<table>
<thead>
<tr>
<th>Handbook: Document History</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date</strong></td>
</tr>
<tr>
<td>First published</td>
</tr>
<tr>
<td>Amendment 1</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Amendment 2</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Reprinted incorporating Amendments 1 and 2</td>
</tr>
<tr>
<td>Second edition incorporating Amendments 1, 2 and 3</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Amendment 4</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Amendment 5</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Amendment 6</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Amendment 7</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Reprinted incorporating Amendment 7</td>
</tr>
<tr>
<td>Amendment 8</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Amendment 9</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

**Note:**
Page numbers relate to the document at the time of Amendment and may not match page numbers in current document.
The most recent version of this document, as detailed in the Document History, is approved by the Building Industry Authority. It is effective from 1 April 2004 and supersedes all previous versions of this document.

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## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preface</strong></td>
<td>5</td>
</tr>
<tr>
<td>1.0 Introduction</td>
<td>5</td>
</tr>
<tr>
<td>1.1 The Act</td>
<td>5</td>
</tr>
<tr>
<td>1.2 The New Zealand Building Code</td>
<td>5</td>
</tr>
<tr>
<td>1.3 The Building Industry Authority</td>
<td>5</td>
</tr>
<tr>
<td>1.4 Territorial authorities</td>
<td>5</td>
</tr>
<tr>
<td>2.0 Special Terms</td>
<td>5</td>
</tr>
<tr>
<td>2.1 Building certifier</td>
<td>5</td>
</tr>
<tr>
<td>2.2 Building certificate</td>
<td>5</td>
</tr>
<tr>
<td>2.3 Project information memorandum</td>
<td>6</td>
</tr>
<tr>
<td>2.4 Building consent</td>
<td>6</td>
</tr>
<tr>
<td>2.5 Waivers and modifications</td>
<td>6</td>
</tr>
<tr>
<td>2.6 Accreditation certificate</td>
<td>6</td>
</tr>
<tr>
<td>2.7 Determination</td>
<td>6</td>
</tr>
<tr>
<td>2.8 Notice to rectify</td>
<td>6</td>
</tr>
<tr>
<td>2.9 Code compliance certificate</td>
<td>7</td>
</tr>
<tr>
<td>2.10 Compliance schedule</td>
<td>7</td>
</tr>
<tr>
<td>2.11 Building warrant of fitness</td>
<td>7</td>
</tr>
<tr>
<td>3.0 Means of Code Compliance</td>
<td>7</td>
</tr>
<tr>
<td>3.1 Owner's choice</td>
<td>7</td>
</tr>
<tr>
<td>3.2 Approved documents</td>
<td>7</td>
</tr>
<tr>
<td>3.3 Acceptable solutions</td>
<td>7</td>
</tr>
<tr>
<td>3.4 Alternative solutions</td>
<td>7</td>
</tr>
<tr>
<td>3.5 Verification methods</td>
<td>7</td>
</tr>
<tr>
<td>3.6 Producer statements</td>
<td>8</td>
</tr>
<tr>
<td>3.7 Status of other publications</td>
<td>8</td>
</tr>
<tr>
<td>4.0 Interpretation</td>
<td>8</td>
</tr>
<tr>
<td>4.1 Building code</td>
<td>8</td>
</tr>
<tr>
<td>4.2 Approved documents</td>
<td>9</td>
</tr>
<tr>
<td>Publications Referenced in Approved Documents</td>
<td>11</td>
</tr>
<tr>
<td>Definitions</td>
<td>33</td>
</tr>
<tr>
<td>Compliance Schedules</td>
<td>55</td>
</tr>
<tr>
<td>List of Approved Documents</td>
<td>79</td>
</tr>
<tr>
<td>Index to the Building Code and Approved Documents</td>
<td>81</td>
</tr>
<tr>
<td>The New Zealand Building Code</td>
<td>151</td>
</tr>
</tbody>
</table>
1.0 Introduction

1.0.1 This preface is provided only as a convenient user reference. It gives simple answers to questions frequently asked about the building code and associated legislation. Legal interpretation must however, be based on the actual wording of the Act and Regulations themselves.

1.1 The Act

1.1.1 The Building Act 1991 establishes a national, uniform, building control system which covers:

- All buildings including Crown buildings, except for certain defence works.
- All components of each building including plumbing, electrical and mechanical installations.

1.1.2 The Act applies to:

- Building construction, including alteration and demolition.
- Maintenance of building systems or features such as lifts and fire protection installations.

1.1.3 The Act does not cover:

- Planning and resource management, and other aspects of a building’s relationship to the surrounding neighbourhood.
- Occupational safety and health, and other aspects of managing people.

1.1.4 The building control system regulates only those matters essential for ensuring that buildings perform in a way which:

- Safeguards people from injury and illness.
- Safeguards people, particularly those with disabilities, from loss of amenity.
- Protects other property from damage.
- Facilitates efficient use of energy.

1.1.5 The controls do not provide for regulatory intervention in the owner’s choice on other matters such as aesthetics or non-essential building features provided solely for the comfort or convenience of users. Nor do they protect an owner’s economic interests in terms of ensuring value for money, or through losses due to lack of care or competence.

1.1.6 No person shall be required to achieve performance criteria additional to or more restrictive than those specified in the building code, except as may be provided for in any other Act.

1.2 The New Zealand Building Code

1.2.1 The New Zealand Building Code (NZBC) is a schedule to the Regulations authorised by the Act. It contains the mandatory provisions for meeting the purposes of the Act, and is performance-based. That means it says only what is to be done, not how to do it.

1.3 The Building Industry Authority

1.3.1 The Building Industry Authority (BIA) is a Crown agency established under the Act as the sole regulatory authority for building controls in New Zealand.

1.4 Territorial authorities

1.4.1 Territorial authorities are responsible within their districts for the day-to-day administration of the building control legislation.

2.0 Special Terms

2.1 Building certifier

2.1.1 A building certifier is a person approved by the Building Industry Authority to issue building certificates with respect to specific provisions of the New Zealand Building Code. A building certifier may be employed by a building owner as an alternative to using the territorial authority for checking technical proposals and performing inspections.

2.2 Building certificate

2.2.1 A building certificate is a formal confirmation by a building certifier that specific aspects of a building comply with the New Zealand Building Code. A territorial authority is obliged to accept such a certificate.
2.3 Project information memorandum

2.3.1 A territorial authority is required, either on request or when a building consent is issued, to provide the owner with a project information memorandum. The memorandum shall contain all information known to the territorial authority about physical site conditions, and requirements under any legislation, which could be of relevance to an owner initiating a building project.

2.3.2 This requirement is intended to avoid an owner being committed to expensive redesign costs on a project as a result of not being supplied with details of requirements in advance of doing the work.

2.4 Building consent

2.4.1 The building consent is the formal authorisation by the territorial authority that proposed building work may proceed. The consent may contain conditions, and will confirm inspection requirements necessary to ensure that the finished work complies with the New Zealand Building Code.

2.5 Waivers and modifications

2.5.1 A territorial authority may grant waivers and modifications to provisions of the New Zealand Building Code.

2.5.2 In doing so, the territorial authority must have due regard to matters described in section 47 of the Act. These include the physical characteristics of the building, its location, use and intended life, and any special historical, cultural or traditional considerations. The Building Industry Authority must be notified of any waivers or modifications approved by a territorial authority.

2.5.3 Waivers and modifications to New Zealand Building Code provisions, are not to be confused with site changes to a design or variations to an acceptable solution, which still comply with the New Zealand Building Code. In effect such changes are an alternative solution and may be authorised at any time by a building certifier or territorial authority.

2.6 Accreditation certificate

2.6.1 The Building Industry Authority may issue an accreditation certificate for materials, components and construction methods used in building. Accreditations may be based on an assessment of appraisals given by recognised independent specialists, or on type endorsements confirming that a particular material, component or construction method conforms with one already acceptable under the New Zealand Building Code.

2.6.2 Any materials or methods for which the Building Industry Authority has issued an accreditation certificate must be accepted by a territorial authority or building certifier as satisfying relevant New Zealand Building Code provisions.

2.7 Determination

2.7.1 A determination is a decision by the Building Industry Authority on whether a material, component or method complies with the New Zealand Building Code.

2.7.2 An application for a determination is made to resolve a disagreement between a building owner and a territorial authority or building certifier. A determination applies only to a particular building and is binding on all parties concerned.

2.7.3 The Building Industry Authority will publish those determinations of significance, as a guide to future decisions by territorial authorities and building certifiers.

2.8 Notice to rectify

2.8.1 A territorial authority may issue to the owner or owner's agent a notice to rectify, requiring any building work not complying with the Act or New Zealand Building Code to be rectified.
2.9 Code compliance certificate

2.9.1 A territorial authority or building certifier will, on the satisfactory completion of building work, issue a code compliance certificate indicating that all necessary provisions of the New Zealand Building Code have been satisfied.

2.9.2 Separate code compliance certificates may be issued for different parts of staged building construction.

2.10 Compliance schedule

2.10.1 A compliance schedule specifies inspection, maintenance and reporting procedures for systems whose continued operation is essential for ongoing New Zealand Building Code compliance.

2.10.2 Such systems include automatic fire protection equipment, lifts, signs, emergency lighting and ventilation plant.

2.11 Building warrant of fitness

2.11.1 An annual building warrant of fitness is a building owner’s confirmation that essential features of the building, as listed in the compliance schedule, have been properly maintained.

3.0 Means of Code Compliance

3.1 Owner’s choice

3.1.1 An owner is free to use any materials, components or construction methods which comply with relevant performance criteria of the New Zealand Building Code. The absence of prescriptive requirements is expected to encourage innovation and the use of new technology.

3.1.2 For those people who prefer specific guidance, Approved Documents issued by the Building Industry Authority provide detailed methods for establishing New Zealand Building Code compliance.

3.2 Approved Documents

3.2.1 Approved Documents authorised under the Act, contain acceptable solutions and verification methods.

3.2.2 A territorial authority or building certifier must accept that compliance with an Approved Document is a means of establishing compliance with those provisions of the New Zealand Building Code to which that document refers.

3.3 Acceptable solutions

3.3.1 Acceptable solutions given in Approved Documents are examples of materials, components and construction methods which, if used, will result in compliance with the New Zealand Building Code. They serve also as guidelines for alternative solutions.

3.4 Alternative solutions

3.4.1 There is no obligation to adopt any particular solution. Materials, components and construction methods which differ in whole or in part from those described in Approved Documents may be used, if they comply with the New Zealand Building Code. The owner may be required to demonstrate that any such method does in fact comply, when seeking a consent from the territorial authority under section 33 of the Act, or a determination from the Building Industry Authority under section 17 of the Act.

3.5 Verification methods

3.5.1 New Zealand Building Code compliance of an alternative solution may be verified by any of the following methods:

a) Calculations – using recognised analytical methods and mathematical models.

b) Laboratory tests – using tests (sometimes to destruction) on prototype components and systems.

c) Tests in-situ – which may involve examination of plans and verification by inspection, where compliance with specified numbers (e.g. fittings), dimensions or locations is required. Non-destructive tests (e.g. pipe pressure tests), are also included.
3.5.2 Where specific test methods are known, and practicable, they are listed in Approved Documents.

3.6 Producer statements

3.6.1 A territorial authority may, at its discretion, accept a producer statement establishing compliance with the New Zealand Building Code.

3.6.2 A building certifier may also accept a producer statement if satisfied on reasonable grounds that the product or design complies with the New Zealand Building Code.

3.6.3 The acceptance of a producer statement does not absolve the territorial authority or building certifier from responsibility.

3.7 Status of other publications

3.7.1 Publications issued by organisations other than the Building Industry Authority are referred to in Approved Documents. Those publications (subject to any stated deletions or modifications), are methods of compliance with the New Zealand Building Code, to the extent that they relate to provisions specifically stated in the purpose of each New Zealand Building Code clause.

3.7.2 It should be noted in using reference publications that:


b) For purposes of the New Zealand Building Code, reference content may be separated into two parts comprising either verification methods or acceptable solutions.

c) Content on good practice, while being desirable is not essential for satisfying New Zealand Building Code performance.

d) Approvals, waivers and modifications under the New Zealand Building Code may be granted only by the territorial authority, or the Building Industry Authority as the outcome of a referral. This does not preclude the site supervisor making (within the limits of his/her technical competence) minor practical construction changes to facilitate New Zealand Building Code compliance.

e) As it is the responsibility of building owners or their agents to demonstrate that alternative solutions comply with the New Zealand Building Code, phrases such as “to the approval of the engineer”, used in referenced publications, are not applicable to the New Zealand Building Code.

3.7.3 Referenced publications are:

- specific to the dated edition quoted, and include any amendments issued prior to the date shown at the foot of the page on which they are listed, or
- include only the quoted edition and specific amendments as listed in each Approved Document.

4.0 Interpretation

4.1 Building Code

4.1.1 This schedule to the Building Regulations 1992 is divided under eight main categories into a total of 37 clauses of which the first two are general provisions, and the remainder specifically applicable to different aspects of building construction.

4.1.2 Clause references are identified by letters and numerals, with the letter indicating the category.

4.1.3 First order numerals (either 1, 2 or 3) indicate primary subdivisions of each clause where:

1 is the Objective
2 is the Functional Requirement
3 is the Performance

4.1.4 Second order numerals identify a specific Functional Requirement or Performance.

For example in Clause F4.3.2:

F indicates the main category “Safety of Users”.

4 indicates specific application to “Safety from falling”.

3 indicates a Performance.

2 indicates the second performance of the Clause.
4.1.5 Throughout the New Zealand Building Code and Approved Documents, except in headings, defined words are indicated by italics.

4.1.6 Defined words of the New Zealand Building Code are listed in Clause A2. Approved Documents each contain a list of definitions relevant to the document. A full list of definitions is contained in this Handbook.

4.1.7 Where an **Objective**, **Functional Requirement** or **Performance** has limited application, the exceptions are identified immediately beside the Clause to which they refer.

4.2 Approved Documents

4.2.1 Approved Documents may contain acceptable solutions and verification methods. In cases where a verification method or acceptable solution has not been adopted, this is stated. Over time additional verification methods and acceptable solutions may be issued by the Building Industry Authority.

4.2.2 Each acceptable solution and verification method is identified according to topic and whether it is an acceptable solution or verification method at the top of each page.

For example:

E1/VM1 Indicates that the topic is E1 “Surface Water”, and the document is verification method number 1.

G13/AS2 Indicates that the topic is G13 “Foul Water”, and the document is acceptable solution number 2.

4.2.3 Approved Documents each include copies of the appropriate New Zealand Building Code Clause and a list of references and definitions relevant to the document, but do not contain explanations of classified uses. These apply to all Approved Documents and are available separately in Clause A1 and the New Zealand Building Code, reproduced in this Handbook.

4.2.4 Advisory comment

Where Approved Documents contain information that is general advice, such comments are identified and in shaded smaller print immediately following the paragraph to which they refer.
Publications Referenced in Handbook and Approved Documents

(Revised by Amendment 6)

For the purposes of New Zealand Building Code compliance, acceptable reference documents include only the quoted edition and specific amendments as listed below. Dates in brackets indicate that the Standard was reviewed and reissued without change that year.

Approved Documents in which the particular references are quoted are identified by the relevant New Zealand Building Code Clause and the number of the verification method or acceptable solution.

For example: B1/VM1/AS3 indicates that the reference occurs in Verification Method 1, and Acceptable Solution 3 of the Approved Document for Clause B1 Structure.

