buildings located adjacent to a way must not unduly affect the integrity of the way.

After GP1.4 insert Performance Requirements Tas GP1.5 to Tas GP1.9 as follows:

PERFORMANCE REQUIREMENTS

**Tas GP1.5**

*Swimming pools* must be suitable and safe to use and be provided with appropriate facilities.
Tas GP1.6
Projections over ways must be constructed and located to provide safe passage along the way and reduce the spread of fire and the potential for collapse.

Tas GP1.7
Roofs of buildings and attachments to buildings must not allow stormwater to reach the way except by way of a drain.

Tas GP1.8
Excavations must be protected to prevent any part of a way from subsiding into them.

Tas GP1.9
Footings of a building must not project on to a way except if they are at sufficient depth.

Limitations
Tas GP1.5 does not apply to a swimming pool associated with a Class 2 building.

Delete G1.0(b) and insert Tas G1.0(b) as follows:

Tas G1.0(b) Deemed-to-Satisfy Provisions

Performance Requirements GP1.2 to GP 1.4 and Tas GP1.5 to Tas GP1.9 are satisfied by complying with G1.1 and G1.2.

After G1.1(b) insert Tas G1.1(c) to (i) as follows:

Tas G1.1 Swimming Pools

(c) Swimming pools for the use of the public, a club, or an association, or in connection with Class 3, 5, 6, 7, 8 or 9 buildings must—

(i) be constructed of durable materials with smooth finishes;
(ii) have sides vertical;
(iii) in that part of the pool where the water depth is not more than 1.5 m, have the bottom or floor slope not steeper than 1 vertical to 15 horizontal;
(iv) have the depth of water marked clearly and conspicuously on each side of the pool (at the shallow end and at the deep end);
(v) not have diving boards installed where the water depth is less than 3.5 m;
(vi) have scum-gutters with opening not less than 150 mm if they are to provide hand-holds; and
(vii) have the floor or bottom of the pool, except for the guide lines, of such colours that the light reflectance is not less than 60%.

(d) For a public swimming pool or pool in which competitions are held—

(i) all steps into the pool must be recessed;
(ii) fittings must not project into the water area;
(iii) piping must not be bracketed to the sides to provide hand-holds;
(iv) surrounding concourses must be provided not less than 2 m wide, with a suitable non-slip surface, graded away from the pool and drained to waste; and
(v) dressing rooms with sanitary accommodation must be so located that bathers pass through that accommodation enroute to the swimming pool.

(e) If the volume of a swimming pool exceeds 15 m³—
(i) an adequate water recirculation, disinfection and filtration system must be installed;
(ii) the inlet and outlet openings in a swimming pool for the purpose of water recirculation must be so located that water movement is continuous from inlet to outlet;
(iii) inlet and outlet openings, and skimmer boxes where provided, must comply with AS 1926.3;
(iv) recirculation of water in a swimming pool must be so designed that the pool contents are recirculated not less than once in the period shown in Tas Table G1.1(e); and
(v) water filtration rates must not exceed 12 250 L/m² of sand filter bed per hour, or an equivalent rate in other filter media.

<table>
<thead>
<tr>
<th>Pool Type</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outdoor Swimming pool</td>
<td>6 hours</td>
</tr>
<tr>
<td>Indoor Swimming pool</td>
<td>4 hours</td>
</tr>
<tr>
<td>Wading Pool</td>
<td>2 hours</td>
</tr>
</tbody>
</table>

(f) Chlorine and chlorination equipment must be stored in an area or room separate from any part of the premises used by the public.

(g) A chlorination room—
(i) must be built or shielded to avoid penetration by direct sunlight;
(ii) must not be in direct or indirect contact with any ventilation system serving any other part of the building;
(iii) must be located to avoid transfer of heat for any boiler or furnace;
(iv) must be provided with ventilation within 300 mm from the floor and 300 mm from the ceiling in the ratio, in each location, of not less than 1/150 of its floor area;
(v) must be provided with a clear glass window of such size and in such a position as will enable the operator working in any position inside the room to be observed from the outside;
(vi) must be provided with a door opening outwards and fitted with such fastenings as will ensure that the door can be opened easily from the outside or the inside without the use of a key while the operator is in the room; and
(vii) must be provided with a cabinet of the “break-the-glass” type on the outside, near to the door, for the purpose of holding a gas-mask intended for use in rescue work.

(h) Where no other suitable sanitary accommodation is provided, sanitary facilities must be provided in accordance with Tas Table G1.1(h).
TAS TABLE G1.1(h) SANITARY FACILITIES AT SWIMMING POOLS

<table>
<thead>
<tr>
<th></th>
<th>Closet Fixtures</th>
<th>Urinals</th>
<th>Wash Basins</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 Each Extra</td>
<td>1 Each Extra</td>
<td>1 Each Extra</td>
</tr>
<tr>
<td>Males</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Females</td>
<td>40</td>
<td>-</td>
<td>60</td>
</tr>
</tbody>
</table>

(i) Where no other suitable shower facilities are provided, showers must be provided so that each shower serves up to 40 persons.

After Part G5 insert Tas Part G101 as follows:

**TAS PART G101 PROJECTIONS OVER WAYS**

**Tas G101.1 Construction and location of projections over ways**

(a) In this Part the following meanings apply:

**Awning** means a cover projecting from a building to provide shelter or shade for people outside the building.

**Balcony** means a permanent projection from a building, designed to be walked, stood or sat on, and which is not roofed.

**Kerb-line** means the line of the carriageway edge of the kerb or, where there is no kerb, the line of the carriageway edge of the kerb if there was one.

**Verandah** means a permanent, roofed projection from a building, designed to be walked, stood or sat on.

**Way** includes a public road, street, alley or footpath.

(b) Every bridge connecting buildings over a way must be of non-combustible material.

(c) Every awning and balcony which projects over a way must be supported entirely from the building to which it is attached.

(d) A verandah must not project over a way.

(e) Every part of a building which projects over a way must comply with Tas Table G101.1.

**Tas TABLE G101.1 PROJECTIONS OVER WAYS**

<table>
<thead>
<tr>
<th>Heights above ground or footpath level:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Awnings</td>
<td>2.7 m</td>
</tr>
<tr>
<td>Shades or sunblinds (when not in use), signs, lamps or the like.</td>
<td>2.4 m</td>
</tr>
<tr>
<td>Other projections</td>
<td>3.0 m</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maximum Distance of projection over a way:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Awnings-(i)</td>
<td>non-combustible</td>
</tr>
<tr>
<td></td>
<td>not beyond a line 450 mm from the plumb of the kerb-line</td>
</tr>
<tr>
<td>(ii)</td>
<td>combustible</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>Balconies-</td>
<td></td>
</tr>
<tr>
<td>Other projections-</td>
<td></td>
</tr>
<tr>
<td>(i)</td>
<td>in streets more than 15 m wide</td>
</tr>
<tr>
<td>(ii)</td>
<td>in streets not more than 15 m wide</td>
</tr>
</tbody>
</table>

Note:

(i) A door, gate, window, sash, or shutter is not deemed to open outwards unless, when open to its utmost extent, some part of it projects beyond the boundary line of the way.

(ii) The total width of all the oriel windows and turrets projecting onto a way in any wall of any storey of a building, taken together, must not exceed 3/5 of the length of that wall on the level of that storey.

(f) Any combustible awning which projects over a way must not extend to within 1.5 m of an adjoining building.

After Tas G101.1 insert Tas G101.2 as follows:

**Tas G101.2 Protection of Ways**

(a) Every roof of a building, and every verandah, balcony, or other similar projection or projecting window must be so designed and built as to prevent stormwater from it from dropping on, running over, or seeping under any way.

(b) The roof of any awning that extends more than 1.0 m over a way must be drained to a down pipe.

(c) Down-pipes from awnings—

(i) must not project beyond the boundary of a way; and

(ii) must be of steel or provided with a protective cover to a height of 2 m from the path.

(d) Any excavation must be protected, by shoring or otherwise, as necessary to prevent subsidence into the excavation of any part of a way adjoining it.

(e) Footings must not extend beyond the boundary of a way other than as shown in Tas Table G101.2.

**Tas TABLE G101.2 PROJECTION OF FOOTINGS**

<table>
<thead>
<tr>
<th>Depth of top of footing below ground level</th>
<th>Maximum permissible projection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1.3 m</td>
<td>Nil</td>
</tr>
<tr>
<td>1.3 m to 3.0 m</td>
<td>450 mm</td>
</tr>
<tr>
<td>Exceeding 3.0 m</td>
<td>750 mm</td>
</tr>
</tbody>
</table>
SECTION H     SPECIAL USE BUILDINGS

Insert Objectives for Tas Part H101 as follows:

OBJECTIVES

Tas Part H101  Workplaces
Every workplace must be constructed in a manner that will provide for the safety, health and welfare of workers using that workplace.

Tas Part H102  ***
This clause has deliberately been left blank.

Insert Objectives for Tas Part H103 as follows:

Tas Part H103  Dining Rooms and Bar Rooms
Dining rooms and bar rooms must provide for the comfort, convenience and health of customers.

Insert Objectives for Tas Part H104 as follows:

Tas Part H104  Bottle Shops at Licensed Premises
Bottle shops, with adequate storage facilities, must provide for display of goods for sale and for shelter of customers.

Insert Objectives for Tas Part H105 as follows:

Tas Part H105  Accommodation Facilities
Accommodation facilities must provide for the comfort, convenience and security of travellers.

Insert Objectives for Tas Part H106 as follows:

Tas Part H106  Meat Premises
Meat premises must be constructed in such a manner that—
(a) does not jeopardise animal welfare; and
(b) provides for hygienic processing of animals; and
(c) ensures the wholesomeness of meat and meat products.

Insert Objectives for Tas Part H107 as follows:

Tas Part H107  Farm Dairy Premises
Dairies must be constructed in such a manner that contamination of milk can be avoided.
Insert Objectives for Tas Part H108 as follows:

**Tas Part H108  Pharmacies**

Pharmacies must be able to be secured against entry and the interior must be able to be supervised by a pharmacist.

Insert Objectives for Tas Part H109 as follows:

**Tas Part H109  Hospitals and Nursing Homes**

Hospitals and nursing homes must be able to be easily cleaned and must have adequate space for patients.

Insert Objectives for Tas Part H110 as follows:

**Tas Part H110  Premises Used for Activities Involving Skin Penetration**

Premises used for activities involving skin penetration must provide for cleanliness of staff and comfort of customers.

Insert Objectives for Tas Part H111 as follows:

**Tas Part H111  Dental Surgeries and Chiropractors' Premises**

Dental surgeries and chiropractors' premises must be able to be easily cleaned and must have a waiting room for patients.

Insert Objectives for Tas Part H112 as follows:

**Tas Part H112  Mortuaries**

Mortuaries must be constructed in a manner that will ensure the health of staff and the general public.

Insert Objectives for Tas Part H113 as follows:

**Tas Part H113  Foundries**

Foundries must provide for the comfort and safety of workers on the premises.

Insert Objectives for Tas Part H114 as follows:

**Tas Part H114  Premises for Manufacture or Processing of Glass Reinforced Plastic**

Premises for manufacture or processing of glass reinforced plastic must—

(a) provide for the safety and comfort of workers; and

(b) be constructed in a manner that will avoid the spread of fire within the building and to other buildings.

Insert Objectives for Tas Part H115 as follows:

**Tas Part H115  Premises for the Production or Processing of Isocyanates**

Premises for the production or processing of isocyanates must—
(a) provide for the safety and comfort of workers; and
(b) be constructed in a manner that will avoid the spread of fire within the building and to other buildings.

Insert Objectives for Tas Part H116 as follows:

**Tas Part H116 Premises for Electro-plating, Electro-polishing, Anodising or Etching**

Premises for electro-plating, electro-polishing, anodising or etching must—
(a) provide for the safety and comfort of workers; and
(b) be constructed in a manner that will prevent the escape of liquids and atmospheric contaminants to other areas of the building.

Insert Objectives for Tas Part H117 as follows:

**Tas Part H117 Premises for Lead Processing**

Premises for lead processing must—
(a) provide for the safety and comfort of workers; and
(b) be constructed in a manner that will minimise the lodgement of dust and must be capable of being flushed with water.

Insert Objectives for Tas Part H118 as follows:

**Tas Part H118 Booths for Spray-painting or Spray-coating**

Booths for spray-painting or spray-coating must—
(a) be constructed of *non-combustible* materials;
(b) have adequate means of escape; and
(c) have suitable means of extracting harmful fumes from the booth.

Insert Objectives for Tas Part H119 as follows:

**Tas Part H119 Electricity Distribution Substations**

Building-type electricity distribution substations must be housed in buildings that are tamper-proof, vermin-proof and weatherproof, and have adequate means of escape.

Insert Objectives for Tas Part H120 as follows:

**Tas Part H120 Premises for Storage of Dangerous Goods**

Premises for storage of dangerous goods must—
(a) provide for the safety and comfort of workers in the premises; and
(b) be constructed so as not to be a danger to other people or buildings.

Insert Objectives for Tas Part H121 as follows:

**Tas Part H121 Hairdressers' Premises**

Hairdressers' premises must be of adequate size and amenity.
After Part H1 insert Tas Part H101 as follows:

**TAS PART H101 WORKPLACES**

**Tas H101.1 Application of Part**

This Part is applicable to every building or part of a building used as a workplace.

**Tas H101.2 Floor area**

(a) The *floor area* of each office must be 7 m² or sufficient to provide 4 m² for each occupant, whichever is the greater.

(b) Each floor plan dimension of any room which is a workplace must be greater than 2.5 m.

**Tas H101.3 Floor surfaces**

(a) Every floor in a work place must have an even, unbroken slip-resistant surface, free from holes, indentations, projections or other obstructions that might create tripping or stumbling hazards.

(b) Where the nature of the process is such that spillage of liquids is likely to occur, or where it is necessary for the floors to be cleansed with water or other liquids—

(i) the floors must be surfaced with materials that are impervious to the penetration of liquids likely to be spilt or used in the process of cleaning; and

(ii) the joints between the floors and the walls must be sealed with an impervious material and finished in such a manner that the joint is concavely rounded.

**Tas H101.4 Floor drainage**

(a) Floors in a workplace must be graded to drain off liquids which must be carried away and disposed of by means of open paved channels, covered drains or pipes.

(b) Floors graded as shown in **Tas Table H101.4** satisfy (a).

**Tas TABLE Table H101.4 SLOPES OF FLOORS FOR DRAINAGE**

<table>
<thead>
<tr>
<th>Area Type</th>
<th>Slope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wash (or hose-down) areas</td>
<td>1:25</td>
</tr>
<tr>
<td>Wet (or mop-down) areas</td>
<td>1:50</td>
</tr>
<tr>
<td>Dry areas</td>
<td>1:100</td>
</tr>
</tbody>
</table>

(c) Where the effluent from drains is likely to be offensive it must be intercepted by suitable deodorising tanks.

(d) Wherever practicable, drains to carry off spilt liquids should be planned so that the liquids are intercepted close to the point of spillage and not allowed to spread over the working surface of the floor.

**Tas H101.5 Floor covering**

(a) Where workers stand in substantially the one location while working on a floor of brick, metal, stone or other similar material, those floors or sections thereof, must be covered with—
Tas H101.5

(i) wood, rubber, linoleum, resilient types of plastic tiles;
(ii) suitable compositions containing asphalt, rubber, cork, magnesite; or
(iii) other semi-resilient, thermally non-conductive materials on which the workers may stand.

(b) Fixed coverings for local sections of floors must be inset flush with the main floor.

Tas H101.6 Overhead clearance

Pipes, fixtures and similar objects running above a passage or walkway must be fixed at a height to provide a clear distance not less than 2.1 m measured from the floor to the lowest part of the object.

Tas H101.7 Lighting

Interior lighting in a workplace must comply with the relevant requirements in AS/NZS 1680 Parts 2.4 and 2.5 and AS 1680 Parts 1, 2.1, 2.2, and 2.3.

Tas H101.8 Ventilation

(a) Every workplace must be ventilated to remove offensive gases, vapours, fumes, dust or other airborne impurities.
(b) The discharge from mechanical ventilation must be constructed to prevent recirculation of the impurities.

Tas H101.9 Toilet facilities

(a) Where practicable, toilet facilities must be located in the same building as the workplace or change room that they serve.
(b) Toilet facilities which are not located in the same building as the workplace they serve must—
   (i) be sited within the boundary of the premises;
   (ii) be housed in a fully roofed and clad building;
   (iii) be located at a distance not greater than 100 m from any workplace they serve; and
   (iv) have provided, at every entrance doorway giving direct access to the interior of the building, a full length door fitted with a suitable locking device.
(c) Every closet must be fitted with a door capable of being fastened on the inside.

Tas H101.10 Hand washing facilities

(a) Hand washing facilities must be located in change rooms or in wash rooms accessible to change rooms and must be placed where they can be conveniently used by persons before eating meals and after using toilet facilities.
(b) Where hand washing facilities are located in a change room, the floor area allowed for the change room must be increased by the area required for the washing equipment and its use.
(c) Hand washing facilities include wash basins, wash troughs and circular ablution fountains.
Tas H101.11 Shower facilities

(a) Where the work engaged upon is such that a change of clothing is necessary, showers with hot and cold running water must be provided at the rate of not less than shown in Tas Table H101.11.

Tas TABLE H101.11 SHOWERS IN WORK PLACES

<table>
<thead>
<tr>
<th>Industry Type</th>
<th>Showers per 15 Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot, arduous or dirty industries</td>
<td>1</td>
</tr>
<tr>
<td>Light, clean industries</td>
<td>1</td>
</tr>
</tbody>
</table>

(b) Shower rooms must be located immediately adjacent to change rooms and urinal facilities, but urinal facilities may be provided in male shower rooms.

(c) Separate and distinct shower accommodation must be provided for male and female employees.

Tas H101.12 Change rooms

Where change rooms are required by Regulation 116(1)(b) of the Workplace Health and Safety Regulations 1998, they must comply with Tas Table H101.12.

Tas TABLE H101.12 CHANGE ROOMS

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Area/Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum area of room for each person requirement to change clothes:</td>
<td>0.5 m²</td>
</tr>
<tr>
<td>Minimum area of room for each person not requiring to change clothes:</td>
<td>0.3 m²</td>
</tr>
<tr>
<td>Minimum free floor space between lockers facing one another:</td>
<td>1.5 m</td>
</tr>
<tr>
<td>Minimum free floor space between locker face and a wall:</td>
<td>1.0 m</td>
</tr>
<tr>
<td>Minimum free floor area:</td>
<td>2.0 m²</td>
</tr>
</tbody>
</table>

Tas H101.13 Dining rooms

(a) In any work place which is a factory or shop a dining area or dining room must be provided as set out in Tas Table H101.13.

Tas TABLE H101.13 DINING AREAS AND DINING ROOMS

<table>
<thead>
<tr>
<th>Employee Count</th>
<th>Dining Area Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>For 10 or less employees</td>
<td>a suitable dining area separate from any working area: Dining areas must be provided with adequate and hygienic facilities for the washing of eating utensils and for the storage of utensils where they will be protected from dust or vermin.</td>
</tr>
</tbody>
</table>
For more than 10 employees: a conveniently located dining room separate from any work room or work area:

| Dining rooms must be equipped with a dish washing sink supplied with hot and cold water, draining board and cupboards in which food-stuffs and crockery can be stored free from dust and vermin, except that the provision of running water shall not apply where a reticulated water service cannot be made available. |

NOTE: Where up to 15 persons of the same sex are employed, a combined change room/dining room may be provided.

(b) In buildings to be used as offices, there must be provided on each storey, in a location accessible to all tenants, an area containing a dish washing sink supplied with hot and cold water, cupboard storage for food stuffs and utensils, and facilities for boiling water. Such areas must not be located in toilets, wash-rooms, or change rooms.

Tas H101.14 Rest rooms

Where 20 or more females are employed, a separate rest room, with convenient access to sanitary accommodation, must be provided in accordance with Tas Table H101.14.

Tas TABLE H101.14 FLOOR AREAS OF REST ROOMS

<table>
<thead>
<tr>
<th>m² of floor area:</th>
<th>6</th>
<th>9</th>
<th>12</th>
<th>15</th>
<th>Each extra 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. number of females served:</td>
<td>100</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>200</td>
</tr>
</tbody>
</table>

NOTE: Where a first aid room or health centre is provided the rest room may be adjacent to it or part of it.

Tas H101.15 First aid rooms and health centres

(a) In every workplace, other than a shop or office, where the number of employees working on the premises exceeds 300 at any time, a self-contained health centre must be provided, at ground level if practicable, with floor area not less than 45 m², which includes—

(i) treatment room with a floor area of at least 14 m²;
(ii) separate waiting room;
(iii) separate recovery room;
(iv) separate combined office and consulting room;
(v) toilet with air lock and washbasin with clean, hot and cold, running water;
(vi) store room or adequate storage cupboards; and
(vii) walls, floors and ceilings impervious to moisture, easy to clean, free from cracks, ledges and sharp angles and finished in a light colour.
(b) In every workplace where the number of employees exceeds 150 at any time and where a health centre has not been provided, a first aid room must be provided, suitably located with convenient access, readily accessible to sanitary accommodation, having a floor area not less than 14 m² and clearly marked “FIRST AID”.

Tas H101.16 Doors

(a) **Roller-shutter door:** Every power operated, roller-shutter door must be fitted with a continuous-pressure, manual switch for control of downward movement.

(b) **Automatic-closing doors:** A suitable switch, controlled by a photo-electric device, must be fitted to stop or reverse the closing travel if a person or object should obtrude into the line of travel of the closing door.

(c) **Sliding-door:** Every sliding door must be installed in such a manner that it will not derail or over-run its normal travel.

After Tas Part H101 insert Tas Part H102 as follows:

**TAS PART H102 FOOD PREMISES**

**OBJECTIVE**

Tas H102 O1

The **Objective** of this Part is to facilitate the safe manufacture, preparation, storage or packing of food for sale for human consumption.

**Application:**

(a) Tas H102 O1 applies to any premises where food intended for human consumption is manufactured, processed or sold and to which the following apply-

(i) *Food Act 2003*; or

(ii) *Liquor and Accommodation Act 1990*.

(b) Tas H102 O1 includes, but is not limited to-

(i) bakehouses;

(ii) bar service areas;

(iii) premises for boning, curing, canning, mincing, pre-packing or other similar processes of preparation of meat for sale;

(iv) retail meat premises;

(v) eating houses and tea shops;

(vi) fish shops;

(vii) kitchens in eating houses, restaurants, guest houses, motels and hotels;

(viii) rooms for processing, manufacturing, packing, etc of fruit and vegetables, dairy products, ice blocks, ices, meat-for-sale, or other fish;

(ix) shellfish packing or processing premises;

(x) take-away-food stores; and
Limitations:
Tas H102 O1 does not apply to—

(a) boarding houses or the like classified as Class 1 buildings; or
(b) tents, buildings or other structures used temporarily for serving meals to the public at any fair, show, race meeting or other public sports, games or amusements; or
(c) dairies covered by Tas H107.

FUNCTIONAL STATEMENT

Tas H102 F1

Each building or part of a building constructed as a food premise must be able to be used in such a manner that minimises opportunities for food contamination.

Application:
(a) Tas H102 F1 applies to any premises where food intended for human consumption is manufactured, processed or sold and to which the following apply-
   (i) Food Act 2003; or
   (ii) Liquor and Accommodation Act 1990.
(b) Tas H102 F1 includes, but is not limited to-
   (i) bakehouses;
   (ii) bar service areas;
   (iii) premises for boning, curing, canning, mincing, pre-packing or other similar processes of preparation of meat for sale;
   (iv) retail meat premises;
   (v) eating houses and tea shops;
   (vi) fish shops;
   (vii) kitchens in eating houses, restaurants, guest houses, motels and hotels;
   (viii) rooms for processing, manufacturing, packing, etc of fruit and vegetables, dairy products, ice blocks, ices, meat-for-sale, or other fish;
   (ix) shellfish packing or processing premises;
   (x) take-away-food stores; and
   (xi) breweries and wineries.
(c) In Tas H102 F1, words and meanings as defined in the Food Act 2003, Food Standards Code and Liquor and Accommodation Act 1990 apply.

Limitations:
Tas H102 F1 does not apply to—
(a) boarding houses or the like classified as Class 1 buildings; or
(b) tents, buildings or other structures used temporarily for serving meals to the public at any fair, show, race meeting or other public sports, games or amusements; or
(c) dairies covered by Tas H107.

PERFORMANCE REQUIREMENTS

Tas H102 P1

The design and construction of food premises must:

(a) be appropriate for the activities for which the premises are used; and

(b) provide adequate space for the activities to be conducted on the food premises and for the fixtures, fittings and equipment used for those activities; and

(c) permit the food premises to be effectively cleaned and, if necessary, sanitized; and

(d) to the extent that is practicable:
   (i) exclude dirt, dust, odours, fumes, smoke and other contaminants; and
   (ii) not permit the entry of pests; and
   (iii) not provide harbourage for pests.

Tas H102 P2

(a) Food premises must have an adequate supply of water if water is to be used at the food premises for any of the activities conducted on the food premises.

(b) A food business must use potable water for all activities that use water that are conducted on the food premises.

Limitation:

If a food business demonstrates that the use of non-potable water for a purpose will not adversely affect the safety of the food handled by the food business, subclause (b) does not apply.

Tas H102 P3

Food premises must have a sewage and waste water disposal system that—

(a) will effectively dispose of all sewage and waste water; and

(b) is constructed and located so that there is no likelihood of the sewage and waste water polluting the water supply or contaminating food.

Tas H102 P4

Food premises must have facilities for the storage of garbage and recyclable matter that—

(a) adequately contain the volume and type of garbage and recyclable matter on the food premises; and
(b) enclose the garbage or recyclable matter, if this is necessary to keep pests and animals away from it; and

(c) are designed and constructed so that they may be easily and effectively cleaned.

**Tas H102 P5**

Food premises must have sufficient natural or mechanical ventilation to remove fumes, smoke and vapours from the food premises.

**Tas H102 P6**

Food premises must have lighting systems that provide sufficient natural or artificial light for the activities conducted on the food premises.

**Tas H102 P7**

(a) Floors must be designed and constructed in a way that is appropriate for the activities conducted on the food premises.

(b) Floor must—

(i) be able to be effectively cleaned; and

(ii) be unable to absorb grease, food particles or water; and

(iii) be laid so that there is no ponding of water; and

(iv) to the extent that is practicable, be unable to provide harbourage for pests.

**Application:**

The requirements for floors apply to the floors of all areas used for food handling, cleaning, sanitizing and personal hygiene except the following areas:

(a) dining areas; and

(b) drinking areas; and

(c) other areas to which members of the public usually have access.

**Limitation:**

The following floors do not have to comply with sub-clause (b)—

(i) floors of temporary food premises, including ground surfaces, that are unlikely to pose any risk of contamination of food handled on the food premises; and

(ii) floors of food premises that are unlikely to pose any risk of contamination of food handled on the food premises provided the food business has obtained approval for their use.

**Tas H102 P8**

Walls and ceilings—

(a) must be designed and constructed in a way that is appropriate for the activities conducted on the food premises; and

(b) must be provided where they are necessary to protect food from contamination; and

(c) provided in accordance with sub-clause (b) must be—
(i) sealed to prevent the entry of dirt, dust and pests; and
(ii) unable to absorb grease, food particles or water; and
(iii) be able to be easily and effectively cleaned; and

(d) must—
(i) be able to be effectively cleaned; and
(ii) to the extent that is practicable, be unable to provide harbourage for pests.

Application:
The requirements for walls and ceilings apply to the walls and ceilings of all areas used for food handling, cleaning, sanitizing and personal hygiene except the following areas:

(a) dining areas; and
(b) drinking areas; and
(c) other areas to which members of the public usually have access.

Tas H102 P9

(a) Food premises must have hand washing facilities that are located where they can be easily accessed by food handlers—

(i) within areas where food handlers work if their hands are likely to be a source of contamination of food; and
(ii) if there are toilets on the food premises—immediately adjacent to the toilets or toilet cubicles.

(b) Hand washing facilities must be—

(i) permanent fixtures; and
(ii) provided with a supply of warm running potable water; and
(iii) of a size that allows easy and effective hand washing; and
(iv) clearly designated for the sole purpose of washing hands, arms and face.

Tas H102 P10

Fixtures, fittings and equipment must—

(a) be adequate for the production of wholesome food; and

(b) be fit for their intended use; and

(c) be designed, constructed, located and installed, and equipment must be located and, if necessary, installed, so that—

(i) there is no likelihood that they will cause food contamination; and
(ii) they are able to be easily and effectively cleaned; and
(iii) adjacent floors, walls, ceilings and other surfaces are able to be easily and effectively cleaned; and
(iv) to the extent that is practicable, they do not provide harbourage for pests; and

(d) have food contact surfaces—
(i) able to be easily and effectively cleaned and, if necessary, sanitized if there is a likelihood that they will cause food contamination; and

(ii) unable to absorb grease, food particles and water if there is a likelihood that they will cause food contamination; and

(iii) made of a material that will not contaminate food.

Tas H102 P11

Food premises must have adequate storage facilities—

(a) for the storage of items that are likely to be the source of contamination of food, including chemicals, clothing and personal belongings; and

(b) located where there is no likelihood of stored items contaminating food or food contact surfaces.

Tas H102 P12

All refrigerated or cooling chambers must be constructed so that stored products will not be contaminated.

Application:

(a) Tas H102 P1 to P12 applies to any premises where food intended for human consumption is manufactured, processed or sold and to which the following apply—

   (i) Food Act 2003; or
   (ii) Liquor and Accommodation Act 1990.

(b) Tas H102 P1 to P12 includes, but is not limited to—

   (i) bakehouses;
   (ii) bar service areas;
   (iii) premises for boning, curing, canning, mincing, pre-packing or other similar processes of preparation of meat for sale;
   (iv) retail meat premises;
   (v) eating houses and tea shops;
   (vi) fish shops;
   (vii) kitchens in eating houses, restaurants, guest houses, motels and hotels;
   (viii) rooms for processing, manufacturing, packing, etc of fruit and vegetables, dairy products, ice blocks, ices, meat-for-sale, or other fish;
   (ix) shellfish packing or processing premises;
   (x) take-away-food stores; and
   (xi) breweries and wineries.

(c) In Tas H102 P1 to P12, words and meaning as defined in the Food Act 2003, Food Standards Code and Liquor and Accommodation Act 1990 apply.

Limitations:

Tas H102 P1 to P12 do not apply to—

(a) boarding houses or the like classified as Class 1 buildings; or
(b) tents, buildings or other structures used temporarily for serving meals to the public at any fair, show, race meeting or other public sports, games or amusements; or
(c) dairies covered by Tas H107.

DEEMED-TO-SATISFY PROVISIONS

Tas H102.0 Application of Part

(a) This Part applies to any premises where food intended for human consumption is manufactured, processed or sold and to which the following apply—
   (i) Food Act 2003; or
   (ii) Liquor and Accommodation Act 1990.
(b) This Part includes, but is not limited to—
   (i) bakehouses;
   (ii) bar service areas;
   (iii) premises for boning, curing, canning, mincing, pre-packing or other similar processes of preparation of meat for sale;
   (iv) retail meat premises;
   (v) eating houses and tea shops;
   (vi) fish shops;
   (vii) kitchens in eating houses, restaurants, guest-houses, motels and hotels;
   (viii) rooms for processing, manufacturing, packing, etc of fruit and vegetables, dairy products, ice blocks, ices, meat-for-sale or other fish;
   (ix) shellfish packing or processing premises;
   (x) take-away-food stores; and
   (xi) breweries and wineries.
(c) This Part does not apply to—
   (i) boarding houses or the like classified as Class 1 buildings; or
   (ii) tents, buildings or other structures used temporarily for serving meals to the public at any fair, show, race meeting or other public sports, games or amusements; or
   (iii) dairies covered by Tas Part H107.
(d) In this Part, words and meanings as defined in the Food Act 2003, Food Standards Code and Liquor and Accommodation Act 1990 apply.

Tas H102.1 Deemed-to-Satisfy Provisions

Performance Requirements Tas H102 P1 to Tas H102 P12 are satisfied by complying with the relevant provisions of Tas H102.0 to Tas H102.17.
Tas H102.2 General Requirements

(a) The provision of—
   (i) close-fitting windows and doors; and
   (ii) air intakes that do not draw in contaminated air; and
   (iii) air locks and self-closing doors to separate toilet areas, laundries and living areas from food handling areas; or
   (iv) mechanical ventilation that removes sources of contamination,
   satisfies Tas H102 P1(d)(i).

(b) The provision of—
   (i) self-closing or pest-screened external doors; and
   (ii) mesh screens at opening windows or other ventilation openings; and
   (iii) sealing to drains, grease traps and ventilation pipes; and
   (iv) sealing to openings where pipes pass through external walls; and
   (v) the installation of pest-proof flashings to doors,
   satisfies Tas H102 P1(d)(ii).

(c) The provision of—
   (i) vermin-proof sealing; or
   (ii) filling; or
   (iii) access for inspection and cleaning of boxed-in areas,
   satisfies Tas H102 P1(d)(iii).

Tas H102.3 Pests and contaminants

Premises where customers are served outside the premises through an opening, that has an appliance for the elimination of flies and mechanical ventilation adequate to exhaust air through the opening at a rate of not less than 5 litres per second for each square metre of opening, satisfies Tas H102 P1(d).

Tas H102.4 Drains and Pipes

Premises satisfy Tas H102 P3 where—

(a) A grease trap, a gully trap or an untrapped opening connected directly with a drain or sewer, is not installed in a room used for preparation, processing, packing or storing of food for sale; and

(b) as far as is practicable, service pipes are concealed beneath the surface of walls, floors or ceilings, or are fixed clear of the wall, floor or ceiling, at such distance as to facilitate cleaning.

Tas H102.5 Offensive material and trade waste

Where offensive material or trade waste is stored, a separate area or room which—

(a) is paved and easily cleanable; and
(b) is graded to drain to a suitable drainage system; and
(c) has available a supply of water under pressure,
satisfies Tas H102 P4.

**Tas H102.6 Ventilation**
A mechanical ventilating exhaust system complying with the requirements of AS/NZS 1668.1 and AS 1668.2 satisfies Tas H102 P5.

**Tas H102.7 Lighting**
A lighting system that complies with AS 1680.1 and AS/NZS 1680.2.4 satisfies Tas H102 P6.

**Tas H102.8 Floors, walls and ceilings**
(a) A floor, wall or ceiling that is—
   (i) durable, rigid, impervious to water, non-absorbent, non-toxic and smooth enough to be easily cleaned; and
   (ii) free from cracks, crevices and other defects,
satisfies Tas H102 P7 and Tas H102 P8.
(b) A floor subject to wet cleaning by hosing down or where liquids are discharged on to the floor, graded to trapped floor waste outlets connected to a drainage installation, satisfies Tas H102 P7.
(c) Walls that—
   (i) are free from skirtings, architraves, picture rails or other ledges that could provide lodgement for dirt; and
   (ii) the angles between the walls and the floor are coved to permit ease of cleaning; and
   (iii) the angles between walls and all joints in walls are sealed,
satisfy Tas H102 P8(c).
(d) Walls and ceilings that are finished in light colour, and if painted, are washable, satisfy Tas H102 P8(d).
(e) Sub-clauses (a), (b), (c) and (d) do not apply to areas used only by customers and they do not apply to walls and ceilings in a premises or places—
   (i) used for the storage or display for sale of food that is wholly enclosed in protective packages; and
   (ii) used for the storage for sale of fruit and vegetables; or
   (iii) in which all food for sale is completely enclosed and otherwise protected from contamination by processing plants, other appliances, or other means.

**Tas H102.9 Separation of work place**
A room where food for sale is processed, manufactured, prepared, deposited, treated, stored or packed, that does not have direct communication with a room containing sanitary facilities, living quarters, laundry, bathroom or garage or a room where animals are housed, satisfies Tas H102 P8(b).
Tas H102.10 Washbasins

Premises or places for preparation or storage of food for sale provided with not less than one washbasin, supplied with hot and cold water through a common outlet, in or within reasonable proximity of those areas where the nature of the activities performed is such that hands are likely to be a source of contamination of food, satisfy Tas H102 P9.

Tas H102.11 Sinks

(a) Where equipment and utensils are required to be manually cleaned and sanitized, or food preparation requires a sink, premises that are provided with a suitably sized double bowl sink for equipment washing and a separate suitably sized sink for food preparation of stainless steel supplied with—
   (i) hot and cold water; and
   (ii) an integral drainer on at least one side or a third bowl,

satisfies Tas H102 P10.

(b) A sink installed adjacent to a wall or other vertical surface, that is fitted with an integral flashing to that wall or vertical surface to a height of not less than 150 mm, satisfies Tas H102 P10.

(c) A sink provided with an integral surround not less than 150 mm wide except on sides with an integral flashing as in (b), satisfies Tas H102 P10.

Tas H102.12 Installation of equipment and fittings

The provision of—

(a) automatic equipment that uses water to sanitize utensils or other equipment and only operate for the purposes of sanitation when the water is at a temperature that will sanitize the utensils or equipment; or

(b) a sink that meets Tas H102.11,

satisfies Tas H102 P10.

Tas H102.13 Storage of materials and equipment

Separate areas for the storage of fuel, cleaning compounds and general maintenance equipment provided so as to prevent the contamination of the product in the event of a spillage or any other form of breakdown, satisfies Tas H102 P11.

Tas H102.14 Food store

An eating house provided with a dry-food store, satisfies Tas H102 P11.

Tas H102.15 Meat Premises

(a) Premises used for the preparation or sale of red meat, other than those licensed under the Meat Hygiene Act 1985, that comply with—
   (i) Tas Part H106; or
   (ii) the provisions of Tas H102.2 to Tas H102.13 and Tas H102.17, satisfy in relation to building construction, the requirements of Tas H102 P1 to P12.
Tas H102.16 Dairy produce

Definition:

(a) **Dairy produce** means milk, cream, butter, cheese, condensed milk, ice-cream, yoghurt and any other product of milk and includes margarine and dairy blend.

(b) Premises designed and constructed in compliance with the Export Control (Processed Food) Orders satisfy the special requirements of this code for premises to be used for the manufacture of *dairy produce*.

Tas H102.17 Refrigerated and cooling chambers

The construction of a refrigerated chamber or cooling chamber installed in premises for storage of food complying with the requirements for that premises, satisfies Tas H102 P12 where they have—

(a) internal and external panels adhered directly to the insulating core material to form an integral wall section with tight fitting edges resistant to penetration by liquids; and

(b) every joint caulked with a water-resistant, flexible sealer and finished in such a manner as to prevent migration of liquids into the core; and

(c) every intersection of walls with floors and walls with walls coved with a radius not less than 25 mm; and

(d) exposed slot-head screws or open-headed pop rivets filled with sealer; and

(e) service pipes and conduits concealed in floors, walls or ceilings, if practicable, or fixed on brackets to provide clearances of not less than 25 mm between the pipe and a wall and 100 mm between the pipe and a floor; and

(f) fittings not fixed over exposed pipes nor in a position to make difficult the cleaning of the pipe and surrounding area; and

(g) rat proof construction, and any inaccessible spaces between the low temperature room and surrounding walls, ceilings and fixtures proof against rats and vermin; and

(h) floors graded, as shown in Tas Table H102.17(h), to drains located outside the chamber as near as practicable to the door opening; and

(i) drainage from cooling units within the chamber constructed in accordance with Tas Table H102.17(i), draining to a trapped outlet located outside the chamber.

**Tas Table H102.17(h) FLOOR DRAINAGE OF REFRIGERATED OR COOLING CHAMBERS**

<table>
<thead>
<tr>
<th>FLOOR SLOPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active chillers</td>
</tr>
<tr>
<td>Other chambers</td>
</tr>
</tbody>
</table>

**Tas Table H102.17(i) DRAINAGE FROM COOLING UNITS WITHIN REFRIGERATED CHAMBERS OR COOLING CHAMBERS**

| Wall-mounted cooling units - |
drain water must be contained and removed by either a wall-mounted channel or a spoon drain located under the coil.

**Floor-mounted cooling units** -

drain water must be confined by kerbs, of a height not less than 150 mm, and directed to a trapped drain outlet.

**Ceiling-mounted cooling units** -

drain water must be confined by suitable insulated drip trays directly connected to the drainage system.

After Tas Part H102 insert Tas Part H103 as follows:

**TAS PART H103 DINING ROOMS AND BAR ROOMS**

**Tas H103.1 Application of Part**

This Part applies to all dining rooms and bar rooms (excluding bar service areas) in licensed premises covered by the *Liquor and Accommodation Act 1990*.

**Tas H103.2 Sanitary facilities**

(a) Separate sanitary facilities for males and females must be provided in close proximity to each dining room and bar room in licensed premises.

(b) Where the sanitary facilities are not accessed from within the dining room or bar area, reasonable fixed protection from the elements must be provided.

**Tas H103.3 Separation from other areas**

A dining room must not have direct opening to sanitary facilities, living quarters, a laundry, bathroom or garage or a room where animals are housed.

After Tas Part H103 insert Tas Part H104 as follows:

**TAS PART H104**

**Tas H104**

This Part has been deliberately left blank.

Add Tas Part H105 as follows:
TAS PART H105  ACCOMMODATION FACILITIES

Tas H105.1 Application of Part

This Part applies to every form of accommodation facility for travellers covered by the Liquor and Accommodation Act 1990.

Tas H105.2 Definitions

Bed and breakfast establishment means a guest house.

Bedroom means a room for sleeping to be occupied by one or more people travelling together and may have sanitary facilities attached to the room.

Dormitory means a room for communal sleeping.

Tas H105.3 Floor area of bedrooms and dormitories

(a) The floor area of the main bedroom or only bedroom in a sole-occupancy unit must be not less than 8.5 m² for the first person with additional space of 3 m² for each other person to be accommodated.

(b) The floor area of any bedroom, other than the main bedroom, must be not less than—
   (i) 7.5 m² for a room accommodating one person; or
   (ii) 9.0 m² for a room accommodating two persons; or
   (iii) 9.0 m² for two persons, plus additional 3.5 m² for each person in excess of two accommodated in the room.

(c) The floor area of a dormitory must be not less than—
   (i) 4.0 m² per person accommodated in beds; and
   (ii) 2.5 m² per person accommodated in two-tiered bunks; and
   (iii) 2.0 m² per person accommodated in three-tiered bunks.

(d) For the purposes of (a), (b) and (c), the area occupied by an attached bathroom, toilet, living, dining, kitchenette or access area must not be included in the area of a bedroom or dormitory.

(e) This Clause does not apply to unregisterable relocatable dwellings.

Tas H105.4 General Requirements for bedrooms and dormitories

(a) Each bedroom or dormitory must be provided with—
   (i) locking devices on all windows; and
   (ii) suitable floor coverings or finish; and
   (iii) a power point conveniently located for use by guests.

(b) Each dormitory must be provided with a night light.

(c) Where bunks are built in they are to be designed and constructed in accordance with AS/NZS 4220.

(d) Provide in close proximity to any bedrooms and dormitories—
   (i) a storage area for fresh linen; and
(ii) a separate cleaner's storage area.

Tas H105.5 Eating areas

(a) Except in Class 1b bed and breakfast establishments, dining rooms, where provided in accommodation facilities, for travellers must comply with the requirements of Tas Part H103.

(b) An eating area must be provided in each sole-occupancy unit for which meals are provided for consumption in the unit or in which occupants prepare their own meals.

Tas H105.6 Cooking areas

(a) Kitchens, attached to dining rooms or in which meals are prepared and cooked for delivery to guests or for sale to customers, must comply with the requirements of Tas Part H102.

(b) Each holiday unit must be provided with a cooking area with—
   (i) food and utensil storage space; and
   (ii) space for a refrigerator; and
   (iii) space for a free standing stove or wall oven and cooking top or equivalent; and
   (iv) kitchen sink; and
   (v) a water supply providing hot and cold drinking water.

(c) Each holiday cabin must be provided with—
   (i) food and utensil storage space; and
   (ii) space for an appliance for cooking within the cabin; and
   (iii) kitchen sink; and
   (iv) a water supply providing cold drinking water.

(d) Each hostel must be provided with—
   (i) space for sufficient appliances for cooking; and
   (ii) space for a refrigerator; and
   (iii) food and utensil storage space; and
   (iv) kitchen sink; and
   (v) a water supply providing hot and cold drinking water.

Tas H105.7 Communal common rooms and dining rooms

In a hostel or other accommodation designed for communal living there must be a common or lounge room and a dining room.

Tas H105.8 Sanitary facilities

Each sanitary facility must include—

(a) a bath or shower or both, together or separate; and
(b) a closet pan; and
(c) a washbasin with adjacent shelving or bench space; and
(d) a mirror of at least 600 mm x 450 mm fixed at a convenient height and provided with effective lighting; and

(e) a double coat hook; and

(f) a suitable towel hanging device for effective drying of towels after use; and

(g) a soap holder in the shower recess or adjacent to the bath; and

(h) a toilet paper dispenser; and

(i) an impervious non-slip floor covering.

**Tas H105.9 Communal sanitary facilities**

(a) Communal sanitary facilities provided for travellers in accordance with Table F 2.1, must be situated—

(i) conveniently in relation to the travellers’ bedrooms or dormitories for which the facilities are provided; and

(ii) in such a position as to be capable of being entered from within the premises.

(b) Separate communal sanitary facilities must be provided for travellers of each sex in accordance with **Tas Table H105.9** except that in a Class 1b bed and breakfast establishment, one communal sanitary facility may be provided if it serves a family or group travelling together and the proprietor has separate facilities.

(c) For male travellers one third of closet pans may be replaced by urinals.

(d) In calculating the numbers of facilities to be provided under (a) and (b) the following must not be included in the communal sanitary facilities to be provided for travellers—

(i) those provided for use by the proprietor, his family and his employees; or

(ii) those provided for the sole use by persons occupying accommodation or caravan sites with sanitary facilities attached.

(e) Washbasins may be installed in a separate communal area for each sex.

(f) Where communal toilets are located in a building separate from communal washing facilities, washbasins must be installed in the toilet building at the rate of one washbasin for each three toilets in the building.

(g) Communal sanitary facilities for females must have adequate means for disposal of sanitary towels.

(h) Each toilet or shower is to be in a separate sanitary compartment in accordance with F2.5.

(i) In each shower compartment or bath area there must be provided in a suitable position—

(i) a soap holder; and

(ii) a dry area with—

(A) seat; and

(B) two double coat hooks; and

(C) an area large enough for a person to dress/undress; and

(iii) a door to give privacy, fitted with a privacy latch; and

(iv) where coin operated devices are provided the apparatus to operate the device is to be situated within the compartment.
### Tas TABLE H105.9 COMMUNAL SANITARY FACILITIES FOR TRAVELLERS

<table>
<thead>
<tr>
<th>Max. Number of Males or Females Served by:</th>
<th>1</th>
<th>Each Extra</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closet Fixture(s)</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Wash Basin(s)</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Shower or bath</td>
<td>10</td>
<td>15</td>
</tr>
</tbody>
</table>

### Tas H105.10 General requirements for communal bathing and toilet facilities

Communal bathing and toilet facilities must be provided with—

(a) an impervious non-slip floor surface graded to a floor waste and continuous up walls to a height of 150 mm above floor level with the junction between the floor and the wall coved for easy cleaning; and

(b) bench tops, walls and ceiling surfaces finished with an impervious easily cleaned material; and

(c) entrance screens, doors and windows to provide adequate privacy for users; and

(d) mirrors of a least 600 mm x 450 mm fixed at a convenient height above each basin and with adequate lighting over; and

(e) shelving or bench space adjacent to the basins and mirrors; and

(f) power points conveniently located adjacent to mirrors; and

(g) coat hooks or towel rails; and

(h) paper towel dispensers or hand drying devices; and

(i) mechanical ventilation in accordance with F4.5.

### Tas H105.11 Location of communal facilities

(a) In a hostel, communal sanitary facilities must be situated—

(i) at a distance no greater than 100 m from the travellers' bedrooms or dormitories in the hostel in respect of which the units are provided; and

(ii) in such a position as to be capable of being entered from within the hostel premises.

(b) At holiday cabins, communal sanitary facilities must be situated conveniently in relation to the cabins for which the units are provided, being in no case more than 100 m or less than 6 m from any of those holiday cabins.

(c) In a caravan park the communal sanitary facilities must be situated—

(i) at a distance no greater than 100 m and no less than 6 m from any caravan site; and

(ii) in such a position as to be entered from within the park.

(d) In camping grounds the communal sanitary facilities must be situated—
(i) conveniently in relation to that area of the camping ground on which caravans may be parked or tents erected; and

(ii) in such a position as to be entered from within the camping ground.

Tas H105.12 Doors and windows on communal facilities

(a) Every external doorway giving direct access to the interior of a building containing a sanitary facility or a laundry, or a group of sanitary facilities or laundries must be provided with a full-length door fitted with a suitable locking device.

(b) A doorway giving access to a bathroom, shower-cubicle, or toilet closet within a building containing communal sanitary facilities must be provided with a door of such size as to allow for adequate space to be left open between the top and bottom of the door and the head of the doorway and the floor respectively, whilst still ensuring the privacy of the user.

(c) Each door referred to in (b) must be fitted with a suitable means of fastening to ensure the privacy of the user and must be capable of being opened from the outside in an emergency.

(d) Every window serving a sanitary facility must be glazed with obscured glass.

Tas H105.13 Laundry facilities

(a) Communal laundry facilities must be provided at the rate shown in Tas Table H105.13 for use by occupants for whom individual laundry units have not been provided.

(b) A water supply must be capable of providing ample hot and cold, drinking water to the unit.

(c) A laundry unit must include—

(i) space for a washing machine; and

(ii) a wash trough; and

(iii) an ironing board or ironing table.

(d) Drying units for washed clothes must be provided with space for—

(i) 6 m of clothes line; or

(ii) one heater dryer for each laundry unit.

**Tas TABLE H105.13 NUMBERS SERVED BY LAUNDRY UNITS**

<table>
<thead>
<tr>
<th>Units served</th>
<th>One Laundry unit serves</th>
<th>Each Extra Laundry unit serves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holiday units:</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Holiday cabins:</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Sites in Caravan Parks:</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Travellers in hostels:</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

Note: In calculating the number of communal units to be provided those <i>sole-occupancy units</i> with attached laundry units need not be included.
Tas H105.14 Insect proofing

Every accommodation facility must be rendered insect-proof by the fitting of an insect-proof screen on at least one openable window or door in each room of each unit.

Tas H105.15 Doors on accommodation facilities

(a) An external door to a sole-occupancy unit must be—
   (i) fitted with a suitable locking device; and
   (ii) capable of being locked from inside the sole-occupancy unit.

(b) Every internal door in an accommodation facility must be fitted with a latching device capable of being opened from either side in an emergency.

Tas H105.16 Lighting

Lighting must be provided—

(a) at the entrance and reception area of an accommodation facility; and

(b) at all external entrances to an accommodation facility; and

(c) to the interior of all buildings containing communal facilities during the period of accessibility of patrons from sunset to sunrise; and

(d) throughout the caravan park other than that referred to in (c) on a subdued basis from sunset to sunrise.

Tas H105.17 Caravan Parks

(a) Caravan park sites must—
   (i) be level and drained; and
   (ii) have caravan pads constructed of concrete or other all weather surface; and
   (iii) be clearly defined and numbered.

(b) Sites—
   (i) for tents must be of a size large enough to allow surrounding space for reasonable movement around the site; and
   (ii) for campervans must be a minimum of 45 m² in area, with a minimum frontage of 5m; and
   (iii) for caravans, or on site vans must be a minimum of 80 m² in area with a minimum frontage of 7 m; and
   (iv) for unregisterable relocatable dwellings must be a minimum of 80 m² in area; and
   (v) for campervans and caravans must provide an uninterrupted buffer zone (not including easily removable guy ropes or supports) of 2.4 m between the campervan, caravan and any attached annex and any campervan, caravan or annex on an adjoining site; and
   (vi) must have a minimum buffer zone between roadways and sites of 1.2 m.

(c) Roadways—
(i) in a caravan park must be provided that are cambered, drained and paved to give all weather access to all sites from the point of entry to the point of egress from the caravan park; and

(ii) at the entrance or reception area of a caravan park must be wide enough to allow incoming vehicles to be parked temporarily so as to avoid disruption to other traffic entering or leaving the caravan park; and

(iii) in a caravan park must be—

(A) not less than 3.5 m wide where one way access only is provided to sites; and

(B) not less than 5 m wide where two way access is provided to sites.

(d) Where powered sites are provided, a 15 ampere supply is to be provided.

**Tas H105.18 Dump points in caravan parks**

(a) Where a sewerage system is available, a caravan park must be provided with—

(i) at least one common soil waste dump point; and

(ii) at least 1 sullage dump point to every 4 sites.

(b) The dump points to be located in the short-term residency section of the caravan park.

(c) The dump points to be in accordance with Clause 3.15 of AS/NZS 3500.2.2 and connected to the sewerage system.

(d) Each dump point to include a water tap connected to a water supply system.

**Tas H105.19 Unregisterable relocatable dwellings**

An unregisterable relocatable dwelling located in a caravan park—

(a) is to be sited in accordance with Tas H105.17(b)(iv); and

(b) where beds and/or bunks are provided in a passage way or alcove primarily for the accommodation of children—

(i) the clear floor space must be sufficient to not obstruct access; and

(ii) allowance is to be made for adequate storage areas.

After Tas Part H105 insert Tas Part H106 as follows:

**TAS PART H106 MEAT PREMISES**

**Tas H106.1 Application of Part**

This Part is applicable to—

(a) meat premises processing animals, including game and poultry, and producing meat and meat products for human consumption; and

(b) pet food works licensed under *Meat Hygiene Act 1985*.

**Tas H106.2 Premises Processing Meat**

Premises used for the processing of animals and meat for human consumption must comply with the relevant Parts and Sections of the Australian Standards listed below—
(a) Hygienic Production and Transportation of Meat and Meat Products for Human Consumption, AS 4696—Part 7, Sections 19 to 21.4460

(b) Hygienic Production of Game Meat for Human Consumption, AS 4464—Sections 6 and 8.

(c) Construction of Premises and Hygienic Production of Poultry Meat for Human Consumption, AS 4465—Part A, Sections 3 to 12.

(d) Hygienic Production of Rabbit Meat for Human Consumption, AS 4466—Section 5.

(e) Hygienic Rendering of Animal Products, AS 5008—Section 4.

(f) Hygienic Production of Ratite (Emu/Ostrich) Meat for Human Consumption, AS 5010—Section 5.

(g) Hygienic Production of Natural Casings for Human Consumption, AS 5011—Section 4.

(h) Tasmania Code of Practice for Hygienic Production of Pet Food—Section 5.

After Tas Part H106 insert Tas Part H107 as follows:

**TAS PART H107 FARM DAIRY PREMISES**

**Tas H107.1 Application of this Part**

This part is applicable to every farm dairy as covered by the *Tasmanian Dairy Industry Act 1994*.

**Tas H107.2 Milking Sheds and Holding Yards**

(a) The walls (including the walls of the pit of a herringbone design milking shed) must be non absorbent and easy to clean.

(b) The floor of a holding yard and a milking shed must be non absorbent, easy to clean and free-draining.

(c) The lighting of a holding yard and a milking shed must be adequate for proper milking.

(d) The working space in a milking shed is to be sufficient to minimise the risk of contamination of milk during milking.

(e) Effluent from a holding yard and a milking shed is to be drained to a suitable point for disposal.

(f) The requirements of (a), (b) and (c) are satisfied if—

   (i) the walls are constructed of well-compacted smooth finish concrete or other material sealed to be impervious to moisture; and

   (ii) the floors are constructed of well-compacted smooth finish concrete and graded to a drain; and

   (iii) joints between wall sections and walls and floors are sealed to prevent entry of water and pests; and

   (iv) artificial lighting is designed to comply with AS 1680.

**Tas H107.3 Milk Receiving Area and Milk Storage Room**

(a) A Milk Receiving Area and Milk Storage Room must—
(i) have internal surfaces that are smooth, non-absorbent, free-draining and easy to clean; and

(ii) be constructed so as to prevent the entry of dust, insects, pests, birds and animals; and

(iii) have adequate artificial lighting that—
   (A) is located to provide a clear view of the milk for grading and measuring purposes; and
   (B) the lights over a bulk vat are to be protected to prevent glass entering the vat if the light is broken; and
   (C) have switches appropriately located at the milk collection areas; and

(iv) have adequate ventilation to aid the drying of floors and walls between milkings.

(b) The requirements of (a) are satisfied if—

(i) the floors are constructed of well-compacted smooth finish concrete and graded to a drain; and

(ii) the internal surfaces are smooth, sealed and washable; and

(iii) joints between wall sections and walls and floors are sealed to prevent entry of water and pests; and

(iv) artificial lighting is designed to comply with AS 1680; and

(v) all openings are fitted with doors, windows or screens; and

(vi) the milk is stored in a bulk storage tank which complies with AS 1187; and

(vii) ventilation is provided in accordance with F4.5.

Tas H107.4 Water supply

An adequate and suitable supply of water must be available for plant sanitation, teat washing, milk cooling and vat rinsing.

After Tas Part H107 insert Tas Part H108 as follows:

**TAS PART H108 PHARMACIES**

**Tas H108.1 Application of Part**

This Part applies to all pharmacies to which the Pharmacy Regulations 1966 apply.

**Tas H108.2 Definition**

In this Part the following meaning applies—

Dispensary means the room or area within a pharmacy or other premises which a registered pharmaceutical chemist uses for the compounding or dispensing of prescriptions, medicines or drugs.

**Tas H108.3 Pharmacy premises**

(a) Each premises used as a pharmacy must have—
Tas H108.3

(i) a dispensary for the compounding or dispensing of drugs and for the storage of material used in dispensing;

(ii) space for the storage of narcotic substances and poisons as required by the Poisons Regulations 1975;

(iii) a place for unpacking containers or cases and goods; and

(iv) a room for storing merchandise not used in dispensing.

(b) A pharmacy may have an area set aside for retailing merchandise that is not compounded or dispensed.

Tas H108.4 Dispensary

(a) A dispensary must be located—

(i) within a pharmacy in a position to enable a person in the dispensary to supervise the dispensary, storage areas for narcotic substances and poisons, the entrances to unpacking areas and areas for storing other substances, and the retail area; and

(ii) separate from any place where goods are unpacked or where general merchandise, not used in dispensing, is stored.

(b) Each dispensary must be provided with—

(i) a sink and drainage board of impervious material moulded or manufactured in one piece;

(ii) a reticulated supply of hot and a cold water capable of providing to the sink adequate quantities of water for dispensing purposes; and

(iii) space for a dispensing bench with a working area not less than 1.4 m².

Tas H108.5 Security of dispensary

(a) Every dispensary and enclosure set aside for the storage of narcotic substances and poisons must be able to be secured against entry.

(b) If a dispensary is located in a pharmacy that is capable of being secured against entry at all times while the dispensary is not in use, then the dispensary is deemed to be secured against entry.

After Tas Part H108 insert Tas Part H109 as follows:

TAS PART H109 HOSPITALS AND NURSING HOMES

Tas H109.1 Application of Part

This Part applies to every hospital or nursing home.

Tas H109.2 Floor area of wards and bedrooms

The floor area of each ward or bedroom must be sufficient to provide not less than—

(a) 9 m² in a one-bed ward or bedroom; or

(b) 7.5 m² for each patient or resident accommodated in any other ward or bedroom.
Tas H109.3 Floor and walls
(a) The surface finish of all floors and walls within the building must have a smooth impervious and non-toxic finish.
(b) The junctions between floors and walls must be coved for ease of cleaning.
(c) In operating theatres, all junctions of walls with walls and of walls with ceilings must be coved.
(d) Provided the requirements of Specification C1.10 are met, the walls and floors complying with (a) may have suitable coverings.

Tas H109.4 Grab rails and handrails
(a) Every toilet closet, bath and shower alcove for use by patients or residents must be fitted with grab rails.
(b) Corridors in areas used by patients or residents must be fitted with handrails.

Tas H109.5 Insect proofing
Each external opening must be fly-screened except where the openings are fitted with self-closing doors or with doors provided with suitable insect repellent devices.

Tas H109.6 Water temperature
The temperature of water supplied to baths and showers for patients must not exceed 45°C.

After Tas Part H109 insert Tas Part H110 as follows:

TAS PART H110 PREMISES USED FOR ACTIVITIES INVOLVING SKIN PENETRATION

Tas H110.1 Application of Part
This Part applies to premises for tattooing, ear-piercing, acupuncture and like activities, covered by the Public Health (Skin Penetration) Regulations 1978.

Tas H110.2 Sanitary facilities
(a) Sanitary facilities for customers must be provided and must include not less than—
   (i) one water closet; and
   (ii) one washbasin.
(b) Sanitary facilities must be separated from the workroom by—
   (i) an air lock with self-closing entry door; or
   (ii) a self-closing door.

Tas H110.3 Washbasins
The area in which skin penetration is done must be provided with—
(a) one wash basin for each 10, or part of 10 employees; and
(b) an adequate supply of hot and cold water controlled by foot-operated or other suitable means which allows the use of a tap without hand contact.

After Tas Part H110 insert Tas Part H111 as follows:

**TAS PART H111 DENTAL SURGERIES AND CHIROPRACTORS' PREMISES**

**Tas H111.1 Application of Part**
This Part applies to premises to be used—
(a) as a dental surgery and covered by the *Dental Regulations 1983*; or
(b) in the practice of chiropractic and covered by the *Chiropractors Regulations 1984*.

**Tas H111.2 Waiting room**
Each dental surgery and chiropractor's premises must have a separate waiting room.

**Tas H111.3 Floor, walls and ceiling**
The floor, walls and ceiling of a dentist's surgery and each room used in conjunction with that surgery or in a chiropractor's premises must be finished with materials which enable easy cleaning and disinfecting.

**Tas H111.4 Disposal of liquid wastes**
The operating section of a dental surgery must have adequate means for the disposal of waste water, other liquids and infected matter.

After Tas Part H111 insert Tas Part H112 as follows:

**TAS PART H112 MORTUARIES**

**Tas H112.1 Application of Part**
This Part applies to any premises used for the storage or preparation for burial, cremation or disposal by other means, of bodies of deceased persons.

**Tas H112.2 Layout of mortuary**
(a) A mortuary may be integral with the remainder of a building but must be separated physically from all public areas of that building.
(b) Each mortuary at which bodies are prepared for burial, cremation or other disposal must be provided with a body preparation room—
   (i) capable of being isolated from the remainder of the premises; and
   (ii) having a *floor area* not less than 10 m².
Tas H112.2

(c) A vehicle reception area or garage must be provided adjacent to and with direct access to the storage room or body preparation room to ensure that the transfer of uncoffined bodies is screened from public view.

(d) Access to toilet and shower facilities from any other part of the mortuary premises must be only by way of an air lock.

**Tas H112.3 Construction of body preparation room**

(a) The floor must be—
   (i) of impervious material with a smooth, unbroken surface; and
   (ii) uniformly graded to a floor drain.

(b) All walls and partitions must be of concrete or masonry with a smooth, unbroken finish for ease of cleaning.

(c) All joints between the floor, walls, partitions, ceiling, ventilation grilles, fittings, pipework, windows and light fittings must be sealed with impervious material for ease of cleaning.

(d) All joints between the floor and walls or partitions must be coved for ease of cleaning.

(e) The body preparation room must be provided with at least one washbasin, fitted with elbow or foot-operated taps, and an adequate supply of hot and cold water.

(f) The body preparation room must be provided with refrigerated storage facilities—
   (i) with sufficient capacity for the storage of at least two adult bodies; and
   (ii) capable of maintaining an internal temperature between 1° and 5°C.

**Tas H112.4 Water supply and sewerage**

Each mortuary with a body preparation room must be connected to—

(a) a permanent water supply with a physical discontinuity, provided by a registered break tank or reduced pressure zone device, between the water supply and all equipment, appliances, fittings and areas in the mortuary; and

(b) a water carriage sewerage system.

After Tas Part H112 insert Tas Part H113 as follows:

**TAS PART H113  FOUNDRIES**

**Tas H113.1 Application of Part**

This Part is applicable to every building or premises in which foundry operations are undertaken.

**Tas H113.2 General**

(a) Every floor in a foundry must be level and, in places other than where molten metal is poured, must be composed of concrete or similar material or wooden blocks.

(b) Every part of a foundry must be not less than 4.2 m high—
   (i) where a ceiling is provided, measured from the floor to the ceiling; or
(ii) where a ceiling is not provided, measured from the floor to the lowest part of the roof.

(c) All roof lights in a foundry must be fitted with wired glass or protected by means of wire netting fitted under the underside.