Where references are quoted in the Handbook, these are identified by the letters HB and the relevant section. For example: HB/CS 3 indicates that the reference occurs in compliance schedule CS 3 in the Handbook.

Places where the reference documents are quoted, are more specifically identified by paragraph or table, in the reference list contained in each Approved Document.

### Contents

<table>
<thead>
<tr>
<th>Standards New Zealand</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Standards Institution</td>
<td>19</td>
</tr>
<tr>
<td>Standards Australia</td>
<td>21</td>
</tr>
<tr>
<td>Australian Publications (other than Standards)</td>
<td>25</td>
</tr>
<tr>
<td>Australia/NZ Publications (other than Standards)</td>
<td>25</td>
</tr>
<tr>
<td>British Publications (other than Standards)</td>
<td>25</td>
</tr>
<tr>
<td>International Publications</td>
<td>26</td>
</tr>
<tr>
<td>New Zealand Publications (other than Standards)</td>
<td>27</td>
</tr>
<tr>
<td>United States of America Publications</td>
<td>30</td>
</tr>
</tbody>
</table>

#### Standards New Zealand

- **NZS/BS 21: 1985** Specification for pipe threads for tubes and fittings where pressure-tight joints are made on the threads (metric dimensions)

- **NZS/BS 143, and BS 1256: 1993** Specification for malleable cast iron and cast copper alloy threaded pipe fittings
  - Amend: 1, 2, 3

- **NZS 202: 1966** Specification for steel pipes and joints for hydraulic purposes

- **NZS 380: 1968** Specification for flameproof electric lighting fittings

#### Where quoted

- **G10/AS1, G14/VM1**
- **G10/AS1, G14/VM1**
- **G14/VM1**
- **F6/AS1**
| NZS/BS 476:- | Fire tests on building materials and structures |
| Part 20: 1987 | Method for determination of the fire resistance of elements of construction (general principles) |
| Part 21: 1987 | Methods for determination of the fire resistance of loadbearing elements of construction |
| Part 22: 1987 | Methods for determination of the fire resistance of non-loadbearing elements of construction |

| NZS/BS 970:- | Specification for wrought steels for mechanical and allied engineering purposes |
| Part 1: 1991 | General inspection and testing procedures and specific requirements for carbon, carbon manganese, alloy and stainless steels |

| NZS/BS 1387: 1985 | Specification for screwed and socketed steel tubes and tubulars and for plain end steel tubes suitable for welding or screwing to BS 21 pipe threads (1990) |

| NZS/AS 1397: 1993 | Steel sheet and strip – hot-dipped zinc-coated or aluminium/zinc coated. (This Standard is an acceptable alternative to NZS 3441: 1978.) |

| NZS/BS 1560:- | Circular flanges for pipes, valves and fittings (class designated) |
| Part 3:- | Steel, cast iron and copper alloy flanges |
| Section 3.1: 1989 | Specification for steel flanges |
| Section 3.2: 1989 | Specification for cast iron flanges |

| NZS/AS 1650: 1989 | Hot-dipped galvanised coatings on ferrous articles |

| NZS/AS 1657: 1992 | Fixed platforms, walkways, stairways and ladders – Design, construction and installation (known as the SAA Code for fixed platforms, walkways, stairways, and ladders) |

| NZS/BS 1740:- | Specification for wrought steel pipe fittings (screwed BS 21 – R series thread) |
| Amend: 1, 2, 3 |

| NZS 1900:- | Model building bylaw |
| Ch 11: 1985 | Special structures |
| Division 11.2 | Farm buildings |
| Amend: 1 |

| NZS/AS 2033: 1980 | Installation of polyethylene pipe systems |

| NZS 2295: 1988 | Building papers (breather type) |
| Amend: A |

<p>| Where quoted |
| C/AS1 |
| C/AS1 |
| C/AS1 |
| C/AS1 |
| E1/AS1 |
| G10/AS1, G12/AS1, G14/VM1 |
| E2/AS1 |
| E1/AS1, G10/AS1, G14/VM1 |
| G10/AS1 |
| B1/AS2/AS3 |
| D1/AS1 |
| G10/AS1, G14/VM1 |
| B1/VM1 |
| E1/AS1, G14/VM1 |
| E2/AS1 |</p>
<table>
<thead>
<tr>
<th>Publication</th>
<th>Where quoted</th>
</tr>
</thead>
<tbody>
<tr>
<td>NZS/BS 2494: 1990 Specification for elastomeric seals for joints in pipework and pipelines</td>
<td>E1/AS1, G13/AS1/AS2, G14/VM1</td>
</tr>
<tr>
<td>NZS/BS 2654: 1989 Specification for manufacture of vertical steel welded non-refrigerated storage tanks with butt-welded shells for the petroleum industry</td>
<td>G14/VM1</td>
</tr>
<tr>
<td>NZS 2908:-- Cellulose-cement products Part 1: 1992 Corrugated sheets</td>
<td>E2/AS1</td>
</tr>
<tr>
<td>NZS/BS 2971: 1991 Specification for Class II arc welding of carbon steel pipework for carrying fluids</td>
<td>G10/AS1, G14/VM1</td>
</tr>
<tr>
<td>NZS 3101:-- Concrete structures standard Part 1: 1995 The design of concrete structures</td>
<td>B1/VM1, B2/AS1</td>
</tr>
<tr>
<td>NZS 3106: 1986 Code of practice for concrete structures for the storage of liquids Amend: 1, 2</td>
<td>B1/VM1, G14/VM1</td>
</tr>
<tr>
<td>NZS 3107: 1978 Specification for precast concrete drainage and pressure pipes</td>
<td>B1/VM1, E1/AS1, G13/AS2, G14/VM1</td>
</tr>
<tr>
<td>NZS 3114: 1987 Specification for concrete surface finishes Amend: 1</td>
<td>D1/AS1, G15/AS1</td>
</tr>
<tr>
<td>NZS 3116: 1991 Interlocking concrete block paving</td>
<td>D1/AS1</td>
</tr>
<tr>
<td>NZS 3124: 1987 Specification for concrete construction for minor works</td>
<td>E1/AS1</td>
</tr>
<tr>
<td>NZS 3302: 1983 Specification for ceramic pipes, fittings and joints</td>
<td>E1/AS1, G14/VM1</td>
</tr>
<tr>
<td>NZS 3331: 1972 Specification for quality of vitreous china sanitary appliances</td>
<td>G1/AS1</td>
</tr>
<tr>
<td>NZS 3402: 1989 Steel bars for the reinforcement of concrete</td>
<td>B1/AS3</td>
</tr>
<tr>
<td>NZS 3404:-- Steel structures standard Part 1: 1997 Steel structures standard</td>
<td>B1/VM1</td>
</tr>
</tbody>
</table>
NZS 3441: 1978 Specification for hot-dipped zinc-coated steel coil and cut lengths
Amend: 1, 2 (See also NZS/AS 1397: 1993)

NZS 3501: 1976 Specification for copper tubes for water, gas, and sanitation

NZS 3502: 1976 Specification for copper and copper alloy tubes for general engineering purposes

NZS 3601: 1973 Metric dimensions for timber
Amend: 1, 2

NZS/BS 3601: 1987 Specification for carbon steel pipes and tubes with specified room temperature properties for pressure purposes
Amend: 1, 2

NZS 3602:-

NZS 3603: 1993 Timber structures standard
Amend: 1, 2

NZS 3604: 1999 Timber framed buildings
Amend: 1


NZS 3617: 1979 Specification for profiles of weatherboards, fascia boards, and flooring

NZS 3631: 1988 New Zealand timber grading rules

NZMP 3640: 1992 Specification of the minimum requirements of the NZ Timber Preservation Council Inc.
Amend: 1

NZS/AS 3725: 1989 Loads on buried concrete pipes

NZS 4121: 2001 Design for access and mobility - Buildings and associated facilities

NZS 4203: 1984 Code of practice for general structural design and design loadings for buildings
Amend: 1

NZS 4203: 1992 Code of practice for general structural design and design loadings for buildings
Corrigendum: 1

NZS 4206: 1992 Concrete interlocking roofing tiles

Amend: 1, 2

Where quoted

B1/AS2/AS3, E1/AS1

G10/AS1, G12/AS1

G10/AS1

B1/AS2

G10/AS1, G14/VM1

B2/AS1

B2/AS1

B1/VM1/VM4


B1/VM4

B1/AS1

B1/AS2

B1/AS2/VM4, E2/AS1

B1/VM1

D1/AS1, G1/AS1, G5/AS1

B1/VM1, G10/AS1

B1/VM1/VM4, C/AS1, E2/VM1/AS1

B1/VM1/VM4

E2/AS1

B1/AS3, E2/AS1
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| Amend: 1 | |
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| Amend: 1, 2 | |
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| Amend: 1, 2 | |
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| Amend: 1 | |
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| Amend: 1, 2, 3 | |
| Where quoted | |
| G4/AS1, HB/CS 9 | |
| G4/AS1 | |
| G15/AS1 | |
| H1/AS1 | |
| D2/AS1, F6/AS1, HB/CS 8/1 | |
| B1/Defs | |
| B1/Defs | |
| B1/VM4 | |
| B1/VM1 | |
| E1/AS1, G13/AS2, G14/VM1 | |
| B1/AS1, E1/AS1, G14/VM1 | |
| C/AS1, HB/CS 16 | |
| G10/AS1, G14/VM1 | |
| C/AS1, HB/CS 6 | |
| C/AS1, HB/CS 3 | |
| F7/AS1 | |
| C/AS1, F7/AS1, HB/CS 1 | |
| C/AS1, F7/AS1 HB/CS 1 | |
| G12/AS1 | |
| G12/AS1 | |
| G12/AS1 | |
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  Amend 9
  Apr 2004
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  Amend: 1, 2
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G12/AS1
G12/AS1
G12/AS1
G12/AS1
F8/AS1
G4/AS1,
G10/VM1/AS1,
G11/AS1
C/AS1
F3/AS1
G14/VM1
G14/VM1
G10/AS1, G12/AS1
C/AS1, F6/AS1
G12/AS1
G12/AS1
G12/AS1
F6/VM1,
G7/AS1/VM1,G8/VM1
F6/AS1, F8/AS1,
HB/CS 4
### Publications Referenced

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Part 2: 1990</td>
<td>Methods of tests</td>
<td>G12/AS1</td>
</tr>
<tr>
<td>Part 3: 1990</td>
<td>High temperature tests</td>
<td>G12/AS1</td>
</tr>
<tr>
<td>NZS 7203: 1992</td>
<td>Safety in laboratories – Fume cupboards</td>
<td>G12/AS1</td>
</tr>
<tr>
<td>NZS 7401: 1985</td>
<td>Specification for solid fuel burning domestic appliances</td>
<td>HB/CS 10</td>
</tr>
<tr>
<td>NZS 7601: 1978</td>
<td>Specification for polyethylene pipe (Type 3) for cold water services</td>
<td>G12/AS1, G14/VM1</td>
</tr>
<tr>
<td>NZS 7602: 1977</td>
<td>Specification for polyethylene pipe (Type 5) for cold water services</td>
<td>G12/AS1, G14/VM1</td>
</tr>
<tr>
<td>NZS 7604: 1981</td>
<td>Specification for high density polyethylene drain and sewer pipe and fittings</td>
<td>E1/AS1, G14/VM1</td>
</tr>
<tr>
<td>NZS 7609:-</td>
<td>Acrylonitrile butadiene styrene (ABS) pipes and fittings for pressure applications</td>
<td>E1/AS1, G14/VM1</td>
</tr>
<tr>
<td>NZS 7610: 1991</td>
<td>Blue polyethylene pipes up to nominal size 63 for below ground use for potable water</td>
<td>G12/AS1, G14/VM1</td>
</tr>
<tr>
<td>NZS 7641: 1978</td>
<td>Specification for unplasticized PVC waste and ventilating pipe, fittings and accessories 32 mm, 40 mm and 50 mm</td>
<td>G14/VM1</td>
</tr>
<tr>
<td>NZS 7642: 1971</td>
<td>Specification for unplasticized PVC soil and ventilating pipe, fittings and accessories</td>
<td>E1/AS1, G14/VM1</td>
</tr>
<tr>
<td>NZS 7643: 1979</td>
<td>Code of practice for the installation of unplasticized PVC pipe systems</td>
<td>B1/AS1, E1/AS1, G12/AS1, G13/AS1/AS2, G14/VM1</td>
</tr>
<tr>
<td>NZS 7646: 1978</td>
<td>Specification for polyethylene pipes and fittings for gas reticulation</td>
<td>G10/AS1</td>
</tr>
<tr>
<td>NZS 7648: 1987</td>
<td>Unplasticized PVC pipe and fittings for pressure applications</td>
<td>G14/VM1</td>
</tr>
<tr>
<td>NZS 7649: 1988</td>
<td>Unplasticized PVC sewer and drain pipe and fittings</td>
<td>E1/AS1, G14/VM1</td>
</tr>
<tr>
<td>NZS 7652: 1976</td>
<td>Specification for plastics waste traps</td>
<td>G14/VM1</td>
</tr>
</tbody>
</table>