**Tas H113.3 Cupola charging platform**

(a) The floors of cupola charging platforms must be—
   (i) of heavy timber or non-slip steel plate;
   (ii) securely fixed in position; and
   (iii) level.

(b) All parts of the cupola charging platform must be covered by a roof not less than 3 m above the platform.

(c) A cupola charging platform must have—
   (i) a wall, not less than 1 m high, measured from the floor of the platform, constructed to surround the platform; and
   (ii) the sides between the top of the wall and the roof suitably waterproofed and ventilated.

(d) A properly constructed access stair or ramp must be provided to give access to every cupola charging platform and must comply with AS 1657.

**Tas H113.4 Deep moulds and pits**

Deep moulds or pits, for permanent use—

(a) must be lined with bricks, concrete, or other suitable material in such a manner as to provide adequate reinforcement and to keep the pit or mould in a dry condition; and

(b) must be securely fenced by means of a wall of adequate construction, railings or chains and stanchions raised, in each case, to a height not less than 1 m above the surface of the surrounding floor.

**Tas H113.5 Pot furnaces**

Where pot furnaces are below ground level, the pit must be covered by a substantial grating at the point at which metal is removed from the furnace, and must at all other points be securely fenced as in **Tas H113.4(b)**.

After Tas Part H113 insert Tas Part H114 as follows:

**TAS PART H114 PREMISES FOR MANUFACTURE OR PROCESSING OF GLASS REINFORCED PLASTICS**

**Tas H114.1 Application of Part**

This Part is applicable to every building in which glass reinforced plastics are manufactured or processed.
Tas H114.2 Separation from other buildings

A building for manufacture or processing of glass fibre plastics must be—

(a) separated from other buildings or parts of an occupancy by means of impervious walls with FRL at least 120/120/120; or

(b) separated from all other buildings by a clear space of not less than 6 m.

Tas H114.3 Rise in storeys

The building must be of single storey construction.

Tas H114.4 Maximum floor areas

The floor area of any building or fire-separated section must not exceed the relevant maximum floor area set out in Tas Table H114.4.

<table>
<thead>
<tr>
<th>Type of construction of building—</th>
<th>Type A</th>
<th>Type B</th>
<th>Type C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Sprinklered</td>
<td>1500</td>
<td>1200</td>
<td>1000</td>
</tr>
<tr>
<td>Sprinklered</td>
<td>6000</td>
<td>5000</td>
<td>3000</td>
</tr>
</tbody>
</table>

Tas H114.5 Required exits

(a) Each fire-separated section of a building which is a work place must have at least two exits for escape purposes and the number and location of the exits must be such that any point on the floor is not further than 20 m from one of the exits.

(b) Only exits with vertically hinged swinging doors may be considered as exits for the purposes of this clause.

Tas H114.6 Hand laminating and spray depositing

The walls and floors of areas to be used for hand laminating and spray depositing must be constructed of non-combustible materials.

Tas H114.7 Ventilation

(a) Mechanical or natural ventilation must be via low-level, exhaust ducting in a wall and a fixed, open, floor-level, fresh-air inlet ducting in the opposite wall such as to ensure a cross flow of the ventilation air over the complete working area.

(b) Mechanical ventilation must provide not less than 6 air changes per hour.

(c) The ventilation fan and exhaust ducting must be arranged in such a manner as to—

(i) produce a negative pressure within any exhaust ducting within the work place so that a leak in the ducting will not vent exhaust air back to the work place; and
(ii) vent the exhaust air to the atmosphere so as to prevent recirculation of that exhaust air.

Tas H114.8 Smoke and heat roof vents
Each fire-separated section must be provided with automatic smoke and heat roof vents. After Tas Part H114 insert Tas Part H115 as follows:

TAS PART H115 PREMISES FOR PRODUCTION OR PROCESSING OF ISOCYANATES

Tas H115.1 Application of Part
This Part is applicable to every building in which isocyanate production or processing is undertaken.

Tas H115.2 Areas of work places
Work places in which an isocyanate industry is carried on must be divided into the following divisional areas:

(a) Administration and staff amenities.
(b) Workshop.
(c) Bulk stores.
(d) Curing room.
(e) Processing plant.
(f) Raw materials plant.
(g) Manufacture.

Tas H115.3 Separation from other areas and buildings

(a) Each of the divisional areas required by Tas H115.2 other than the administration and staff amenities building, must be—
   (i) separated from each of the other divisional areas by means of an impervious wall with an FRL not less than 120/120/120; or
   (ii) separated from all other buildings by a clear space of not less than 6 m.
(b) Notwithstanding the distance requirements of (a), bulk stores of polyols and bulk stores of isocyanates must comply with the requirements of the Dangerous Goods (General) Regulations 1998.

Tas H115.4 Rise in storeys
The building must be of single storey construction.

Tas H115.5 Maximum floor areas
The floor area of any building or fire-separated section must not exceed the area shown in Tas Table H114.4.
Tas H115.6 Required exits

(a) Every building or divisional area of a work place must have not less than 2 exits for escape purposes.

(b) The number and location of the exits must be such that any point on the floor is not more than 20 m from one of the exits.

(c) Only exits with vertically hinged swinging doors may be considered as exits for the purposes of this clause.

Tas H115.7 Bulk stores for polyols and isocyanates

(a) A bulk store for polyols must be constructed from non-combustible materials and have a smooth impervious concrete floor and it must protect the polyols from direct exposure to the sun's radiation.

(b) A bulk store for isocyanates must—
   
   (i) be constructed from non-combustible materials, have a smooth impervious concrete floor, and must protect the isocyanate containers from direct exposure to the sun; and
   
   (ii) if it is used for storage of either TDI or HDI and is not an open sided building, be fitted with mechanical ventilation so that the TLV is not exceeded at any time provided that the ventilation must provide not less than 6 air changes per hour.

(c) The area around both a polyol bulk store and an isocyanate bulk store must be bunded, the bund or bunds must ensure separation of the polyol and isocyanate areas and each bund must have a capacity of 10% more than the storage capacity of the largest tank it protects.

Tas H115.8 Curing room

The curing room for the storage of newly produced flexible polyurethane foam must be constructed of non-combustible materials with a smooth impervious concrete floor and fitted automatic fire vents in the roof.

After Tas Part H115 insert Tas Part H116 as follows:

TAS PART H116 PREMISES FOR ELECTRO-PLATING ELECTRO-POLISHING, ANODISING OR ETCHING

Tas H116.1 Application of Part

This Part is applicable to every building where any of the processes of electro-plating, electro-polishing, anodising or etching are undertaken.

Tas H116.2 Floors

The floor of every plating area must be—

(a) so graded as to—
Tas H116.2

(i) permit easy flushing with water; and
(ii) prevent liquids from flowing from the area into other parts of the work place; and
(b) chemically resistant to the solutions used in the process.

Tas H116.3 Height of plating area

Every part of a plating area must be not less than 2.7 m in height—
(a) measured from the floor to the ceiling if a ceiling is provided; or
(b) measured from the floor to the lowest part of the roof if a ceiling is not provided.

Tas H116.4 Air space

In every plating area there must be not less than 14 m$^3$ of air space for each person employed and, in the calculation of such space, the height taken into account must not exceed 4.2 m.

Tas H116.5 Ceiling construction

The ceiling of a plating area must be so constructed as to prevent, so far as is practicable, atmospheric contaminants from escaping into rooms or work places, situated above the level of the ceiling.

After Tas Part H116 insert Tas Part H117 as follows:

TAS PART H117 PREMISES FOR LEAD PROCESSING

Tas H117.1 Application of Part

This Part is applicable to every building in which lead processes are used.

Tas H117.2 Floors

(a) The floor of every work place where a lead process is used must be—
   (i) so constructed of concrete or other suitable material as to be smooth and impervious to fluids; and
   (ii) graded and properly drained to permit flushing with water.
(b) The material of which the floor is constructed must be applied to the walls to a height of not less than 75 mm in such a fashion that the angle between the walls and the floor is coved for easy cleaning.

Tas H117.3 Height of lead processing areas

Every part of a lead processing area must be not less than 2.7 m in height—
(a) where a ceiling is provided, measured from the floor to the ceiling; or
(b) where a ceiling is not provided, measured from the floor to the lowest part of the roof.
Tas H117.4 Air space and floor space

(a) In every lead processing area there must be not less than 14 m³ of air space for each person employed therein, and in the calculation of such space the maximum height taken must be not greater than 4.2 m; and

(b) total floor space for the persons employed in such area, exclusive of space used for storage, must be not less than 3.3 m² for each person so employed.

Tas H117.5 Interior of lead processing areas

(a) The inner surfaces of the walls of every lead processing area must be of a smooth material impervious to fluids and must not contain any projections on which dust may lodge; and

(b) the interior construction of the ceiling or roof must, so far as is practicable, be such that dust will not settle on it.

Tas H117.6 Dust collection

Any areas in which dust-forming lead materials are manipulated, moved or treated must be served by a mechanical exhaust ventilation system capable of safely and effectively collecting all dust.

Tas H117.7 Isolation of certain processes

Where any process of pasting of electric accumulator plates or drying of paste plates, or melting down of pasted plates or of formation with tacking in the electric accumulator industry or of manipulation of dry oxide of lead, is to be carried on in the same room as any other lead process, the processes of pasting, drying, melting, formation or manipulation must be isolated from one another and from any other lead process—

(a) by a partition extending from the floor to the ceiling in the case of a room having a ceiling not more than 3.6 m in height, or to a height of 2.7 m in any other case; or

(b) by some other suitable method.

Tas H117.8 Drying room shelves

The racks or shelves provided in any drying room must not be more than 2.6 m from the floor nor more than 650 mm in width except that, in the case of racks or shelves set or drawn from both sides, the total width must not exceed 1.3 m.

Tas H117.9 Washing facilities

Washing facilities served with running hot and cold water for the use of all employees engaged in a lead process must be provided consisting of—

(a) one washbasin for each 5 employees, or part thereof; and

(b) one shower bath for each 8 employees, or part thereof.

Tas H117.10 Change rooms

In every work place in which lead is processed there must be provided two suitable furnished change rooms for the use of employees as follows—
(a) one of the change rooms must be used for taking off, storing, and putting on of the street clothing of employees;

(b) the other of the change rooms must be used for the taking off, storing, and putting on of overalls and other clothing worn in any work room;

(c) each change room must be so constructed and situated as to prevent the entry into the room of dust or fumes generated in a workroom; and

(d) each change room must be in close proximity to the washing facilities required in Tas H117.9.

After Tas Part H117 insert Tas Part H118 as follows:

**TAS PART H118   BOOTHS FOR SPRAY PAINTING OR SPRAY COATING**

**Tas H118.1 Application of Part**
This Part is applicable to every building in which spray painting or spray coating is undertaken.

**Tas H118.2 Design and construction of booths**
A spray painting booth is to be designed and constructed to comply with AS/NZS 4114.1 Spray Painting Booths, designated spray painting areas and paint mixing rooms. Part 1: Design, construction and testing.

After Tas Part H118 insert Tas Part H119 as follows:

**TAS PART H119   ELECTRICITY DISTRIBUTION SUBSTATIONS**

**Tas H119.1 Application of Part**
This Part is applicable to every surface building type electricity distribution substation as defined in Aurora Energy’s “Distribution Substation Design and Construction Standard”.

**Tas H119.2 Building-type substations**
A building-type electricity distribution substation which complies with the building design and construction requirements of Aurora Energy’s “Distribution Substation Design and Construction Standard” satisfies this Part.

After Tas Part H119 insert Tas Part H120 as follows:

**TAS PART H120   PREMISES FOR STORAGE OF DANGEROUS GOODS**

**Tas H120.1 Application of Part**
This Part applies to every building used for the storage of dangerous goods covered by the *Dangerous Goods Act 1998* except for explosives.
Tas H120.2 Interpretation

The words “dangerous goods”, “explosive” and “flammable liquid” have the same meaning as in the Dangerous Goods Act 1998.

Tas H120.3 Class of dangerous goods

The classification of dangerous goods will be as prescribed in the Dangerous Goods (General) Regulations 1998.

Tas H120.4 Premises for storage of dangerous goods

(a) A building must comply with the relevant Australian Standard, applicable to the storage of dangerous goods listed below—
   (i) Class 3 flammable liquids: AS 1940
   (ii) Pesticides: AS 2507
   (iii) Liquefied petroleum gas: AS/NZS 1596
   (iv) Gas installations: AS 5601
   (v) Anhydrous ammonia: AS 2022
   (vi) Chlorine: AS/NZS 2927
   (vii) Organic peroxides: AS 2714
   (viii) Class 8 substances—Corrosives: AS 3780

(b) Except as provided in (a) a room, or space, for the storage of dangerous goods must be on the ground floor and may be—
   (i) attached to an external wall of a building; or
   (ii) located within a building; or
   (iii) separate from any building.

(c) A room, or space, attached to or located within a building must be separated from the remainder of the building by one or more walls, each having an FRL not less than 240/240/240.

(d) Every external wall of a room used for the handling or storage of dangerous goods, if not required to have an FRL, must be non-combustible.

(e) If a storage area attached to an external wall of a building is a space without walls, other than the separating wall, the fire protected separating wall must extend for a distance of 5 m on each side of the common part of the wall or to the end of the wall, whichever is less.

(f) Unless the wall required in (c) extends, over its full length, to the underside of the roof covering, the ceiling of a room, or space, for the storage of dangerous goods must have FRL not less than 180/180/180.

(g) The floor surface of a room, or space, for the storage of dangerous goods must be—
   (i) of hardwood or a non-combustible material; and
   (ii) resistant to attack by, and compatible with the dangerous goods stored in the room or space; and
   (iii) of impervious construction.
(h) Where a Class 2.1 flammable gas cylinder is to be stored in a recess enclosed by walls and a ceiling, the side opposite the cylinder safety valve must allow for the free unimpeded discharge of gas from the safety valve.

(i) The requirement of (h) is satisfied if the side is provided with a secure full height open non-combustible mesh or similar open material access door or enclosure with openings sufficient to prevent interference to the installation.

(j) Except as required in (h) and (i); the provisions of the Australian Standards shall apply in cases of conflict between these provisions and those in the following section of this Appendix.

**Tas H120.5 Workrooms**

A workroom for industrial or commercial use of dangerous goods must—

(a) be located in accordance with AS 2430 Part 1 from any fire source feature; and

(b) have all doors opening outwards; and

(c) have passages of escape clear of machinery or other plant.

**Tas H120.6 Exits**

(a) Exits must be provided in accordance with Part D1.

(b) Any door in a wall, separating a room or space for storage and handling of dangerous goods from another room, must have an FRL in accordance with Specification C1.1 but not less than 120/120/120.

**Tas H120.7 Explosion vents**

(a) A room, or space, in which dangerous goods are stored must be provided with natural or mechanical ventilation so that any vapour generated within the storage is diluted with and removed by air passing through the storage area. Air dilution of the vapour should be sufficient to maintain the storage below the lower explosive limits and recommended workplace exposure standards.

(b) The requirements of (a) are satisfied if ventilation provided to the room or space in which the dangerous goods are stored is in accordance with the ventilation requirements of AS 1940.

**Tas H120.8 Spill Collection Bunds**

(a) A spill collection bund must be provided for all liquid dangerous goods stored in a room or space.

(b) For Class 3 dangerous goods the bund must comply with the requirements of AS 1940.

(c) For liquid dangerous goods other than Class 3, the spill collection bund—

(i) must be capable of containing 100% of the largest package or tank plus 25% of the storage capacity up to 10 000 L together with 10% of the storage capacity greater than 10 000 L; and

(ii) may form part of the room or space or may be separate; and

(iii) must be constructed of materials that are impervious to the dangerous goods it is to contain.

(d) Separate bunds must be provided for dangerous goods that are incompatible.
Tas H120.9  Electrical equipment

Any electrical equipment in a room or space used for the storage of dangerous goods is to comply with the provisions outlined in AS 2430 Part 1 and AS 2381 Part 1, 2, 6 and 7.

After Tas Part H120 insert Tas Part H121, as follows:

TAS PART H121  HAIRDRESSERS’ PREMISES

Tas H121.1  Application of Part

This Part applies to any building or part of a building used as a hairdressers’ premises.

Tas H121.2  Size of operating section

The operating section of a hairdressers’ premises must have—

(a) any floor plan dimension not less than 2.5 m; and
(b) a floor area sufficient to enable the operations to proceed without inconvenience to the operators or the customers.

Tas H121.3  Premises in a residence

A hairdressers' premises located in a residence must—

(a) be isolated from the living quarters; and
(b) have direct access from a public place.

Tas H121.4  Sanitary facilities

Except where sanitary facilities are available for common use, every hairdressers' premises which has more than 5 operating seats must be provided with one water closet and one washbasin for use by customers.

After Tas Part H121 insert Tas Part H122 as follows:

TAS PART H122  CENTRE-BASED CHILD CARE FACILITIES

OBJECTIVE

Tas H122 O1

The Objective of this Part is to regulate the physical specification of a centre-based child care facility at which child care or a child care service is operated or provided.
FUNCTIONAL STATEMENT

Tas H122 F1

A centre-based child care facility must be designed and constructed to provide a safe environment and provide for the health, safety and well-being of the children, parents and staff using the centre.

PERFORMANCE REQUIREMENTS

Tas H122 P1

The design and construction of a centre-based child care facility must to the degree necessary, provide an environment that is spacious enough to prevent overcrowding, and supports a range of daily activities and routines including—

(a) indoor playing; and
(b) outdoor playing; and
(c) sleeping.

Tas H122 P2

A centre-based child care facility, must to the degree necessary, have sufficient space and facilities to ensure a healthy, safe and comfortable environment for children, staff and parents including—

(a) sanitary facilities; and
(b) nappy changing facilities; and
(c) laundry facilities; and
(d) food preparation facilities; and
(e) reception, administration and staff facilities; and
(f) storage facilities; and
(g) suitable—
   (i) floor surfaces; and
   (ii) lighting and ventilation; and
   (iii) fire safety provisions; and
   (iv) windows and glazing; and
   (v) heating and cooling.

Tas H122 P3

A centre-based child care facility must to the degree necessary, have fencing around the perimeter of any outdoor play space, and any identified hazard isolated by fences, barriers and gates.

SUPERSEDED

SUPERSEDED

SUPERSEDED

SUPERSEDED
Application:
Tas H122 O1, Tas H122 F1 and Tas H122 P1 to Tas H122 P3 apply to a centre-based child care facility licensed under the Child Care Act 2001.

DEEMED-TO-SATISFY PROVISIONS

Tas H122.0 Application of Part
This Part applies to a centre-based child care facility licensed under the Child Care Act 2001.

Tas H122.1 Deemed-to-Satisfy Provisions
(a) Performance Requirement Tas H122 P1 is satisfied by complying with the relevant provisions of Tas H122.2 to Tas H122.4.
(b) Performance Requirement Tas H122 P2 is satisfied by complying with the relevant provisions of Tas H122.5 to Tas H122.15.
(c) Performance Requirement Tas H124 P3 is satisfied by complying with the relevant provisions of Tas H122.16.

Tas H122.2 Indoor play space
(a) A centre-based child care facility is to be provided with an indoor playroom or area with a floor area allowing a clear unencumbered play space of at least 3.25 m² for each child cared for in the room or area.
(b) When calculating the clear unencumbered indoor play space required in (a) any passageway or thoroughfare, kitchen, toilet or shower area, storage area (including cupboards, children’s lockers / bag hooks, bookcases, storage / art trolleys or the like), areas through which doors may swing, cot rooms (including areas where fixed cots will be used or stored) or any other ancillary area is not to be included.

Tas H122.3 Outdoor play space
(a) A centre-based care class 1 facility is to be provided with a minimum outdoor play space of 7 m² of unencumbered space per child cared for in the centre.
(b) When calculating the unencumbered outdoor play space required by (a) any storage shed or other fixed item that prevents children from using the space is not to be included.
(c) The requirements of (a) may be reduced in a built up area if determined by the State licensing authority for child care services that the lesser requirement will not impact negatively on children using the centre.

Tas H122.4 Sleep space
(a) A centre-based care class 1 facility is to be provided with a sleep room or area additional to the play space with a floor area allowing a clear unencumbered space of at least 2 m² for—
(i) each child 12 month and under cared for in the centre; and
(ii) half the number of children over 12 months and under 2 years cared for in the centre.

(b) The provisions of (a)(ii) are not required where—
   (i) children over 12 months and under 2 years attend a centre where care is only provided for up to four hours per day for any individual child; or
   (ii) children two years or older are cared for in the centre.

(c) Where the sleep area requirements of (a) are contained in a separate room, a viewing panel is to be provided into the room to allow direct and easy monitoring of the children sleeping.

**Tas H122.5 Sanitary facilities**

Toilets, hand basins, and baths, are to be provided in a *centre-based child care facility* in accordance with Table F2.3.

**Tas H122.6 Nappy changing facilities**

(a) In a *centre-based care class 1 facility* where children under 3 years are cared for, a nappy changing area is to be provided with—
   (i) a change bench; and
   (ii) hot and cold water supply; and
   (iii) a hand basin; and
   (iv) a bath in accordance with Table F2.3
   (v) a slop hopper, sluice, additional toilet or other device for the disposal of liquid or solid waste; and
   (vi) fixed steps, for toddlers to climb up onto the change bench.

(b) Where the nappy change requirements of (a) are separated from the play area a viewing panel is to be provided into the play area from the nappy change area to allow direct monitoring of the children in the play area.

(c) A nappy change area required by (a) is to be ventilated to remove offensive odors.

**Tas H122.7 Laundry facilities**

(a) A *centre-based child care facility* is to be provided with facilities for sanitary storage of soiled clothes, nappies and linen pending laundering or disposal.

(b) In addition to the requirements of (a), a *centre-based care class 1 facility* where children under 3 years are cared for is to be provided with a laundry facility in accordance with F2.3(c)(ii).

**Tas H122.8 Floor surfaces**

The floor surface in a toilet or wet area of a *centre-based child care facility* is to be impervious to the penetration of liquids and is to have a slip-resistant surface.

**Tas H122.9 Food preparation facilities**

(a) A *centre-based child care facility* is to be provided with—
(i) a kitchen with facilities in accordance with F2.3(c)(i); and
(ii) space for a stove or microwave located in the kitchen; and
(iii) hot and cold water.

(b) The requirement of (a)(ii) is not required where the care provided to children is for 4 hours or less a day.

(c) In a centre-based care class 1 facility where children under 2 years are cared for, the facilities required by (a) are to be adjacent to or part of a babies / toddlers room, or additional separate facilities are to be provided in or adjacent to the babies / toddlers room.

(d) The additional separate facilities required by (c) are to include—
   (i) a sink with hot and cold water supply; and
   (ii) a space for a refrigerator; and
   (iii) a space for a facility for heating babies' bottles and food.

(e) Where facilities are provided in accordance with (a), (c) and (d), the facilities are to be protected by a door or gate with childproof latches to prevent access to the facilities by children.

Tas H122.10 Reception, administration and staff respite areas

In a centre-based child care facility where children are cared for more than 4 hours a day an area is to be set aside for—

(a) the administration of the centre; and
(b) private consultation with parents; and
(c) the respite of staff.

Tas H122.11 Storage facilities

In a centre-based child care facility adequate storage is to be provided for—

(a) children's personal belongings; and
(b) play equipment, resources and materials; and
(c) administrative records; and
(d) cleaning equipment and materials.

Tas H122.12 Lighting and ventilation

A centre-based child care facility is to be provided with—

(a) natural lighting in accordance with F4.1(d) and F4.2; and
(b) ventilation in accordance with F4.5.

Tas H122.13 Fire safety

A centre-based child care facility is to be provided with—

(a) an automatic fire detection system in accordance with Tas EP1.7, Tas E1.0 and Tas E1.101; or
(b) a smoke alarm system in accordance with Clause 3 of Specification E2.2a where the centre is—
   (i) only one storey; and
   (ii) the floor area of the storey is not more than 500 m²; and

(c) required exits in accordance with D1.2; and

(d) portable fire extinguishers in accordance with E1.6.

Tas H122.14 Glazing and windows

(a) The glazing in a centre-based child care facility is to be in accordance with B1.4(h).

(b) The sills of 50% of the windows in a play room or the like used by children in a centre-based child care facility are to be located at a level to optimise the view of the outdoor environment by children and staff.

(c) In a centre-based child care facility where it is possible for a child to fall through an openable window 600 mm or more above the ground surface and the window opens more than 100 mm, a lock, secured screen or other device is to be fitted to the window.

Tas H122.15 Heating and Cooling

In a centre-based child care facility—

(a) heating and or cooling is to be provided to the areas that are occupied by children to maintain a safe and comfortable temperature to the areas of between 16°C to 20°C; and

(b) where heating units and fans are used, they are to be safely situated, secured and adequately guarded to prevent access and injury to children.

Tas H122.16 Fences and barriers

(a) Any outdoor play space in a centre-based child care facility is to be enclosed on all sides with fences and other barriers, which have an effective perpendicular height of at least 1200 mm, and together with any gates and fittings comply with AS 1926.1.

(b) Gates in fences are to be self-fastening and have childproof mechanisms.

(c) In a centre-based child care facility where there is child access to a deck, patio, landing or the like and to a stair or ramp, and there is a difference in level of 600 mm or more, a barrier is to be provided in accordance with D2.16(f) and D2.16(g)(ii), except that any openings in the barrier must not permit a 100 mm sphere to pass through the barrier.

(d) Any swimming pool associated with a centre-based child care facility is to have a suitable barrier to restrict access by young children to the immediate pool surrounds in accordance with AS 1926—Part 1 and Part 2.

After Tas Part H122 insert Tas Part H123 as follows:
TAS PART H123 TEMPORARY STRUCTURES

OBJECTIVE

Tas H123 O1

The objective of this Part is to safeguard the public who assemble for public events in temporary structures and other persons who use temporary structures from illness or injury.

FUNCTIONAL STATEMENT

Tas H123 F1

A temporary structure is to—

(a) withstand the combination of loads and other actions to which it may reasonably be subjected; and

(b) be of materials that resists the spread of fire so that occupants have time to evacuate safely without being overcome by the effect of a fire; and

(c) be provided with—

(i) safe, equitable and dignified access for the people using the structure; and

(ii) means of evacuation that allow occupants time to evacuate safely without being overcome by the effects of an emergency; and

(iii) a safe and hazard free environment for the people using the structure; and

(iv) adequate lighting upon failure of normal lighting during an emergency; and

(v) adequate means for occupants to identify exits and paths of travel to an exit; and

(vi) fire fighting equipment for occupants to undertake fire-fighting operation if a fire occurs; and

(vii) sanitary facilities for personal hygiene for the people using the structure; and

(viii) natural or artificial lighting to enable the safe use and movement of people using the structure; and

(ix) means of ventilation with outdoor air which will maintain adequate air quality; and

(d) have any—

(i) electrical services in or associated with the structure installed in a manner that provides adequate safety for occupants; and

(ii) heating appliances located in the structure installed in a way that reduces the likelihood of fire spreading beyond the appliance; and

(iii) temporary seating located in or associated with the structure able to withstand the combination of loads and other actions to which they may reasonably be subjected to and provide a safe means of evacuation in an emergency.
Tas H123 P1

A temporary structure must, to the degree necessary, be capable of sustaining at an acceptable level of safety and serviceability the most adverse combination of loads and other actions to which it may reasonably be expected to be subjected.

Tas H123 P2

The material used in a temporary structure must, to the degree necessary, be capable of resisting the spread of fire to limit the generation of smoke and heat, and any toxic gases likely to be produced.

Tas H123 P3

(a) Access must be provided to the degree necessary, to enable safe, equitable and dignified movement of people to and within a temporary structure.

(b) So that people can move safely to and within a temporary structure, it must have—

   (i) walking surfaces with safe gradients; and
   (ii) stairways and ramps with slip-resistant walking surfaces; and
   (iii) suitable handrails where necessary to assist and provide stability to people using a stairway or ramp.

Tas H123 P4

(a) Exits must be provided to the degree necessary, from a temporary structure to enable the safe evacuation of occupants, with their number, location and dimensions being appropriate to the—

   (i) travel distances to exits; and
   (ii) number, mobility and other characteristics of the occupants; and
   (iii) function or use of the structure.

(b) So that occupants can safely evacuate a temporary structure, paths of travel to exits must have dimensions appropriate to the—

   (i) number, mobility and other characteristics of the occupants; and
   (ii) function or use of the structure.

Tas H123 P5

Where a person could fall 1 m or more, due to a sudden change of level within or associated with a temporary structure, a barrier must to the degree necessary, be provided which must be—

(a) continuous and extend for the full extent of the hazard; and

(b) of a height to protect the people from accidentally falling from the level; and

(c) constructed to prevent the people from falling through the barrier; and

(d) capable of restricting the passage of children; and
(e) of strength and rigidity to withstand the foreseeable impact of the people and where appropriate, the static pressure of the people pressing against it.

**Tas H123 P6**

A level of illumination for safe evacuation from a *temporary structure* in an emergency must be provided, to the degree necessary, appropriate to the—

(a) function or use of the structure; and

(b) size of the structure; and

(c) distance of travel to an *exit*.

**Tas H123 P7**

To facilitate evacuation from a *temporary structure* suitable signs or other means of identification must, to the degree necessary—

(a) be provided to identify the location of *exits*; and

(b) guide the occupants to *exits*; and

(c) be clearly visible to the occupants; and

(d) operate in the event of power failure for sufficient time for the occupants to safely evacuate.

**Tas H123 P8**

Fire equipment must be installed in a *temporary structure* to the degree necessary, to allow the occupants to undertake initial attack on a fire appropriate to the—

(a) function or use of the structure; and

(b) fire hazard.

**Tas H123 P9**

Sanitary facilities for personal hygiene must be provided in a convenient location associated with a *temporary structure*, to the degree necessary, appropriate to the—

(a) function or use of the structure; and

(b) number and gender of the occupants; and

(c) disability or other particular needs of the occupants.

**Tas H123 P10**

Lighting must be installed to the degree necessary, to provide a level of illumination appropriate to the function or use of a *temporary structure* to enable safe use and movement by the occupants.

**Tas H123 P11**

Ventilation must be provided to the degree necessary, to a level appropriate to the function or use of a *temporary structure*. 
Tas H123 P12

Electrical services must be installed to the degree necessary, to provide a level of safety appropriate to the environment and function or use of a temporary structure by the occupants.

Tas H123 P13

Where provided in a temporary structure, a heating appliance and its associated components must be installed to the degree necessary—

(a) to withstand the temperatures likely to be generated by the appliance; and

(b) so that it does not raise the temperature of any structural element to a level that would adversely affect the element’s physical or mechanical properties or function; and

(c) so that hot products of combustion will not escape through the walls of the associated components and discharge to a position that will cause fire to spread to nearby combustible materials or allow smoke to penetrate the temporary structure.

Tas H123 P14

A temporary structure of tiered seating must be designed and constructed to the degree necessary, to provide for the safety of the occupants and orderly means of evacuation in an emergency.

Application:

Tas H123 O1, Tas H123 F1 and Tas H123 P1 to P14 only applies to a temporary structure that—

(a) is used by the public as a place of assembly as described in the Public Health Act 1997; and

(b) is a temporary structure as described in the Building Act 2000.

DEEMED-TO-SATISFY PROVISIONS

Tas H123.0 Application of Part

This Part only applies to a temporary structure that—

(a) is used by the public as a place of assembly as described in the Public Health Act 1997; and

(b) is a temporary structure as described in the Building Act 2000.

Tas H123.1 Deemed-to-Satisfy Provisions

Performance Requirements Tas H123 P1 to Tas H123 P14 are satisfied by complying with the relevant provisions of Tas H123.0 to Tas H123.15.
Tas H123.2 Structure

(a) A temporary structure must be capable of resisting loads and actions determined in accordance with the following:
   (i) Dead and live loads and load combinations: AS 1170.1 or AS/NZS 1170.1
   (ii) Wind loads: AS 1170.2 or AS/NZS 1170.2.

(b) Materials and forms of construction used in a temporary structure must as far as practicable comply with the relevant Australian Standard.

Tas H123.3 Fire resisting material

Roof and wall coverings to a temporary structure (including any lining or internal materials) must not be more than the Spread-of-Flame Index and the Smoke-Developed Index values in Table Tas H123.3.

<table>
<thead>
<tr>
<th>Component</th>
<th>Spread of Flame Index</th>
<th>Smoke Developed Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof covering (ceiling)</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Roof covering (ceiling) &amp; walls</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Walls (including lining material)</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Walls (including lining material)</td>
<td>0</td>
<td>7</td>
</tr>
</tbody>
</table>

Note:
The spread-of-flame and smoke-developed index are interrelated. When reading the table, the spread-of-flame index for a component determines the smoke-developed index for the component. If the spread-of-flame index for components is zero, then a higher smoke-developed index is permitted.

Tas H123.4 Access

(a) Access for people with disabilities must be provided to and within a temporary structure by means of a continuous path of travel.

(b) Access for people with disabilities must be provided to:
   (i) any public sanitary facilities; and
   (ii) all areas normally used by the public but excluding those areas only used by persons working in the temporary structure.

(c) If fixed seating is provided, in a temporary structure, wheelchair spaces must be provided not less than—
   (i) 1 wheelchair space for up to 100 seats; and
   (ii) 2 wheelchair spaces for 100–200 seats; and
   (iii) an additional wheelchair space for each additional 200 seats or part thereof.
(d) Parts of the temporary structure required to be accessible must comply with AS 1428.1.

**Tas H123.5 Exits and entrances**

(a) *Exits* to be provided to a temporary structure must be not less than the number of *exits* and aggregate width specified in Table Tas H123.5 for the number of persons accommodated.

(b) *Exits* are to be distributed as evenly as practicable around a temporary structure.

(c) The maximum travel distance to an *exit* must as far as practicable, not be more than 20 m where only one *exit* is provided and 40 m where more than one *exit* is provided.

(d) Every part of an entrance or *exit* must provide a minimum unobstructed height of 2000 mm and, where the entrance or *exit* is beneath a stepped seating platform, infilled riser or other projections, and overhead protection must be provided above the entrance or path of travel to the *exit*.

(e) A flap or curtain used to cover an exit must be so designed that, when it is secured, it will not obstruct or impede egress.

**Tas TABLE H123.5**

<table>
<thead>
<tr>
<th>Accommodation Provided (persons)</th>
<th>Number of <em>Exits Required</em></th>
<th>Aggregate Width of <em>Exits</em> (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1–25</td>
<td>1</td>
<td>1000</td>
</tr>
<tr>
<td>26–50</td>
<td>1</td>
<td>1500</td>
</tr>
<tr>
<td>51–75</td>
<td>2</td>
<td>2000</td>
</tr>
<tr>
<td>76–100</td>
<td>2</td>
<td>2500</td>
</tr>
<tr>
<td>100–200</td>
<td>3</td>
<td>3000</td>
</tr>
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<td>201–400</td>
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<td>4000</td>
</tr>
<tr>
<td>401–600</td>
<td>4</td>
<td>6000</td>
</tr>
<tr>
<td>601–800</td>
<td>5</td>
<td>8000</td>
</tr>
<tr>
<td>801–1000</td>
<td>5</td>
<td>9000</td>
</tr>
<tr>
<td>over 1000</td>
<td>5 plus one additional <em>exit</em> for each additional 450 persons or part thereof.</td>
<td>9000 plus 500 mm for each additional 50 persons or part thereof.</td>
</tr>
</tbody>
</table>

**Note:**

(a) Where only one *exit* is provided that *exit* must be at least 1000 mm wide.

(b) Where 2 *exits* are provided each must be at least 1000 mm wide.

(c) Width may be reduced by 250 mm at doorways.

**Tas H123.6 Barriers**

A rigid barrier with no openings more than 125 mm wide must—
(a) be provided at least 1000 mm high above the floor of a platform used as a temporary structure, and extend in the case of

(i) a stepped platform, from the front of the first riser to the back of the platform and along the rear of that platform for its full width; and

(ii) an inclined platform, from the front of the first row of seating to the back of the highest platform and along the rear of that platform for its full width; and

(iii) any other platform which is more than 1 m above the surrounding surface, other than a performance stage, to each side of the platform; and

(b) not obstruct any aisle, cross-over or exit.

**Tas H123.7 Emergency lighting**

An emergency lighting system must as far as practicable—

(a) be installed in any enclosed area of a temporary structure more than 300 m² in area; and

(b) comply with AS 2293.1.

**Tas H123.8 Exit signs**

Exit signs must as far as practicable be provided above all exits and comply with AS 2293.1.

**Tas H123.9 Fire fighting equipment**

Portable fire extinguishers must as far as practicable be—

(a) provided in a temporary structure as listed in Table Tas H123.9; and

(b) be selected, located and distributed in accordance with Section 1, 2, 3, and 4 of AS 2444.

**TABLE Tas H123.9**

<table>
<thead>
<tr>
<th>Requirements for extinguishers</th>
<th>Risk class (as defined in AS 2444)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All temporary structures</td>
<td>(a) To cover Class A fire risks;</td>
</tr>
<tr>
<td></td>
<td>(b) To cover Class B fire risks in locations where flammable liquids in excess of 20 litres are stored or used (not including liquid held in fuel tanks or vehicles);</td>
</tr>
<tr>
<td></td>
<td>(c) To cover fire risks involving live electrical equipment (E);</td>
</tr>
<tr>
<td></td>
<td>(d) To cover Class F fire risks involving cooking oils and fats in cooking areas.</td>
</tr>
</tbody>
</table>

**Tas H123.10 Sanitary facilities**

Sanitary facilities must as far as practicable be provided, within a 50 m distance from a temporary structure according to the numbers set out in Table Tas H123.10.
TABLE Tas H123.10

<table>
<thead>
<tr>
<th>Sanitary Facilities to be provided</th>
<th>Closet Fixtures</th>
<th>Urinals</th>
<th>Washbasins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of males</td>
<td>100</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Number of females</td>
<td>25</td>
<td>—</td>
<td>50</td>
</tr>
</tbody>
</table>

*Where the number of male patrons exceeds 250, not less than 5 urinals must be provided plus one additional urinal for every additional 100 males in excess of 250.

**Where the number of female patrons exceeds 250, not less than 6 closet fixtures must be provided plus one additional closet fixture for every 100 females in excess of 250.

A unisex facility must be provided for people with disabilities and this facility must comply with AS 1428.1.

Tas H123.11 Lighting

(a) Natural or artificial lighting must be provided to all enclosed areas in a temporary structure.

(b) Natural lighting must as far as practicable be not less than 10% of the floor area of the enclosed area.

(c) The artificial lighting system must as far as practicable comply with the relevant provisions of AS 1680 Parts 1, 2.0, 2.1, 2.2 and 2.3.

Tas H123.12 Ventilation

(a) Natural ventilation or mechanical ventilation must be provided to all enclosed areas in a temporary structure.

(b) Natural ventilation must as far as is practicable consist of openings or devices which can be opened with an aggregate opening of not less than 5% of the floor area of the enclosed area.

(c) Mechanical ventilation must as far as practicable comply with the relevant provisions of AS 1668.2.

Tas H123.13 Electrical

(a) All electrical installations in a temporary structure must be installed in accordance with AS/NZS 3002.
(b) All electrical equipment in a temporary structure must be tested in accordance with AS 3760.

**Tas H123.14 Heating appliances**

The installation of a stove, heater or similar appliance in a temporary structure must as far as practicable comply with the following standards:

(a) Domestic oil-fired appliances – Installation: AS 1691.
(b) Domestic solid-fuel burning appliances – Installation: AS 2918.
(c) Pressure equipment: AS/NZS 1200.
(d) L P gas portable mobile appliances: AS 2658.

**Tas H123.15 Seating**

A seating area in a temporary structure must as far as practicable comply with H1.4.
This Appendix contains variations and additions to the Building Code of Australia (BCA) provisions which are considered necessary for the effective application of the Code in Victoria and shall be treated as amendments to the Code.
APPENDIX CONTENTS

APPENDIX VICTORIA

Victoria

A GENERAL PROVISIONS
Vic A1.1 Definitions
VIC Specification A1.3 Standards Adopted by Reference

D ACCESS AND EGRESS
Vic D1.4 Exit travel distances
Vic D1.6 Dimensions of exits and paths of travel to exits
Vic D2.21 Operation of latch

E SERVICES AND EQUIPMENT
Vic Table E1.5 Requirements for Sprinklers
Vic Specification E1.5 Fire Sprinkler Systems
Vic Specification E2.2a Smoke Detection and Alarm Systems

F HEALTH AND AMENITY
Vic FF2.2 Functional Statements
Vic FP2.2 Performance Requirements
Vic FP2.3 Performance Requirements
Vic F2.0 Deemed-to-Satisfy Provisions
Vic F2.3 Facilities in Class 3 to 9 buildings
Vic Table F2.3 Sanitary Facilities in Class 3, 5, 6, 7, 8 and 9 Buildings
Vic F2.5 Construction of sanitary compartments
Vic F2.101 First aid rooms
Vic FO3 Objective
Vic FF3.1 Functional Statement
Vic FP3.1 Performance Requirement
Vic F3.0 Deemed-to-Satisfy provisions
Vic F3.101 Childrens services - size of rooms
Vic F3.102 Class 3 buildings - size of rooms
Vic F3.103 Class 3 and Class 9a residential aged care buildings - size of rooms
Vic F4.1 Provision of natural light
Vic F4.2 Methods and extent of natural lighting
Vic Part F6 Energy Efficiency

G ANCILLARY PROVISIONS
Vic G1.1 Swimming pools

H SPECIAL USE BUILDINGS
Vic Part H102 Places of Public Entertainment
Vic Part H103 Fire Safety in Class 2 and Class 3 Buildings
Vic Part H104 Class 9b Childrens Services

Footnote: Special Requirements For Certain Buildings And Components
SECTION A GENERAL PROVISIONS

PART A1 INTERPRETATION

Vary A1.1 as follows:

**Vic A1.1 Definitions**

Add the definition of “children’s service” as follows:

**Children’s service** means a service providing care or education for 5 or more children under the age of 6 years in the absence of their parents or guardians—

(a) for fee or reward; or

(b) while the parents or guardians of the children use services or facilities provided by the proprietor of the service,

but does not include a service where the children are—

(a) patients in a hospital which is a registered funded agency under the Health Services Act 1988; or

(b) students enrolled at a preparatory level or above at—

(i) a State school within the meaning of the Education Act 1958; or

(ii) a school within the meaning of section 35 of the Education Act 1958; or

(c) recipients of protection, care or accommodation being provided by a community service or secure welfare service established under section 57 of the Children and Young Persons Act 1989 or a community service approved under section 58 of that Act; or

(d) clients of a registered service or a residential program within the meaning of the Intellectually Disabled Person’s Services Act 1986; or

(e) children being cared for or educated in their own home or by a relative of the children.

Add the definition of “Conditioned Space” as follows:

**Conditioned Space** means a space within a building that is heated, cooled, humidified or dehumidified by the building's services; but excludes a non-habitable room which is not cooled, humidified or dehumidified and is only heated by a heater with a capacity of not more than 1.2 kW.

Substitute the definition of “early childhood centre” as follows:

**Early childhood centre** means a children’s service.

Add the definition of “Envelope” as follows:

**Envelope** for the purposes of Vic Part F6, means the parts of a building's fabric that separate a conditioned space from—

(a) the exterior of the building; or

(b) a non-conditioned space.

Add the definition of “Fabric” as follows:

**Fabric** for the purposes of Vic Part F6, means the basic building structural elements and components of a building including the roof, ceilings, walls and floors.

Add the definition of “residential care building” as follows:
Residential care building means a building which is a place of residence for persons who need physical assistance in conducting their daily activities and to evacuate the building during an emergency, including an aged care building, supported residential service, hostel or nursing home, but not including—

(a) a hospital; or
(b) a dwelling in which related persons and not more than 2 additional unrelated persons would ordinarily be resident; or
(c) a place of residence where less than 10% of residents need physical assistance in conducting their daily activities and to evacuate the building during an emergency.

Add the definition of “restricted children’s service” as follows:

Restricted children’s service means a restricted children’s service as defined in the Children’s Services Regulations 1998.

Add the definition of “service” as follows:

Service for the purposes of Vic Part F6, means an engineering system of a building that uses energy or controls the use of energy; and—

(a) includes heating, cooling, air-conditioning, mechanical ventilation, hot water supply systems, artificial lighting, electric power and vertical transport systems; but
(b) excludes emergency systems, cooking facilities and portable appliances.

Add the definition of “shared accommodation building” as follows:

Shared accommodation building means a Class 3 building which is used for accommodation purposes having—

(a) a sole-occupancy unit which is a room or suite of rooms which includes sleeping facilities capable of accommodating three or more persons but does not mean a sole-occupancy unit which constitutes the whole of the Class 3 part of a building; or
(b) sleeping facilities capable of accommodating thirteen or more persons, including a boarding-house, chalet, guest house, hostel, lodging-house, backpacker accommodation and residential part of a hotel offering shared accommodation but does not include a residential care building or a residential part of a motel, school, health-care building or detention centre.

Vary Specification A1.3 Table 1 as follows:

VIC Specification A1.3 STANDARDS ADOPTED BY REFERENCE

Insert in Vic Table 1 of Specification A1.3 the following additional and revised clause references and additional documents:

Vic Table 1 SCHEDULE OF REFERENCED DOCUMENTS

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Title</th>
<th>BCA Clause(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS 1926</td>
<td></td>
<td>Swimming pool safety</td>
<td></td>
</tr>
<tr>
<td>Part 1</td>
<td>1993</td>
<td>Fencing for swimming pools Amdt 1, June 2000</td>
<td>Vic G1.1, Vic H104.4</td>
</tr>
<tr>
<td>No.</td>
<td>Date</td>
<td>Title</td>
<td>BCA Clause(s)</td>
</tr>
<tr>
<td>-----</td>
<td>------</td>
<td>-------</td>
<td>---------------</td>
</tr>
<tr>
<td>Part 2</td>
<td>1995</td>
<td>Location of fencing for private swimming pools</td>
<td>Vic G1.1</td>
</tr>
<tr>
<td>AS 2118</td>
<td></td>
<td>Automatic fire sprinkler systems</td>
<td></td>
</tr>
<tr>
<td>Part 4</td>
<td>1995</td>
<td>Residential</td>
<td>Vic Spec E1.5, Vic H103.1</td>
</tr>
<tr>
<td>AS/NZS 4200</td>
<td></td>
<td>Pliable building membranes and underlays</td>
<td></td>
</tr>
<tr>
<td>Part 2</td>
<td>1994</td>
<td>Installation requirements</td>
<td>Vic F6.5</td>
</tr>
<tr>
<td>CAMS—Track operator’s safety guide—Edition 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edition 2</td>
<td>June 1993</td>
<td>Confederation of Australian Motor Sport</td>
<td>Vic H102.3</td>
</tr>
<tr>
<td>FirstRate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Version 3.5.4</td>
<td>October 2003</td>
<td>FirstRate energy rating software, Sustainable Energy Authority Victoria</td>
<td>Vic F6.3</td>
</tr>
<tr>
<td>NatHERS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supported residential service design guidelines</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>September 1995</td>
<td>Health and Community Services Victoria, September 1995</td>
<td>Vic H101.4, Vic H101.5</td>
</tr>
<tr>
<td>Residential fire safety systems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practice Note 2002–07</td>
<td>February 2003</td>
<td>Building Commission</td>
<td>Vic Spec E2.2a, Vic H103.1</td>
</tr>
<tr>
<td>Emergency communication systems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practice Note 2002–08</td>
<td>February 2003</td>
<td>Building Commission</td>
<td>Vic H103.1</td>
</tr>
</tbody>
</table>
SECTION D    ACCESS AND EGRESS

PART D1    PROVISION FOR ESCAPE

Substitute the lead-in to D1.4(d) as follows:

Vic D1.4 Exit travel distances

(d) Class 9 buildings—in a patient care area in a Class 9a building and in a children’s service—

Delete D1.6(f)(iv) as follows:

Vic D1.6 Dimensions of exits and paths of travel to exits

(f) (iv) (Deleted)

PART D2    CONSTRUCTION OF EXITS

Add Vic D2.21 (g) as follows:

Vic D2.21 Operation of latch

(g) is an exit door from a children’s service which does not open to an outdoor space enclosed in accordance with Vic H104.4, in which case the latch must be located between 1.5 m and 1.65 m above the floor and the door must be self-closing.

SECTION E    SERVICES AND EQUIPMENT

PART E1    FIRE FIGHTING EQUIPMENT

Delete reference to Class 9c aged care building and add references to shared accommodation buildings and residential care buildings in Table E1.5 and substitute Note (3) of Table E1.5 as follows:
VIC Table E1.5 REQUIREMENTS FOR SPRINKLERS

<table>
<thead>
<tr>
<th>Occupancy</th>
<th>When sprinklers are required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential care buildings</td>
<td>In all buildings.</td>
</tr>
<tr>
<td>Shared accommodation buildings</td>
<td>In all buildings.</td>
</tr>
</tbody>
</table>

(3) For the purposes of this Table, occupancies of excessive fire hazard comprise buildings which contain-

- **hazardous process risks including the following:**
  - (i) aircraft hangars.
  - (ii) electrical/electronic manufacturing and assembly (predominantly plastic components).
  - (iii) fire-lighter manufacturing.
  - (iv) fireworks manufacturing.
  - (v) flammable liquid spraying.
  - (vi) foam plastic goods manufacturing and/or processing.
  - (vii) foam rubber goods manufacturing and/or processing.
  - (viii) hydrocarbon based sheet product manufacturing and/or processing.
  - (ix) nitrocellulose and nitrocellulose goods manufacturing.
  - (x) paint and varnish works, solvent based.
  - (xi) plastic goods manufacturing and/or processing works.
  - (xii) resin and turpentine manufacturing.
  - (xiii) vehicle repair shops.

- **combustible goods with an aggregate volume exceeding 2000 m³ and stored to a height greater than 4 m such as the following:**
  - (i) aerosol packs with flammable contents.
  - (ii) cartons and associated packing material excluding cartons with densely packed non-combustible content.
  - (iii) electrical appliances where the components are predominantly plastic.
  - (iv) foamed rubber or plastics including wrappings or preformed containers.
  - (v) paper products.
  - (vi) plastic, rubber, vinyl and other sheets in the form of offcuts, random pieces or rolls.
  - (vii) textiles raw and finished.
  - (viii) timber products.
Substitute Clause 2(b) of Specification E1.5 as follows:

**Vic Specification E1.5  FIRE SPRINKLER SYSTEMS**

2. Adoption of AS 2118

   (b) for a Class 2 or 3 building or a *residential care building* other than a Class 9c *aged care building*: AS 2118.4 as applicable; or

Substitute Clause 4(e) of Specification E2.2a as follows:

**Vic Specification E2.2a  SMOKE DETECTION AND ALARM SYSTEMS**

4. Smoke detection system

   (e) In a Class 9c *aged care building*—

   (i) if the building accommodates more than 20 residents, manual call points must be installed in paths of travel so that no point on a floor is more than 30 m from a manual call point; and

   (ii) indication of the zone where the smoke detection system has actuated must be achieved by one of the following:

      (A) remote automatic indication of each zone must be given in each smoke compartment; and

      (bb) indication of (aa) must be indicated on remote annunciator panels with alpha-numeric displays with a minimum of 20 characters of 9 mm minimum height; or

      (B) indication of the zone where the smoke detection system has actuated must be communicated via a suitable interface with the fire indicator panel to a portable remote communication device; and

      (bb) at least one such portable remote communication device per *smoke compartment* must be provided to staff nominated by the owner or operator and properly instructed as to the duties and responsibilities involved; and

      (cc) the portable remote communication device may be a pager with alpha-numeric display or portable telephone handset with capability of receiving alpha-numeric display.

Substitute Clause 7(b) and (c) of Specification E2.2a as follows:

7. System monitoring

   (b) A smoke detection system in a Class 9a *health-care building*, if the building accommodates more than 20 patients, unless the building is sprinklered and the sprinkler system is permanently connected to a fire station, or other approved monitoring service with a direct data link to a fire station, in accordance with Practice Note 2002-07.

   (c) (deleted).
SECTION F    HEALTH AND AMENITY

PART F2    SANITARY AND OTHER FACILITIES

Substitute application of Functional Statement FF2.2 as follows:

**FUNCTIONAL STATEMENTS**

**Application:**
FF2.2 only applies to—
(a) a Class 2 building or a Class 4 part; and
(b) a health-care building and a children’s service other than a restricted children’s service.

Substitute application of Performance Requirement FP2.2 as follows:

**PERFORMANCE REQUIREMENTS**

**Application:**
FP2.2 only applies to—
(a) a Class 2 building or a Class 4 part; and
(b) a health-care building and a children’s service, other than a restricted children’s service.

Add Vic FP2.3(d) as follows:

**VIC FP2.3**
(d) in a children’s service, a space for a refrigerated storage facility.

Substitute Vic F2.0 as follows:

**DEEMED-TO-SATISFY PROVISIONS**

**Vic F2.0 Deemed-to-Satisfy Provisions**

*Performance Requirements* FP2.1 to FP2.6 are satisfied by complying with F2.1 to F2.8 and Vic F2.101.

Amend reference to Class 9c Residential aged care building in Table F2.1 as follows:

**Vic Table F2.1 Provision of sanitary facilities in residential buildings**

SUPERSEDED
### Class of building | Minimum facilities required
--- | ---
**Class 9c aged care buildings** | Facilities for residents—
For each building or group of buildings—
(a) a closet pan and wash basin for each 6 residents or part thereof for whom private facilities are not provided; and
(b) a shower for each 7 residents or part thereof for whom private facilities are not provided; and
(c) a suitable bath, fixed or mobile on each residential storey, located in a *resident use area*.

**Other facilities**
(d) one kitchen or other adequate facility for the preparation and cooking or reheating of food including a kitchen sink and washbasin; and
(e) laundry facilities for the cleansing and drying of linen and clothing or adequate facilities for holding and dispatch or treatment of soiled linen and clothing and the like and the receipt and storage of clean linen; and
(f) one clinical hand washing basin for each 16 residents or part thereof.

Note: Urinals must not be taken into consideration in calculating the number of facilities.

Substitute F2.3(c) as follows:

**Vic F2.3 Facilities in Class 3 to 9 buildings**

(c) A *children’s service* must be provided with—
(i) one kitchen with facilities for the preparation and cooking of food for children including washing up facilities and a space for refrigerated food storage facilities; and
(ii) except in a *restricted children’s service*, if the service accommodates children younger than 3 years old, a laundry facility comprising a washtub and space in the same room for a washing machine.

Vary Table F2.3 as follows:

**Vic Table F2.3 Sanitary Facilities in Class 3, 5, 6, 7, 8 and 9 Buildings**

<table>
<thead>
<tr>
<th>Class of building</th>
<th>User</th>
<th>Closet Pan(s)*</th>
<th>Urinal(s)</th>
<th>Washbasin(s)**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1 2 Each Extra</td>
<td>1 2 Each Extra</td>
<td>1 2 Each Extra</td>
</tr>
<tr>
<td>9b—<em>Children’s services</em></td>
<td>Children</td>
<td>– 30 15</td>
<td>–</td>
<td>30 15</td>
</tr>
<tr>
<td>Class of building</td>
<td>User</td>
<td>Max Number Served by—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>------</td>
<td>-----------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Closet pans for use by children must be junior toilets, except that those in a restricted children’s service may be adult height toilets if they are fitted with a removable seat suitable for children and a wide and stable step in front.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Except in a restricted children’s service, the closet pans must be located in relation to children’s rooms and outdoor play spaces so that children using toilets can be observed by staff from each children’s room and outdoor play space.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>** Wash basins for use by children must have a rim height not exceeding 600 mm, except that those in a restricted children’s service may be adult height wash basins if they are provided with a wide and stable step in front.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Except in a restricted children’s service one bath or shower-bath must be provided.</td>
</tr>
<tr>
<td>(b) If the children’s service accommodates children under 3 years of age a bench type baby bath, with hot and cold water connected, and a nappy change bench in close proximity, must be provided.</td>
</tr>
</tbody>
</table>

Add Vic F2.5(c) as follows:

** Vic F2.5 Construction of sanitary compartments **

(c) In a children’s service, other than a restricted children’s service, closet pans situated in a group for use by children must be separated from one another by means of partitions extending from between 150 mm to 250 mm above the floor to a height of not less than 900 mm or more than 1.5 m above the floor.

Add Vic F2.101 as follows:

** Vic F2.101 First aid rooms **

(a) If an assembly building, place of public entertainment (as defined in the Building Act 1993) or an open spectator stand accommodates more than 5000 spectators at an arena, sportsground, showground, racecourse, cricket ground, football ground, coursing ground, motor racing arena, or the like, a suitable room or rooms must be provided in accordance with Table F2.101 for use by para-medical attendants for first aid purposes.

** Table F2.101 FIRST AID ROOMS **

<table>
<thead>
<tr>
<th>Spectator Capacity</th>
<th>Number of Rooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 001–10 000</td>
<td>1</td>
</tr>
<tr>
<td>10 001–15 000</td>
<td>2</td>
</tr>
<tr>
<td>15 001–30 000</td>
<td>3</td>
</tr>
<tr>
<td>each extra 15 000 or part thereof</td>
<td>1</td>
</tr>
</tbody>
</table>

(b) **Conditions:** First aid rooms required by (a) must—
(i) be distributed as uniformly as possible throughout the *assembly building* or *open spectator stand*; and

(ii) be convenient to a public road; and

(iii) be readily accessible from within and outside the arena or ground; and

(iv) have a *floor area* of not less than 24 m²; and

(v) be provided with a suitable wash basin or sink.

**PART F3 ROOM SIZES**

Substitute FO3 as follows:

**OBJECTIVE**

**Vic FO3**

The *Objective* of this Part is to safeguard occupants from injury or loss of amenity caused by inadequate size of a room or space.

Substitute FF3.1 as follows:

**FUNCTIONAL STATEMENT**

**Vic FF3.1**

A building is to be constructed with sufficient size in a room or space suitable for the intended use.

Substitute FP3.1 as follows:

**PERFORMANCE REQUIREMENT**

**Vic FP3.1**

A *habitable room* or space must have sufficient size to enable the room or space to fulfil its intended use.
Substitute Vic F3.0 as follows:

**DEEMED-TO-SATISFY PROVISIONS**

**Vic F3.0 Deemed-to-Satisfy Provisions**

*Performance Requirement* Vic FP3.1 is satisfied by complying with F3.1 and Vic F3.101 to Vic F3.103.

Add Vic F3.101 as follows:

**Vic F3.101 Children’s services—size of rooms**

(a) A children’s room in a *children’s service* must have a *floor area* allowing a clear space of at least 3.3 m² for each child using that room.

(b) When calculating the clear space *required* by (a) any passageway or thoroughfare less than 3 metres wide, kitchen, toilet or shower area, storage area (including cupboards), areas through which doors may swing, cot rooms (including areas where fixed cots will be used or stored) or any other ancillary area must not be included.

Add Vic F3.102 as follows:

**Vic F3.102 Class 3 buildings—size of rooms**

A *habitable room* in a Class 3 building (other than a *residential aged care building*)—

(a) must have a *floor area* of at least 7.5 m²; or

(b) may have a *floor area* less than 7.5 m² provided the room has light and ventilation not less than that *required* for a room having a *floor area* of 7.5 m².

Add Vic F3.103 as follows:

**Vic F3.103 Class 3 and Class 9a residential aged care buildings—size of rooms**

In a *residential aged care building*—

(a) each bedroom must have a *floor area* of not less than 12 m² per occupant; and

(b) all other common *habitable rooms* (other than kitchens) must have a *floor area* of not less than 7.5 m² with—

(i) in a Class 3 hostel or supported residential services building or Class 9c *aged care building* an aggregate *floor area* of not less than 3.5 m² per occupant; or

(ii) in a Class 9a nursing home an aggregate *floor area* of not less than 2.5 m² per occupant.
PART F4 LIGHT AND VENTILATION

Delete F4.1(d) and insert Vic F4.1 as follows:

Vic F4.1 Provision of natural light

(d) Class 9b buildings—to all general purpose classrooms in primary or secondary schools and all playrooms or the like for the use of children in a children’s service other than a restricted children’s service.

Substitute F4.2(b) and delete F4.2(c) as follows:

Vic F4.2 Methods and extent of natural lighting

(b) In a Class 2, 3 or 9 building or Class 4 part a required window that faces a boundary of an adjoining allotment or a wall of the same building or another building on the allotment must not be less than a horizontal distance from that boundary or wall that is the greater of—

(i) generally—1 m; and

(ii) in a patient care area or other room used for sleeping purposes in a Class 9a or Class 9c building—3 m; and

(iii) 50% of the square root of the exterior height of the wall in which the window is located, measured in metres from its sill.

(c) (deleted).

Add Vic Part F6 as follows:

Vic PART F6 ENERGY EFFICIENCY

OBJECTIVE

Vic FO6

The Objective of this Part is to reduce greenhouse gas emissions by efficiently using energy.

Application:

Vic FO6 only applies to a Class 2, Class 3 or Class 9c building or a Class 4 part of a building.

FUNCTIONAL STATEMENT

Vic FF6.1

A building including its services, is to be capable of efficiently using energy.
Application:
Vic FF6.1 only applies to a Class 2, Class 3 or Class 9c building or a Class 4 part of a building.

PERFORMANCE REQUIREMENT

Vic FP6.1
A building, including its services, must have, to the degree necessary, features that facilitate the efficient use of energy appropriate to—
(a) the function and use of the building and service; and
(b) the internal environment; and
(c) the geographic location of the building; and
(d) the effects of nearby permanent features, such as topography, structures and buildings; and
(e) solar radiation being—
   (i) utilised for heating; and
   (ii) controlled to minimise energy for cooling; and
(f) the sealing of the building envelope against air leakage; and
(g) the utilisation of air movement to assist heating and cooling; and
(h) the energy source of the service.

Application:
Vic FP6.1 only applies to a Class 2, Class 3 or Class 9c building or a Class 4 part of a building.

DEEMED-TO-SATISFY PROVISIONS

Vic F6.0 Deemed-to-Satisfy Provisions
Performance Requirement Vic FP6.1 is satisfied by complying with Vic F6.1 to Vic F6.6.

Vic F6.1 Application
(a) The Deemed-to-Satisfy Provisions of this Part apply to Class 2, Class 3 and Class 9c buildings and to a Class 4 part of a building.
(b) Vic F6.3(a)(iii) does not apply to—
(i) concrete panels, cavity brick, earth wall construction, ashlar stone or other masonry walls which have a thickness (excluding any cavity) of not less than 180 mm if the floor of the building is concrete or masonry in direct contact with the ground; or

(ii) windows, vents and other similar openings in walls, roofs and ceilings.

**Vic F6.2 Definition of R value**

*R or R value* means the thermal resistance of an element of the building measured in m² K/W.

**Vic F6.3 Energy efficiency measures**

(a) The building must—

(i) in the case of a new Class 2 building, until 30 June 2004—

(A) for the elements nominated in **Vic Table F6.1**, comply with all the *R values* of option A or all the *R values* of option B; or

(B) achieve a house energy rating of at least 3 stars as assessed by a person accredited in the use of—

(aa) the FirstRate house energy rating software; or

(bb) the Nationwide House Energy Rating Software (NatHERS); and

(ii) in the case of a new Class 2 building, from 1 July 2004—

(A) achieve an average house energy rating of at least 5 stars for all the dwellings in the building and a minimum house energy rating of at least 3 stars for each dwelling in the building as assessed by a person accredited in the use of—

(aa) the FirstRate house energy rating software; or

(bb) the Nationwide House Energy Rating Software (NatHERS); or

(B) comply with Practice Note 2004–55; and
(iii) in the case of a new Class 3 or 9c building or a new Class 4 part of a building; or an alteration to, or re-erection of, an existing Class 2, 3 or 9c building or an existing Class 4 part of a building—

(A) for the elements nominated in Vic Table F6.1, comply with all the R values of option A or all the R values of option B; or

(B) achieve a house energy rating of at least 3 stars as assessed by a person accredited in the use of—

(aa) the FirstRate house energy rating software; or

(bb) the Nationwide House Energy Rating Software (NatHERS).

Vic Table F6.1 MINIMUM OVERALL R VALUES

<table>
<thead>
<tr>
<th>Element</th>
<th>Option A</th>
<th>Option B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof or ceiling</td>
<td>R2.2</td>
<td>R2.2</td>
</tr>
<tr>
<td>External wall</td>
<td>R1.3</td>
<td>R1.7</td>
</tr>
<tr>
<td>Ground Floor</td>
<td>R1.0</td>
<td>R0.7</td>
</tr>
</tbody>
</table>

Note: For the purposes of this Table a wall which separates a Class 2 or 3 building or a Class 4 part of a building from a Class 10a building or from any roof space is regarded as an external wall.