Amend 9 Apr 2004
<table>
<thead>
<tr>
<th>British Standards Institution</th>
<th>Where quoted</th>
</tr>
</thead>
<tbody>
<tr>
<td>BS 10: 1962 Specification for flanges and bolting for pipes,</td>
<td>G10/AS1</td>
</tr>
<tr>
<td>valves and fittings</td>
<td></td>
</tr>
<tr>
<td>BSCP 143:-</td>
<td></td>
</tr>
<tr>
<td>Part 5: 1964 Zinc</td>
<td>E2/AS1</td>
</tr>
<tr>
<td>Part 12: 1970 Copper. Metric units</td>
<td>E2/AS1</td>
</tr>
<tr>
<td>Part 15: 1973 Aluminium. Metric units</td>
<td>E2/AS1</td>
</tr>
<tr>
<td>(1986) Amend: 4473</td>
<td></td>
</tr>
<tr>
<td>BSDD 175: 1988 Code of practice for the identification of</td>
<td>F1/VM1</td>
</tr>
<tr>
<td>potentially contaminated land and its investigation</td>
<td></td>
</tr>
<tr>
<td>BS 437: 1978 Specification for cast iron spigot and socket drain</td>
<td>G13/AS2</td>
</tr>
<tr>
<td>pipes and fittings</td>
<td></td>
</tr>
<tr>
<td>Amend: 5877</td>
<td></td>
</tr>
<tr>
<td>BS 585:-</td>
<td></td>
</tr>
<tr>
<td>Part 1: 1989 Wood stairs</td>
<td>D1/AS1</td>
</tr>
<tr>
<td>Specification for stairs with closed risers for domestic use,</td>
<td></td>
</tr>
<tr>
<td>including straight and winder flights and quarter or half</td>
<td></td>
</tr>
<tr>
<td>landings</td>
<td></td>
</tr>
<tr>
<td>BS 1470: 1987 Specification for wrought aluminium and</td>
<td>E1/AS1</td>
</tr>
<tr>
<td>aluminium alloys for general engineering purposes: plate, sheet</td>
<td></td>
</tr>
<tr>
<td>and strip</td>
<td></td>
</tr>
<tr>
<td>Amend: 6032</td>
<td></td>
</tr>
<tr>
<td>BS 1521: 1972 Specification for waterproof building papers</td>
<td>E2/AS1</td>
</tr>
<tr>
<td>Amend: 3519</td>
<td></td>
</tr>
<tr>
<td>BS 1600: 1992 Specification for dimensions of steel pipe for</td>
<td>G14/VM1</td>
</tr>
<tr>
<td>the petroleum industry</td>
<td></td>
</tr>
<tr>
<td>BS 1640:-</td>
<td></td>
</tr>
<tr>
<td>Part 3: 1968 Wrought carbon and ferritic alloy steel fittings.</td>
<td>G10/AS1, G14/VM1</td>
</tr>
<tr>
<td>Metric units</td>
<td></td>
</tr>
<tr>
<td>Amend: 905</td>
<td></td>
</tr>
<tr>
<td>Part 4: 1968 Wrought and cast austenitic chromium-nickel steel</td>
<td>G10/AS1, G14/VM1</td>
</tr>
<tr>
<td>fittings. Metric units</td>
<td></td>
</tr>
<tr>
<td>BS 1723:-</td>
<td></td>
</tr>
<tr>
<td>Part 1: 1986 Braising</td>
<td>G10/AS1</td>
</tr>
<tr>
<td>BS 1845: 1984 Specification for filler metals for brazing</td>
<td>G10/AS1</td>
</tr>
<tr>
<td>BS 1965:-</td>
<td></td>
</tr>
<tr>
<td>Part 1: 1963 Carbon steel</td>
<td>G14/VM1</td>
</tr>
<tr>
<td>Amend: 5474, 4169</td>
<td></td>
</tr>
<tr>
<td>BS 2594: 1975 Specification for carbon steel welded horizontal</td>
<td>G14/VM1</td>
</tr>
<tr>
<td>cylindrical storage tanks</td>
<td></td>
</tr>
<tr>
<td>BS 2598:-</td>
<td></td>
</tr>
<tr>
<td>Part 1: 1980 Glass plant, pipeline and fittings</td>
<td>G14/VM1</td>
</tr>
<tr>
<td>Part 2: 1980 Specification for properties of borosilicate glass 3.3</td>
<td>G14/VM1</td>
</tr>
<tr>
<td>and use</td>
<td></td>
</tr>
<tr>
<td>BS 2640: 1982</td>
<td>Specification for Class II oxy-acetylene welding of carbon steel pipework for carrying fluids</td>
</tr>
<tr>
<td>BS 2870: 1980</td>
<td>Specification for rolled copper and copper alloys: sheet, strip and foil</td>
</tr>
<tr>
<td>BS 3799: 1974 (1994)</td>
<td>Specification for steel pipe fittings, screwed and socket-welding for the petroleum industry</td>
</tr>
<tr>
<td>BS 4741: 1971</td>
<td>Specification for vertical cylindrical welded steel storage tanks for low-temperature service: single wall tanks for temperatures down to -50°C</td>
</tr>
<tr>
<td>BS 4790: 1996</td>
<td>Method for determination of the effects of a small source of ignition on textile floor coverings (hot metal nut method)</td>
</tr>
<tr>
<td>BS 4991: 1974</td>
<td>Specification for propylene copolymer pressure pipe</td>
</tr>
<tr>
<td>BS 4994: 1987</td>
<td>Specification for design and construction of vessels and tanks in reinforced plastics</td>
</tr>
<tr>
<td>BS 5287: 1996</td>
<td>Specification for assessment and labelling of textile floor coverings tested to BS 4790</td>
</tr>
<tr>
<td>BS 5378:- Part 1: 1980</td>
<td>Safety signs and colours</td>
</tr>
<tr>
<td>BS 5378:- Part 2: 1984</td>
<td>Specification for colour and design</td>
</tr>
<tr>
<td>BS 5395:- Part 1: 1990</td>
<td>Code of practice for the design of helical and spiral stairs</td>
</tr>
<tr>
<td>BS 5446:- Part 1: 1990</td>
<td>Specification for self-contained smoke alarms and point-type smoke detectors Amends: 6863, 7648, 9628</td>
</tr>
<tr>
<td>BS 5572: 1978</td>
<td>Code of practice for sanitary pipework</td>
</tr>
<tr>
<td>BS 6037: 1990</td>
<td>Code of practice for permanently installed suspended access equipment Amend: 6709</td>
</tr>
<tr>
<td>BS 6283:- Part 1: 1991</td>
<td>Specification for expansion valves for pressures up to and including 10 bar</td>
</tr>
<tr>
<td>BS 6283:- Part 3: 1991</td>
<td>Specification for combined temperature and pressure relief valves for pressures up to and including 10 bar</td>
</tr>
<tr>
<td>BS 6283:- Part 4: 1991</td>
<td>Specification for drop-tight pressure reducing valves of nominal size up to and including DN 54 for supply for pressures up to and including 12 bar</td>
</tr>
<tr>
<td>Standards Australia</td>
<td>Where quoted</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------------</td>
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<tr>
<td>BS 6374:- Part 1: 1985 Specification for lining with sheet thermoplastics</td>
<td>G14/VM1</td>
</tr>
<tr>
<td>BS 6374:- Part 2: 1984 Specification for lining with non-sheet applied thermoplastics</td>
<td>G14/VM1</td>
</tr>
<tr>
<td>BS 6374:- Part 3: 1984 Specification for lining with stoved thermosetting resins</td>
<td>G14/VM1</td>
</tr>
<tr>
<td>BS 6374:- Part 4: 1984 Specification for lining with cold curing thermosetting resins</td>
<td>G14/VM1</td>
</tr>
<tr>
<td>BS 6374:- Part 5: 1985 Specification for lining with rubbers</td>
<td>G14/VM1</td>
</tr>
<tr>
<td>BS 6464: 1984 Specification for reinforced plastics pipes, fittings and joints for process plants</td>
<td>E1/AS1</td>
</tr>
<tr>
<td>BS 6561: 1985 Specification for zinc alloy sheet and strip for building</td>
<td>E2/AS1</td>
</tr>
<tr>
<td>BS 6915: 1988 Specification for design and construction of fully supported lead sheet roof and wall coverings</td>
<td>E2/AS1</td>
</tr>
<tr>
<td>BS 6925: 1988 Specification for mastic asphalt for building and civil engineering (limestone aggregate)</td>
<td>G14/VM1</td>
</tr>
<tr>
<td>BS 7159: 1989 Code of practice for design and construction of glass-reinforced plastics (GRP) piping systems for individual plants or sites</td>
<td>G14/VM1</td>
</tr>
<tr>
<td>BS 8004: 1986 Code of practice for foundations</td>
<td>B1/VM4</td>
</tr>
<tr>
<td>ASD 26: 1972 Tube fittings with Dryseal American standard taper pipe and unified threads for automotive and industrial use</td>
<td>G10/AS1</td>
</tr>
<tr>
<td>AS 1159: 1988 Polyethylene pipes for pressure applications</td>
<td>G14/VM1</td>
</tr>
<tr>
<td>AS 1167:- Part 1: 1993 Filler metal for brazing and braze welding</td>
<td>G10/AS1</td>
</tr>
<tr>
<td>AS 1214: 1983 Hot-dip galvanised coatings on threaded fasteners (ISO metric coarse thread series)</td>
<td>B1/AS2</td>
</tr>
<tr>
<td>AS/NZS 1221: 1997 Fire hose reels</td>
<td>C/AS1</td>
</tr>
<tr>
<td>AS 1229: 1989 Laundry troughs</td>
<td>G2/AS1</td>
</tr>
<tr>
<td>AS 1254: 1991 Unplasticised PVC (uPVC) pipes and fittings for storm and surface water applications</td>
<td>E1/AS1</td>
</tr>
<tr>
<td>AS/NZS 1260: 1999 PVC pipes and fittings for drain, waste and vent applications</td>
<td>G13/AS1/AS2</td>
</tr>
<tr>
<td>AS 1273: 1991 Unplasticized PVC (uPVC) downpipe and fittings for rainwater</td>
<td>E1/AS1</td>
</tr>
<tr>
<td>AS 1357:- Part 2: 1998 Control valves</td>
<td>G12/AS1</td>
</tr>
</tbody>
</table>
Where quoted

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Part 1: 1992 Rigid cellular polyurethane (RC/PUR)
Amend: 1

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Amend: 1

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Amend: 1

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Part 1: 1989 Mechanical jointing fittings
Part 2: 1989 Electrofusion fittings

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Part 1: 1994 Combustibility test for materials
Part 2: 1993 Test for flammability of materials
Part 4: 1997 Fire-resistance tests of elements of building construction

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Part 1: 1997 Limit state design
Amend: 1
Part 2: 1997 Allowable stress design
Amend: 1

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Part 1: 1998 Fire and smoke control in multi-compartment buildings
Part 2: 1991 Mechanical ventilation for acceptable indoor-air quality

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Part 6: 1997 System design, installation and commissioning
Smoke alarms
<table>
<thead>
<tr>
<th>Amendment</th>
<th>Standard</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amend 9 Apr 2004</td>
<td>AS 1691: 1985</td>
<td>Domestic oil-fired appliances – installation</td>
</tr>
<tr>
<td>Amend 9 Apr 2004</td>
<td>AS 1727: 1975</td>
<td>Tank containers (international sizes)</td>
</tr>
<tr>
<td>Amend 9 Apr 2004</td>
<td>AS/NZS 1730: 1996</td>
<td>Washbasins</td>
</tr>
<tr>
<td>Amend 9 Apr 2004</td>
<td>AS 1741: 1991</td>
<td>Vitrified clay pipes and fittings with flexible joints - Sewerage quality</td>
</tr>
<tr>
<td>Amend 9 Apr 2004</td>
<td>AS 1768: 1991</td>
<td>Lightning protection (incorporating Amdt 1)</td>
</tr>
<tr>
<td>Amend 9 Apr 2004</td>
<td>AS 1851:- Part 6: 1997</td>
<td>Management procedures for maintaining the fire precaution features of air handling systems</td>
</tr>
<tr>
<td>Amend 9 Apr 2004</td>
<td>AS/NZS 2032: 1997</td>
<td>Installation of uPVC pipe systems</td>
</tr>
<tr>
<td>Amend 9 Apr 2004</td>
<td>AS 2050: 1995</td>
<td>Fixing of roofing tiles</td>
</tr>
<tr>
<td>Amend 9 Apr 2004</td>
<td>AS 2159: 1995</td>
<td>Rules for the design and installation of piling</td>
</tr>
<tr>
<td>Amend 9 Apr 2004</td>
<td>AS 2220:- Part 2: 1989</td>
<td>System design, installation and commissioning</td>
</tr>
<tr>
<td>Amend 9 Apr 2004</td>
<td>AS 2280: 1991</td>
<td>Ductile iron pressure pipes and fittings</td>
</tr>
<tr>
<td>Amend 9 Apr 2004</td>
<td>AS 2280: 1999</td>
<td>Ductile iron pressure pipes and fittings</td>
</tr>
<tr>
<td>Amend 9 Apr 2004</td>
<td>AS/NZS 2642:- Part 2: 1994</td>
<td>Polybutylene (PB) pipe extrusion compounds</td>
</tr>
<tr>
<td>Amend 9 Apr 2004</td>
<td>AS/NZS 2642:- Part 3: 1994</td>
<td>Polybutylene (PB) pipe for hot and cold water applications</td>
</tr>
<tr>
<td>Amend 9 Apr 2004</td>
<td>AS/NZS 2642:- Part 3: 1994</td>
<td>Mechanical jointing fittings for use with polybutylene (PB) pipes for hot and cold water applications</td>
</tr>
<tr>
<td>Amend 9 Apr 2004</td>
<td>AS 2845:-</td>
<td>Water supply – Mechanical backflow prevention devices</td>
</tr>
<tr>
<td>Amend 9 Apr 2004</td>
<td>AS/NZS 2845:- Part 3: 1993</td>
<td>Field testing and maintenance</td>
</tr>
</tbody>
</table>

<table>
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<td>Off-street parking</td>
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</tr>
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<td>Part 1: 1993 Car parking facilities</td>
<td>D1/AS1</td>
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<td>Part 2: 1989 Commercial vehicle facilities</td>
<td>C/AS1</td>
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<td>G12/AS1</td>
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<td>AS 3147: 1992 Approval and test specification – Electric cables</td>
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<td>AS 3500:-</td>
<td>National plumbing and drainage code</td>
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<td>Part 1: 1992 Water supply</td>
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</tr>
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<td>National plumbing and drainage code</td>
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<td>Amendment: 1</td>
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<td>Part 4.2: 1997 Hot water supply Acceptable solutions</td>
<td>G12/VM1/AS1</td>
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<td></td>
</tr>
<tr>
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<td>G13/AS2</td>
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</tr>
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<td>G1/AS1</td>
<td></td>
</tr>
<tr>
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<td>Slip resistance of pedestrian surfaces</td>
<td></td>
</tr>
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<td>Part 1: 1993 Requirements</td>
<td>D1/VM1/AS1</td>
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</tr>
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<td>Air-handling and water systems of buildings</td>
<td></td>
</tr>
<tr>
<td>– Microbial Control</td>
<td>HB/CS 9</td>
<td></td>
</tr>
<tr>
<td>Part 1: 2002 Design, installation and commissioning</td>
<td>HB/CS 9</td>
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<tr>
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<td>HB/CS 9</td>
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<td>B1/VM4</td>
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<td></td>
</tr>
<tr>
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</tr>
<tr>
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</tr>
<tr>
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</tr>
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<td>G6/VM1</td>
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<td></td>
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<td></td>
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<tr>
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<td></td>
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Miscellaneous Publication
Definitions

Unless the context otherwise requires, words used in the New Zealand Building Code and Approved Documents shall have the meaning given under this section of the Handbook.

**Access chamber** A chamber with working space at drain level through which the drain passes either as an open channel or as a pipe incorporating an inspection point.

**Access point** A place where access may be made to a drain or discharge pipe for inspection, cleaning or maintenance; and may include a cleaning eye, inspection point, rodding point, inspection chamber or access chamber.

**Access route** A continuous route that permits people and goods to move between the apron or construction edge of the building to spaces within a building, and between spaces within a building.

**Accessible** Having features to permit use by people with disabilities.

**Accessible route** An access route usable by people with disabilities. It shall be a continuous route that can be negotiated unaided by a wheelchair user. The route shall extend from street boundary or car parking area to those spaces within the building required to be accessible to enable people with disabilities to carry out normal activities and processes within the building.

**Accessible stairway** A stairway having features for use by people with disabilities. Buildings required to be accessible shall have at least one accessible stairway leading off an accessible route whether or not a lift is provided.

**Accreditation certificate** means an accreditation certificate issued under Part VIII of the Act.

**Active conductor** Any electrical conductor in which the electrical potential differs from that of a neutral conductor or earth.

**Adequate** Adequate to achieve the objectives of the building code.

**Adjacent building** A nearby building, including an adjoining building, whether or not erected on other property.

**Air gap** The vertical distance through air between the lowest point of the water supply outlet and the flood level rim of the equipment or the fixture into which the outlet discharges.

**Air admittance valve** A valve that allows air to enter but not to escape in order to limit pressure fluctuations within the sanitary plumbing or drainage system.

**Allotment** has the meaning ascribed to it by section 4 of the Building Act 1991.

**Alter** in relation to a building, includes to rebuild, re-erect, repair, enlarge and extend; and alteration has a corresponding meaning.

**Amenity** An attribute of a building which contributes to the health, physical independence, and well being of the building's users but which is not associated with disease or a specific illness.

**Appliance hearth** A layer of non-combustible material under or near an appliance. It may be either part of the building structure or an overlay on a combustible floor.