(b) Deemed R Value—An element described in Vic Table F6.2 is deemed to have the R value nominated in the Table adjacent to the description of the element.

Vic Table F6.2 R VALUES FOR COMMON ELEMENTS

<table>
<thead>
<tr>
<th>Description of element</th>
<th>R value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tiled or metal pitched roof, R2.5 bulk insulation between ceiling joists, lined ceiling</td>
<td>R2.4</td>
</tr>
<tr>
<td>Tiled or metal pitched roof, rfl as sarking and insulation over rafters, R2.0 bulk insulation between ceiling joists, lined ceiling</td>
<td>R2.2</td>
</tr>
<tr>
<td>Metal deck roof, rfl as sarking and insulation, 20 mm air gap, R2.0 bulk insulation installed between joists/beams, rfl as a vapour barrier, ceiling lining on underside of joists/beams</td>
<td>R2.2</td>
</tr>
<tr>
<td>Metal deck roof, R2.0 bulk insulation installed between rafters, rfl as a vapour barrier, ceiling lining on underside of rafters</td>
<td>R2.2</td>
</tr>
<tr>
<td>Metal deck roof, R2.0 bulk insulation installed between roof battens, rfl as a vapour barrier, ceiling lining on top of exposed rafters</td>
<td>R2.2</td>
</tr>
<tr>
<td>Tiled roof, rfl as sarking and insulation, R2.0 bulk insulation installed between counter battens, optional rfl as a vapour barrier, ceiling lining on top of exposed rafters</td>
<td>R2.2</td>
</tr>
<tr>
<td>Description of element</td>
<td>R value</td>
</tr>
<tr>
<td>------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td><strong>External walls</strong></td>
<td></td>
</tr>
<tr>
<td>Brick/masonry veneer with R1.5 bulk insulation between the studs, lined internally</td>
<td>R1.7</td>
</tr>
<tr>
<td>Brick/masonry veneer with R1.0 foam board fixed over the face of the studs, lined internally</td>
<td>R1.7</td>
</tr>
<tr>
<td>Brick/masonry veneer with double sided rfl fixed to external face of studs, lined internally</td>
<td>R1.3</td>
</tr>
<tr>
<td>Weatherboard/fibre cement cladding, R1.5 bulk insulation between studs, lined internally</td>
<td>R1.7</td>
</tr>
<tr>
<td>Weatherboard/fibre-cement, double sided perforated rfl dished between studs, lined internally</td>
<td>R1.3</td>
</tr>
<tr>
<td>Cavity brick with R0.8 foam board in cavity</td>
<td>R1.3</td>
</tr>
<tr>
<td>150 mm concrete panel with R1.0 foam board and lined internally</td>
<td>R1.3</td>
</tr>
<tr>
<td><strong>Floors</strong></td>
<td></td>
</tr>
<tr>
<td>Concrete/masonry on ground</td>
<td>R1.5</td>
</tr>
<tr>
<td>Timber framed floor, enclosed perimeter</td>
<td>R1.0</td>
</tr>
<tr>
<td>Timber framed floor, unenclosed perimeter, 20 mm foam board fixed to the underside of floor joists</td>
<td>R1.0</td>
</tr>
<tr>
<td>Timber framed floor, unenclosed perimeter, perforated rfl dished between joists</td>
<td>R1.0</td>
</tr>
<tr>
<td>Timber framed floor, unenclosed perimeter</td>
<td>R0.7</td>
</tr>
</tbody>
</table>

Note: For the purposes of this Table an enclosed perimeter may incorporate sub-floor ventilation at the rate of approximately 7300 mm²/m.

**Vic F6.4 Chimneys and flues**

Chimneys and flues from open solid fuel-burning appliances must be provided with a damper or flap.

**Vic F6.5 Installation of reflective foil laminate**

Installation of reflective foil laminate (rfl) must comply with AS/NZS 4200.2.

**Vic F6.6 Thermal insulation materials**

Thermal insulation materials must comply with 3.12.1.1(d) of Volume Two of the Building Code of Australia.
SECTION G  ANCILLARY PROVISIONS

PART G1  MINOR STRUCTURES AND COMPONENTS

Substitute G1.1(b) as follows:

Vic G1.1 Swimming pools

(b) Safety barriers: A swimming pool associated with a Class 2 or 3 building or Class 4 part or a children's service, with a depth of water more than 300 mm, must have fencing or other barriers in accordance with AS 1926 Parts 1 and 2.

SECTION H  SPECIAL USE BUILDINGS

Add Vic Part H101 as follows:

Vic Part H101  CLASS 3, CLASS 9a AND CLASS 9c RESIDENTIAL AGED CARE BUILDINGS

Application:
This Part only applies to Class 3, Class 9a and Class 9c residential aged care buildings.

Note.
Vic Part H101—Class 3, Class 9a and Class 9c Residential Aged Care Buildings contains additional Deemed-to-Satisfy Provisions for Sections D and F for Class 3, Class 9a and Class 9c residential aged care buildings as well as additional Performance Requirements and associated Deemed-to-Satisfy Provisions.

PERFORMANCE REQUIREMENTS

Vic HP101.1
The temperature of water supplied to baths and showers for use by residents must be controlled to avoid the risk of scalding whilst ensuring the stored water temperature does not encourage the growth of Legionella Bacteria.

Vic HP101.2
An electronic communication system must be provided to enable residents and staff to summon assistance in habitable rooms (other than kitchens), water closets, shower rooms and bathrooms.

Vic HP101.3
Sufficient general purpose outlets must be provided for electrical appliances in bedrooms in locations that obviate the need for extension leads.
DEEMED-TO-SATISFY PROVISIONS

Vic H101.0 Deemed-to-Satisfy Provisions

Performance Requirements Vic HP101.1 to HP101.3 and relevant Performance Requirements in Sections D and F are satisfied by complying with Vic H101.1 to Vic H101.7.

Vic H101.1 Application of Part

The Deemed-to-Satisfy Provisions of this Part apply to Class 3, Class 9a and Class 9c residential aged care buildings.

Vic H101.2 Doorway width

(a) The clear width of all bedroom entrance doorways must be not less than 900 mm.
(b) The clear width of all other doorways must be not less than 800 mm.

Vic H101.3 Windows

(a) The sill height of windows in habitable rooms (except kitchens) must be not more than 900 mm above the floor.
(b) Openable windows must be provided with flyscreens.

Vic H101.4 Grab rails and handrails

(a) Grab rails must be provided in association with every closet fixture, shower or bath in accordance with the Supported Residential Service Design Guidelines.
(b) Handrails must be provided along both sides of every common passageway or common corridor used by residents and they must be—
   (i) fixed not less than 50 mm clear of the wall; and
   (ii) where practicable, continuous for their full length.

Vic H101.5 Water temperature

The hot water temperature must comply with the minimum design parameters of the Supported Residential Service Design Guidelines.

Vic H101.6 Electronic communications system

A communication system must—
(a) contain a back-up power supply; and
(b) have a control that enables the call to be cancelled manually at the point of origin only; and
(c) incorporate a device at the point of origin that indicates the system has operated; and
(d) incorporate an indication panel in the manager's office or staff area that clearly identifies the point of origin of a call; and
(e) have an audible tone that has a continuous signal until deactivated at the point of origin; and
(f) be operational at all times; and

(g) have two call points in each en-suite or combined shower/water closet with one call point located in the shower recess and the other on the wall beside the closet pan ahead of the bowl rim; and

(h) have call points (other than those mentioned in (g)) which are located—
   (i) within the reach of a resident whilst in bed; and
   (ii) in all common habitable rooms; and
   (iii) in all bathrooms, sanitary compartments and shower rooms where the call point must be of waterproof construction and within reach of any fallen resident.

**Vic H101.7 Electrical power outlets**

General purpose outlets must be provided as follows:

(a) In bedrooms with one occupant—two general purpose outlets provided on a minimum of two walls.

(b) For each additional occupant—two general purpose outlets provided at the head of each additional bed.

Add Vic Part H102 as follows:

**Vic Part H102 PLACES OF PUBLIC ENTERTAINMENT**

**Application:**

This Part applies to all places of public entertainment as defined in the Building Act 1993 and prescribed in regulation 10.2 of the Building Regulations 1994.

**Note.**


**PERFORMANCE REQUIREMENTS**

**Vic HP102.1**

Temporary tiered seating stands and embankments must be designed using engineering principles and constructed to provide for the safety of the patrons and orderly means of evacuation in an emergency.

**Vic HP102.2**

Every place of public entertainment where motor vehicle racing takes place must be provided with suitable barriers and guard rails to protect the public from injury.
Sufficient sanitary and amenity facilities must be provided at places of public entertainment for use by patrons.

**DEEMED-TO-SATISFY PROVISIONS**

**Vic H102.0 Deemed-to-Satisfy Provisions**

*Performance Requirements* Vic HP102.1 to HP102.3 are satisfied by complying with Vic H102.1 to Vic H102.4.

**Vic H102.1 Application of Part**


**Vic H102.2 Temporary tiered seating, concourses and embankments**

Temporary tiered seating stands and embankments must be designed and constructed as follows:

(a) Temporary tiered seating, concourses and embankments must comply with the *Deemed-to-Satisfy Provisions* of Section B, Section D and Clause H1.4(a)(ii), (iii) and (b).

(b) The maximum slope of tiered seating must not exceed 34 degrees when measured from the horizontal plane.

(c) Aisles must be evenly spaced throughout the structure and have—

(i) a minimum width of 1 m; and

(ii) the aggregate of aisle widths leading to an exit must be not less than the required width of that exit; and

(iii) no one aisle may serve more than—

   (A) 120 patrons where individual seating with backs is provided; or

   (B) 200 patrons in any other case.

(d) When applying the balustrading requirements of the *Deemed-to-Satisfy Provisions* of Section D, the height of plat balustrading that directly abuts seating (i.e. with no aisle between the seat and the balustrading) must be measured from the plat or seat base whichever is the higher.

(e) Transverse aisles must be provided at a horizontal distance of not more than 10 m between any row of seats.

(f) All individual moveable seats must be—

   (i) fixed in groups of not less than four; and

   (ii) not used in stepped or ramped seating areas.
(g) For any spectators’ embankment—
   (i) where the rear slope exceeds 1 in 5, a guard rail must be installed with no
       openings except at the heads of steps or ramps; and
   (ii) where the forward or front slope exceeds 1 in 8, the embankment must be stepped
       with plats not less than 500 mm wide and risers not greater than 230 mm high.

(h) Guard rails must be installed to protect any fence, balustrade or railing associated with
    stepped or ramped standing spaces where excess pressure is expected from spectators.

Vic H102.3 Motor vehicle racing

Motor vehicle racing barriers and guard rails must be provided so as to comply with the
following:

(a) CAMS “Track Operators Safety Guide”.

(b) For stock car racing, barriers installed—
   (i) on the outer margin of the track: a continuous concrete, close boarding or long
       guard barrier having a height of not less than 900 mm; and
   (ii) on all curved sections of the track within 3 m of the barrier described in (i): a stout
       welded or woven wire mesh fence adequately supported having a height of not less
       than 1.8 m above the adjacent spectators viewing areas; and
   (iii) between the public viewing area and the fence described in (ii): a suitable crowd
       barrier that will prevent spectators entering within 1.2 m of that fence.

Vic H102.4 Sanitary and amenity facilities

Sanitary and amenity facilities in places of public entertainment must be provided as follows:

(a) In places other than buildings:
   (i) One closet fixture for every 200 female patrons or part thereof.
   (ii) One closet fixture or urinal for every 200 male patrons or part thereof, at least 30% of
        which must be in the form of closet fixtures.
   (iii) One washbasin for every 200 patrons or part thereof.
   (iv) For use by disabled persons, one unisex facility within the meaning of Part F2 of
        the BCA for every 100 closet fixtures or part thereof required under (i) and (ii).
   (v) One drinking fountain or drinking tap for every washbasin required under (iii).
   (vi) First aid facilities in accordance with Vic F2.101.

(b) In buildings, as required to comply with Part F2.

Add Vic Part H103 as follows:

Vic Part H103 FIRE SAFETY IN CLASS 2 AND CLASS 3 BUILDINGS

Note:
There are no Performance Requirements for Vic Part H103—Fire Safety in Class 2 and
Class 3 Buildings as the Part contains only additional Deemed-to-Satisfy Provisions for
Sections C, D and E for Class 2 and Class 3 buildings.
Vic H103.1 Fire safety in Class 2 and Class 3 buildings

(a) A Class 2 or Class 3 building not more than 25 m in effective height that has a sprinkler system complying with Specification E1.5 installed throughout the building may be constructed in accordance with (b) provided that—

(i) where a sprinkler system complying with AS 2118.4, as applicable, is installed in the building, the system must be permanently connected with a direct data link or other approved monitoring system to a fire station or fire station dispatch centre in accordance with Practice Note 2002-07 if—

(A) it has more than 100 sprinkler heads; or

(B) in the case of a residential care building, the building will accommodate more than 32 residents; and

(ii) the sprinkler system is fitted with sprinklers complying with Clause 2.6 of AS 2118.4 in bedrooms; and

(iii) an automatic smoke detection and alarm system is installed in accordance with Specification E2.2a, except that it need not be connected to a fire station and in the case of a residential care building must be installed in accordance with—

(A) Specification E2.2a Clause 4; or

(B) (aa) Specification E2.2a Clause 3 provided Clause 3 (c)(ii) is applied as if the building was not protected with a sprinkler system; and

(bb) Practice Note 2002-07; and

(iv) in a residential care building, the automatic smoke detection and alarm system and the sprinkler system are connected to an alarm panel constructed in accordance with Practice Note 2002-07; and

(v) fire orders are provided in a Class 3 building in accordance with G4.9.

(b) Subject to compliance with (a), the following concessions are permissible:

(i) C3.11—deletion of the requirement for self-closing fire doors or solid-core doors (except those opening to fire-isolated exits).

(ii) Specification C1.1—deletion of the requirement for internal walls to have an FRL subject to compliance with Clause 2.2 of Specification C1.1, except that walls bounding public corridors must be—

(A) clad in non-combustible material; and

(B) extend to the underside of a non-combustible roof covering or to the underside of the ceiling and be designed to minimise smoke spread to the corridor; and

(C) not incorporate any penetrations above door head height unless the penetrations are adequately stopped to prevent the free passage of smoke.

(iii) D1.3—deletion of the requirement for stairways that serve not more than 5 storeys to be fire-isolated stairways provided—

(A) the stairway is smoke enclosed with construction that complies with D2.6 (except D2.6(a) and (b)(i)); and

(B) in a Class 3 building, storeys 4 and 5 are served by a minimum of 2 smoke enclosed stairways.

(iv) D1.4(a)(i)(A)—except in a residential care building, the maximum distance of travel may be increased from 6 m to 12 m.
Add Vic Part H104 as follows:

**Vic Part H104 CLASS 9b CHILDREN'S SERVICES**

**Application:**
This Part only applies to Class 9b children's services.

**Note:**
Vic Part H104—Class 9b Children's Services contains additional Performance Requirements and Deemed-to-Satisfy Provisions for Sections D, F and G for Class 9b children's services.

**PERFORMANCE REQUIREMENTS**

Vic HP104.1

The number and location of doorways to a children's room must take into account the mobility of children in the event that emergency egress or entry is required.
Vic HP104.2

A children's room must have sufficient windows located to provide a view for children.

Vic HP104.3

The design and height of fencing or other barriers around any outdoor play space (including the design of gates and fittings, and the proximity of the barriers to any permanent structure on the property) must ensure that children cannot go through, over or under the fencing or other barriers.

DEEMED-TO-SATISFY PROVISIONS

Vic H104.0 Deemed-to-Satisfy Provisions

Performance Requirements Vic HP104.1 to HP104.3 and relevant Performance Requirements in Sections D and F are satisfied by complying with Vic H104.1 to Vic H104.4.

Vic H104.1 Application of Part

The Deemed-to-Satisfy Provisions of this Part apply to Class 9b children's services.

Vic H104.2 Doorways to a children's room

A children's room must have a doorway, or in the case of every such room accommodating more than 21 children at least two doorways as widely separated as possible, providing direct access to or from—

(a) an outdoor play area; or
(b) a passage leading to the outside; or
(c) a fire-isolated exit.

Vic H104.3 Window sill height

The sills of 50% of required windows in children's rooms must be located not more than 1 m above floor level.

Vic H104.4 Children's services—outdoor play space

Any outdoor play space in a children's service must be enclosed on all sides with fences or other barriers, at least 1.5 m high measured from ground level and, together with any gates and fittings, except those on doors to the children's service, complying with AS 1926 Part 1.
Footnote: SPECIAL REQUIREMENTS FOR CERTAIN BUILDINGS AND COMPONENTS

In addition to any applicable provisions of the Building Act 1993, the Building Regulations 1994 and this Code, there are a number of technical building design and construction requirements of which practitioners should be aware. The following is a list of some of these:

1 Abattoirs, knackeries
   1.1 Authority: Department of Natural Resources and Environment

2 Accommodation—Residential (boarding houses, guest houses, hostels, motels)
   2.1 Approval authority: Municipal council
   2.2 Relevant legislation: Health Act 1958, Health (Prescribed Accommodation) Regulations 2001

3 Accommodation—Supported Residential Services
   3.1 Approval authority: Department of Human Services
   3.2 Relevant legislation: Health Services Act 1988, Health Services (Residential Care) Regulations 1991
   3.3 Design codes: Supported Residential Service Design Guidelines

4 Alpine Resorts—approval of construction
   4.1 Approval authority: Alpine Resorts Commission
   4.2 Relevant legislation: Alpine Resorts (Management) Act 1997

5 Children’s Services
   5.1 Approval authority: Regional Director, Department of Human Services

6 Crematoria, vaults, mortuary churches, etc
   6.1 Approval authority: Cemeteries and Crematoria Unit, Public Health Division, Department of Human Services, cemetery trusts
   6.2 Relevant legislation: Cemeteries Act 1958, Cemeteries Regulations 2000
7 Crown land—construction approval

7.1 Approval authority: Crown Land and Assets Division, Department of Natural Resources and Environment
7.2 Relevant legislation: Crown Land (Reserves) Act 1978

8 Dairies

8.1 Authority: Department of Natural Resources and Environment
8.2 Relevant legislation: Dairy Act 2000

9 Dangerous Goods

9.1 Approval authority: Victorian WorkCover Authority
9.3 Design Codes: Various codes of practices published by the authority.

10 Electrical installations

10.1 Authority: Electricity supply companies
10.3 Design codes: SAA Wiring Rules, AS/NZS 3000/3013

11 Fences - (dividing)

11.1 Relevant legislation: Fences Act 1968
11.2 Appeal body: Magistrates’ Court

12 Fire prevention in existing buildings

12.1 Authority: Municipal council
12.3 Appeal body: Building Appeals Board (Building Act only)

13 Food premises

13.1 Approval authority: Municipal council
13.2 Relevant legislation: Food Act 1984
14  Gas installations
14.1 Approval authority: Gas and Fuel (Gascor)
14.3 Design codes: Gas Installation Code AG601 1992

15  Historic buildings
15.1 Approval authority: Executive Director under the Heritage Act 1995
15.2 Relevant legislation: Heritage Act 1995
15.3 Appeal body: Heritage Council

16  Hospitals, nursing homes, health care buildings
16.1 Approval authority: Department of Human Services
16.2 Relevant legislation: Health Act 1958, Mental Health Act 1986

17  Lifts installations
17.1 Approval authority: Victorian WorkCover Authority
17.3 Design codes: AS 1735 Lifts, escalators and moving walks

18  Movable dwellings (in caravan parks)
18.1 Approval authority: Municipal council
18.2 Relevant legislation: Residential Tenancies Act 1997, Residential Tenancies (Caravan Parks and Movable Dwellings Registration and Standards) Regulations 1999
18.3 Appeal body: Building Appeals Board

19  Occupational health and safety
19.1 Approval authority: Victorian WorkCover Authority
19.3 Design codes: Various codes of practice published by the Authority

20  Pharmacies
20.1 Approval authority: Pharmacy Board of Victoria
20.3 Design codes: Guidelines for Good Pharmaceutical Practice 1997

21 Planning controls
21.1 Approval authority: Municipal council, in some cases the Minister for Planning
21.2 Relevant legislation: Planning and Environment Act 1987
21.3 Design codes: Planning schemes
21.4 Appeal body: Victorian Civil and Administrative Tribunal

22 Prisons and gaols
22.1 Approval authority: Correctional Services, Department of Justice
22.2 Relevant legislation: Corrections Act 1986

23 Radiation safety
23.1 Approval authority: Radiation Safety Unit, Public Health Division, Department of Human Services
23.2 Relevant legislation: Health Act 1958, Health (Radiation Safety) Regulations 1994
23.3 Design codes: AS 2398 - 1980 Fixed Diagnostic X-ray Equipment—Design Construction and Installation, other Australian Standards and codes of practice

24 Schools (non-government)
24.1 Approval authority: Registered Schools Board
24.2 Relevant legislation: Education Act 1958

25 Sanitary plumbing, water supply and sewerage
25.1 Approval authority: Melbourne Water in metropolitan area, sewerage and water supply authorities in country areas
25.3 Design codes: AS/NZS 3500 National Plumbing and Drainage Code

26 Septic tank installations
26.1 Approval authority: Municipal council, Environment Protection Authority (discharge > 5000 l/day)
26.2 Relevant legislation: Environment Protection Act 1970
26.3 Design codes: Septic Tanks Code of Practice 1990

27 Subdivision of buildings
27.1 Approval authority: Municipal Council
27.2 Relevant legislation: Subdivision Act 1988
This Appendix contains variations and additions to the Building Code of Australia (BCA) provisions which are considered necessary for the effective application of the Code in Western Australia and shall be treated as amendments to the Code.
APPENDIX WESTERN AUSTRALIA

Western Australia

F  HEALTH AND AMENITY

WA FO5 Objective
WA FF5.1 Functional Statement
WA FP5.1 Performance Requirements
WA F5.0 Deemed-to-Satisfy Provisions
WA F5.1 Application of Part
WA F5.2 Weighted sound reduction index: Interpretation
WA F5.3 Sound insulation of floors between units
WA F5.4 Sound insulation of walls between units
WA F5.5 Walls between a bathroom, sanitary compartment, laundry or kitchen and a habitable room in adjoining unit
WA F5.6 Soil and waste pipes to be separated
WA-F5.7 Isolation of pumps
WA F5.8 Walls between a bedroom and kitchen or laundry in a Class 9c building
WA Specification F5.2 Sound Insulation for Building Elements
WA Specification F5.5 Impact Sound - Test of Equivalence

I  MAINTENANCE

WA I01 Objective
WA IF1 Functional Statement
WA IP1 Performance Requirement
WA I1.0 Deemed-to-Satisfy Provisions
WA I1.1 Safety installations
WA I1.2 Mechanical ventilation and hot water, warm water and cooling water systems
Amend Part F5 as follows:

**OBJECTIVE**

WA FO5

The Objective of this Part is to safeguard occupants from illness or loss of amenity as a result of undue sound being transmitted—

(a) between adjoining *sole-occupancy units*; and

(b) from common spaces to *sole-occupancy units*.

**Application:**

WA FO5 only applies to a Class 2 or 3 building or a Class 9c *aged care building*.

**FUNCTIONAL STATEMENT**

WA FF5.1

A building element which separates *sole-occupancy units*, or separates a *sole-occupancy unit* from a common space within the building, is to be constructed to prevent undue sound transmission.

**Application:**

WA FF5.1 only applies to a Class 2 or 3 building or a Class 9c *aged care building*.

**PERFORMANCE REQUIREMENTS**

WA FP5.1

Floors separating *sole-occupancy units* must provide insulation against the transmission of airborne and impact generated sound sufficient to prevent illness or loss of amenity to the occupants.

**Application:**

WA FP5.1 only applies to a Class 2 or 3 building or a Class 9c *aged care building*. 
WA FP5.2

Walls separating—
(a) sole-occupancy units; or
(b) a sole-occupancy unit from a plant room, lift shaft, stairway, public corridor, public lobby or the like,

must provide insulation against the transmission of airborne and impact generated sound sufficient to prevent illness or loss of amenity to the occupants.

Application:
WA FP5.2 only applies to a Class 2 or 3 building.

WA FP5.3

The required sound insulation of floors or walls must not be compromised by the incorporation or penetration of a pipe or other service element.

Application:
WA FP5.3 only applies to a Class 2 or 3 building or a Class 9c aged care building.

WA FP5.4

Walls separating—
(a) sole-occupancy units; or
(b) a sole-occupancy unit from a kitchen, bathroom, sanitary compartment (not being an associated ensuite), laundry, plant room or utilities room,

must provide insulation against the transmission of airborne sound sufficient to prevent illness or loss of amenity to the occupants, and
(c) a sole-occupancy unit from a kitchen or laundry,

must provide insulation against the transmission of impact generated sound sufficient to prevent illness or loss of amenity to the occupants.

Application:
WA FP5.4 only applies to a Class 9c aged care building.

WA F5.0 Deemed-to-Satisfy Provisions

Performance Requirements WA FP5.1 to WA FP5.4 are satisfied by complying with WA F5.1 to WA F5.8.

WA F5.1 Application of Part

The Deemed-to-Satisfy Provisions of this Part apply to Class 2 and 3 buildings and Class 9c aged care buildings.
WA F5.2 Weighted sound reduction index: Interpretation

A form of construction required to have a certain weighted sound reduction index \( R_w \) must—

(a) have the required value determined under AS/NZS 1276.1, or ISO 717.1; or

(b) comply with WA Specification F5.2.

WA F5.3 Sound insulation of floors between units

A floor separating sole-occupancy units must have an \( R_w \) not less than 45.

WA F5.4 Sound insulation of walls between units

A wall must have an \( R_w \) not less than 45 if it separates—

(a) sole-occupancy units; or

(b) a sole-occupancy unit not within a Class 9c aged care building from a plant room, lift shaft, stairway, public corridor, hallway or the like.

(c) a sole-occupancy unit in a Class 9c aged care building from a kitchen, bathroom, sanitary compartment (not being an associated ensuite), laundry, plant room or utilities room.

WA F5.5 Walls between a bathroom, sanitary compartment, laundry or kitchen and a habitable room in adjoining unit

(a) Except for a Class 9c aged care building, a wall separating a bathroom, sanitary compartment, laundry or kitchen in one sole-occupancy unit from a habitable room (other than a kitchen) in an adjoining unit must—

(i) have an \( R_w \) of not less than 50; and

(ii) provide a satisfactory level of insulation against impact sound; and

(iii) not incorporate a duct which reduces the \( R_w \) of the wall to less than 50.

(b) A wall satisfies (a)(i) and (a)(ii) if it is—

(i) in accordance with WA Table F5.5; or

(ii) for other than masonry, in 2 or more separate leaves without rigid mechanical connection except at their periphery; or

(iii) identical with a prototype that is no less resistant to the transmission of impact sound when tested in accordance with WA Specification F5.5 than a wall listed in WA Table F5.5.

WA Table F5.5 CONSTRUCTION OF WALLS TO REDUCE IMPACT SOUND

<table>
<thead>
<tr>
<th>Cavity brickwork—</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two leaves of 90 mm brick masonry with—</td>
</tr>
<tr>
<td>(i) all joints filled solid with mortar; and</td>
</tr>
<tr>
<td>(ii) an air space not less than 40 mm between the leaves; and</td>
</tr>
<tr>
<td>(iii) the leaves connected only by ties in accordance with AS 3700.</td>
</tr>
</tbody>
</table>

| Single leaf brickwork— |
110 mm thick brick masonry with—
(i) each face rendered 13 mm thick; and
(ii) 50 mm x 12 mm thick timber battens at not more than 610 mm centres fixed to each face but not recessed into the render; and
(iii) one layer of 12 mm thick softboard nailed to the battens; and
(iv) 6 mm thick medium density hardboard adhesive-fixed to the softboard.

Concrete blockwork—
190 mm thick concrete block masonry with—
(i) each face of the blocks fitted with 50 mm x 50 mm timber battens, spaced at not more than 610 mm centres, screw-fixed into resilient plugs with rubber inserts; and
(ii) the space between the battens completely filled with mineral or glass wool blanket or batts not less than 50 mm thick; and
(iii) the outer face of the battens finished with plasterboard not less than 10 mm thick or other material with a mass per unit area not less than 7.3 kg/m².

WA F5.6 Soil and waste pipes to be separated
If a soil or waste pipe, including a pipe that is embedded in or passes through a floor, serves or passes through more than one sole-occupancy unit—
(a) the pipe must be separated from the rooms of any sole-occupancy unit by construction with an $R_w$ not less than—
   (i) 45 if the adjacent room is a habitable room (other than a kitchen); or
   (ii) 30 if the adjacent room is a kitchen or any other room; and
(b) a door or panel providing access to the pipe must not open into any habitable room (other than a kitchen); and
(c) an access door or panel in any other part must be firmly fixed so as to overlap the frame or rebate of the frame by not less than 10 mm, be fitted with a sealing gasket along all edges and constructed of—
   (i) wood, particleboard or blockboard not less than 38 mm thick; or
   (ii) compressed fibre reinforced cement sheeting not less than 9 mm thick; or
   (iii) other suitable material with a mass per unit area not less than 24.4 kg/m².

WA F5.7 Isolation of pumps
A flexible coupling must be used at the point of connection between the service pipes in a building and any circulating or other pump.

WA F5.8 Walls between a bedroom and kitchen or laundry in a Class 9c building
In addition to WA F5.4, a wall separating a sole-occupancy unit in a Class 9c aged care building from a kitchen or laundry must—
(a) for other than masonry, be two or more separate leaves without rigid mechanical connection except at their periphery; or

(b) be identical with a prototype that is no less resistant to the transmission of impact sound when tested in accordance with **WA Specification F5.5** than a wall listed in **Table 2 of WA Specification F5.2**.
1. **Scope**

This Specification lists the weighted sound reduction index ($R_w$) for some common forms of construction.

2. **Construction deemed-to-satisfy**

The forms of construction listed in Table 2 are considered to have the $R_w$ stated in that Table if installed as follows:

(a) **Masonry**—Units must be laid with all joints filled solid, including those between the masonry and any adjoining construction.

(b) **Concrete slabs**—Joints between concrete slabs and any adjoining construction must be filled solid.

(c) **Plasterboard**—

   (i) if one layer is required under this Specification, it must be screw-fixed to the studs with joints staggered on opposite faces; and

   (ii) if 2 layers are required, the first layer must be fixed according to (i) and the second layer must be fixed to the first layer with nails, screws or adhesive so that the joints do not coincide with those of the first layer; and

   (iii) joints between sheets or between sheets and any adjoining construction must be taped and filled solid; and

   (iv) fire-protective grade plasterboard must be the special grade manufactured for use in fire-resisting construction.

(d) **Steel studs and perimeter members**—

   (i) the section of steel must be not less than 0.6 mm thick; and

   (ii) studs must be not less than 63 mm in depth unless another depth is listed in the Table; and

   (iii) studs must be fixed to steel top and bottom plates of sufficient depth to permit secure fixing of the plasterboard; and

   (iv) all steel members at the perimeter of the wall must be securely fixed to the adjoining structure and bedded in resilient compound or the joints must be caulked so that there are no voids between the steel members and the wall.
Table 2 $R_w$ APPLICABLE TO CONSTRUCTION

<table>
<thead>
<tr>
<th>Construction</th>
<th>$R_w$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WALLS</strong></td>
<td></td>
</tr>
<tr>
<td>Clay brickwork—</td>
<td></td>
</tr>
<tr>
<td>(a) 230 mm thick in one or more leaves and with a mass per unit area of not less than 290 kg/m$^2$</td>
<td>45</td>
</tr>
<tr>
<td>(b) 110 mm thick rendered 13 mm thick on both sides with a mass per unit area of the unrendered wall being not less than 190 kg/m$^2$</td>
<td>45</td>
</tr>
<tr>
<td>(c) 110 mm thick, of semi-dry-pressed bricks and rendered 13 mm on one side, the mass per unit area of the unrendered wall being not less than 215 kg/m$^2$</td>
<td>45</td>
</tr>
<tr>
<td>(d) 110 mm thick, of extruded brick and rendered 13 mm on one side, the mass per unit area of the unrendered wall being not less than 180 kg/m$^2$</td>
<td>45</td>
</tr>
<tr>
<td>Concrete brickwork— 110 mm thick with a mass per unit area of not less than 195 kg/m$^2$</td>
<td>45</td>
</tr>
<tr>
<td>Concrete blockwork—</td>
<td></td>
</tr>
<tr>
<td>(a) 190 mm thick with a mass per unit area of not less than 215 kg/m$^2$</td>
<td>45</td>
</tr>
<tr>
<td>(b) 140 mm thick, the wall thickness of the blocks being not less than 44 mm and with—</td>
<td></td>
</tr>
<tr>
<td>(i) 50 mm x 50 mm timber battens spaced at not more than 610 mm centres screw-fixed on one face of the blocks into resilient plugs with rubber inserts between battens and the wall;</td>
<td></td>
</tr>
<tr>
<td>(ii) the face of the battens clad with 13 mm thick standard plasterboard; and</td>
<td></td>
</tr>
<tr>
<td>(iii) a mass per unit area of the whole system of not less than 220 kg/m$^2$</td>
<td>45</td>
</tr>
<tr>
<td>Concrete—</td>
<td></td>
</tr>
<tr>
<td>(a) In-situ concrete— 125 mm thick and with a density of not less than 2200 kg/m$^3$</td>
<td>45</td>
</tr>
<tr>
<td>(b) In-situ concrete— 100 mm thick and with a density of not less than 2500 kg/m$^3$</td>
<td>45</td>
</tr>
<tr>
<td>(c) Precast concrete— 100 mm thick and without joints</td>
<td>45</td>
</tr>
<tr>
<td>Steel stud walling—</td>
<td></td>
</tr>
<tr>
<td>(a) with 2 layers of 16 mm thick fire-protective grade plasterboard fixed to each face</td>
<td>45</td>
</tr>
</tbody>
</table>
### Deemed-to-Satisfy Provisions

#### Construction

<table>
<thead>
<tr>
<th>(b) with—</th>
<th>$R_w$ (not less than)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) 1 layer of 13 mm thick fire-protective grade plasterboard fixed to one face, and before fixing, 50 mm thick mineral or glass wool blanket or batts stapled to the back of each sheet so that the sheet is completely covered; and</td>
<td>45</td>
</tr>
<tr>
<td>(ii) 2 layers of 13 mm thick fire-protective grade plasterboard fixed to the other face</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(c) with—</th>
<th>$R_w$ (not less than)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) 1 layer of 16 mm fire-protective grade plasterboard fixed to one face; and</td>
<td>45</td>
</tr>
<tr>
<td>(ii) 50 mm thick mineral or glass wool blanket or batts wedged firmly between the studs; and</td>
<td></td>
</tr>
<tr>
<td>(iii) 2 layers of fire-protective grade plasterboard fixed to the other face, the inner layer being 16 mm thick and the outer layer being 13 mm</td>
<td></td>
</tr>
</tbody>
</table>

| (d) with 2 layers of 13 mm plasterboard on both sides of 75 mm studs | 45 |

#### FLOORS—

#### Concrete—

| (a) In-situ concrete slab— 125 mm thick and with a density of not less than 2200 kg/m$^3$ | 45 |
| (b) In-situ concrete slab— 100 mm thick and with a density of not less than 2500 kg/m$^3$ | 45 |
| (c) Pre-cast concrete slab— 100 mm thick and without joints | 45 |

#### Timber—comprising—

| (a) timber joists not less than 175 mm x 50 mm; and | 45 |
| (b) 75 mm thick mineral or glass wool blanket or batts cut to fit tightly between joists and laid on 10 mm thick plasterboard fixed to underside of joists; and | |
| (c) 25 mm thick mineral or glass wool blanket or batts laid over entire floor, including tops of joists before flooring is laid; and | |
| (d) tongued-and-grooved boards not less than 19 mm thick, secured to 75 mm x 50 mm battens; and | |
| (e) the assembled flooring laid over the joists, but not fixed to them, with the battens lying between the joists | |

#### DUCTS OR OTHER CONSTRUCTION SEPARATING SOIL AND WASTE PIPES FROM UNITS

| Masonry— not less than 90 mm thick | 30 |
| Plasterboard— 2 layers of plasterboard— | |
### Deemed-to-Satisfy Provisions

<table>
<thead>
<tr>
<th>Construction</th>
<th>$R_w$ (not less than)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) each 10 mm thick, fixed to timber studs not less than 75 mm x 50 mm and spaced at not more than 400 mm centres</td>
<td>30</td>
</tr>
<tr>
<td>(b) each 13 mm thick, one on each side of steel studs not less than 50 mm deep and spaced at not more than 400 mm centres</td>
<td>30</td>
</tr>
</tbody>
</table>
SPECIFICATION F5.5 IMPACT SOUND — TEST OF EQUIVALENCE

Deemed-to-Satisfy Provisions

1. Scope

This Specification describes a method of test to determine the comparative resistance of walls to the transmission of impact sound.

2. Construction to be tested

(a) The test is conducted on a specimen of prototype wall construction and on a specimen of one or other of the constructions specified in WA Table F5.5.

(b) The testing of a construction specified in WA Table F5.5 need not be repeated for subsequent comparisons provided complete records of the results, the test equipment and the technique of testing are kept so that identical equipment can be employed and an identical technique can be adopted in the testing of specimens of prototype wall construction.

3. Method

(a) The wall constructions to be compared must be tested in accordance with AS 1191.

(b) A horizontal steel platform 510 mm x 460 mm x 10 mm thick must be placed with one long edge in continuous and direct contact with the wall to be tested on the side of the wall on which the impact sound is to be generated.

(c) A tapping machine complying with ISO 140/6—1998 (E) must be mounted centrally on the steel platform.

(d) The sound transmission through the wall must be determined in accordance with AS 1191 except that the tapping machine as mounted on the steel platform must be used as the source of sound.

(e) The impact sound pressure levels measured in the receiving room must be converted into normalised levels using a reference equivalent absorption area of 10 m².
SECTION I MAINTENANCE

PART I1 EQUIPMENT AND SAFETY INSTALLATIONS

Delete Part I1.1 and insert WA Part I1.1 as follows:

OBJECTIVE

WA I01

The Objective of this Part is to ensure that people are protected from illness, injury and loss of amenity throughout the life of the building.

FUNCTIONAL STATEMENT

WA IF1

A building is to be adequately maintained to safeguard people from illness or injury and prevent the loss of amenity.

PERFORMANCE REQUIREMENT

WA IP1.1

Equipment, installations and components essential to the safety of people must be adequately maintained in such a condition that will enable their proper performance.

WA I1.0 Deemed-to-Satisfy Provisions

Performance Requirements WA IP1.1 is satisfied by complying with WA I1.1 and WA I1.2.

WA I1.1 Safety installations

Safety installations in buildings must be adequately maintained.

WA I1.2 Mechanical ventilation and hot water, warm water and cooling water systems

Mechanical ventilation and hot water, warm water and cooling water systems in a building other than a system only serving a single sole-occupancy unit in a Class 2 or 3 building or Class 4 part must be maintained in accordance with AS/NZS 3666.2.
INDEX . ABBREVIATIONS AND SYMBOLS

Index

Abbreviations

Symbols
INDEX ABBREVIATIONS AND SYMBOLS

Index

Abbreviations and Symbols
INDEX (TO DEEMED-TO-SATISFY PROVISIONS)

A

Access for people with disabilities

D3.0 Deemed-to-Satisfy Provisions
D3.1 Application of Part
D3.2 General building access requirements
D3.3 Parts of buildings to be accessible
D3.4 Concessions
D3.5 Carparking
D3.6 Identification of accessible facilities, services and features
D3.7 Hearing augmentation
D3.8 Tactile indicators
SPEC-D3.6 Specification D3.6 Braille and Tactile Signs

Access for people with disabilities, Braille

D3.6 Identification of accessible facilities, services and features
SPEC-D3.6 Specification D3.6 Braille and Tactile Signs

Access for people with disabilities, carpark

D3.5 Carparking

Access for people with disabilities, hearing augmentation

D3.7 Hearing augmentation

Access for people with disabilities, tactile indicators

D3.8 Tactile indicators

Access for people with disabilities, tactile signs

D3.6 Identification of accessible facilities, services and features
SPEC-D3.6 Specification D3.6 Braille and Tactile Signs

Aged care building

C2.5 Class 9a and 9c buildings
D2.19 Doorways and doors
E3.8 Aged care buildings
F5.8 Walls between a bedroom and kitchen or laundry in a Class 9c building
SPEC-C2.5 Specification C2.5 Smoke-Proof Walls in Health-Care and Aged Care Buildings

Aged care building, lift

E3.8 Aged care buildings
Aged care building, smoke proof wall

SPEC-C2.5 Specification C2.5 Smoke-Proof Walls in Health-Care and Aged Care Buildings

Aged care building, sound insulation

F5.8 Walls between a bedroom and kitchen or laundry in a Class 9c building

Airlock

F4.9 Airlocks

Aisle lights

H1.7 Aisle lights in theatres

Alpine area

G4.0 Deemed-to-Satisfy Provisions
G4.1 Application of Part
G4.3 External doorways
G4.4 Emergency lighting
G4.5 External ramps
G4.6 Discharge of exits
G4.7 External trafficable structures
G4.8 Fire-fighting services and equipment
G4.9 Fire orders

Aluminium construction

B1.4 Determination of structural resistance of materials and forms of construction

Atrium

C1.0 Deemed-to-Satisfy Provisions
C2.0 Deemed-to-Satisfy Provisions
C3.0 Deemed-to-Satisfy Provisions
D1.0 Deemed-to-Satisfy Provisions
D2.0 Deemed-to-Satisfy Provisions
D3.0 Deemed-to-Satisfy Provisions
E2.0 Deemed-to-Satisfy Provisions
G3.1 Atriums affected by this Part

SPEC-G3.8 Specification G3.8 Fire and Smoke Control Systems in Buildings Containing Atriums
INDEX . ABBREVIATIONS AND SYMBOLS

Atrium construction

G3.1 Atriums affected by this Part
G3.2 Dimensions of atrium well
G3.3 Separation of atrium by bounding walls
G3.4 Construction of bounding walls
G3.5 Construction at balconies
G3.6 Separation at roof
G3.7 Means of egress
G3.8 Fire and smoke control systems

Atrium construction, fire and smoke control

G3.8 Fire and smoke control systems

Atrium, emergency warning and intercommunication


Atrium, fire and smoke control

SPEC-G3.8 Specification G3.8 Fire and Smoke Control Systems in Buildings Containing Atriums

Atrium, fire detection


Atrium, fire sprinkler system


Atrium, smoke control


Atrium, standby power system


Attachments, fire resistance

SPEC-C1.1-2.4 Specification C1.1 Fire-Resisting Construction 2.2.4

B

Balcony, verandah

SPEC-C1.1-2.5 Specification C1.1 Fire-Resisting Construction 2.2.5

Balustrade

D2.16 Balustrades or other barriers
BCA application

A0.1 Adoption
A0.2 BCA Volumes
A0.3 BCA Structure
A0.4 Compliance with the BCA
A0.5 Meeting the Performance Requirements
A0.6 Objectives and Functional Statements
A0.7 Deemed-to-Satisfy Provisions
A0.8 Alternative Solutions
A0.9 Assessment Methods
A1.2 Adoption of Standards and other references
A1.3 Referenced Standards, etc
A1.4 Differences between referenced documents and the BCA
A1.5 Compliance with all Sections of BCA
A1.6 Application of the BCA to a particular State or Territory
A1.7 Language

BCA application, Language

A1.7 Language

BCA application, Standards

A1.2 Adoption of Standards and other references
A1.3 Referenced Standards, etc
A1.4 Differences between referenced documents and the BCA
SPEC-A1.3 Specification A1.3 Standards Adopted By Reference

BCA application, State/Territory Appendices

A1.6 Application of the BCA to a particular State or Territory

Bounding construction

C3.11 Bounding construction: Class 2, 3 and 4 buildings

Braille

D3.6 Identification of accessible facilities, services and features
SPEC-D3.6 Specification D3.6 Braille and Tactile Signs

Building classification

A3.1 Principles of classification
A3.2 Classifications
A3.3 Multiple classification
A3.4 Parts with more than one classification
Building classification, multiple
  A3.3 Multiple classification
  A3.4 Parts with more than one classification

Building elements, fire resistance
  SPEC-A2.3 Specification A2.3 Fire-Resistance of Building Elements

Building occupant warning system
  E2.0 Deemed-to-Satisfy Provisions
  SPEC-E2.2a Specification E2.2a Smoke Detection and Alarm Systems

Buildings, united
  A4.1 When buildings are united
  A4.2 Alterations in a united building

Bushfire prone area
  G5.0 Deemed-to-Satisfy Provisions
  G5.1 Application of Part
  G5.2 Protection

C

Carpark
  D3.5 Carparking
  F4.11 Cararks
  SPEC-C1.1-3.9 Specification C1.1 Fire-Resisting Construction 3. 3.9
  SPEC-C1.1-4.2 Specification C1.1 Fire-Resisting Construction 4. 4.2
  SPEC-C1.1-5.2 Specification C1.1 Fire-Resisting Construction 5. 5.2

Carpark, access for people with disabilities
  D3.5 Carparking

Carpark, Class 2, 3
  SPEC-C1.1-2.8 Specification C1.1 Fire-Resisting Construction 2. 2.8

Carpark, Type A construction
  SPEC-C1.1-3.9 Specification C1.1 Fire-Resisting Construction 3. 3.9

Carpark, Type B construction
  SPEC-C1.1-4.2 Specification C1.1 Fire-Resisting Construction 4. 4.2

Carpark, Type C construction
  SPEC-C1.1-5.2 Specification C1.1 Fire-Resisting Construction 5. 5.2

Carpark, ventilation
  F4.11 Cararks
Ceilings

A2.5 Resistance to the incipient spread of fire
C3.12 Openings in floors and ceilings for services

Ceilings, fire resisting

A2.5 Resistance to the incipient spread of fire

Columns

C3.17 Columns protected with lightweight construction to achieve an FRL

Compartment

F2.5 Construction of sanitary compartments

Columns, protected with lightweight construction

C3.17 Columns protected with lightweight construction to achieve an FRL

Composite steel and concrete construction

B1.4 Determination of structural resistance of materials and forms of construction

Concrete construction

B1.4 Determination of structural resistance of materials and forms of construction

Construction joints

C3.16 Construction joints

Construction joints, protection

C3.16 Construction joints

Curtain wall, panel wall

SPEC-C1.1-2.5 Specification C1.1 Fire-Resisting Construction 2. 2.5

D

Damp and weatherproofing

F1.0 Deemed-to-Satisfy Provisions
F1.1 Stormwater drainage
F1.10 Damp-proofing of floors on the ground
F1.11 Provision of floor wastes
F1.12 Sub-floor ventilation
F1.13 Glazed assemblies
F1.5 Roof coverings
F1.6 Sarking
F1.7 Water proofing of wet areas in buildings
F1.9 Damp-proofing

Damp and weatherproofing, wet areas

F1.7 Water proofing of wet areas in buildings
Damp and weatherproofing, floor waste

**F1.11** Provision of floor wastes

Damp and weatherproofing, glazing

**F1.13** Glazed assemblies

Damp and weatherproofing, roof coverings

**F1.5** Roof coverings

Damp and weatherproofing, sarking

**F1.6** Sarking

Damp and weatherproofing, stormwater drainage

**F1.1** Stormwater drainage

Damp and weatherproofing, sub-floor ventilation

**F1.12** Sub-floor ventilation

Definitions

**A1.1** Definitions

Door, direction of swing

**D2.20** Swinging doors

Door, latch

**D2.21** Operation of latch

Door, sign

**D2.23** Signs on doors

Door, sliding, revolving etc

**D2.19** Doorways and doors

Doorway, protection in bounding construction

**C3.11** Bounding construction: Class 2, 3 and 4 buildings

E

Early fire hazard indices

**SPEC-A2.4** Specification A2.4 Fire Hazard Properties

**SPEC-C1.10** Specification C1.10 Fire Hazard Properties - General

Earthwall construction

**B1.4** Determination of structural resistance of materials and forms of construction

Electrical supply equipment

**C2.13** Electricity supply system

Elements

**SPEC-F5.2** Specification F5.2 Sound Insulation for Building Elements
Emergency lift

E3.4 Emergency lifts

Emergency lighting

E4.0 Deemed-to-Satisfy Provisions
E4.2 Emergency lighting requirements
E4.3 Measurement of distance
E4.4 Design and operation of emergency lighting

Emergency warning and intercommunication system

E4.0 Deemed-to-Satisfy Provisions
E4.9 Emergency warning and intercommunication system

Emergency warning and intercommunication, atrium


Exit

C3.8 Openings in fire-isolated exits
C3.9 Service penetrations in fire-isolated exits
D1.0 Deemed-to-Satisfy Provisions
D1.1 Application of Part
D1.10 Discharge from exits
D1.11 Horizontal exits
D1.13 Number of persons accommodated
D1.14 Measurement of distances
D1.15 Method of measurement
D1.16 Plant rooms and lift motor rooms: Concession
D1.2 Number of exits required
D1.3 When fire-isolated exits are required
D1.4 Exit travel distances
D1.5 Distance between alternative exits
D1.6 Dimensions of exits and paths of travel to exits
D1.7 Travel via fire-isolated exits
D1.8 External stairways or ramps in lieu of fire-isolated exits
D1.9 Travel by non-fire-isolated stairways or ramps
D2.0 Deemed-to-Satisfy Provisions

Exit, alternative exit

D1.5 Distance between alternative exits
Exit, construction

D2.0 Deemed-to-Satisfy Provisions
D2.1 Application of Part
D2.10 Pedestrian ramps
D2.11 Fire-isolated passageways
D2.12 Roof as open space
D2.13 Goings and risers
D2.14 Landings
D2.15 Thresholds
D2.16 Balustrades or other barriers
D2.17 Handrails
D2.18 Fixed platforms, walkways, stairways and ladders
D2.19 Doorways and doors
D2.2 Fire-isolated stairways and ramps
D2.20 Swinging doors
D2.21 Operation of latch
D2.22 Re-entry from fire-isolated exits
D2.23 Signs on doors
D2.3 Non-fire-isolated stairways and ramps
D2.4 Separation of rising and descending stair flights
D2.5 Open access ramps and balconies
D2.6 Smoke lobbies
D2.7 Installations in exits and paths of travel
D2.8 Enclosure of space under stairs and ramps
D2.9 Width of stairways

Exit, construction, balustrade

D2.16 Balustrades or other barriers

Exit, construction, door sign

D2.23 Signs on doors

Exit, construction, door threshold

D2.15 Thresholds

Exit, construction, doorway and door

D2.19 Doorways and doors

Exit, construction, enclosure of space

D2.8 Enclosure of space under stairs and ramps
Exit, construction, fire-isolated passageway
  D2.11 Fire-isolated passageways

Exit, construction, fire-isolated stairway and ramp
  D2.2 Fire-isolated stairways and ramps

Exit, construction, fixed platforms, walkways, stairways and ladders
  D2.18 Fixed platforms, walkways, stairways and ladders

Exit, construction, handrail
  D2.17 Handrails

Exit, construction, installations in exits
  D2.7 Installations in exits and paths of travel

Exit, construction, installations in path of travel
  D2.7 Installations in exits and paths of travel

Exit, construction, landing
  D2.14 Landings

Exit, construction, latch
  D2.21 Operation of latch

Exit, construction, non-fire-isolated stairway and ramp
  D2.3 Non-fire-isolated stairways and ramps

Exit, construction, open access ramp or balcony
  D2.5 Open access ramps and balconies

Exit, construction, ramp
  D2.10 Pedestrian ramps

Exit, construction, re-entry
  D2.22 Re-entry from fire-isolated exits

Exit, construction, rising and descending stair flights
  D2.4 Separation of rising and descending stair flights

Exit, construction, smoke lobby
  D2.6 Smoke lobbies

Exit, construction, stairway
  D2.13 Goings and risers

Exit, construction, swinging door
  D2.20 Swinging doors

Exit, construction, use of roof
  D2.12 Roof as open space

Exit, construction, width of stairway
  D2.9 Width of stairways
INDEX . ABBREVIATIONS AND SYMBOLS

Exit,dimensions
  D1.6 Dimensions of exits and paths of travel to exits
Exit,discharge
  D1.10 Discharge from exits
Exit,external stairs in lieu
  D1.8 External stairways or ramps in lieu of fire-isolated exits
Exit,fire-isolated
  C3.8 Openings in fire-isolated exits
  C3.9 Service penetrations in fire-isolated exits
  D1.3 When fire-isolated exits are required
  D1.7 Travel via fire-isolated exits
Exit,fire-isolated,protection of openings
  C3.8 Openings in fire-isolated exits
Exit,fire-isolated,service penetrations
  C3.9 Service penetrations in fire-isolated exits
Exit,horizontal
  D1.11 Horizontal exits
Exit,measurement of distance
  D1.14 Measurement of distances
Exit,method of measurement of distance
  D1.15 Method of measurement
Exit,non-fire-isolated
  D1.9 Travel by non-fire-isolated stairways or ramps
Exit,number of persons accommodated
  D1.13 Number of persons accommodated
Exit,number required
  D1.2 Number of exits required
Exit,plant room lift motor room
  D1.16 Plant rooms and lift motor rooms: Concession
Exit,re-entry
  D2.22 Re-entry from fire-isolated exits
INDEX . ABBREVIATIONS AND SYMBOLS

Exit, sign
- **E4.0** Deemed-to-Satisfy Provisions
- **E4.5** Exit signs
- **E4.6** Direction signs
- **E4.7** Class 2 and 3 buildings and Class 4 parts: Exemptions
- **E4.8** Design and operation of exit signs

External stairs
- **D1.8** External stairways or ramps in lieu of fire-isolated exits

External wall
- **C1.11** Performance of external walls in fire
- **C3.2** Protection of openings in external walls
- **C3.3** Separation of external walls and associated openings in different fire compartments
  - **SPEC-C1.11** Specification C1.11 Performance of External Walls in Fire

External wall, fire resistance
- **C1.11** Performance of external walls in fire

External wall, performance in fire
- **SPEC-C1.11** Specification C1.11 Performance of External Walls in Fire

External wall, protection of path of travel
- **D1.7** Travel via fire-isolated exits

F

Fire compartmentation
- **C2.2** General floor area and volume limitations

Fire compartmentation and separation
- **C2.0** Deemed-to-Satisfy Provisions
- **C2.1** Application of Part
- **C2.5** Class 9a and 9c buildings
- **C2.7** Separation by fire walls

Fire compartmentation and separation, aged care building
- **C2.5** Class 9a and 9c buildings

Fire compartmentation and separation, fire wall
- **C2.7** Separation by fire walls

Fire compartmentation and separation, health-care building
- **C2.5** Class 9a and 9c buildings
INDEX . ABBREVIATIONS AND SYMBOLS

Fire control centre

E1.8 Fire control centres
SPEC-E1.8 Specification E1.8 Fire Control Centres

Fire detection, atrium


Fire door

C3.6 Sliding fire doors

Fire door, construction

SPEC-C3.4 Specification C3.4 Fire Doors, Smoke Doors, Fire Windows and Shutters

Fire door, sliding

C3.6 Sliding fire doors

Fire extinguisher

E1.6 Portable fire extinguishers

Fire fighting equipment

E1.0 Deemed-to-Satisfy Provisions
E1.10 Provision for special hazards
E1.3 Fire hydrants
E1.4 Fire hose reels
E1.5 Sprinklers
E1.6 Portable fire extinguishers
E1.8 Fire control centres
E1.9 Fire precautions during construction

Fire fighting equipment, fire control centre

E1.8 Fire control centres

Fire fighting equipment, fire extinguisher

E1.6 Portable fire extinguishers

Fire fighting equipment, fire hose reel

E1.4 Fire hose reels

Fire fighting equipment, fire hydrant

E1.3 Fire hydrants

Fire fighting equipment, fire precautions during construction

E1.9 Fire precautions during construction

Fire fighting equipment, fire sprinkler system

E1.5 Sprinklers
Fire fighting equipment, provisions for special hazards

E1.10 Provision for special hazards

Fire hazard properties

A2.4 Fire hazard properties
C1.10 Fire hazard properties
SPEC-A2.4 Specification A2.4 Fire Hazard Properties
SPEC-C1.10 Specification C1.10 Fire Hazard Properties - General
SPEC-C1.10a Specification C1.10a Fire Hazard Properties - Floors, Walls and Ceilings

Fire Hazard Properties - Floors, Walls and Ceilings
SPEC-C1.10a Specification C1.10a Fire Hazard Properties - Floors, Walls and Ceilings

Fire hose reel

E1.4 Fire hose reels

Fire hydrant

E1.3 Fire hydrants

Fire precautions during construction

E1.9 Fire precautions during construction

Fire resistance

A2.3 Fire-resistance of building elements
C1.0 Deemed-to-Satisfy Provisions
C1.1 Type of construction required
C1.11 Performance of external walls in fire
C1.2 Calculation of rise in storeys
C1.3 Buildings of multiple classification
C1.4 Mixed types of construction
C1.5 Two storey Class 2, 3 or 9c buildings
C1.6 Class 4 parts of buildings
C1.7 Open spectator stands and indoor sports stadiums
C1.8 Lightweight construction
SPEC-A2.3 Specification A2.3 Fire-Resistance of Building Elements

Fire resistance, external wall

C1.11 Performance of external walls in fire

Fire resistance, lightweight construction

C1.8 Lightweight construction
INDEX . ABBREVIATIONS AND SYMBOLS

**Fire resistance, type of construction**

C1.1 Type of construction required
C1.5 Two storey Class 2, 3 or 9c buildings
C1.6 Class 4 parts of buildings
C1.7 Open spectator stands and indoor sports stadiums

**Fire separation**

C2.10 Separation of lift shafts
C2.11 Stairways and lifts in one shaft
C2.12 Separation of equipment
C2.13 Electricity supply system
C2.6 Vertical separation of openings in external walls
C2.8 Separation of classifications in the same storey
C2.9 Separation of classifications in different storeys

**Fire separation, electrical supply equipment**

C2.13 Electricity supply system

**Fire separation, equipment**

C2.12 Separation of equipment

**Fire separation, lift and stairway shaft**

C2.11 Stairways and lifts in one shaft

**Fire separation, lift shaft**

C2.10 Separation of lift shafts

**Fire separation, multiple classification in different storeys**

C2.9 Separation of classifications in different storeys

**Fire separation, multiple classification in same storey**

C2.8 Separation of classifications in the same storey

**Fire separation, openings in external wall**

C2.6 Vertical separation of openings in external walls

**Fire shutter, construction**

SPEC-C3.4 Specification C3.4 Fire Doors, Smoke Doors, Fire Windows and Shutters

**Fire sprinkler system**

E1.5 Sprinklers
SPEC-E1.5 Specification E1.5 Fire Sprinkler Systems

**Fire sprinkler system, atrium**

Fire stopping, service penetrations
   SPEC-C3.15 Specification C3.15 Penetration of Walls, Floors and Ceilings by Services

Fire wall
   C2.7 Separation by fire walls
   C3.5 Doorways in fire walls
   C3.6 Sliding fire doors

Fire wall, protection of doorway
   C3.5 Doorways in fire walls

Fire window, construction
   SPEC-C3.4 Specification C3.4 Fire Doors, Smoke Doors, Fire Windows and Shutters

Fire-isolated passageway, construction
   D2.11 Fire-isolated passageways

Fire-resisting construction
   SPEC-C1.1 Specification C1.1 Fire-Resisting Construction

Fire-resisting construction, attachments
   SPEC-C1.1-2.4 Specification C1.1 Fire-Resisting Construction 2. 2.4

Fire-resisting construction, carpark
   SPEC-C1.1-2.8 Specification C1.1 Fire-Resisting Construction 2. 2.8

Fire-resisting construction, concessions
   SPEC-C1.1-2.5 Specification C1.1 Fire-Resisting Construction 2. 2.5

Fire-resisting construction, fire-source feature
   SPEC-C1.1-2.1 Specification C1.1 Fire-Resisting Construction 2. 2.1

Fire-resisting construction, lintel
   SPEC-C1.1-2.3 Specification C1.1 Fire-Resisting Construction 2. 2.3

Fire-resisting construction, mezzanine floor
   SPEC-C1.1-2.6 Specification C1.1 Fire-Resisting Construction 2. 2.6

Fire-resisting construction, residential aged care building
   SPEC-C1.1-2.9 Specification C1.1 Fire-Resisting Construction 2. 2.9

Fire-resisting construction, shaft
   SPEC-C1.1-2.7 Specification C1.1 Fire-Resisting Construction 2. 2.7

Fire-resisting construction, support of another part
   SPEC-C1.1-2.2 Specification C1.1 Fire-Resisting Construction 2. 2.2

Fire-resisting construction, Type A
   SPEC-C1.1-3 Specification C1.1 Fire-Resisting Construction 3.

Fire-resisting construction, Type B
   SPEC-C1.1-4 Specification C1.1 Fire-Resisting Construction 4.
Fire-resisting construction, Type C

SPEC-C1.1-5 Specification C1.1 Fire-Resisting Construction 5.