**Asbestos** as defined by the Asbestos Regulations 1983 means:

(a) Actinolite, amosite, chrysotile, crocidolite, fibrous anthophyllite, or tremolite; or

(b) A mixture containing a mineral specified in paragraph a) of this definition; or

(c) A material that is composed wholly or partly of any such mineral; or

(d) A material or article that is contaminated by any such material.

**Atmospheric burner** A burner system where all the air for combustion is induced by the inspirating effect of a gas injector and/or by natural draught in the combustion chamber without mechanical assistance.

**Authority** means the Building Industry Authority established under Part III of the Act.
Backflow: The unplanned reversal of flow of water or mixtures of water and contaminants into the water supply system. See back-siphonage and back-pressure.

Backflow prevention device: A device that prevents backflow.

Back-pressure: A backflow condition caused by the downstream pressure becoming greater than the supply pressure.

Back-siphonage: Backflow condition caused by the supply pressure becoming less than the downstream pressure.

Baluster: A post providing the support for the top and bottom rails of a barrier.

Balustrade: The infill parts of a barrier (typically between floor and top rail).

Basement: Any firecell or part of a firecell below the level of the lowest final exit.

COMMENT:
Because fire safety precautions are increased with increases in escape height, the precautions for basements increase with basement depth. Thus a single floor building with one basement level is treated as a two floor building, a single floor building with three basement levels as a four floor building and the requirements of C/AS1 Table 4.1 shall be applied downwards as opposed to upwards for levels above ground.

Boundary: means any boundary which is shown on a survey plan approved by the Chief Surveyor and which is deposited in the Titles Office whether or not a new title has been issued.

Boundary joist: A joist running along the outer ends of the floor joists.

Branch discharge pipe: A discharge pipe that serves one or more fixture discharge pipes for any one floor.

Branch vent pipe: A vent pipe that serves two or more fixture vent pipes.

Building: has the meaning ascribed to it by section 3 of the Act as follows: meaning of building –

(1) In this Act, unless the context otherwise requires, the term “building” means any temporary or permanent movable or immovable structure (including any structure intended for occupation by people, animals, machinery, or chattels); and includes any mechanical, electrical, or other systems, and any utility systems, attached to and forming part of the structure whose proper operation is necessary for compliance with the building code; but does not include:

(a) Systems owned or operated by a network utility operator for the purpose of reticulation of other property; or

(b) Cranes, including any cranes as defined in regulations in force under the Health and Safety in Employment Act 1992; or

(c) Cablecars, cableways, ski tows, and other similar stand alone machinery systems, whether or not incorporated within any other structure; or

(d) Any description of vessel, boat, ferry, or craft used in navigation, whether or not it has any means of propulsion, and regardless of that means; nor does it include

(i) a barge, lighter, or other like vessel:

(ii) a hovercraft or other thing deriving full or partial support in the atmosphere from the reactions of air against the surface of the water over which it operates:

(iii) a submarine or other thing used in navigation while totally submerged; or
(e) Vehicles and motor vehicles (including vehicles and motor vehicles as defined in section 2(1) of the Transport Act 1962 and section 2(1) of the Transport (Vehicle and Driver Registration and Licensing) Act 1986, but not including vehicles and motor vehicles, whether movable or immovable, which are used exclusively for permanent or long-term residential purposes; or

(ea) Aircraft, including any machine that can derive support in the atmosphere from the reactions of the air otherwise than by the reactions of the air against the surface of the earth; or

(f) Containers as defined in section 2 of the Dangerous Goods Act 1974; or

(g) Magazines as defined in section 2 of the Explosives Act 1957; or

(h) Scaffolding used in the course of the construction process; or

(i) Falsework used in the course of the construction process.

(2) For the purposes of Part IX of this Act a building consent, a code compliance certificate, and a compliance schedule the term building also includes –

(a) Any part of a building; and

(b) Any 2 or more buildings which, on completion of any building work, are intended to be managed as 1 building with a common use and a common set of ownership arrangements.

(3) For the purposes of subclause (2) of this definition, where any utility system or any part of any utility system –

(a) Is external to the building; and

(b) Is also connected to or is intended to be connected to –

(i) A network under the control of a network utility operator; or

(ii) Some other facility which is able to provide for the successful functioning of the utility system in accordance with its intended design – that utility system or that part of the utility system shall be deemed to be part of a building.

(4) Notwithstanding the provisions of subclause (3) of this definition, where a septic tank is connected to a building utility system the septic tank shall be deemed to form part of that building utility system.

Building certifier means a person approved as a building certifier by the Authority under Part VII of the Building Act 1991.

Building code means the building code made under Part VI of the Building Act 1991, being the building code set out in the First Schedule to the Building Regulations.

Building consent means a consent to carry out building work granted by a territorial authority under Part V of the Building Act 1991; and includes all conditions to which the consent is subject.

Building element Any structural and non-structural component or assembly incorporated into or associated with a building. Included are fixtures, services, drains, permanent mechanical installations for access, glazing, partitions, ceilings and temporary supports.

Building height The vertical distance between the floor level of the lowest final exit from the building; and the highest occupied floor level containing or supporting any purpose group other than IE, IA or ID, or penthouses used to enclose stairways, liftshafts or machinery rooms located on or within the roof.
Building performance index (BPI) in relation to a building, means the energy from a network utility operator or a depletable resource (measured in kilowatt-hours per square metre of floor area and per degree-day, and calculated using the Building Research Association of New Zealand’s Annual Loss Factor Design Manual 1990 or some other method that can be correlated with that manual) needed to maintain the building at a constant internal temperature for the period from 1 May to the close of 31 August under the following standard conditions:

(a) A continuous temperature of 20°C throughout the building.

(b) An air change rate of 1 change per hour or the actual air leakage rate, whichever is the greater.

(c) A heat emission contribution arising from internal heat sources for the period being considered of 1000 kWh for the first 50 m² of floor area and 10 kWh for every additional square metre of floor area.

(d) No allowance for:
   (i) carpets, or
   (ii) blinds, curtains, or drapes, on windows.

(e) Windows to have a shading coefficient of 0.6 (made up of 0.8 for windows and recesses and 0.75 for site shading).

Building statement of fitness means a statement issued by a territorial authority under section 44(4)(c) of the Act.

Building work means work for or in connection with the construction, alteration, demolition, or removal of a building; and includes sitework.

Cavity barrier A construction provided to close openings within a concealed space against the passage of fire, or to restrict the spread of fire within such spaces.

Check valve (or non-return valve) A valve that permits flow in one direction but prevents a return flow and is part of a backflow device.

Chimney A non-combustible structure which encloses one or more flues, fireplaces or other heating appliances.

Chimney back The non-combustible wall forming the back of a fireplace.

Chimney base That part of a chimney which houses the fireplace.

Chimney breast The front fireplace wall construction above the fireplace opening.

Chimney jambs The side walls of a fireplace.

Cladding The exterior weather-resistant surface of a building.

Classified use means a classified use listed in clause A1 of the building code.

Cleaning eye A small diameter access point usually formed as part of a fitting or trap.

Code compliance certificate means a certificate to that effect issued by a territorial authority or a building certifier pursuant to section 43 of the Building Act 1991.

Combined waste pipe A discharge pipe which serves two or more waste pipes.

Combustible See non-combustible.

Common ramp A ramp which is used, or intended to be used by the public whether as of right or not, and is not a service ramp or accessible ramp.

Common stairway A stairway which is used, or intended to be used, by the public whether as of right or not, and is not a private stairway, service stairway or accessible stairway.

Compliance schedule means a compliance schedule issued under section 44 of the Building Act 1991.

Compound In relation to the storage of liquid dangerous goods, a basin, pit, excavation, hollow or enclosure constructed of concrete, brick, clay, earth, or similar incombustible material which will effectively retain the liquid dangerous goods if they leak from their container(s).
**Concealed space** Any part of the space within a building that cannot be seen from an occupied space.

**COMMENT:**
This term includes any ceiling space, roof space, space under a raised floor (such as computer rooms, floors, or stages), plenums, spaces under a tiered floor, “left-over spaces” created when some structural element or the like has been covered in; small service or duct spaces within the volume of a firecell and the like, but not a protected shaft.

**Construct** in relation to a building, includes to build, erect, prefabricate, and relocate; and **construction** has a corresponding meaning.

**Contaminant** includes any substance (including gases, liquids, solids, and microorganisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar, or other substances, energy, or heat

(a) When discharged into water, changes or is likely to change the physical, chemical, or biological condition of water, or

(b) When discharged onto or into land or into air, changes or is likely to change the physical, chemical, or biological condition of the land or air onto or into which it is discharged.

This is the meaning ascribed to it by the Resource Management Act 1991.

**Controlled area** That area where the use of radioactive material or an irradiating apparatus may, in the opinion of the licensee, present a hazard to persons within that area.

**Cool location** means a location in New Zealand where the degree-day total is 920 or more.

**Cross connection** Any actual or potential connection between a potable water supply and a source of contamination.

**Damp-proof course (DPC)** A narrow strip (generally up to 300 mm wide) of durable vapour barrier placed between building elements to prevent the passage of moisture from one element to another.

**Damp-proof membrane (DPM)** A sheet material, coating or vapour barrier, having a low water vapour transmission, and used to prevent water and water vapour movement through concrete in contact with the ground. (Also known as a concrete underlay.)

**Dangerous goods** Any materials included in the UN classification, classes 2-5.

**Dangerous goods workroom** A room reserved primarily for the use of dangerous goods of Class 3(a) or Class 3(b) (i.e. flammable liquids).

**Dead end** That part of an open path where escape is possible in only one direction.

**COMMENT:**
A dead end ceases to exist where the escape route reaches a point in the open path which offers alternative directions of travel, or at a final exit or an exitway.

**Degree-day** in relation to any location on any day, –

(a) If a base temperature of 15ºC is greater than the mean of the maximum and minimum outdoor temperatures at that location on that day, means the number of degrees Celsius by which that base temperature is greater than that mean.

(b) If a base temperature of 15ºC is not greater than the mean of the maximum and minimum outdoor temperatures at that location on that day, means zero.

**Degree-day total** in relation to any location, means the sum of the degree-days for that location for the period of 1 May to 31 August, as derived from Average Degree-day Tables – Selected NZ Stations (Miscellaneous Publication 159, 1978 of the New Zealand Meteorological Service).

**Depot** In relation to dangerous goods, a building, place, or vessel as may be prescribed, or as may be approved by an Inspector (of dangerous goods), as a depot for the storage of dangerous goods.

**Developed length** The total length along the centre line of a pipe including fittings and bends.
Diameter (or bore) The nominal internal diameter.

Discharge pipe Any pipe that is intended to convey discharge from sanitary fixtures or sanitary appliances.

Discharge stack A discharge pipe that has one or more discharge pipe connections, and which is vented at one end via a discharge stack vent.

Discharge stack vent A vent pipe connected to the top of the discharge stack.

Discharge unit The unit of measure for the discharge (hydraulic load) in the plumbing system, and is based on the rate, duration and frequency of discharge from a sanitary fixture or sanitary appliance.

Doorset A complete assembly comprising a door leaf or leaves including any glazed or solid panels adjacent to or over the leaves within the door frame including hardware or other inbuilt features; and a door frame, if any, with its fixings to the wall and, for a sliding or tilting door, all guides and their respective fixings to the lintel, wall or sill.

Drain A pipe normally laid below ground level including fittings and equipment and intended to convey foul water or surface water to an outfall.

Drainage access area means a space within a building containing an inspection chamber or access chamber, and which is isolated from other enclosed spaces within the building.

Drain vent pipe Any pipe which is intended to permit the movement of air into and out of the drain and sewer.

Draught diverter A device, without moving parts, fitted in the flue of an appliance for isolating the combustion system from the effects of pressure changes in the secondary flue.

Durable Resistant to wear and decay.

Electrical installation Any electrical fixed appliances, and components used in the reticulation of electricity, which are intended to remain permanently attached to and form part of the building.

Electrical supply system The source of electricity external to the electrical installation.

Energy work means –
(a) Gasfitting;
(b) Prescribed electrical work.

Energy work certificate means a certificate of the kind referred to in paragraph (e) or paragraph (f) of section 50(1) of the Act.

Escape height The height between the floor level in the firecell being considered and the floor level of the required final exit which is the greatest vertical distance above or below that firecell.

COMMENT:
1. It is necessary only to use the greatest height to the exits required for the firecell being considered, even though the building may have other final exits at lower or higher levels.
2. Where the firecell contains intermediate floors, or upper floors within household units the escape height shall be measured from the floor having the greatest vertical separation from the final exit.

Escape route A continuous unobstructed route from any occupied space in a building to a final exit to enable occupants to reach a safe place, and shall comprise one or more of the following: open paths, protected paths and safe paths.

COMMENT:
Doors are not obstructions in an escape route provided they comply with C/AS1 Part 3 and D1/AS1.

Essential service In the context of an electrical installation means emergency lighting, firemen’s lifts, alarms, water pumps, sprinklers, detectors, ventilation systems and public address systems necessary for the safety of people in buildings.

Estimated value The value of building work shall be the aggregate of the values, determined in accordance with section 10 of the Goods and Services Tax Act 1985, of all goods and services to be supplied for that building work.
Evacuation time The time taken by the occupants of the building to evacuate the building to a final exit.

Exitway All parts of an escape route protected by fire or smoke separations, or by distance when exposed to open air, and terminating at a final exit.

External wall Any exterior face of a building within 30° of vertical, consisting of primary and/or secondary elements intended to provide protection against the outdoor environment, which may also contain unprotected areas.

COMMENT: A roof is an external wall if within 30° of the vertical.

Factor of safety in relation to any building means the ratio of resisting forces to applied forces for a given loading condition. It is generally expressed to two significant figures.

Falsework used in the course of the construction process means any temporary structure or framework used in construction work to support materials, equipment, or any assembly; and includes the use of steel tubes, adjustable steel props, proprietary frames, or any other means to support a permanent structure during its construction until it becomes self-supporting; but does not include scaffolding or cranes for support.

Final exit The point at which an escape route terminates by giving direct access to a safe place.

COMMENT: Final exits are commonly the external doors from a ground floor, but this applies only if such doors open directly onto a safe place. If a safe place can be reached only by passing down an alley, or across a bridge, then the final exit is not reached until the end of such an alley or bridge. Final exits, therefore, should be seen strictly as a point of arrival, rather than as any particular element of a building. They are determined entirely by the definition of safe place.

Fire The state of combustion during which flammable materials burn producing heat, toxic gases, or smoke or flame or any combination of these.

Firecell Any space including a group of contiguous spaces on the same or different levels within a building, which is enclosed by any combination of fire separations, external walls, roofs, and floors.

COMMENT: Floors, in this context, includes ground floors and those in which the underside is exposed to the external environment (e.g. when cantilevered). Note also that internal floors between firecells are fire separations.

Firecell rating (F) The time in minutes for which it is intended to prevent fire spreading to another firecell within a building, or causing structural collapse within the firecell due to failure of any primary or secondary element.

COMMENT:
1. The purpose of the firecell rating is to prevent premature collapse of elements of structure in order to protect:
   a) The occupants, some of whom may have to remain in the building for some time while evacuation proceeds, particularly if the building is a large one.
   b) Adjacent household units and sleeping areas in the building of fire origin.
   c) Fire fighters engaged on rescue and fire fighting operations (although this is limited because property protection in the building of origin is not a matter covered by the New Zealand Building Code except as required by b) above).
2. The use of the F rating to determine the FRR of a primary or secondary element is discussed in C/AS1 Part 5.