Fire-source feature

SPEC-C1.1-2.1 Specification C1.1 Fire-Resisting Construction 2.2.1

Fireplace

G2.0 Deemed-to-Satisfy Provisions

G2.3 Open fireplaces

Floor area and volume limitations

C2.2 General floor area and volume limitations

C2.3 Large Isolated Buildings

Floor area and volume limitations, type of construction

C2.2 General floor area and volume limitations

C2.3 Large Isolated Buildings

Floor waste

F1.11 Provision of floor wastes

Flooring, particle board

B1.4 Determination of structural resistance of materials and forms of construction

G

Glazing

B1.4 Determination of structural resistance of materials and forms of construction

F1.13 Glazed assemblies

Going and risers, stairway

D2.13 Goings and risers

H

Handrail

D2.17 Handrails

Health-care building

C2.5 Class 9a and 9c buildings

SPEC-C2.5 Specification C2.5 Smoke-Proof Walls in Health-Care and Aged Care Buildings

Health-care building, smoke-proof wall

SPEC-C2.5 Specification C2.5 Smoke-Proof Walls in Health-Care and Aged Care Buildings

Hearing augmentation

D3.7 Hearing augmentation
Heating appliance
  G2.0 Deemed-to-Satisfy Provisions
  G2.2 Installation of appliances

Heating appliance, fireplace
  G2.3 Open fireplaces

Heating appliance, incinerator
  G2.4 Incinerator rooms

Horizontal exit
  C3.7 Protection of doorways in horizontal exits
  D1.11 Horizontal exits

Horizontal exit, protection
  C3.7 Protection of doorways in horizontal exits

I
Impact sound
  SPEC-F5.5 Specification F5.5 Impact Sound - Test of Equivalence

Incinerator
  G2.0 Deemed-to-Satisfy Provisions
  G2.4 Incinerator rooms

K
Kitchen exhaust
  F4.12 Kitchen local exhaust ventilation

L
Landing, construction
  D2.14 Landings

Language
  A1.7 Language

Large isolated buildings
  C2.3 Large Isolated Buildings
  C2.4 Requirements for open spaces and vehicular access

Legionella control
  F2.7 Microbial (legionella) control
INDEX . ABBREVIATIONS AND SYMBOLS

**Lift**
- C3.10 Openings in fire-isolated lift shafts
- E3.0 Deemed-to-Satisfy Provisions
- E3.2 Stretcher facility in lifts
- E3.3 Warning against use of lifts in fire
- E3.4 Emergency lifts
- E3.5 Landings
- E3.6 Facilities for people with disabilities
- E3.7 Fire service controls
- E3.8 Aged care buildings

**Lift and stairway shaft**
- C2.11 Stairways and lifts in one shaft

**Lift shaft**
- B1.4 Determination of structural resistance of materials and forms of construction
- C2.10 Separation of lift shafts

**Lift, aged care building**
- E3.8 Aged care buildings

**Lift, emergency**
- E3.4 Emergency lifts

**Lift, fire service control**
- E3.7 Fire service controls

**Lift, landing**
- E3.5 Landings

**Lift, openings in fire-isolated shaft**
- C3.10 Openings in fire-isolated lift shafts

**Lift, people with disabilities**
- E3.6 Facilities for people with disabilities

**Lift, stretcher facility**
- E3.2 Stretcher facility in lifts

**Lift, warning**
- E3.3 Warning against use of lifts in fire

**Light**
- F4.0 Deemed-to-Satisfy Provisions

**Light, artificial**
- F4.4 Artificial lighting
Light, natural

F4.1 Provision of natural light
F4.2 Methods and extent of natural lighting
F4.3 Natural light borrowed from adjoining room

Lightweight construction

C1.8 Lightweight construction
C3.17 Columns protected with lightweight construction to achieve an FRL
SPEC-C1.8 Specification C1.8 Structural Tests for Lightweight Construction

Lightweight construction, protection of columns

C3.17 Columns protected with lightweight construction to achieve an FRL

Lightweight construction, structural tests

SPEC-C1.8 Specification C1.8 Structural Tests for Lightweight Construction

Lintel

SPEC-C1.1-2.3 Specification C1.1 Fire-Resisting Construction 2.2.3

M

Maintenance

I1.0 Deemed-to-Satisfy Provisions
I1.1 Safety measures
I1.2 Mechanical ventilation and hot water, warm water and cooling water systems

Masonry construction

B1.4 Determination of structural resistance of materials and forms of construction

Materials

A2.1 Suitability of materials
A2.2 Evidence of suitability
A2.3 Fire-resistance of building elements
A2.4 Fire hazard properties
C1.10 Fire hazard properties
C1.12 Non-combustible materials
SPEC-A2.3 Specification A2.3 Fire-Resistance of Building Elements
SPEC-A2.4 Specification A2.4 Fire Hazard Properties
SPEC-C1.10 Specification C1.10 Fire Hazard Properties - General
INDEX . ABBREVIATIONS AND SYMBOLS

Materials, fire hazard properties
   A2.4 Fire hazard properties
   C1.10 Fire hazard properties
   SPEC-A2.4 Specification A2.4 Fire Hazard Properties
   SPEC-C1.10 Specification C1.10 Fire Hazard Properties - General

Materials, fire resistance
   A2.3 Fire-resistance of building elements
   SPEC-A2.3 Specification A2.3 Fire-Resistance of Building Elements

Materials, non-combustible
   C1.12 Non-combustible materials

Materials, suitability
   A2.1 Suitability of materials
   A2.2 Evidence of suitability

Mezzanine
   C1.2 Calculation of rise in storeys

Mezzanine floor
   SPEC-C1.1-2.6 Specification C1.1 Fire-Resisting Construction 2.2.6

Minor structure
   G1.0 Deemed-to-Satisfy Provisions
   G1.1 Swimming pools
   G1.2 Refrigerated chambers, strong-rooms and vaults

Minor structure, refrigerated chamber, strong room, vault
   G1.2 Refrigerated chambers, strong-rooms and vaults

Minor structure, swimming pool
   G1.1 Swimming pools

Multiple classification
   A3.3 Multiple classification
   A3.4 Parts with more than one classification
   C1.3 Buildings of multiple classification

Multiple classification in different storeys
   C2.9 Separation of classifications in different storeys

Multiple classification in same storey
   C2.8 Separation of classifications in the same storey
N

Non required, stairway, ramp, escalator

D1.12 Non-required stairways, ramps or escalators

Non-combustible materials

C1.12 Non-combustible materials

Number of persons accommodated

D1.13 Number of persons accommodated

O

Open space

C2.4 Requirements for open spaces and vehicular access

Open spectator stand, indoor sports stadium

C1.7 Open spectator stands and indoor sports stadiums

SPEC-C1.1-3.8 Specification C1.1 Fire-Resisting Construction 3.3.8

Openings in external wall

C2.6 Vertical separation of openings in external walls

Openings, method of protection

C3.4 Acceptable methods of protection

Openings, protection

C3.0 Deemed-to-Satisfy Provisions

C3.1 Application of Part

C3.10 Openings in fire-isolated lift shafts

C3.12 Openings in floors and ceilings for services

C3.13 Openings in shafts

C3.15 Openings for service installations

C3.16 Construction joints

C3.2 Protection of openings in external walls

C3.3 Separation of external walls and associated openings in different fire compartments

C3.4 Acceptable methods of protection

C3.5 Doorways in fire walls

C3.6 Sliding fire doors

C3.7 Protection of doorways in horizontal exits

C3.8 Openings in fire-isolated exits

C3.9 Service penetrations in fire-isolated exits
Openings, protection, atrium
  C3.0 Deemed-to-Satisfy Provisions

Openings, protection, construction joints
  C3.16 Construction joints

Openings, protection, doorway in fire wall
  C3.5 Doorways in fire walls
  C3.6 Sliding fire doors

Openings, protection, doorway in horizontal exit
  C3.7 Protection of doorways in horizontal exits

Openings, protection, external wall
  C3.2 Protection of openings in external walls
  C3.3 Separation of external walls and associated openings in different fire compartments

Openings, protection, fire-isolated exit
  C3.8 Openings in fire-isolated exits

Openings, protection, in fire-isolated lift shaft
  C3.10 Openings in fire-isolated lift shafts

Openings, protection, openings in shaft
  C3.13 Openings in shafts

Openings, protection, service penetrations
  C3.15 Openings for service installations

Openings, protection, service penetrations in fire-isolated exit
  C3.9 Service penetrations in fire-isolated exits

Openings, protection, service penetrations in floors and
  C3.12 Openings in floors and ceilings for services

Openings, protection, theatre, stage and public hall
  C3.0 Deemed-to-Satisfy Provisions

P

Path of travel
  D1.6 Dimensions of exits and paths of travel to exits
  D2.7 Installations in exits and paths of travel

Path of travel, dimensions
  D1.6 Dimensions of exits and paths of travel to exits

Path of travel, installations within
  D2.7 Installations in exits and paths of travel
Path of travel, protection of external wall
   D1.7 Travel via fire-isolated exits

People with disabilities, lift
   E3.6 Facilities for people with disabilities

People with disabilities, sanitary facilities
   F2.2 Calculation of number of occupants and fixtures
   F2.4 Facilities for people with disabilities

Piling
   B1.4 Determination of structural resistance of materials and forms of construction

Primary production
   B1.4 Determination of structural resistance of materials and forms of construction

Proscenium wall
   H1.3 Proscenium wall construction
   SPEC-H1.3 Specification H1.3 Construction of Theatres with Proscenium Walls

Public corridor
   C2.14 Public corridors in Class 2 and 3 buildings

Pumps
   F5.7 Isolation of pumps

R

Ramp
   D2.10 Pedestrian ramps
   D2.8 Enclosure of space under stairs and ramps

Refrigerated chamber, strong room, vault
   G1.2 Refrigerated chambers, strong-rooms and vaults

Residential aged care building
   SPEC-C1.1-2.9 Specification C1.1 Fire-Resisting Construction 2. 2.9

Resistance to the incipient spread of fire
   A2.5 Resistance to the incipient spread of fire

Rise in storeys
   C1.2 Calculation of rise in storeys

Roof construction
   B1.4 Determination of structural resistance of materials and forms of construction

Roof coverings
   F1.5 Roof coverings
Rooflight

SPEC-C1.1-3.6 Specification C1.1 Fire-Resisting Construction 3.3.6

Room size

F3.0 Deemed-to-Satisfy Provisions
F3.1 Height of rooms and other spaces

S

Sanitary and other facilities

F2.0 Deemed-to-Satisfy Provisions
F2.1 Facilities in residential buildings
F2.2 Calculation of number of occupants and fixtures
F2.3 Facilities in Class 3 to 9 buildings
F2.4 Facilities for people with disabilities
F2.5 Construction of sanitary compartments
F2.6 Interpretation: Urinals and washbasins
F2.7 Microbial (legionella) control
F2.8 Waste management

Sanitary and other facilities, construction of sanitary

F2.5 Construction of sanitary compartments

Sanitary and other facilities, legionella control

F2.7 Microbial (legionella) control

Sanitary and other facilities, urinals and washbasins

F2.6 Interpretation: Urinals and washbasins

Sanitary and other facilities, waste management

F2.8 Waste management

Sarking

F1.6 Sarking

Service penetrations

C3.12 Openings in floors and ceilings for services
C3.15 Openings for service installations
C3.9 Service penetrations in fire-isolated exits

Service penetrations, fire-isolated exits

C3.9 Service penetrations in fire-isolated exits
Service penetrations, protection of openings

C3.12 Openings in floors and ceilings for services
C3.15 Openings for service installations
SPEC-C3.15 Specification C3.15 Penetration of Walls, Floors and Ceilings by Services

Shaft

C3.13 Openings in shafts
SPEC-C1.1-2.7 Specification C1.1 Fire-Resisting Construction 2. 2.7

Shaft, enclosure

SPEC-C1.1-2.7 Specification C1.1 Fire-Resisting Construction 2. 2.7

Shaft, protection of openings

C3.13 Openings in shafts

Smoke alarm system

SPEC-E2.2a Specification E2.2a Smoke Detection and Alarm Systems

Smoke and heat vents

SPEC-E2.2c Specification E2.2c Smoke-and-Heat Vents

Smoke control, atrium


Smoke detection and alarm system

E2.0 Deemed-to-Satisfy Provisions
SPEC-E2.2a Specification E2.2a Smoke Detection and Alarm Systems

Smoke door, construction

SPEC-C3.4 Specification C3.4 Fire Doors, Smoke Doors, Fire Windows and Shutters

Smoke exhaust system

SPEC-E2.2b Specification E2.2b Smoke Exhaust Systems

Smoke hazard management

E2.0 Deemed-to-Satisfy Provisions
E2.1 Application of Part
E2.2 General requirements
E2.3 Provision for special hazards

Smoke hazard management system

SPEC-E2.2b Specification E2.2b Smoke Exhaust Systems
SPEC-E2.2c Specification E2.2c Smoke-and-Heat Vents
Smoke hazard management system, smoke and heat vents
   **SPEC-E2.2c** Specification E2.2c Smoke-and-Heat Vents

Smoke hazard management system, smoke exhaust system
   **SPEC-E2.2b** Specification E2.2b Smoke Exhaust Systems

Smoke hazard management, special hazards
   **E2.3** Provision for special hazards

Smoke lobby
   **D2.6** Smoke lobbies

Smoke separation
   **C2.14** Public corridors in Class 2 and 3 buildings

Smoke separation, public corridor
   **C2.14** Public corridors in Class 2 and 3 buildings

Smoke-proof wall
   **SPEC-C2.5** Specification C2.5 Smoke-Proof Walls in Health-Care and Aged Care Buildings

Soil and waste pipes
   **F5.6** Soil and waste pipes to be separated

Sound transmission and insulation
   **F5.0** Deemed-to-Satisfy Provisions
   **F5.1** Application of Part
   **F5.2** Weighted sound reduction index: Interpretation
   **F5.3** Sound insulation of floors between units
   **F5.4** Sound insulation of walls between units
   **F5.5** Walls between a bathroom, sanitary compartment, laundry or kitchen and a habitable room in adjoining unit
   **F5.6** Soil and waste pipes to be separated
   **F5.7** Isolation of pumps
   **F5.8** Walls between a bedroom and kitchen or laundry in a Class 9c building
   **SPEC-F5.2** Specification F5.2 Sound Insulation for Building Elements
   **SPEC-F5.5** Specification F5.5 Impact Sound - Test of Equivalence

Sound transmission and insulation, impact sound
   **SPEC-F5.5** Specification F5.5 Impact Sound - Test of Equivalence

Sound transmission and insulation, pumps
   **F5.7** Isolation of pumps

Sound transmission and insulation, soil and waste pipes
   **F5.6** Soil and waste pipes to be separated
Sound transmission and insulation, sound insulation for building

**SPEC-F5.2** Specification F5.2 Sound Insulation for Building Elements

Special hazards

**E1.10** Provision for special hazards

**E2.3** Provision for special hazards

Special hazards, smoke hazard management

**E2.3** Provision for special hazards

Stadium

**SPEC-C1.1-3.8** Specification C1.1 Fire-Resisting Construction 3. 3.8

Stairway, construction

**D2.13** Goings and risers

**D2.14** Landings

**D2.8** Enclosure of space under stairs and ramps

**D2.9** Width of stairways

Stairway, construction, landing

**D2.14** Landings

Stairway, construction, width

**D2.9** Width of stairways

Stairway, goings and risers

**D2.13** Goings and risers

Stairway, ramp, escalator

**D1.12** Non-required stairways, ramps or escalators

**SPEC-D1.12** Specification D1.12 Non-Required Stairways, Ramps and Escalators

Stairway, ramp, escalator, non-required

**SPEC-D1.12** Specification D1.12 Non-Required Stairways, Ramps and Escalators

Stairway, rising and descending stair flights

**D2.4** Separation of rising and descending stair flights

Standards

**A1.2** Adoption of Standards and other references

**A1.3** Referenced Standards, etc

**A1.4** Differences between referenced documents and the BCA

**SPEC-A1.3** Specification A1.3 Standards Adopted By Reference

Standby power system, atrium

**SPEC-G3.8-6** Specification G3.8 Fire and Smoke Control Systems in Buildings Containing Atriums 6.
State/Territory Appendices

A1.6 Application of the BCA to a particular State or Territory

Steel column

SPEC-C1.1-2.5 Specification C1.1 Fire-Resisting Construction 2. 2.5

Steel construction

B1.4 Determination of structural resistance of materials and forms of construction

Stormwater drainage

F1.1 Stormwater drainage

Structural

B1.0 Deemed-to-Satisfy Provisions
B1.1 Resistance to actions
B1.2 Determination of individual actions
B1.3 Loads
B1.4 Determination of structural resistance of materials and forms of construction

Structures on roof

SPEC-C1.1-2.5 Specification C1.1 Fire-Resisting Construction 2. 2.5

Sub-floor ventilation

F1.12 Sub-floor ventilation

Suitability of materials

A2.1 Suitability of materials
A2.2 Evidence of suitability

Support of another part

SPEC-C1.1-2.2 Specification C1.1 Fire-Resisting Construction 2. 2.2

Swimming pool

G1.1 Swimming pools

T

Tactile indicators

D3.8 Tactile indicators

Tactile signs

D3.6 Identification of accessible facilities, services and features
SPEC-D3.6 Specification D3.6 Braille and Tactile Signs

Termites

B1.4 Determination of structural resistance of materials and forms of construction
Theatre, stage and public hall

C1.0 Deemed-to-Satisfy Provisions
C2.0 Deemed-to-Satisfy Provisions
C3.0 Deemed-to-Satisfy Provisions
D1.0 Deemed-to-Satisfy Provisions
D2.0 Deemed-to-Satisfy Provisions
D3.0 Deemed-to-Satisfy Provisions
H1.1 Application of Part
H1.2 Separation
H1.3 Proscenium wall construction
H1.4 Seating area
H1.5 Exits from theatre stages
H1.6 Access to platforms and lofts
H1.7 Aisle lights in theatres

SPEC-H1.3 Specification H1.3 Construction of Theatres with Proscenium Walls

Theatre, stage and public hall, proscenium wall

SPEC-H1.3 Specification H1.3 Construction of Theatres with Proscenium Walls

Threshold, doorway

D2.15 Thresholds

Tilt-up construction

SPEC-C1.11 Specification C1.11 Performance of External Walls in Fire

Timber column

SPEC-C1.1-2.5 Specification C1.1 Fire-Resisting Construction 2. 2.5

Timber construction

B1.4 Determination of structural resistance of materials and forms of construction

Type A construction

SPEC-C1.1-3 Specification C1.1 Fire-Resisting Construction 3.

Type A construction, carpark

SPEC-C1.1-3.9 Specification C1.1 Fire-Resisting Construction 3. 3.9

Type A construction, open spectator stand, indoor sports

SPEC-C1.1-3.8 Specification C1.1 Fire-Resisting Construction 3. 3.8

Type A construction, rooflight

SPEC-C1.1-3.6 Specification C1.1 Fire-Resisting Construction 3. 3.6

Type B construction

SPEC-C1.1-4 Specification C1.1 Fire-Resisting Construction 4.
Type B construction, carpark

SPEC-C1.1-4.2 Specification C1.1 Fire-Resisting Construction 4. 4.2

Type C construction

SPEC-C1.1-5 Specification C1.1 Fire-Resisting Construction 5.

Type C construction, carpark

SPEC-C1.1-5.2 Specification C1.1 Fire-Resisting Construction 5. 5.2

Type of construction

C1.1 Type of construction required
C1.2 Calculation of rise in storeys
C1.3 Buildings of multiple classification
C1.4 Mixed types of construction
C1.5 Two storey Class 2, 3 or 9c buildings
C1.6 Class 4 parts of buildings
C1.7 Open spectator stands and indoor sports stadiums
C2.2 General floor area and volume limitations
C2.3 Large Isolated Buildings

Type of construction, mixed

C1.4 Mixed types of construction

Type of construction, multiple classification

C1.3 Buildings of multiple classification

Type of construction, rise in storeys

C1.2 Calculation of rise in storeys

U

United buildings

A4.1 When buildings are united
A4.2 Alterations in a united building

V

Vehicular access

C2.4 Requirements for open spaces and vehicular access
Ventilation

F4.0 Deemed-to-Satisfy Provisions
F4.11 Carparks
F4.12 Kitchen local exhaust ventilation
F4.5 Ventilation of rooms
F4.6 Natural ventilation
F4.7 Ventilation borrowed from adjoining room
F4.8 Restriction on position of water closets and urinals
F4.9 Airlocks

Ventilation, carpark

F4.11 Carparks

Ventilation, kitchen exhaust

F4.12 Kitchen local exhaust ventilation

W

Water closets and urinals

F4.8 Restriction on position of water closets and urinals
F4.9 Airlocks

Wet areas

F1.7 Water proofing of wet areas in buildings
Abbreviations and Symbols uses in the BCA include:

### ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ABCB</td>
<td>Australian Building Codes Board</td>
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<td>AISC</td>
<td>Australian Institute of Steel Construction</td>
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<td>ALGA</td>
<td>Australian Local Government Association</td>
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<td>AS</td>
<td>Australian Standard</td>
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<td>ASTM</td>
<td>American Society for Testing and Materials</td>
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<td>BCA</td>
<td>Building Code of Australia</td>
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<td>Building Codes Committee</td>
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<td>CSIRO</td>
<td>Commonwealth Scientific and Industrial Research Organisation</td>
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<td>DBC&amp;E</td>
<td>CSIRO Division of Building, Construction and Engineering</td>
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<td>FRL</td>
<td>Fire Resistance Level</td>
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<td>GRP</td>
<td>glass fibre reinforced polyester</td>
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<td>International Organisation for Standardisation</td>
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<td>NATA</td>
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<td>NBTC</td>
<td>CSIRO National Building Technology Centre</td>
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<tr>
<td>PVC</td>
<td>polyvinyl chloride</td>
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<td>(R_w)</td>
<td>weighted sound reduction index</td>
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<td>Sound Transmission Class</td>
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<td>unplasticized polyvinyl chloride</td>
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### SYMBOLS (SI UNITS)

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<tr>
<td>(\text{dB}(A))</td>
<td>decibels “A” scale weighting network</td>
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<td>°C</td>
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<td>kW/m²</td>
<td>kilowatt(s) per square metre</td>
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HISTORY OF AMENDMENTS
<table>
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**HISTORY OF AMENDMENTS**

**History of BCA Adoption**

1.0 Adoption of BCA96  
1.1 Amendment No. 1  
1.2 Amendment No. 2  
1.3 Amendment No. 3  
1.4 Amendment No. 4  
1.5 Amendment No. 5  
1.6 Amendment No. 6  
1.7 Amendment No. 7  
1.8 Amendment No. 8  
1.9 Amendment No. 9  
1.10 Amendment No. 10  
1.11 Amendment No. 11  
1.12 Amendment No. 12  
1.13 Amendment No. 13  
2.0 Adoption of BCA 2004
HISTORY OF BCA ADOPTION

1.0 Adoption of BCA96

The 1996 edition of the BCA was adopted as set out in Table Amdt 1.0.

Table 1.0 History of adoption of BCA96

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1.1 Amendment No. 1

(a) Amendment No. 1 of the 1996 edition of the BCA was adopted as set out in Table 1.1.

Table 1.1 History of adoption of Amendment No. 1 of the BCA96

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(b) The purpose of Amendment No. 1 is to—

(i) correct minor typographical errors including spelling, punctuation and layout; and

(ii) include reference to a Certificate of Conformity issued by the ABCB in A2.2; and
(iii) change the reference to the Standards Mark Certificate to refer to JAS–ANZ in A2.2; and
(iv) update references to Standards.

Note:
Only substantive typographical corrections are noted in the margin.

1.2 Amendment No. 2

(a) Amendment No. 2 of the 1996 edition of the BCA was adopted as set out in Table 1.2.

Table 1.2 History of adoption of Amendment No. 2 of the BCA96

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(b) The purpose of Amendment No. 2 is to—
(i) correct minor typographical errors; and
(ii) update references to Standards.

1.3 Amendment No. 3

(a) Amendment No. 3 of the 1996 edition of the BCA was adopted as set out in Table 1.3.

Table 1.3 History of adoption of Amendment No. 3 of the BCA96

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1.3 HISTORY OF AMENDMENTS

(b) The purpose of Amendment No. 3 is to—
   (i) incorporate the outcomes of the 1997 ABCB Variations Conference; and
   (ii) update references to Standards; and
   (iii) include minor technical changes.

1.4 Amendment No. 4

(a) Amendment No. 4 of the 1996 edition of the BCA was adopted as set out in Table 1.4.

Table 1.4 History of adoption of Amendment No. 4 of the BCA96

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(b) The purpose of Amendment No. 4 is to—
   (i) update references to Standards; and
   (ii) include minor technical changes.

Note:
Only substantive typographical corrections are noted in the margin.

1.5 Amendment No. 5

(a) Amendment No. 5 of the 1996 edition of the BCA was adopted as set out in Table 1.5.

Table 1.5 History of adoption of Amendment No. 5 of the BCA96

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Note:
Only substantive typographical corrections are noted in the margin.
1.5 History of Amendments

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(b) The purpose of Amendment No. 5 is to—

(i) update references to Standards; and
(ii) include minor technical changes; and
(iii) amend clauses to improve clarity and to reduce the possibility of differences in interpretation; and
(iv) expand on the requirements for sub-floor ventilation based on climatic conditions.

Note:
Only substantive typographical corrections are noted in the margin.

1.6 Amendment No. 6

(a) Amendment No. 6 of the 1996 edition of the BCA was adopted as set out in Table 1.6.

Table 1.6 History of adoption of Amendment No. 6 of the BCA96

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(b) The purpose of Amendment No. 6 is to—

(i) update references to Standards; and
(ii) expand on the requirements for carparking for people with disabilities; and
(iii) replace Sound Transmission Class (STC) with weighted sound reduction index ($R_w$) within Part F5; and
(iv) include minor technical changes.

Note:
Only substantive typographical corrections are noted in the margin.
1.7 Amendment No. 7

(a) Amendment No. 7 of the 1996 edition of the BCA was adopted as set out in Table 1.7.

Table 1.7 History of adoption of Amendment No. 7 of the BCA96

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(b) The purpose of Amendment No. 7 is to—

(i) update references to Standards; and
(ii) include requirements for non-required and private stairways; and
(iii) include minor technical changes.

Note:
Only substantive typographical corrections are noted in the margin.

1.8 Amendment No. 8

(a) Amendment No. 8 of the 1996 edition of the BCA was adopted as set out in Table 1.8.

Table 1.8 History of adoption of Amendment No. 8 of the BCA96

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</table>

(b) The purpose of Amendment No. 8 is to—
1.8 HISTORY OF AMENDMENTS

(i) update references to Standards; and  
(ii) include minor technical changes; and  
(iii) achieve greater consistency between both Volumes of the BCA for stairway construction.

Note:  
Only substantive typographical corrections are noted in the margin.

1.9 Amendment No. 9

(a) Amendment No. 9 of the 1996 edition of the BCA was adopted as set out in Table 1.9.

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</table>

(b) The purpose of Amendment No. 9 is to—

(i) update references to Standards; and  
(ii) include minor technical changes; and  
(iii) clarify which glazed assemblies must comply with AS 2047 and which must comply with AS 1288.

Note:  
Only substantive typographical corrections are noted in the margin.

1.10 Amendment No. 10

(a) Amendment No. 10 of the 1996 edition of the BCA was adopted as set out in Table 1.10.

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The purpose of Amendment No. 10 is to—

(i) update references to Standards; and

(ii) clarify that windows must comply with AS 2047 for resistance to water penetration; and

(iii) subject to certain conditions, allow a non-fire-isolated stairway to connect an additional storey; and

(iv) update signage required for people with disabilities, including the need for signs to contain Braille and tactile information; and

(v) include minor technical changes.

Note:
Only substantive typographical corrections are noted in the margin.

1.11 Amendment No. 11

(a) Amendment No. 11 of the 1996 edition of the BCA was adopted as set out in Table 1.11.

Table 1.11 History of adoption of Amendment No. 11 of the BCA96

<table>
<thead>
<tr>
<th>Administration</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Australian Government</td>
<td>1 July 2002</td>
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<tr>
<td>Australian Capital Territory</td>
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</tr>
<tr>
<td>Western Australia</td>
<td>1 July 2002</td>
</tr>
</tbody>
</table>

(b) The purpose of Amendment No. 11 is to—

(i) update references to Standards; and

(ii) transfer public policy matters, with respect to structural adequacy, from the AS 1170 series to the BCA; and
1.11 HISTORY OF AMENDMENTS

(iii) introduce Class 7a, 7b and 9c classifications; and
(iv) update the provisions for residential buildings used for the accommodation of the aged to align with the Commonwealth Aged Care Act, 1997; and
(v) include minor technical changes.

Note:
Only substantive typographical corrections are noted in the margin.

1.12 Amendment No. 12

(a) Amendment No. 12 of the 1996 edition of the BCA was adopted as set out in Table 1.12.

Table 1.12 History of adoption of Amendment No. 12 of the BCA96

<table>
<thead>
<tr>
<th>Administration</th>
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<tbody>
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<td>Australian Government</td>
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</tr>
<tr>
<td>Western Australia</td>
<td>1 January 2003</td>
</tr>
</tbody>
</table>

(b) The purpose of Amendment No. 12 is to—

(i) update references to Standards; and
(ii) apply the swimming pool safety provisions to swimming pools associated with Class 4 parts as well as Class 2 and 3 buildings; and
(iii) allow the use of either the 1989 editions or the 2002 editions of the 1170 series of standards; and
(iv) include minor technical changes.

Note:
Only substantive typographical corrections are noted in the margin.

1.13 Amendment No. 13

(a) Amendment No. 13 of the 1996 edition of the BCA was adopted as set out in Table 1.13.

Table 1.13 History of adoption of Amendment No. 13 of the BCA96

<table>
<thead>
<tr>
<th>Administration</th>
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<tr>
<td>Australian Government</td>
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### HISTORY OF AMENDMENTS

<table>
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<td>1 July 2003</td>
</tr>
<tr>
<td>Western Australia</td>
<td>1 July 2003</td>
</tr>
</tbody>
</table>

(b) The purpose of Amendment No. 13 is to—
   (i) update references to Standards; and
   (ii) reform the provisions for fire hazard properties of materials; and
   (iii) revise a requirement for the use of non-combustible materials; and
   (iv) include additional requirements for the protection of electrical switchboards which sustain electricity supply to emergency equipment; and
   (v) include minor changes to the requirements for aged care buildings; and
   (vi) include minor technical changes.

Note:
Only substantive typographical corrections are noted in the margin.

### 2.0 Adoption of BCA 2004

(a) The 2004 edition of the BCA was adopted as set out in Table 2.0.

<table>
<thead>
<tr>
<th>Administration</th>
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<td>Australian Government</td>
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<tr>
<td>Western Australia</td>
<td>1 May 2004</td>
</tr>
</tbody>
</table>

(b) The purpose of BCA 2004 is to—
   (i) update references to Standards; and
   (ii) update references from BCA 96 to BCA 2004; and
(iii) include a Performance Requirement considering human impact with glazing; and
(iv) reform the provisions for sound insulation; and
(v) reform the maintenance provisions; and
(vi) include minor technical changes.
LIST OF AMENDMENTS
LIST OF AMENDMENTS

List of Amendments Volume One
This set of notes has been prepared by the Australian Building Codes Board to assist BCA users in identifying changes incorporated in the 2004 edition of Volume One of the BCA (BCA 2004).

The notes provide a description of major changes made from the previous edition of the BCA. If additional information is required to assist in understanding, interpreting or applying the provisions of BCA 2004, reference should be made to the Guide to the BCA.

While the Australian Building Codes Board has attempted to include all changes from the previous edition of the BCA Volume One, the Board does not give any warranty nor accept any liability in relation to the contents of this list of amendments.

**List of Amendments BCA 2004**

<table>
<thead>
<tr>
<th>BCA Reference</th>
<th>Changes &amp; Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contents and Features, Introduction</strong></td>
<td></td>
</tr>
<tr>
<td>How to Use</td>
<td>This section has been removed as it is no longer necessary due to the BCA being in a bound format.</td>
</tr>
<tr>
<td>Introduction</td>
<td>A number of editorial changes have been made because of the change to the 2004 edition of the BCA.</td>
</tr>
<tr>
<td><strong>Section A</strong></td>
<td></td>
</tr>
<tr>
<td>A0.1</td>
<td>Due to the change of name of the BCA, amended to refer to the “Building Code of Australia” rather than the “1996 edition of the Building Code of Australia” and the change in title of the Section containing the adoption dates.</td>
</tr>
<tr>
<td>A0.2 (A)</td>
<td>Due to the change of name of the BCA, amended to refer to the “Building Code of Australia” rather than the “Building Code of Australia 1996”</td>
</tr>
<tr>
<td>A0.8</td>
<td>New sub-clause (c) inserted advising that the Performance Requirements relevant to an Alternative Solution are to be determined in accordance with a new provision, A0.10.</td>
</tr>
<tr>
<td>A0.10</td>
<td>New provision inserted setting out the method of determining the appropriate Performance Requirements relevant to an Alternative Solution. This provision clarifies the intent that when using an Alternative Solution, it is necessary to consider all relevant Performance Requirements, including those in other Parts where the Deemed-to-Satisfy Provisions could be affected.</td>
</tr>
<tr>
<td>A1.1</td>
<td>The following definitions have been inserted or amended:</td>
</tr>
<tr>
<td>Flashover</td>
<td>New definition inserted to clarify the intent of the term used in Clause 3(b) of Specification C1.10a dealing with the tests for the fire hazard properties of building materials and components.</td>
</tr>
<tr>
<td>Open Space</td>
<td>The Queensland variation flag has been deleted because the variation has been removed.</td>
</tr>
<tr>
<td>BCA Reference</td>
<td>Changes &amp; Commentary</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Primary Building element</td>
<td>Reference to B1.3 inserted due to the changes made to Part B1 in Amendment No. 12. The change is necessary to clarify that the loads can now be specified in either B1.2 or B1.3 because the BCA now allows the use of either the AS/NZS 1170 series of Standards or the AS 1170 series of Standards.</td>
</tr>
<tr>
<td>Safety Measure</td>
<td>New definition inserted as part of the revision of Section I.</td>
</tr>
<tr>
<td>A1.3</td>
<td>New sub-clause inserted clarifying that when a document listed in Table 1 of Specification A1.3 refers to another document, that reference is to that document as it existed at the time of publication of the document listed in Specification A1.3.</td>
</tr>
<tr>
<td>A1.7(c)</td>
<td>Due to the change of name of the BCA, the reference to the “Building Code of Australia 1996” has been amended to “Building Code of Australia 2004”.</td>
</tr>
<tr>
<td>A3.2</td>
<td>In the definition of Class 9a building, the words “health-care building” has been italicised because it is a defined term.</td>
</tr>
<tr>
<td>Specification A1.3</td>
<td>The title of the Specification has been amended to “Documents” instead of “Standards” adopted by reference. The change reflects the fact that the list contains more than just Standards. The following referenced documents were inserted or amended in Table 1:</td>
</tr>
<tr>
<td>AS 1670.3</td>
<td>New Standard “AS 1670 – Fire detection, warning, control and intercom systems – Systems design, installation and commissioning, Part 3 – Fire alarm monitoring” inserted as part of the revision of the AS 1670 series of Standards.</td>
</tr>
<tr>
<td>AS 1670.4</td>
<td>New Standard “AS 1670 – Fire detection, warning, control and intercom systems – Systems design, installation and commissioning, Part 4 – Sound systems and intercom systems for emergency purposes” inserted as part of the revision of the AS 1670 series of Standards.</td>
</tr>
<tr>
<td>AS 2220 Parts 1 and 2</td>
<td>Reference to “AS 2220 – Emergency warning and intercommunication systems for buildings, Part 1 – Equipment design and manufacture, and Part 2 – System design, installation and commissioning” deleted as part of the revision of the AS 1670 series of Standards.</td>
</tr>
<tr>
<td>BCA Reference</td>
<td>Changes &amp; Commentary</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>AS/NZS 3500.3</td>
<td>The title of the Standard and Part has been updated to “AS/NZS 3500 – National plumbing and drainage, Part 3 – Stormwater drainage&quot;.</td>
</tr>
<tr>
<td>AS 3700</td>
<td>Amdt 2, Dec 2003 referenced for “AS 3700 – Masonry structures”.</td>
</tr>
<tr>
<td>AS 3786</td>
<td>Amdt 4, Jan 2004 referenced for “AS 3786 – Smoke alarms”.</td>
</tr>
<tr>
<td>AS 4428.4</td>
<td>New Standard “AS 4428 – Fire detection, warning, control and intercom systems – Control and indicating equipment, Part 4 – Intercommunication systems for emergency purposes” inserted.</td>
</tr>
</tbody>
</table>

**Section B**

| BO1(d) | New provision inserted in Objective to include public policy matters for glazing into the BCA. |
| BF1.2  | New Functional Statement inserted to include public policy matters for glazing into the BCA. |
| BP1.3  | New Performance Requirement inserted to include public policy matters for glazing into the BCA. |
| B1.0   | The reference to Performance Requirement BP1.2 has been amended to refer to Performance Requirement BP1.3 as a consequence of the new Performance requirement being included for glazing. The existing provisions have been amended to state that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Part B1, Performance Requirements BP1.1 to BP1.3 are satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A1.10. |

**Section C**

<p>| C1.0   | The existing provisions have been amended to state that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Section C, Performance Requirements CP1 to CP9 are satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10. |
| C1.1(a)(i) | Reference to Class 9c building inserted as a consequence of this classification being added to C1.5 in BCA96 Amendment No. 11. |
| C1.5(b) | Additional words inserted to clarify that it is also necessary for Class 9c buildings to comply with Table C2.2. |</p>
<table>
<thead>
<tr>
<th>BCA Reference</th>
<th>Changes &amp; Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2.0</td>
<td>The existing provisions have been amended to state that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Section C, Performance Requirements CP1 to CP9 are satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10.</td>
</tr>
<tr>
<td>C2.12(b)(iii)</td>
<td>New paragraph inserted allowing for lift installation without a machine-room. As a consequence of the insertion of the new paragraph, the existing paragraph (iii) has been renumbered (iv).</td>
</tr>
<tr>
<td>C3.0</td>
<td>The existing provisions have been amended to state that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Section C, Performance Requirements CP1 to CP9 are satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10.</td>
</tr>
<tr>
<td>C3.3</td>
<td>Amended to clarify that the protection of opening in external walls of different fire compartments applies to the openings in both walls when the openings are within the specified distance of each other.</td>
</tr>
<tr>
<td>C3.15</td>
<td>Amended to only require openings to be protected in an element required to have an FRL with respect to integrity or insulation. The amendment recognises that Part C3 considers the protection of openings in elements that are providing a barrier to the spread of fire and are thus required to have an FRL. It has been recognised that the elements of an FRL that provide the barrier to spread of fire are insulation and integrity and that protecting an opening in an element required to have an FRL for structural adequacy is unnecessary.</td>
</tr>
<tr>
<td>Clause 2.5 of Specification C1.1</td>
<td>The heading “Timber columns” has been bolded to be consistent with other headings within Clause 2.5.</td>
</tr>
<tr>
<td>Clause 2.6 (b)(i) of Specification C1.1</td>
<td>An editorial change has been made by correcting the reference to “200 m²” to “200 m²”.</td>
</tr>
<tr>
<td>Clause 3.10 (a)(iv) of Specification C1.1</td>
<td>Deleted to remove the repetition of requirements already contained in C2.7 and Clause 3.1 of Specification C1.1.</td>
</tr>
<tr>
<td>Clause 4.3 (a) of Specification C1.1</td>
<td>Additional words inserted for consistency with Clause 3.10 of Specification C1.1 to clarify the provisions from which the concession is granted.</td>
</tr>
<tr>
<td>Clause 4.3 (a)(iv) of Specification C1.1</td>
<td>Deleted to remove the repetition of requirements already contained in C2.7 and Clause 4.1 of Specification C1.1.</td>
</tr>
<tr>
<td>Clause 6 (d)(iii) of Specification C1.8</td>
<td>Amended to allow deflection due to impact of light weight construction of wall systems for lifts to comply with Appendix A of AS 1735.1 as an alternative to AS 1735.2.</td>
</tr>
<tr>
<td>BCA Reference</td>
<td>Changes &amp; Commentary</td>
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<tr>
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<tr>
<td><strong>Section D</strong></td>
<td></td>
</tr>
<tr>
<td>DP1</td>
<td>SA variation flag inserted for Application.</td>
</tr>
<tr>
<td>DP7</td>
<td>SA variation flag inserted for Application.</td>
</tr>
<tr>
<td>D1.0</td>
<td>The existing provisions have been amended to state that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Section D, Performance Requirements DP1 to DP9 are satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10.</td>
</tr>
<tr>
<td>D2.0</td>
<td>The existing provisions have been amended to state that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Section D, Performance Requirements DP1 to DP9 are satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10.</td>
</tr>
<tr>
<td>D3.0</td>
<td>The existing provisions have been amended to state that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Section D, Performance Requirements DP1 to DP9 are satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10.</td>
</tr>
<tr>
<td><strong>Section E</strong></td>
<td></td>
</tr>
<tr>
<td>EP1.3(b)</td>
<td>Editorially amended by changing “and” to be “and”. The reason being that this term is not a defined term.</td>
</tr>
<tr>
<td>E1.0</td>
<td>The existing provisions have been amended to state that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Part E1, Performance Requirements EP1.1 to EP1.10 are satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10.</td>
</tr>
<tr>
<td>Table E1.5</td>
<td>Editorially amended by replacing “other than” with “other than” in the reference to Class7a buildings. The reason being that this term is not a defined term.</td>
</tr>
<tr>
<td>Clause 7(a) of Specification E1.5</td>
<td>Typographical correction to spell the word “except” correctly.</td>
</tr>
<tr>
<td>E2.0</td>
<td>The existing provisions have been amended to state that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Part E2, Performance Requirements EP2.1 to EP2.2 are satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10.</td>
</tr>
<tr>
<td>BCA Reference</td>
<td>Changes &amp; Commentary</td>
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<tr>
<td>Table E2.2a</td>
<td>Under the heading of “Fire-isolated exits”, at the end of (a)(iv) the word “and” has been corrected to “or” to be consistent with the other links between the provisions.</td>
</tr>
<tr>
<td>Clause 3(b) of Specification E2.2a</td>
<td>Amended to allow the use of an alarm acknowledgement facility as an alternative to the use of heat detectors in location where spurious signals may occur.</td>
</tr>
<tr>
<td>Clause 4(a)(i)(A) of Specification E2.2a</td>
<td>Reference to Clause 4.3(f) amended to refer to Clause 3.26(f) in AS 1670.1 due to changes in Clause numbers in the revision of the Standard.</td>
</tr>
<tr>
<td>Clause 4(b) of Specification E2.2a</td>
<td>Amended to allow the use of an alarm acknowledgement facility as an alternative to the use of heat detectors in location where spurious signals may occur.</td>
</tr>
<tr>
<td>Clause 6 of Specification E2.2a</td>
<td>Reference to Clause 8.7 amended to refer to Clause 3.22 in AS 1670.1 due to changes in Clause numbers in the revision of the Standard.</td>
</tr>
<tr>
<td>Clause 7 of Specification E2.2a</td>
<td>Clause amended to align with the 2004 edition of AS 1670 Part 3 which is referenced in BCA 2004.</td>
</tr>
<tr>
<td>E3.0</td>
<td>The existing provisions have been amended to state that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Part E3, Performance Requirements EP3.1 to EP3.10 are satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10.</td>
</tr>
<tr>
<td>E3.4(e)(i)</td>
<td>Amended to allow the emergency lifts to comply with Appendix A of AS 1735.1 as an alternative to AS 1735.2.</td>
</tr>
<tr>
<td>E3.7</td>
<td>Amended to allow the fire service controls to comply with Appendix A of AS 1735.1 as an alternative to AS 1735.2.</td>
</tr>
<tr>
<td>E4.0</td>
<td>The existing provisions have been amended to state that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Part E4, Performance Requirements EP4.1 to EP4.9 are satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10.</td>
</tr>
<tr>
<td>E4.9</td>
<td>Reference to AS 2220 Parts 1 and 2 has been updated to refer to AS 1670.4 and AS 4428.4 as part of the revision of the AS 1670 series of Standards.</td>
</tr>
<tr>
<td>Section F</td>
<td>The existing provisions have been amended to state that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Part F1, Performance Requirements FP1.1 to FP1.3 and FP1.5 to FP1.7 are satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10.</td>
</tr>
<tr>
<td>BCA Reference</td>
<td>Changes &amp; Commentary</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>F1.7</td>
<td>Typographical correction to spell the word “impervious” correctly, four times.</td>
</tr>
<tr>
<td>F2.0</td>
<td>The existing provisions have been amended to state that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Part F2, Performance Requirements FP2.1 to FP2.6 are satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10.</td>
</tr>
<tr>
<td>F3.0</td>
<td>The existing provisions have been amended to state that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Part F3, Performance Requirement FP3.1 is satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10.</td>
</tr>
<tr>
<td>F4.0</td>
<td>The existing provisions have been amended to state that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Part F4, Performance Requirements FP4.1 to FP4.5 are satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10.</td>
</tr>
<tr>
<td>Part F5</td>
<td>New Part F5 inserted. The Objective and Functional Statement remain. However, the Performance Requirements and Deemed-to-Satisfy Provisions now deal with the following matters.</td>
</tr>
<tr>
<td>FP5.1</td>
<td>This Performance Requirement requires floors separating sole-occupancy units from other areas of the building, as well as other sole-occupancy units, to provide suitable sound insulation. FP5.1 only applies to Class 2 and 3 buildings. The Performance Requirement for floors in Class 9c buildings is now contained in FP5.4.</td>
</tr>
<tr>
<td>FP5.2</td>
<td>This Performance Requirement requires suitable sound insulation for— airborne sound to walls separating a sole-occupancy unit from other parts of the building, including other sole-occupancy units; and • impact sound only to walls between a sole-occupancy unit and bathrooms, sanitary compartments, laundries and kitchens in another sole-occupancy unit. FP5.2 only applies to Class 2 and 3 buildings.</td>
</tr>
<tr>
<td>FP5.3</td>
<td>This Performance Requirement does not allow the required sound insulation of floors and walls to be compromised by any service penetrations, including door openings. FP5.3 only applies to Class 2 or 3 buildings.</td>
</tr>
<tr>
<td>BCA Reference</td>
<td>Changes &amp; Commentary</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>FP5.4</td>
<td>This Performance Requirement requires floors separating sole-occupancy units in Class 9c buildings to have suitable sound insulation. As a consequence of this new Performance Requirement being inserted, the previous FP5.4 has been renumbered FP5.5.</td>
</tr>
<tr>
<td>FP5.5</td>
<td>This Performance Requirement requires suitable airborne and impact sound insulation to walls separating sole-occupancy units and sole-occupancy units from specified areas in Class 9c buildings.</td>
</tr>
<tr>
<td>FP5.6</td>
<td>This Performance Requirement does not allow the required sound insulation of floors and walls to be compromised by any service penetrations. FP5.6 only applies to Class 9c buildings.</td>
</tr>
<tr>
<td>FV5.1</td>
<td>New Verification Method inserting allowing compliance with FP5.1 and FP5.3 by in situ measurement of airborne and impact generated sound through floors. FV5.1 only applies to Class 2 or 3 buildings.</td>
</tr>
<tr>
<td>FV5.2</td>
<td>New Verification Method inserting allowing compliance with FP5.2(a) and FP5.3 by in situ measurement of airborne generated sound through walls. FV5.1 only applies to Class 2 or 3 buildings.</td>
</tr>
<tr>
<td>F5.0</td>
<td>Sets out that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Part F5, Performance Requirements FP4.1 to FP4.5 are satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10</td>
</tr>
<tr>
<td>F5.1</td>
<td>States that the Deemed-to-Satisfy Provisions of Part F5 apply to Class 2, 3 and 9c buildings.</td>
</tr>
<tr>
<td>F5.2</td>
<td>Sets out the method of determining the required airborne sound insulation ratings of both floors and walls. The airborne sound insulation rating must be determined under AS/NZS 1276.1 or ISO 717.1 using results from laboratory measurements, or comply with a new Specification F5.2.</td>
</tr>
<tr>
<td>F5.3</td>
<td>Sets out the method of determining the required impact sound insulation ratings of both floors and walls. The impact sound rating must be determined under ISO 717.2 using results from laboratory measurements, or comply with a new Specification F5.2.</td>
</tr>
<tr>
<td>F5.4</td>
<td>Sets out the required sound insulation of floors.</td>
</tr>
<tr>
<td>F5.5</td>
<td>Sets out the required sound insulation of floors.</td>
</tr>
<tr>
<td>F5.6</td>
<td>Sets out the sound insulation requirements for services such as ducts, soil, waste and water supply pipes passing through more than one sole-occupancy unit. It also applies to storm water pipes passing through any sole-occupancy unit.</td>
</tr>
<tr>
<td>BCA Reference</td>
<td>Changes &amp; Commentary</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>F5.7</td>
<td>Sets out the requirements for sound insulation for pumps in a building. This requirement has not changed.</td>
</tr>
<tr>
<td>F5.8</td>
<td>Clause deleted. The provisions are now contained in F5.5.</td>
</tr>
<tr>
<td>Clause 1 of Specification F5.2</td>
<td>The scope now states that the Specification lists $R_w$, $R_w + C_{tr}$ and $L_{n,w} + C_1$ to correspond with the changes to Part F5. It includes common forms of discontinuous construction.</td>
</tr>
<tr>
<td>Clause 2 of Specification F5.2</td>
<td>The clause now states the construction requirements for masonry, concrete slab and panels, sheeting materials, timber or steel framed construction and service penetrations to meet the levels of $R_w$, $R_w + C_{tr}$ and $L_{n,w} + C_I$ required by Part F5.</td>
</tr>
<tr>
<td>Table 2 of Specification F5.2</td>
<td>New Table inserted giving wall construction details to meet the levels of $R_w$, $R_w + C_{tr}$ and $L_{n,w} + C_I$ required by Part F5.</td>
</tr>
<tr>
<td>Table 3 of Specification F5.2</td>
<td>New Table inserted giving floor construction details to meet the levels of $R_w$, $R_w + C_{tr}$ and $L_{n,w} + C_I$ required by Part F5.</td>
</tr>
<tr>
<td>Clause 2 of Specification F5.5</td>
<td>Due to other changes to Part F5, references to Table F5.5 have been amended to refer to Table 2 of Specification F5.2.</td>
</tr>
</tbody>
</table>

**Section G**

| G1.0 | Sets out that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Part G1, Performance Requirements GP1.1 to GP1.4 are satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10 |
| G2.0 | Sets out that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Part G2, Performance Requirements GP2.1 to GP2.2 are satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10 |
| Clause 5(a) of Specification G3.8 | Reference to AS 2220 Parts 1 and 2 has been updated to refer to AS 1670.4 and AS 4428.4 as part of the revision of the AS 1670 series of Standards. |
| G4.0 | Sets out that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Part G4, Performance Requirements GP4.1 to GP4.4 are satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10 |
| G5.0 | Sets out that where a Building Solution is proposed to comply with the Deemed-to-Satisfy Provisions contained in Part G5, Performance Requirement GP4.1 is satisfied. Where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10 |
### Section I

<table>
<thead>
<tr>
<th>BCA Reference</th>
<th>Changes &amp; Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF1.1</td>
<td>Part re-written</td>
</tr>
<tr>
<td>IP1.1</td>
<td>New Performance Requirement inserted requiring the required safety measures to be capable of performing to a standard not less than that which they were originally required to achieve.</td>
</tr>
<tr>
<td>IP1.2</td>
<td>New Performance Requirement inserted requiring mechanical ventilation and hot water, warm water and cooling systems to be adequately maintained.</td>
</tr>
<tr>
<td>I1.0</td>
<td>Due to the insertion of the new Performance Requirement, the clause has been amended to state that IP1.1 is satisfied by complying with I1.1 and IP1.2 is satisfied by complying with I1.2. Also, new provision inserted setting out that where an Alternative Solution is proposed, the relevant Performance Requirements must be determined in accordance with the new A0.10</td>
</tr>
<tr>
<td>I1.1</td>
<td>Amended to give a non-inclusive list of required safety measures in Tables I1.1 to I1.13 and require that they be maintained in accordance with the Tables.</td>
</tr>
<tr>
<td>Tables I1.1 to I1.13</td>
<td>New Tables inserted setting out the required standards of performance for required safety measures.</td>
</tr>
</tbody>
</table>

### New South Wales

<p>| Introduction | Due to the change of name of the BCA, the reference to the “1996 edition of the” Building Code of Australia has been removed. |
| NSW A1.1     | The following definitions have been inserted for the purposes of the new NSW Section J: |
| Air-conditioning | New definition inserted as part of the inclusion of energy efficiency measures for Class 2 buildings and Class 4 parts into the NSW Appendix. |
| Climate zone | New definition inserted as part of the inclusion of energy efficiency measures for Class 2 buildings and Class 4 parts into the NSW Appendix. |
| Common area | New definition inserted as part of the inclusion of energy efficiency measures for Class 2 buildings and Class 4 parts into the NSW Appendix. |
| Conditioned space | New definition inserted as part of the inclusion of energy efficiency measures for Class 2 buildings and Class 4 parts into the NSW Appendix. |
| Envelope | New definition inserted as part of the inclusion of energy efficiency measures for Class 2 buildings and Class 4 parts into the NSW Appendix. |</p>
<table>
<thead>
<tr>
<th>BCA Reference</th>
<th>Changes &amp; Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fabric</td>
<td>New definition inserted as part of the inclusion of energy efficiency measures for Class 2 buildings and Class 4 parts into the NSW Appendix.</td>
</tr>
<tr>
<td>Piping</td>
<td>New definition inserted as part of the inclusion of energy efficiency measures for Class 2 buildings and Class 4 parts into the NSW Appendix.</td>
</tr>
<tr>
<td>Reflective insulation</td>
<td>New definition inserted as part of the inclusion of energy efficiency measures for Class 2 buildings and Class 4 parts into the NSW Appendix.</td>
</tr>
<tr>
<td>R-Value</td>
<td>New definition inserted as part of the inclusion of energy efficiency measures for Class 2 buildings and Class 4 parts into the NSW Appendix.</td>
</tr>
<tr>
<td>Roof light</td>
<td>New definition inserted as part of the inclusion of energy efficiency measures for Class 2 buildings and Class 4 parts into the NSW Appendix.</td>
</tr>
<tr>
<td>Service</td>
<td>New definition inserted as part of the inclusion of energy efficiency measures for Class 2 buildings and Class 4 parts into the NSW Appendix.</td>
</tr>
<tr>
<td>Stage</td>
<td>Definition amended.</td>
</tr>
<tr>
<td>Total R-Value</td>
<td>New definition inserted as part of the inclusion of energy efficiency measures for Class 2 buildings and Class 4 parts into the NSW Appendix.</td>
</tr>
<tr>
<td>Total U-Value</td>
<td>New definition inserted as part of the inclusion of energy efficiency measures for Class 2 buildings and Class 4 parts into the NSW Appendix.</td>
</tr>
<tr>
<td>Ventilation opening</td>
<td>New definition inserted as part of the inclusion of energy efficiency measures for Class 2 buildings and Class 4 parts into the NSW Appendix.</td>
</tr>
<tr>
<td>NSW Table 1</td>
<td>The following referenced documents were inserted or amended in NSW Table 1:</td>
</tr>
<tr>
<td>AS/NZS 3500</td>
<td>“AS/NZS 3500 – National plumbing and drainage code, Part 4.2 - Hot water supply systems – Acceptable solutions”, inserted as part of the energy efficiency measures for Class 2 buildings and Class 4 parts being included in the NSW Appendix.</td>
</tr>
<tr>
<td>AS/NZS 4859</td>
<td>“AS/NZS 4859 – Materials for the thermal insulation of buildings, Part 1 – General criteria and technical provisions”, inserted as part of the energy efficiency measures for Class 2 buildings and Class 4 parts being included in the NSW Appendix.</td>
</tr>
<tr>
<td>BCA Reference</td>
<td>Changes &amp; Commentary</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------------</td>
</tr>
</tbody>
</table>
| AS 2464       | The following parts of “AS 2464 – Methods of testing thermal insulation”, have been inserted as part of the energy efficiency measures for Class 2 buildings and Class 4 parts being included in the NSW Appendix–  
Part 3 – Thermal resistance of low-density loose-fill insulation.  
Part 5 – Steady-state thermal transmission properties by means of the heat flow meter.  
Part 6 - Steady-state thermal transmission properties by means of the guarded hot plate. |
| NSW C2.5(b)(iii)(C) | Sub-clause (bb) amended to allow the use of 13 mm thick plasterboard or an equivalent non-combustible material. |
| NSW F2.1      | Note has been modified to include “as amended by the Public Health (Microbial Control) Amendment (Miscellaneous) Regulation, 2003”. |
| NSW F2.6      | Note has been modified to include “as amended by the Public Health (Microbial Control) Amendment (Miscellaneous) Regulation, 2003”. |
| NSW F2.7      | Note has been modified to include “as amended by the Public Health (Microbial Control) Amendment (Miscellaneous) Regulation, 2003”. |
| NSW F4.5      | Note has been modified to include “as amended by the Public Health (Microbial Control) Amendment (Miscellaneous) Regulation, 2003”. |
| NSW I1.2      | Note has been modified to include “as amended by the Public Health (Microbial Control) Amendment (Miscellaneous) Regulation, 2003”. |
| NSW Section J | New Section J inserted as part of the energy efficiency measures for Class 2 buildings and Class 4 parts being included in the NSW Appendix. |
| NSW Abbreviations and Symbols | Inserted as part of the energy efficiency measures. |

**Northern Territory**

| NT Part F5 | New NT Part F5 inserted. These provisions include both the Performance Requirements and the Deemed-to-Satisfy Provisions and are the same as those contained in the BCA prior to the BCA 2004 edition. |
| NT I1.1    | Amended by referring to “safety measures” instead of “safety installations” in line with other changes to Part I1 in the main BCA. |
**LIST OF AMENDMENTS**

<table>
<thead>
<tr>
<th>BCA Reference</th>
<th>Changes &amp; Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Queensland Appendix</strong></td>
<td></td>
</tr>
<tr>
<td>Qld A1.1</td>
<td>The following definitions have been deleted because they are no longer used in the Queensland Appendix–</td>
</tr>
<tr>
<td></td>
<td>Open space</td>
</tr>
<tr>
<td></td>
<td>Workplace</td>
</tr>
<tr>
<td>Qld Table 1</td>
<td>The following Standards have been removed–</td>
</tr>
<tr>
<td></td>
<td>AS 1221</td>
</tr>
<tr>
<td></td>
<td>AS 1731</td>
</tr>
<tr>
<td></td>
<td>AS 2924</td>
</tr>
<tr>
<td></td>
<td>AS/NZS 3661 Part 1</td>
</tr>
<tr>
<td>Qld Part F5</td>
<td>New Qld Part F5 inserted. These provisions include both the Performance Requirements and the Deemed-to-Satisfy Provisions and are the same as those contained in the BCA prior to the BCA 2004 edition.</td>
</tr>
<tr>
<td>Qld Part H101</td>
<td>Part deleted.</td>
</tr>
<tr>
<td>Qld Part H106</td>
<td>Part deleted.</td>
</tr>
<tr>
<td>Qld Part H108</td>
<td>Part deleted.</td>
</tr>
<tr>
<td>Qld Part H109</td>
<td>Part deleted.</td>
</tr>
<tr>
<td><strong>South Australia Appendix</strong></td>
<td></td>
</tr>
<tr>
<td>SA Table 1</td>
<td>The following Minister’s Specifications were inserted or amended in SA Table 1:</td>
</tr>
<tr>
<td>SA F1.7</td>
<td>The specification date and title have been updated to the 2004 edition of “Waterproofing of wet areas in buildings – Additional requirements”.</td>
</tr>
<tr>
<td>SA H3.2</td>
<td>New specification “Concessions and additional requirements for farm buildings” 2004 edition added.</td>
</tr>
<tr>
<td>SA76</td>
<td>The date has been amended to 2000.</td>
</tr>
<tr>
<td>DP1</td>
<td>New Application to DP1(b) inserted.</td>
</tr>
<tr>
<td>DP7</td>
<td>New Application to DP7 inserted.</td>
</tr>
<tr>
<td>SA D3.1</td>
<td>Amended to clarify that the Class 2 buildings are expressly referred to in SA Table 3.2.</td>
</tr>
<tr>
<td>SA Table D3.2</td>
<td>Amended to clarify requirements for residential sole-occupancy units.</td>
</tr>
<tr>
<td>SA D3.4(e)</td>
<td>Amended to refer to the correct term of “a person with disabilities”.</td>
</tr>
<tr>
<td>SA F1.7</td>
<td>Amended to require water proofing of wet areas in buildings to comply with AS 3740 and the additional requirements of Minister’s Specification SA F1.7.</td>
</tr>
<tr>
<td>SA G1.1</td>
<td>Additional requirements inserted.</td>
</tr>
</tbody>
</table>
### BCA Reference

<table>
<thead>
<tr>
<th>Reference</th>
<th>Changes &amp; Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA Part H3</td>
<td>New Part inserted setting requirements for Class 7 or 8 buildings used for certain farming purposes.</td>
</tr>
<tr>
<td>SA I1.0</td>
<td>Clause deleted.</td>
</tr>
<tr>
<td>SA I1.1</td>
<td>Clause varied to require safety measures to be maintained in accordance with the Minister’s Specification SA 76.</td>
</tr>
<tr>
<td>SA I1.2</td>
<td>Clause varied to require maintenance in accordance with Minister’s Specification SA 76.</td>
</tr>
</tbody>
</table>

### Tasmania Appendix

<table>
<thead>
<tr>
<th>Section</th>
<th>Changes &amp; Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>Due to the change of name of the BCA, the reference to the “1996 edition of the” Building Code of Australia has been removed.</td>
</tr>
<tr>
<td>TAS A1.1</td>
<td>New provision inserted including the following definitions:</td>
</tr>
<tr>
<td>Centre-based class 1 facility</td>
<td>New definition inserted as part of the inclusion of requirements for centre-based child care facilities into the Tasmania Appendix.</td>
</tr>
<tr>
<td>Child-based child care facility</td>
<td>New definition inserted as part of the inclusion of requirements for centre-based child care facilities into the Tasmania Appendix.</td>
</tr>
<tr>
<td>Early childhood centre</td>
<td>New definition inserted as part of the inclusion of requirements for centre-based child care facilities into the Tasmania Appendix.</td>
</tr>
<tr>
<td>Public</td>
<td>New definition inserted.</td>
</tr>
<tr>
<td>Temporary structure</td>
<td>New definition inserted.</td>
</tr>
<tr>
<td>TAS Table 1</td>
<td>The following referenced documents have been inserted or amended in Tas Table 1</td>
</tr>
<tr>
<td>AS 2658</td>
<td>Reference to AS 2658 – LP Gas – Portable and mobile appliances” inserted.</td>
</tr>
<tr>
<td>AS/NZS 3002</td>
<td>Reference to “AS/NZS 3002 – Electrical installations – shows and carnivals” inserted.</td>
</tr>
<tr>
<td>AS 3500.2.2</td>
<td>Reference to “AS/NZS 3500 – National plumbing and drainage code, Part 2.2 – Sanitary plumbing and drainage – acceptable solutions” inserted.</td>
</tr>
<tr>
<td>AS/NZS 3760</td>
<td>Reference to “AS/NZS 3760 – In-service safety inspection and testing of electrical equipment” inserted.</td>
</tr>
<tr>
<td>AS/NZS 4220</td>
<td>Reference to “AS/NZS Bunk bed” inserted.</td>
</tr>
</tbody>
</table>
## List of Amendments

<table>
<thead>
<tr>
<th>BCA Reference</th>
<th>Changes &amp; Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>AS 4462</td>
<td>Reference deleted.</td>
</tr>
<tr>
<td>AS 4464</td>
<td>Reference deleted.</td>
</tr>
<tr>
<td>AS 4466</td>
<td>Reference to title corrected to “AS 4464 – Hygienic production of meat for human consumption”.</td>
</tr>
<tr>
<td>AS 4696</td>
<td>Reference to “AS4696 – Hygienic production and transportation of meat and meat products for human consumption” inserted.</td>
</tr>
<tr>
<td>AS 5008</td>
<td>Reference to “AS 5008 – Hygienic rendering of anima products” inserted.</td>
</tr>
<tr>
<td>AS 5010</td>
<td>Reference to “AS 5010 – Hygienic production of ratite (emu/ostich) meat for human consumption” inserted.</td>
</tr>
<tr>
<td>AS 5011</td>
<td>Reference to “AS 5011 – Hygienic production of natural casings for human consumption” inserted.</td>
</tr>
<tr>
<td>AS 5601</td>
<td>Reference to “AS5601 – Gas installations” inserted.</td>
</tr>
<tr>
<td></td>
<td>Reference to “Tasmania Code of Practice Hygienic Production of Pet Food” inserted.</td>
</tr>
<tr>
<td>Tas Part H103</td>
<td>Existing Part amended.</td>
</tr>
<tr>
<td>Tas Part H104</td>
<td>Part deleted.</td>
</tr>
<tr>
<td>Tas Part H105</td>
<td>Part amended.</td>
</tr>
<tr>
<td>Tas Part H106</td>
<td>Part amended.</td>
</tr>
<tr>
<td>Tas H118.2</td>
<td>Amended by reference to the updated title of AS/NZS 4114.1.</td>
</tr>
<tr>
<td>Tas H120.4(a)</td>
<td>Amended by referring to updated editions of Standards.</td>
</tr>
<tr>
<td>Tas Part H122</td>
<td>New Part inserted.</td>
</tr>
<tr>
<td>Tas Part H123</td>
<td>New Part inserted.</td>
</tr>
</tbody>
</table>

### Victoria Appendix

**Vic A1.1**

The following definitions have been inserted:

- **Conditioned space** New definition inserted as part of the Victoria changes to energy efficiency provisions.
- **Envelope** New definition inserted as part of the Victoria changes to energy efficiency provisions.
- **Fabric** New definition inserted as part of the Victoria changes to energy efficiency provisions.
### BCA Reference

<table>
<thead>
<tr>
<th>Service</th>
<th>Changes &amp; Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vic Table 1</td>
<td>The following referenced documents were inserted or amended in Vic Table 1:</td>
</tr>
<tr>
<td>FirstRate</td>
<td>FirstRate house energy rating software updated to version 3.54 dated October 2003.</td>
</tr>
<tr>
<td>NatHERS</td>
<td>Nationwide House Energy Rating Software (NatHERS) inserted as part of the Victoria changes to energy efficiency provisions.</td>
</tr>
<tr>
<td>Practice Note 2004-55</td>
<td>Practice Note 2004-55 “Residential Sustainability Measures” inserted as part of the Victoria changes to energy efficiency provisions.</td>
</tr>
<tr>
<td>Vic Part F6</td>
<td>Part amended as part of the Victoria changes to energy efficiency provisions.</td>
</tr>
</tbody>
</table>

### Western Australia Appendix

<table>
<thead>
<tr>
<th>WA Introduction</th>
<th>New section inserted.</th>
</tr>
</thead>
<tbody>
<tr>
<td>WA Part F5</td>
<td>New WA Part F5 inserted. These provisions include both the Performance Requirements and the Deemed-to-Satisfy Provisions and are the same as those contained in the BCA prior to the BCA 2004 edition.</td>
</tr>
<tr>
<td>WA Part I1</td>
<td>New WA Part I1 inserted. These provisions include both the Performance Requirements and the Deemed-to-Satisfy Provisions and are the same as those contained in the BCA prior to the BCA 2004 edition.</td>
</tr>
</tbody>
</table>

### History of BCA Adoption

<table>
<thead>
<tr>
<th>Section Title</th>
<th>Changes &amp; Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 to 1.13</td>
<td>Reference to the “Commonwealth” in both the text and the Tables has been amended to “Australian Government” in line with Australian Government policy.</td>
</tr>
<tr>
<td>2.0</td>
<td>Clause 2.0 and Table 2.0 have been added in order to detail the adoption dates of the 2004 edition of the BCA in each State and Territory and to summarise the purposes of the changes from BCA96.</td>
</tr>
</tbody>
</table>