Fire damper A device with a specified FRR complete with fixings and operating mechanism for automatically closing off an airway where it passes through a fire separation.

COMMENT: An airway may be a duct, plenum, ceiling space, roof space or similar construction used for the passage of ventilating air.

Fire door A doorset, single or multi-leaf, having a specific fire resistance rating, and in certain situations a smoke control capability, and forming part of a fire separation. The door, in the event of fire, if not already closed, will close automatically and be self latching.
**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 category (FHC)** The number (graded 1 to 4 in order of increasing severity), used to classify purpose groups or activities having a similar fire hazard, and where fully developed fires are likely to have similar impact on the structural stability of the building.

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

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

**Fire load energy density (FLED)** The total fire load divided by the firecell floor area. In this calculation the floor area shall include circulation and service spaces, but exclude exitways and protected shafts.

**Fireplace** A space formed by the chimney back, the chimney jambs, and the chimney breast in which fuel is burned for the purpose of heating the room into which it opens.

**Fire resistance rating (FRR)** The term used to describe the minimum fire resistance of primary and secondary elements as determined in the standard test for fire resistance, or in accordance with a specific calculation method verified by experimental data from standard fire resistance tests. It comprises three numbers giving the time in minutes for which each of the criteria stability, integrity and insulation are satisfied, and is presented always in that order.

**Fire resisting closure** A fire rated device or assembly for closing an opening through a fire separation. It shall have a FRR of no less than that required for the fire separation.

**Fire resisting glazing** Fixed or openable glazing, complete with frame and fixings, Mullions, transoms and glazing beads, with a specified FRR and complying with NZS 4232: Part 2.
Definitions

Fire safety precautions (FSPs) The combination of all methods used in a building to warn people of an emergency, provide for safe evacuation, and restrict the spread of fire, and includes both active and passive protection.

COMMENT: This definition has the same meaning and wording as the definition of “fire safety systems” in the Building Regulations.

Fire separation Any building element which separates firecells or firecells and safe paths, and provides a specific fire resistance rating.

Fire shutter A fire rated device, complete with fixings and operating mechanism, for automatically closing off an opening in a fire separation or protected shaft.

Fire stop A material or method of construction used to restrict the spread of fire within or through fire separations, and having a FRR no less than that of the fire separation.

COMMENT: Fire stops are mainly used to seal around penetrations, but can also be used to seal narrow gaps between building elements.

Fixture An article intended to remain permanently attached to and form part of a building.

Fixture discharge pipe A discharge pipe that is used to convey waste from a single sanitary fixture or sanitary appliance to a branch discharge pipe, a discharge stack, or directly to a drain. It does not include any pipes forming part of a sanitary appliance.

Fixture vent pipe (trap vent) A vent pipe that is connected to a fixture discharge pipe or the sanitary fixture itself.

Flame barrier A material or system applied or installed to protect another building element from flame contact. The protection shall be effective for no less than 10 minutes exposure in the standard test for fire resistance.

COMMENT: 1. The principal use of flame barriers is to delay ignition of foamed plastics materials.

Flame safeguard system A system consisting of a flame detector(s) plus associated circuitry, integral components, valves and interlocks the function of which is to shut off the fuel supply to the burner(s) in the event of ignition failure or flame failure.

Flammability index (FI) That index number for flammability, which is determined according to the standard test method for flammability of thin flexible materials.

Flood level rim The top edge at which water can overflow from equipment or a fixture.

Floor waste An outlet located at the low point of a graded floor or in a level floor designed to receive accidental or intentional discharges.

Floor waste pipe A pipe that receives the discharge from a floor waste and that discharges outside the building or to the foul water drainage or sanitary plumbing system.

Flue The passage through which the products of combustion are conveyed to the outside.

Flue liner Pipes or linings of fire clay, metal or fire brick, surrounding flues.

Flue system A series of interconnecting flue pipe casings which form a safe passage (flue) for conveying products of combustion from within an appliance to the outside of a building or structure.

Foamed plastics Combustible foamed plastic polymeric materials of low density (typically less than 100 kg/m³) and are classified as cellular polymers which are manufactured by creating a multitude of fine voids (typically 90 to 98%) distributed more or less uniformly throughout the product. Examples of foamed plastics are latex foams, polyethylene foams, polyvinyl chloride foams, expanded or extruded polystyrene foams, phenolic foams, urea-formaldehyde foams, polyurethane foams and polychloropene foams.
Definitions

**COMMENT:**
1. Foamed plastics may be rigid or flexible, but rigid foams are the most common in building products. When burnt they tend to generate high levels of heat energy (kJ/kg) and varying quantities of smoke and other toxic gases depending on the nature and volume of the particular product.
2. Where doubt exists as to whether a building material is foamed plastics, an opinion should be sought from a person or organisation with appropriate skill and experience in fire engineering. That opinion should be included with the building consent application to the territorial authority.

**Forced or induced draught appliance** An appliance where all or part of the air for combustion is provided by a fan or other mechanical device which is an integral part of the combustion system.

**Foul water** The discharge from any sanitary fixture or sanitary appliance.

**Foul water drainage system** Drains, joints and fittings normally laid underground and used specifically for the conveyance of water from the plumbing system to an outfall.

**Free outlet (push through)** In the context of storage water heaters means a water heater with a tap on the cold water inlet so designed that the hot water is discharged through an open outlet.

**Functional requirements** in relation to a building, means those functions which a building is to perform for the purposes of the Act.

**Gantry** A structure covering a public way providing protection from both the side and overhead.

**Gasfitting** has the same meaning as in section 2 of the Plumbers, Gasfitters, and Drainlayers Act 1976.

**Gather** That part of a chimney where the transition from fireplace to stack occurs.

**Good ground** means any soil or rock capable of permanently withstanding an ultimate bearing pressure of 300 kPa (i.e. an allowable bearing pressure of 100 kPa using a factor of safety of 3.0), but excludes:

- a) Potentially compressible ground such as topsoil, soft soils such as clay which can be moulded easily in the fingers, and uncompacted loose gravel which contains obvious voids.
- b) Expansive soils being those that have a liquid limit of more than 50% when tested in accordance with NZS 4402 Test 2.2, and a linear shrinkage of more than 15% when tested, from the liquid limit, in accordance with NZS 4402 Test 2.6, and
- c) Any ground which could forseeably experience movement of 25 mm or greater for any reason including one or a combination of: land instability, ground creep, subsidence, seasonal swelling and shrinking, frost heave, changing ground water level, erosion, dissolution of soil in water, and effects of tree roots.

**Grease trap** A device designed to intercept grease in a foul water discharge.

**Group sleeping area** A firecell containing communal sleeping accommodation for a specified number of people who may or may not be known to one another. Partial subdivision within the firecell is permitted with specific limitation including that no occupied space is fully enclosed and all occupied spaces are open and available to all occupants at any time. A group sleeping area firecell may include spaces for associated direct support functions, such as hygiene facilities and tea making (not cooking) activities, for use by the occupants. It does not include spaces, such as waiting rooms, lounges, dining rooms or kitchens, providing a communal service function for all occupants.
1. Examples of group sleeping area firecells are dormitories, hospital wards, wharenui, backpacker hostels and ski lodges.

2. The maximum number of people permitted in a group sleeping area firecell, and the permitted form of subdivision, will depend on the ability of the occupants to react to the presence of fire and escape to a safe place.

Gully trap A fitting designed to prevent foul air escaping from the drainage system and used to receive the discharge from waste pipes.

Habitable space A space used for activities normally associated with domestic living, but excludes any bathroom, laundry, water closet, pantry, walk-in wardrobe, corridor, hallway, lobby, clothes-drying room, or other space of a specialised nature occupied neither frequently nor for extended periods.

Habitable work Any building where people live, work or may assemble, but does not include buildings associated with the storage or use of dangerous goods on the same site.

Handrail A rail to provide support to, or assist with the movement of a person.

Hazardous Creating an unreasonable risk to people of bodily injury or deterioration of health.

Hazardous substance Has the meaning ascribed to it by the Fire Service Act 1975.

Hearth The insulating floor under the fire and in front and at the sides of the fireplace.

Hoarding A structure alongside a public way providing side protection but no overhead protection.

Hold-open device A device which holds a smoke control door or fire door open during normal use, but is released by deactivating the device by an automatic fire detection system, allowing the door to close automatically under the action of a self-closing device.

Household unit means any building or group of buildings, or part of any building or group of buildings, used or intended to be used solely or principally for residential purposes and occupied or intended to be occupied exclusively as the home or residence of not more than one household; but does not include a hostel or boardinghouse or other specialised accommodation.

HVAC An abbreviation for heating, ventilating and airconditioning.

Ignitability index (Ig) That index number for ignitability which is determined according to the standard test method for measuring the properties of lining materials.

Illuminance The luminous flux falling onto a unit area of surface.


Impervious That which does not allow the passage of moisture.

In bulk In relation to liquid or gaseous dangerous goods, product contained in receptacles of a liquid capacity greater than 250 litres. Conversely, non-bulk means contained in receptacles of 250 litres capacity or less.

Inspection chamber A chamber with working space at ground level through which the drain passes either as an open channel or as a pipe incorporating an inspection point.

Inspection point A removable cap at drain level through which access may be made for cleaning and inspecting the drainage system.

Insulating material A material that has a thermal conductivity of less than 0.07 W/mK.
Insulation
In the context of fire protection, the time in minutes for which a prototype specimen, of a fire separation when subjected to the standard test for fire resistance, has limited the transmission of heat through the specimen.

Integrity
In the context of fire protection, the time in minutes for which a prototype specimen, of a fire separation when subjected to the standard test for fire resistance, has prevented the passage of flame or hot gases.

COMMENT:
The precise meaning of integrity depends on the type of building elements being treated and how it is defined in the standard test being used.

Intended use of a building includes:

a) Any reasonably foreseeable occasional other use that is not incompatible with the intended use; and

b) Normal maintenance; and

c) Activities taken in response to fire or any other reasonably foreseeable emergency – but does not include any other maintenance and repairs or rebuilding.

Interceptor trap
A device which will separate and retain desired liquids and solids from a liquid stream and which will provide a water barrier to prevent foul air or gas from entering any downstream system.

Intermediate floor
Any upper floor within a firecell and which is not fire separated from the floor below. Upper floors within household units need not meet the specific fire safety requirements which apply to intermediate floors in all other situations.

COMMENT:
1. An intermediate floor may be open to the firecell or enclosed with non-fire rated construction. If enclosed with fire rated walls another firecell is created.

2. Household units occur only in purpose groups SR and SH. Life safety provisions are governed by the limitations in permitted open path lengths.

Isolation distance
The minimum physical distance by which an installation, or specified part of an installation, containing dangerous goods must be separated from any other specified place, or building.

Kerb ramp
Means a short ramp either cutting through a kerb or built up to the kerb.

Land held under the same title
Includes a piece of land, or a building or part of a building, or both, that is:

(a) A unit under the Unit Titles Act 1972, or

(b) Leased under a crosslease registered under the Land Transfer Act 1952, or

(c) Leased under a company lease registered under the Land Transfer Act 1952.

Licensee
A person holding a license issued under the Radiation Protection Act 1965 and for the time being in force.

Limited area atrium
A single firecell in which individual occupied spaces at different levels open onto a common enclosed space. Limitations are placed on the number of intermediate floors (no more than two levels), individual floor areas and permitted occupant load, depending on the provisions for smoke detection, smoke control and the means of escape from fire.

COMMENT:
Typical limited area atrium buildings are small shopping malls, and motel complexes with a central atrium feature open to a number of floors.

Lock-out
The safety shut down condition of the control system such that re-start cannot be accomplished without manual resetting.

Lower flammable limit (LFL)
(Also referred to as Lower Explosive Limit (LEL)). The lowest percentage of hydrocarbon or flammable vapour in the air which will readily ignite on introduction of an ignition source.

Main private stairway
A private stairway intended to provide access to and between frequently used spaces such as living areas, kitchens and garages, and includes all exterior private stairways.
Means of escape from fire in relation to a building which has a floor area, means continuous unobstructed routes of travel from any part of a floor area of that building to a place of safety; and includes all active and passive protection features required to assist in protecting people from the effects of the fire in the course of their escape.

Minister means the Minister of Internal Affairs.

Minor private stairway A private stairway not on a main thoroughfare, and intended to provide infrequent access to a single room which is not a living area or kitchen.

Multi-unit dwelling Applies to a building or use which contains more than one separate household or family.

COMMENT: For fire-safety purposes each household unit is a separate firecell.

Natural draught The flow produced by the tendency of warmed gases to rise.

Network utility operator means a person who:

(a) Undertakes the distribution or transmission by pipeline of natural or manufactured gas, petroleum, or geothermal energy; or

(b) Is an electricity operator or electrical distributor as defined by section 2(1) of the Electricity Act 1992 for the purposes of any works defined by that Act; or

(c) Undertakes the piped distribution of potable water for supply; or

(d) Is the operator of a sewerage system or a stormwater drainage system.

Nominal pile width The least width of a pile in side view and is equal to the diameter in round piles.

Non-bulk See in bulk.

Non-combustible Materials shall be classified as non-combustible or combustible when tested to:

AS 1530 - Part 1.

Non-return valve A valve that permits flow in one direction but prevents a return flow and is part of a hot or cold water system.

Nosing The rounded projecting edge of a stair tread.

Notional boundary The boundary which for fire safety purposes, is assumed to exist between two buildings on the same property under a single land title.

COMMENT: A notional boundary may be located anywhere between the two buildings, and once chosen determines the unprotected area permitted in each building. Locating it closer to one building than the other, may be an advantage where it is planned for a rear wall without windows to face the front wall of the other building requiring windows.

Occupy load The greatest number of people likely to occupy a particular space within a building. It is determined by:

a) Multiplying the number of people per m² (occupant density) for the activity being undertaken, by the total floor area, or

b) For sleeping areas, counting the number of beds, or

c) For fixed seating areas, counting the number of seats.

Occupied space Any space within a building in which a person will be present from time to time during the intended use of the building.

Open path That part of an escape route (including dead ends) within a firecell where occupants may be exposed to fire or smoke while making their escape.

Open space includes land on which there is and will be no buildings and which has no roof over any part of it other than overhanging eaves.

Open vented storage water heater A water heater incorporating a vent pipe which is permanently open to the atmosphere.
**Other property** means any land or buildings or part thereof which are:

(a) Not held under the same allotment; or
(b) Not held under the same ownership – and includes any road.

**Outdoor air** Air as typically comprising by volume:

i) oxygen 20.94%
ii) carbon dioxide 0.03%
iii) nitrogen and other inert gases 79.03%.

**Outfall** That part of the disposal system receiving surface water or foul water from the drainage system. For foul water, the outfall may include a sewer or a septic tank. For surface water, the outfall may include a natural water course, kerb and channel, or soakage system.

**Over-pressure protection** Devices preventing the pressure in piping or appliances from exceeding a predetermined value.

**Owner** in relation to any land, including any buildings on that land, means the person who is for the time being entitled to the rack rent thereof or who would be so entitled if the land were let to a tenant at a rack rent; and, for the purposes of sections 30, 33, and 43 of the Act, includes the:

(a) Owner of the fee simple of the land; and
(b) Any person who has agreed in writing, whether conditionally or unconditionally, to purchase the land or any leasehold estate or interest in the land, or to take a lease of the land, while the agreement remains in force, and **ownership** has a corresponding meaning.

**Penetration** A pipe, cable or duct passing through an opening in a fire separation.

**People with disabilities** means any person who suffers from physical or mental disability to such a degree that he or she is seriously limited in the extent to which he or she can engage in the activities, pursuits, and the processes of everyday life.

**Performance criteria** in relation to a building, means those qualitative or quantitative criteria which the building is to satisfy in performing its functional requirement.

**Person** includes the Crown, a corporation sole, and also a body of persons, whether corporate or unincorporated.

**Piping system** An assembly of pipes, pipe fittings, gaskets, bolting and pipe supports.

**Pitch line** The line joining the leading edge or nosings (if any) of successive stair treads within a single flight of a stairway.

**Plans and specifications** means the drawings, specifications, and other documents according to which a building is proposed to be constructed, altered, demolished, or removed, including proposed procedures for inspection during construction, alteration, demolition, or removal, and also including (in respect of construction or alteration):

(a) The intended use of the building; and
(b) The design features or systems which the applicant considers will be required to be included in any compliance schedule issued in terms of section 44 of the Act; and
(c) The proposed procedures for inspection and routine maintenance for the purposes of that compliance schedule in respect of those design features or systems.

**Plumbing system** Pipes, joints and fittings laid above ground and used for the conveyance of foul water to the foul water drain, and includes vent pipes.

**Potable (and potable water)** Water that is suitable for human consumption.

**Prescribed electrical work** has the same meaning as in section 2(1) of the Electricity Act 1992.

**Pressure control valve** A pressure limiting valve or pressure reducing valve.
**Primary element** A building element providing the basic load bearing capacity to the structure, and which if affected by fire may initiate instability or premature structural collapse.

**Principal user** A member of the primary group for which a building was constructed, and therefore explicitly excludes persons or groups of persons providing care or control of that principal user group.

**Privacy** The situation of being withdrawn from view.

**Private stairway** A stairway used, or intended to be used, by the occupants of a single household unit.

**Privy** A private room containing a receptacle (other than a WC) or an excavation for excreted liquid or solid human waste, and with a means of disposal or containment of the waste.

**Producer statement** means any statement supplied by or on behalf of an applicant for a building consent or by or on behalf of a person who has been granted a building consent that certain work will be or has been carried out in accordance with certain technical specifications.

**Property** includes land, buildings, and goods; but does not include incorporeal forms of property.

**Protected path** That portion of an exitway within a firecell which is protected from the effects of smoke by smoke separations.

**Protected shaft** A space, other than a safe path, enclosed by fire separations or external walls used to house building services, lifts, or conveyors which pass from one firecell to another.

**Public place** Any place which is freely open to and frequented by the public, but excludes private property where the access of the public to dangerous goods can be controlled by the licensee.

**Purpose group** The classification of spaces within a building according to the activity for which the spaces are used.

**R-value** The common abbreviation for describing the values of both thermal resistance and total thermal resistance.

**Railway line** has the meaning ascribed to it by section 2 of the Transport Services Licensing Act 1989.

**Reflectance** The ratio of the flux reflected from a surface to the flux incident on it.

**Regulations** means regulations in force under Part VI of the Act.

**Regulator** A device which automatically regulates the pressure or volume of gas passing through it to a predetermined level.

**Relevant boundary** means the boundary of an allotment which is other property in relation to the building concerned and from which is measured the separation between the building and that other property. For the external wall of any building, the relevant boundary shall be the nearest of the following boundaries:

(a) A boundary of a freehold allotment, except that where the other property is a road, railway line or public open space the relevant boundary is the boundary on the far side of that other property;

(b) A boundary of a cross lease or of a company lease or licence, except that where the other property is open space to which the lessee or licensee of the building concerned has an exclusive right of access and occupation or to which two or more occupiers have rights of access and occupation the relevant boundary is the boundary on the far side of that other property;

(c) A boundary shown on a unit plan excluding a boundary between a principal unit and its accessory unit, except that where the other property is open space which is common property, the relevant boundary is the boundary on the far side of that other property.
COMMENT:

1. Where an easement, such as a right of way, occurs within an allotment, the relevant boundary shall remain the same as if the easement did not exist.

2. Boundaries within a cross-lease or company lease or licence are shown on a survey plan. In some cases the boundary is the external wall or roof of a building.

3. The unit title boundaries of principal units, accessory units, and common property are shown in the unit plan. A boundary is frequently an internal or external wall, an upper floor, or the roof of a building.

4. A wall along a boundary between two allotments is called a “party wall” when the owners of the allotments each have legal rights in respect of that wall registered by way of easements on one or both titles. An internal wall between cross-leases, company leases, or unit titles, or between one of them and common property, is not generally called a party wall but in that case also the lessees, unit title holders, or corporate body concerned each have legal rights in respect of that wall. Such a wall separates areas which are other property in relation to each other, but the wall itself is part of each property. The fire protection consequence of that legal concept is that such a wall can be regarded as a fire separation providing protection against horizontal fire spread in each direction. In other words, that wall may provide the appropriate FRR instead of each property having its own wall of that FRR.

Relief vent A vent pipe which is connected to a discharge stack below the lowest branch connection and which connects at its upper end to the discharge stack vent or terminates as an open vent.

Road has the meaning ascribed to it by section 315 of the Local Government Act 1974 and includes a public place and also includes a motorway.

Rodding point A removable cap at ground level through which access may be made for cleaning and inspecting the drainage system.

Room-sealed appliance An appliance designed so that air for combustion neither enters from, nor combustion products enter into, the room in which the appliance is located.

Safe path That part of an exitway which is protected from the effects of fire by fire separations, external walls, or by distance when exposed to open air.

Safe place A place of safety in the vicinity of a building, from which people may safely disperse after escaping the effects of a fire. It may be a place such as a street, open space, public space or an adjacent building.

Safety colour (green, red or yellow) A colour of specified properties to which a safety meaning is attributed.

Safety glass means a glass so treated or combined with other materials as to reduce the likelihood of injury to persons when it is cracked or broken.

Safety shut-off system An arrangement of valves and associated control systems which shuts off the supply of gas when required by a device which senses an unsafe condition.

Safety sign A particular type of sign which comprises a geometric form and a safety colour, together with a safety symbol or text (that is, words, letters, numbers or a combination of these) and gives a particular safety message.

Safety symbol means a graphic symbol used in a safety sign.

Sanitary appliance An appliance which is intended to be used for sanitation and which is not a sanitary fixture. Included are machines for washing dishes and clothes.

Sanitary fixture Any fixture which is intended to be used for sanitation.

Sanitation The term used to describe the activities of washing and/or excretion carried out in a manner or condition such that the effect on health is minimised, with regard to dirt and infection.
**Scaffolding** used in the course of the construction process means any structure, framework, swinging stage, suspended scaffolding, or boatswain’s chair, of a temporary nature, used or intended to be used for the support or protection of workers engaged in or in connection with construction work for the purpose of carrying out that work, or for the support of materials used in connection with any such work; and includes any plank, coupling, fastening, fitting, or device used in connection with the construction, erection, or use of scaffolding.

**Screen wall** Any wall or barrier which effectively diverts flammable vapours by virtue of its width, height and position, or which prevents the spread of fire from one place to another.

**Secondary element** A building element not providing load bearing capacity to the structure and if affected by fire, instability or collapse of the building structure will not occur.

**Secondary flow path** The path over which surface water will follow if the drainage system becomes overloaded or inoperative.

**Secondary private stairway** A private stairway other than a main or minor private stairway, intended to provide access to another floor containing only bedrooms, bathroom or similar accommodation.

**Secretary** has the same meaning as in section 2(1) of the Electricity Act 1992 or in section 2(1) of the Gas Act 1992, as the case may require.

**Service ramp** means a ramp that is used, or intended to be used, infrequently by service personnel to gain access to spaces for the purposes of maintenance and the movement of goods.

**Service stairway** means a stairway that is used, or intended to be used, infrequently by service personnel to gain access to spaces for the purposes of maintenance and the movement of goods.

**Sewer** A drain that is under the control of, or maintained by, a network utility operator.

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

**Smokecell** A space within a building which is enclosed by an envelope of smoke separations, or external walls, roofs, and floors.

**Smoke control door** A doorset with close-fitting single or multi-leaves which are impermeable to the passage of smoke, fitted with smoke seals and installed within a smoke separation. The door, in the event of smoke, if not already closed, will close automatically and be held closed.

**Smoke developed index (SDI)** That index number for smoke developed when determined according to the standard test method for measuring the properties of lining materials.

**Smoke separation** Any building element able to prevent the passage of smoke between two spaces. Smoke separations shall:

a) Consist of rigid building elements capable of resisting without collapse:
   i) a horizontal pressure of 0.25 kPa applied from either side, and
   ii) self weight plus the intended vertically applied live loads, and

b) Form an imperforate barrier to the spread of smoke, and

c) Be of non-combustible construction or a flame barrier, or achieve a FRR of 10/10/-, except that non-fire resisting glazing may be used if it is toughened or laminated safety glass.
1. The pressure requirement is to ensure adequate rigidity and is not a smoke leakage requirement.

2. Walls and floors, whether constructed of sheet linings fixed to studs or joists, or of concrete, metal or fired clay, need only be inspected by someone experienced in building construction to judge whether the construction is tight enough to inhibit the passage of smoke.

3. Item c) is intended to ensure that the smoke separation will continue to perform as an effective barrier when exposed to fire or smoke for a short period during fire development.

4. There is no requirement for smoke control doors or other closures in smoke separations to meet the provisions of item c).

**Socket outlet** An accessory fixed to a wall or ceiling and designed to accept a plug that extends the electrical supply to an appliance by means of a flexible cable.

**Soil fixture** A sanitary fixture constructed to receive solid and/or liquid excreted human waste. It includes bedpan disposal units, slop sinks, urinals, water closet pans, and water-flushed sanitary towel disposal units.

**Sound transmission class (STC)** A single number rating derived from measured values of transmission loss in accordance with classification ASTM E 413, Determination of Sound Transmission Class. It provides an estimate of the performance of a partition in certain common sound insulation situations.

**Specified intended life** has the meaning ascribed to it by section 39 of the Act as follows: “specified intended life” in relation to a proposed building, or any existing building proposed to be altered, and which is intended to have a use of not more than 50 years, means the period of time, as stated in an application for a building consent or in the consent itself, for which the building is proposed to be used for its intended use.

**Spread of flame index (SFI)** That index number for spread of flame which is determined according to the standard test method for measuring the properties of lining materials.

**Stability** In the context of fire protection, the time in minutes for which a prototype specimen, of a primary element when subject to the standard test for fire resistance, has continued to carry its fire design load without failure.

**Stairway** A series of steps or stairs with or without landings, including all necessary handrails and giving access between two different levels.

**Standard test** A test method which is recognised as being appropriate for the fire protection properties being assessed.

**Standard year** For the purposes of determining natural lighting, the hours between 8 am and 5 pm each day with an allowance being made for daylight saving.

**Storage water heater** A water tank with an integral water heater for the storage of hot water.

**Strength reduction factor** The factor by which the ultimate strength is multiplied to obtain the design strength.

**Structural fire endurance rating (S)** The time in minutes within which a fire should not cause structural failure of primary or secondary elements, resulting in consequential fire spread or collapse damage to other property, or an adjacent building on the same property which contains sleeping purpose groups.
Suite  A firecell providing residential accommodation for the exclusive use of one person or of several people known to one another. It comprises one or more rooms for sleeping and may include spaces used for associated domestic activities such as hygiene and cooking.

COMMENT:
1. Bed numbers are limited to 6 in purpose groups SC and SD or 12 in purpose group SA in accordance with C/AS1 Paragraphs 6.6.5 and 6.7.6. Examples may be found in hotels, motels and residential care facilities, such as old people’s homes or in hospices providing temporary family accommodation.
2. It is assumed that the social cohesion of the occupants by virtue of the personal relationship (as family members, friends or associates) would ensure that any individual, becoming aware of fire, would naturally assist others within the firecell to escape. The term suite does not apply to a group of bedrooms where each room is available to different “key-holders”. In some cases a suite may be a single bedroom.

Sump  A chamber which is installed in the drain and incorporates features to intercept and retain silt, gravel and other debris.

Surface finish  The combination of a surface coating and substrate material on surfaces of building elements exposed to view. It can be an applied decorative coating or the uncoated building element itself. For interior surfaces the requirements are evaluated in terms of SFI and SDI. For exterior surfaces the requirements are evaluated in terms of rate of heat release as determined by Appendix C, Paragraph C9.1.

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

Tailpipe  A device placed at the low point of a gas piping system to collect condensate, and from which the condensate may be removed.

Territorial authority  has the meaning ascribed to it by section 2 of the Local Government Act 1974; and includes any organisation which is authorised to permit structures pursuant to section 12(1)(b) of the Resource Management Act 1991.

Theatre  A place of assembly intended for the production and viewing of performing arts, and consisting of an auditorium and stage with provision for raising and suspending stage scenery above and clear of the working area.

Thermal resistance  The resistance to heat flow of a given component of a building element. It is equal to the temperature difference (°C) needed to produce unit heat flux (W/m²) through unit area (m²) under steady conditions. The units are °C/m²/W.

Threshold  A sill to an external door, or the floor under an internal door.

Title boundary  A boundary with other property.

COMMENT:

Total thermal resistance  The overall air-to-air thermal resistance across all components of a building element such as a wall, roof or floor. (This includes the surface resistances which may vary with environmental changes e.g. temperature and humidity, but for most purposes can be regarded as having standard values as given in NZS 4214.)

Town gas  A manufactured gas.

Toxic environment  An environment that contains contaminants that can contaminate the water supply in concentrations greater than those included in the New Zealand Drinking Water Standard 1995.

Trap  A chamber which is installed in the drain and incorporates features to intercept and retain floatable debris.

Travel distance  The length of the escape route as a whole or the individual lengths of its parts, namely:

a) Open paths
b) Protected paths and
c) Safe paths.
Unisex facilities
Facilities available for use by either sex.

COMMENT:
Unisex facilities may also be described as both gender facilities.

Unprotected area
in relation to an external wall of a building, means any part of the external wall which is not fire rated or has less than the required FRR.

COMMENT:
Unprotected area includes non-fire rated windows, doors, or other openings, and non-fire rated external wall construction.

Valve vented storage water heater
(storage water heater)
A storage water heater in which the required venting to the atmosphere is controlled by a valve.

Vapour barrier
Sheet material or coating having a low water-vapour transmission, and used to minimise water-vapour penetration in buildings. (Vapour barriers are sometimes referred to as damp-proof membranes.)

Vapour path length
The travel distance between the vapour source and the point at which the vapour concentration is being considered.

Vent line
A pipe or tube which conveys gas to a safe place outside the building from a gas pressure regulator relief valve.

Vent pipe
A pipe for the purpose of protecting water seals that at its upper end is either open to the atmosphere or fitted with an air admittance valve and that at its lower end is connected to a discharge pipe.

Vent stack
A main vertical vent pipe, to which two or more branch vent pipes are connected.

Warm location
means a location in New Zealand where the degree-day total is less than 920.

Waste pipe
A discharge pipe that conveys the discharge from waste water fixtures to a gully trap.

Waste water fixture
A sanitary fixture or sanitary appliance used to receive wastes, and which is not a soil fixture.

Water heater
A device for heating water.

Water main
A water supply pipe vested in, or is under the control, or maintained by, a network utility operator.

Water seal
The depth of water that can be retained in a water trap.

Water supply system
Pipes, fittings and tanks intended to be used in the piping of water from a water main or other water source to sanitary fixtures, sanitary appliances and fittings within a building.

Water tank (vessel)
A covered fixed container for storing hot or cold water.

Water trap
A fitting designed to retain a depth of water that prevents foul air and gases escaping from the plumbing system or foul water drainage system and entering the building.

Weatherboards
Any overlapping strip cladding. It may be fixed either horizontally or vertically.

Wharenui
A communal meeting house having a large open floor area used for both assembly and sleeping in the traditional Maori manner.

Working day
means any day except a Saturday, a Sunday, Good Friday, Easter Monday, Christmas Day, Boxing Day, Anzac Day, Labour Day, the Sovereign’s birthday, Waitangi Day, and any other day observed in any locality concerned as a public holiday.
## Compliance Schedules

### Contents

<table>
<thead>
<tr>
<th>Compliance Schedules</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.0 Introduction</strong></td>
<td>55</td>
</tr>
<tr>
<td>1.1 Inspection and maintenance</td>
<td>55</td>
</tr>
<tr>
<td>1.2 Reporting</td>
<td>55</td>
</tr>
<tr>
<td>1.3 Existing buildings</td>
<td>55</td>
</tr>
<tr>
<td>CS 1 Automatic sprinkler systems</td>
<td>56</td>
</tr>
<tr>
<td>CS 2 Automatic fire doors</td>
<td>57</td>
</tr>
<tr>
<td>CS 3 Emergency warning systems</td>
<td>58</td>
</tr>
<tr>
<td>CS 4 Emergency lighting systems</td>
<td>59</td>
</tr>
<tr>
<td>CS 5 Escape route pressurisation</td>
<td>60</td>
</tr>
<tr>
<td>systems</td>
<td></td>
</tr>
<tr>
<td>CS 6 Riser mains</td>
<td>61</td>
</tr>
<tr>
<td>CS 7 Automatic backflow preventers</td>
<td>62</td>
</tr>
<tr>
<td>CS 8/1 Passenger carrying lifts</td>
<td>63</td>
</tr>
<tr>
<td>CS 8/2 Service lifts</td>
<td>66</td>
</tr>
<tr>
<td>CS 8/3 Escalators and moving walks</td>
<td>69</td>
</tr>
<tr>
<td>CS 9 Mechanical ventilation and air</td>
<td>71</td>
</tr>
<tr>
<td>conditioning systems</td>
<td></td>
</tr>
<tr>
<td>CS 10 Other mechanical, electrical,</td>
<td>72</td>
</tr>
<tr>
<td>hydraulic or electronic systems</td>
<td></td>
</tr>
<tr>
<td>CS 11 Building maintenance units</td>
<td>73</td>
</tr>
<tr>
<td>CS 12 Signs</td>
<td>74</td>
</tr>
<tr>
<td>CS 13 Means of escape</td>
<td>75</td>
</tr>
<tr>
<td>CS 14 Safety barriers</td>
<td>76</td>
</tr>
<tr>
<td>CS 15 Access and facilities for</td>
<td>77</td>
</tr>
<tr>
<td>people with disabilities</td>
<td></td>
</tr>
<tr>
<td>CS 16 Fire hose reels</td>
<td>78</td>
</tr>
</tbody>
</table>
Compliance Schedules

1.0 Introduction

1.0.1 Section 44 of the Building Act 1991 requires specific systems in buildings to be subject to regular inspection, maintenance and reporting procedures. This section of the New Zealand Building Code Handbook provides guidelines for those procedures.

1.0.2 Where suitable reference documents have been identified these are quoted. In other cases suggested check lists are provided, but those lists do not necessarily satisfy the essential requirements for all installations.

1.0.3 In many cases inspection and maintenance requirements will be specific to a particular type of equipment, and recommendations of the designer, manufacturer or supplier should be followed.

1.0.4 The definition (Act s.2) of plans and specifications, includes the proposed procedures for inspection and routine maintenance of design features or systems required to have a compliance schedule. These must be supplied to the territorial authority with the application for a building consent.

1.0.5 The procedures and independent qualified persons must have the approval of the territorial authority which issues the compliance schedule in the prescribed form in accordance with the Act s.44(2).

1.1 Inspection and maintenance

1.1.1 Inspections will generally cover the complete installation. The frequency of such inspections shall be appropriate to the type of installation and the consequences of the system not functioning.

1.1.2 Maintenance for mechanical, electrical, hydraulic or electronic systems will generally be based on the designer's, manufacturer's or supplier's recommendations for routine servicing, and the frequency will vary for different parts of the installation. Routine maintenance is aimed at avoiding breakdown or malfunction, but should breakdown or malfunction occur, corrective action should be taken as soon as is reasonably practical.

1.2 Reporting

1.2.1 Section 44(4) of the Act requires the compliance schedule to be kept in the building or some other location agreed upon with the territorial authority. Section 45(3) of the Act requires the owner to state on the building warrant of fitness, the location of the compliance schedule and associated written reports.

1.2.2 Depending on the installation it may, for practical reasons, be appropriate for a log book to be kept at the installation, with a summary report held in the designated location with the compliance schedule. Defects and action taken should be recorded with the date and the name of the individual concerned.

1.2.3 Written reports by independent qualified persons shall be filed by the owner in a systematic manner. The reports shall be kept for no less than 2 years and be available for inspection by authorised persons.

1.2.4 Where inspections are undertaken by the owner, details of those inspections and any remedial action taken shall be recorded and filed.

1.3 Existing buildings

1.3.1 Compliance schedules are required for existing buildings containing any of the nominated systems (Act s.44(6)). Existing buildings (other than those subject to alteration or change of use) are not required to be upgraded to comply with the New Zealand Building Code (Act s.8).

1.3.2 It is therefore implicit that the inspection and maintenance procedures for an existing building need only satisfy the requirements appropriate to the system at the time of installation. In such cases the examples given in this part of the Handbook may not be appropriate and this must be taken into account by the territorial authority when issuing compliance schedules for existing buildings.

1.3.3 Sections 38 and 46 of the Act explain the extent to which existing buildings, subject to alteration or change of use, must satisfy the New Zealand Building Code.
CS 1  Automatic Sprinkler Systems

A  Inspections

Automatic sprinkler systems shall be inspected regularly to ensure continued effective operation. Content of the inspections shall be in accordance with NZS 4541 or NZS 4515 as is appropriate for the installation.

Frequency of inspection is dependent upon the type of installation, and shall be weekly, monthly, quarterly, annually, 2 yearly and 4 yearly as prescribed in the relevant referenced Standards.

B  Maintenance

Automatic sprinkler systems shall be maintained in accordance with NZS 4541 or NZS 4515 as is appropriate for the installation.

C  Persons responsible

All inspections and maintenance shall be undertaken by independent qualified persons.
A Inspections

Automatic fire doors, including smoke control doors fitted with hold-open devices, shall be inspected regularly to ensure continued effective operation. Inspections shall be monthly and annually and in particular shall check that:

i) Doors are not damaged or obstructed.

ii) Door leaves or fire shutters close and latch automatically from any position.

iii) Double acting doors and double leaf doors stop with the leaves in line with the frame, and seals are in contact at meeting stile and/or frame.

iv) Smoke control door seals are intact and provide continuous contact.

v) Hardware is securely fixed.

vi) No unauthorised hardware is attached.

vii) Doors in exitways can be opened without keys to allow ready egress from the inside of the building at all times.

viii) Fire door to frame clearances comply with NZS 4232.

ix) Manufacturer’s label is on the fire door leaf or shutter and frame, and where the door installation has been work that is subject to a building consent, the labels comply with C/AS1 Paragraph 6.19.2 a).

x) Electrical interlocks on hold-open devices are operable.

B Maintenance

Automatic fire doors and fire shutters shall be maintained to ensure continued effective operation and fire separation integrity, and in particular compliance with the requirements i) to x) above.

C Persons Responsible

Monthly inspection and maintenance including items i) to vii) above shall be undertaken by the owner.

Annual inspection and maintenance including all items i) to x) above shall be undertaken by independent qualified persons.

COMMENT:

1. Doors included under CS 2 are those which automatically close when a fire alarm is actuated.

2. Compliance Schedule requirements for fire dampers are included under CS 9, and for fire doors and smoke control doors not having hold-open devices, under CS 13.

3. The terms “fire damper” and “fire shutter” are often loosely applied. These are defined terms with meanings being given under the definitions section in this Handbook.
CS 3 Emergency Warning Systems

A Inspections

Emergency warning systems shall be inspected regularly to ensure continued effective operation. Content of the inspections for the different inspection frequencies shall be in accordance with the following referenced Standards:


ii) Voice communication systems – monthly, 6 monthly – AS 2220 and AS 1851.10.

B Maintenance

Emergency warning systems shall be maintained in accordance with the appropriate Standard referenced above.

C Persons Responsible

All inspection and maintenance shall be undertaken by independent qualified persons.

COMMENT:

1. F7/AS1 Paragraph 1.1.2 permits three monthly inspections in place of monthly inspections for certain types of buildings.

2. Manual fire alarms come in varying degrees of technical complexity. Where satisfied that the owner has the skill and training appropriate to the technology of the particular system, the territorial authority may permit the monthly inspections of non-monitored manual fire alarms to be undertaken by the owner.
A Inspections

Emergency lighting systems shall be inspected regularly to ensure continued effective operation. Existing systems installed in accordance with NZS 6742 shall be inspected fortnightly or monthly (depending on type of installation), and annually. Systems installed in accordance with AS/NZS 2293 shall be inspected six monthly.

B Maintenance

Existing systems installed in accordance with NZS 6742 shall be maintained in accordance with that Standard.

Systems installed in accordance with AS/NZS 2293 shall be maintained in accordance with that Standard.

The maintenance, inspection and reporting procedures should be appropriate to the particular emergency lighting system concerned. Where there are no appropriate procedures in either NZS 6742 or AS/NZS 2293, these should be developed for the systems concerned and submitted to the territorial authority for its approval.

C Persons Responsible

The fortnightly, monthly or six monthly inspection and maintenance shall be undertaken by the owner who must ensure the person doing the work is appropriately qualified. Annual inspection and maintenance shall be undertaken by independent qualified persons.
CS 5 Escape Route Pressurisation Systems

A  Inspections

Escape route pressurisation systems shall be inspected regularly to ensure continued effective operation. Inspections shall be monthly, 6 monthly, and 2 yearly. Inspection content shall be in accordance with AS 1851.6 or the designer’s recommendations as is appropriate for the installation.

B  Maintenance

Escape route pressurisation systems shall be maintained in accordance with AS 1851.6 or the designer’s recommended maintenance procedures, as is appropriate.

C  Persons Responsible

All inspection and maintenance shall be undertaken by independent qualified persons.
CS 6 Riser Mains

A Inspections

Riser mains for Fire Service use shall be inspected regularly to ensure continued effective operation. Inspections shall be:

- For pumps – weekly if diesel powered, or monthly if electrically powered.
- For hydrants – monthly.
- For total installation – annually.

Inspection content shall be in accordance with NZS 4510.

B Maintenance

Riser mains for Fire Service use shall be maintained in accordance with NZS 4510.

C Persons Responsible

The monthly inspection of hydrants to detect obvious faults or damage shall be undertaken by the owner. All other inspection and maintenance shall be undertaken by independent qualified persons.
CS 7 Automatic Backflow Preventers

A  Inspections

Automatic backflow preventers connected to a
potable water supply shall be inspected and
tested annually in accordance with Chapter 5
of the United States Environmental Protection
Agency “Cross Connection Control Manual”
or AS 2845: Part 3.

Where non-testable backflow preventers are
used in accordance with AS 3500.1, they shall
be inspected annually and replaced if leaking
or displaying any other fault. (Under AS 3500.1
non-testable backflow preventers are
permitted only in a zone downstream of a
zone testable device.)

B  Maintenance

Automatic backflow preventers shall be
immediately repaired or replaced if they fail
the inspection test.

C  Persons Responsible

The above inspection and maintenance
procedures shall be undertaken by
independent qualified persons.
A Inspections

Passenger carrying lift installations shall be inspected annually.
Lifts installed in buildings prior to the introduction of the Building Act (i.e. pre-1993) shall comply with the Power Lift Rules applicable at the time of installation.
For installations that comply with D2/AS1:
- If the lift design is based on NZS 4332
  Inspections and checks shall be carried out in accordance with the requirements of the attached list.
- If the lift design is based on EN 81 (Part 1 or 2)
  Inspections shall comprise those given in Clause D.2 “Tests and verifications” of Annex D of that Standard plus the checks required by the attached list. The tests of Clause D.2 shall be performed in such a manner that, despite their repetition, they do not cause excessive wear or impose stresses likely to reduce the safety of the lift. This is the case in particular of the tests on components such as the safety gear and the buffers. Tests on these components shall be carried out with an empty car and at reduced speed.
If D2/AS1 has not been used the owner shall nominate the necessary lift inspections. Such proposals shall be to the approval of the territorial authority.

B Maintenance

Lifts shall be maintained in accordance with the manufacturer’s or supplier’s recommendations.
Where such instructions are not available, maintenance shall be in accordance with a schedule prepared by a person who, on the basis of experience and qualifications, is competent to determine lift maintenance requirements.
Maintenance frequency shall reflect the rate of lift usage, but in no case shall it be at greater than 6 monthly intervals. For heavy usage the maintenance could be fortnightly.

C Persons Responsible

The above inspection and maintenance procedures shall be undertaken by independent qualified persons.

D Reporting

Reports shall include the name of the independent qualified person performing the work along with the dates that the work was performed.
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Machine room</strong></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual inspection of machine beams and supports.</td>
<td>6.1, 6.3, 7.18</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Check security of machine room door.</td>
<td>7.4.1</td>
<td>6.3.3, 6.3.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check there are no obstructions or rubbish in the machine room.</td>
<td>7.2, 7.7</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Check that lighting in machine room functions.</td>
<td>7.14</td>
<td>6.3.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Check ventilation in machine room functions.</td>
<td>7.17</td>
<td>1.6 (7.17)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Check for the presence of circuit diagrams and manual.</td>
<td>24.10</td>
<td>1.6 (24.10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Check condition of any emergency hand winding equipment.</td>
<td>8.16</td>
<td>12.5</td>
<td></td>
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<tr>
<td><strong>Machinery</strong></td>
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</tr>
<tr>
<td>Check condition of traction sheave, with special attention to the grooves.</td>
<td>18.1, 18.2</td>
<td>✓</td>
<td></td>
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</tr>
<tr>
<td>Check condition of divertor sheave and other sheaves.</td>
<td>18.1, 18.2</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Check the operation of the brake.</td>
<td>8.11</td>
<td>12.4</td>
<td></td>
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<tr>
<td>Check the condition of the brake and the brake linings.</td>
<td>8.11</td>
<td>12.4</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Check the running of machines, gearboxes, motors, generators, their bearings and any commutators.</td>
<td></td>
<td>✓</td>
<td></td>
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<tr>
<td><strong>Lift well</strong></td>
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</tr>
<tr>
<td>Visual check of liftwell enclosure.</td>
<td>12.1, 12.3, 12.4</td>
<td>5.2</td>
<td></td>
<td></td>
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<tr>
<td>Check hoisting ropes for equal tension, attachments and terminations correct and in good condition, number of broken wires within acceptable limits, filings not being shed, all ropes of similar condition.</td>
<td>16, 17</td>
<td>9.2.3.1, 9.5.1</td>
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<tr>
<td>Check for presence and legibility of rope data plates.</td>
<td>16.6</td>
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<tr>
<td>Check that rope retainers are present and correctly fastened.</td>
<td>18.2</td>
<td>9.5.4</td>
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<tr>
<td><strong>Lift pit</strong></td>
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<tr>
<td>Visual check of guide rails for straightness and security.</td>
<td>20</td>
<td>✓</td>
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<tr>
<td><strong>Lift pit exterior</strong></td>
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<tr>
<td>Check there are no obstructions or rubbish in the pit.</td>
<td>11.3</td>
<td>1.6 (11.3)</td>
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<tr>
<td>Check that lighting in the lift pit and lift well functions.</td>
<td>11.6</td>
<td>5.9</td>
<td></td>
<td></td>
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<tr>
<td>Check dryness of pit.</td>
<td>11.3, 11.9</td>
<td>1.6 (11.3, 11.9)</td>
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<tr>
<td>Visual check of buffer condition.</td>
<td>10</td>
<td>✓</td>
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<tr>
<td>Check function of lift pit safety switch.</td>
<td>11.7</td>
<td>5.7.3.4 (a)</td>
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<tr>
<td><strong>Lift car</strong></td>
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<tr>
<td>Inspect and test safety gear (car and counterweight).</td>
<td>29, 30, 69</td>
<td>9.8</td>
<td></td>
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<tr>
<td>Visual check of the car construction and linings.</td>
<td>22</td>
<td>8.3</td>
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<tr>
<td>Check door operation, including door protective devices.</td>
<td>23</td>
<td>1.6 (23.6), 8.7</td>
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<tr>
<td>Check lift rating plate present.</td>
<td>21.3</td>
<td>15.2.1</td>
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<tr>
<td>Check lift controls for correct operation.</td>
<td>25</td>
<td>14.2</td>
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<tr>
<td>Check correct operation of alarms and emergency telephone.</td>
<td>28.2</td>
<td>1.6 (28.2.1), 14.2.3, 15.12</td>
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<tr>
<td>Check access to all, if any, emergency trapdoor.</td>
<td>22.15</td>
<td>8.12</td>
<td></td>
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</tr>
</tbody>
</table>
### List of Inspections and Checks Required for Passenger Carrying Lifts complying with D2/AS1 (Continued)

<table>
<thead>
<tr>
<th>For lift designed to D2/AS1 based on reference document:</th>
<th>Initials and comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>NZS 4332</td>
<td>EN 81&lt;sup&gt;1,2&lt;/sup&gt;</td>
</tr>
<tr>
<td>Inspection and checks required</td>
<td>Checks required</td>
</tr>
</tbody>
</table>

**Landings doors**
- Check door locks. 14.1, 14.4 7.7
- Check emergency opening facilities on landing doors. 14.5 7.7.3.2, 15.11
- Check door operation, including door protective devices. 23.6 1.6 (23.6), 7.5

**Hydraulic systems**
- Visual check of the hydraulic system, including hoses, ram and cylinder. 34, 35, 37 ✓
- Check caisson for moisture. 34.3.7 ✓
- Check condition of flow restriction valve. 36.5 12.5.5
- Check operation of the manual lowering means. 36.6 12.9
- Check operation of device to hold car at lowest floor. 31.6 5.7.3
- Check operation of anti-creep device. 60.4 9.5.1

**Operation**
- Check operation of door locks, limit switches, slack rope switch, stop switches, trapdoor switch and other safety switches. 7.12, 11.7, 22.15(f), 24.1, 26.1, 26.7, 27, 60 14.1, 14.2
- Check functioning of lift car emergency lighting. 22.20.2.7, 22.21 1.6 (22.20.2.7)
- Check for correct operation under fire conditions. 25.6, 25.7 1.6 (25.6, 25.7)
- Check correct operation of counterweight displacement detector. 25.8 1.6 (25.8)
- Check operation of load weighing device. 26.6 ✓

**Lifts on access routes for people with disabilities**
- Check floor levelling. 70.1 1.6 (70.1)
- Check door dwell time. 70.3 1.6 (70.3)
- Check controls distinction. 70.4 1.6 (70.4)
- Check correct operation of landing indicators. 70.5 1.6 (70.5)
- Check handrails. 70.6 1.6 (70.6)

**General**
- Visual check for any repairs or modifications carried out incorrectly. ✓ ✓
- Check maintenance records are properly kept. ✓ ✓

Note:
1. For lifts designed to NZS 4332 all of the items above must be checked. References given are to clauses of NZS 4332.
2. For lifts designed to EN 81 (Part 1 or 2) checks shall be carried out where the item is ticked (✓) or a reference is given. References given are to clauses of EN 81, as modified by D2/AS1. References given in brackets are the relevant clauses imported from NZS 4332.
3. These checks are to be made in addition to the tests and verifications of Clause D.2 of Annex D of EN 81.

**Name of independent qualified person:**

**Address:**

**Date of Inspection:**
CS 8/2 Service Lifts

A  Inspections

Service lift installations shall be inspected annually. Installations in existing buildings shall comply with the Rules for Power Lifts Not Exceeding 750 Watts (1.H.P.): applicable at the time of installation. Where the lift installation complies with D2/AS2 the attached check list is a suitable basis for the inspection. If D2/AS2 has not been used the owner should provide and work to a similar check list approved by the territorial authority.

B  Maintenance

Lifts shall be maintained in accordance with the manufacturer’s or supplier’s recommend-ations but at least every six months.

C  Persons Responsible

The above inspection and maintenance procedures shall be undertaken by independent qualified persons.
# Checklist Suitable for Service Lifts complying with D2/AS2

References are rules in The Rules For Power Lifts Not Exceeding 750 Watts (I.H.P.)

* Indicates that the rule has been modified by D2/AS2

<table>
<thead>
<tr>
<th>Reference</th>
<th>Initials and comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Machinery spaces</strong></td>
<td></td>
</tr>
<tr>
<td>Visual inspection of machine beams and supports.</td>
<td>3.1 (a)</td>
</tr>
<tr>
<td>Check security of machine room door.</td>
<td>3.2 (f)*</td>
</tr>
<tr>
<td>Clean the machinery space and clear out any rubbish.</td>
<td>3.2 (f)*</td>
</tr>
<tr>
<td>Check lighting in the machinery space functions.</td>
<td>3.2 (d)</td>
</tr>
<tr>
<td>Check the condition of the controller.</td>
<td></td>
</tr>
<tr>
<td>Check the governor and any position devices.</td>
<td></td>
</tr>
<tr>
<td>Check for the presence of circuit diagrams, manual and log book.</td>
<td></td>
</tr>
</tbody>
</table>

| **Machinery** | | |
| Check sheaves, pulleys and drums with special attention to the grooves. | 6.2 |
| Check the condition and operation of the brake and the condition of brake linings. | 3.1 (b) |
| Check the running of the lift machinery. | | |
| Check condition of drive belts. | 3.1 (c) |

| **Lift well** | | |
| Inspect and test any safety gear. | 1.5 |
| Visual check of liftwell enclosure. | 5 |
| Check hoisting ropes for equal tension, attachments and terminations correct and in good condition, number of broken wires within acceptable limits, filling not being shed, all ropes of similar condition, correct length of rope. | 6.1.1 |
| Visual check of guide rails for integrity, straightness and security. | 9.2* |
| Check condition of guide shoes or rollers. | | |

| **Lift pit** | | |
| Remove any rubbish from the lift pit. | | |
| Check lighting in the pit functions. | 4.4 (g) |
| Check dryness of pit. | 4.4 (b) |
| Visual check of buffer condition and other pit components. | 4.3* |

| **Landing stations** | | |
| Check door locks. | 8.3 (a) and (b), 8.4 |
| Check lift controls for correct operation. | | |
## Checklist Suitable for Service Lifts complying with D2/AS2 (Continued)

References are rules in The Rules For Power Lifts Not Exceeding 750 Watts (I.H.P.)

* Indicates that the rule has been modified by D2/AS2

<table>
<thead>
<tr>
<th>Reference</th>
<th>Initials and comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lift car</strong></td>
<td></td>
</tr>
<tr>
<td>Check car doors or safety barriers.</td>
<td></td>
</tr>
<tr>
<td>Check lift car lighting.</td>
<td></td>
</tr>
<tr>
<td><strong>Hydraulic systems</strong></td>
<td></td>
</tr>
<tr>
<td>Visual check of the hydraulic system, including hoses, ram and cylinder.</td>
<td>12*</td>
</tr>
<tr>
<td>Check caisson for moisture.</td>
<td></td>
</tr>
<tr>
<td>Check operation of anti-creep device.</td>
<td>12.7</td>
</tr>
<tr>
<td>Check the operation of control and auxiliary valves.</td>
<td>12.8, 12.9</td>
</tr>
<tr>
<td><strong>Operation</strong></td>
<td></td>
</tr>
<tr>
<td>Check operation of terminal stopping devices, slack rope switch and any emergency switch.</td>
<td>10</td>
</tr>
<tr>
<td>Check landing door interlocks and opening of the door when the car is away from the landing.</td>
<td>8.4 (a)</td>
</tr>
<tr>
<td><strong>General</strong></td>
<td></td>
</tr>
<tr>
<td>Visually check for any repairs or modifications carried out.</td>
<td></td>
</tr>
<tr>
<td>Maintain full records of maintenance and inspections.</td>
<td></td>
</tr>
</tbody>
</table>

Name of independent qualified person:

Address:

Date of Inspection:
A Inspections

Escalators and moving walks shall be inspected annually. Where the installation complies with D2/AS3 the attached check list is a suitable basis for the inspection. If D2/AS3 has not been used the owner should provide and work to a similar check list approved by the territorial authority.

B Maintenance

Escalators and moving walks shall be maintained in accordance with the manufacturer’s or supplier’s recommendations.

C Persons Responsible

The above inspection and maintenance procedures shall be undertaken by independent qualified persons.
### Check List Suitable for Escalators and Moving Walks

*References are to clauses in EN 115*

* Indicates that the rule has been modified by D2/AS3

<table>
<thead>
<tr>
<th>Safety devices as appropriate.</th>
<th>Initials and comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switches to inspection doors.</td>
<td>5.1.3</td>
</tr>
<tr>
<td>Stop switch in machinery space.</td>
<td>6.3.3*</td>
</tr>
<tr>
<td>Overspeed protection.</td>
<td>12.5</td>
</tr>
<tr>
<td>Emergency stop devices.</td>
<td>14.2.2.3.1</td>
</tr>
<tr>
<td>Other stop switches.</td>
<td>14.2.2.1 (a) to (h)</td>
</tr>
<tr>
<td>Brakes.</td>
<td>12.4, 16.2.1 (d)</td>
</tr>
<tr>
<td>Driving elements for visible signs of wear and tear and for insufficient tension of belts and chains.</td>
<td>9.0*</td>
</tr>
<tr>
<td>Steps, pallets or the belt for defects, true run and guidance.</td>
<td>8.0*</td>
</tr>
<tr>
<td>Dimensions and tolerances.</td>
<td>0.1.2, 11.0</td>
</tr>
<tr>
<td>Combs for proper condition and adjustment.</td>
<td>8.3, 11.3</td>
</tr>
<tr>
<td>Balustrade interior panelling and the skirting.</td>
<td>5.1.5.4 to 5.1.5.6</td>
</tr>
<tr>
<td>Handrails.</td>
<td>7.0*</td>
</tr>
</tbody>
</table>

**Name of independent qualified person:** [ ]

**Address:** [ ]

**Date of Inspection:** [ ]
CS 9 Mechanical Ventilation and Air Conditioning Systems

A Inspections

Mechanical ventilation and air conditioning systems shall be inspected regularly to ensure continued effective operation. Inspection content and frequency shall be as follows:

i) Mechanical ventilation and air conditioning systems shall be inspected in accordance with either Part 2 of NZS 4302 or Section 2 of AS/NZS 3666.2 and the designer’s recommendations for functional operation and inspection frequency. Where the designer’s recommendations are not available, the requirements of either Part 2 of NZS 4302 or Section 2 of AS/NZS 3666.2 shall be met through compliance with an inspection and maintenance schedule prepared by a person who, on the basis of experience and qualifications, is competent to design heating, ventilating and air conditioning systems.

ii) Smoke control systems, including fire dampers, shall be inspected monthly, quarterly, half-yearly or yearly, as required by AS 1851.6, or in accordance with the designer’s recommendations as is appropriate.

B Maintenance

Mechanical ventilation and air conditioning systems shall be maintained in accordance with either Part 2 of NZS 4302 and AS 1851.6 or the designer’s recommended maintenance procedures as is appropriate to the installation. Specific design and designs in accordance with G4/AS1 shall include a maintenance manual. Particular attention must be given to systems incorporating cooling towers where organisms such as Legionella may be present. The procedures listed in either Section 309.3 of NZS 4302, or Section 2 of AS/NZS 3666.2 must be carried out.

To ensure adequate chemical control is being achieved in cooling towers with automatic chemical dosing, bacteriological tests shall be performed as detailed in the table below.

Cooling towers without automatic chemical dosing shall, in addition to the table below, be subject to weekly dipslide tests. When dipslide tests have a result of greater than 10⁵ cfu/ml, control strategies in AS/NZS 3666.3 Table 3.2 must be implemented.

---

### Table 1: Cooling tower testing

<table>
<thead>
<tr>
<th>Cooling Tower Type</th>
<th>Test Frequency</th>
<th>Test Method</th>
<th>Test Result Levels and Control Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooling tower with automatic chemical dosing</td>
<td>Monthly</td>
<td>AS/NZS 3896</td>
<td>AS/NZS 3666.3 Table 3.1</td>
</tr>
<tr>
<td>Legionella</td>
<td></td>
<td>AS/NZS 3896</td>
<td>AS/NZS 3666.3 Table 3.1</td>
</tr>
<tr>
<td>Heterotrophic microorganisms</td>
<td>Monthly</td>
<td>AS 4276.3.1</td>
<td>AS/NZS 3666.3 Table 3.2</td>
</tr>
<tr>
<td>Cooling tower without automatic chemical dosing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterotrophic microorganisms</td>
<td>Weekly</td>
<td>Dipslide</td>
<td>AS/NZS 3666.3 Table 3.2</td>
</tr>
</tbody>
</table>

Notes:

1. Tests to AS/NZS 3896 and AS 4276.3.1 shall be undertaken by an IANZ biologically accredited laboratory.
2. Legionella tests with results greater than or equal to 1000 cfu/ml should be notified within 48 hours to the local Medical Officer of Health at the Public Health Service of the District Health Board, and the Required Control Strategy from Table 3.1 of AS/NZS 3666.3 shall be implemented.
3. Industrial cooling towers, or cooling towers used for industrial process that are not part of a building as defined in section 3 of the Building Act 1991, are not required by the Building Act to be included on the compliance schedule. Testing for Legionella in these cooling towers is required by employers to ensure a safe working environment for their employees under the Health and Safety in the Workplace Act legislation.
C Persons Responsible

All inspection and maintenance shall be undertaken by independent qualified persons.

COMMENT:
1. A mechanical ventilation or air conditioning system is required by section 44 (1) (i) to be on the compliance schedule only if serving all or a major part of the building.

   However, if a specialist system does not serve all or a major part of the building, but:
   - can spread pathogens or toxic gases from their source to other building spaces, and
   - those pathogens or toxic gases would remain undetected until illness has occurred,

   then the system could well come within section 44 (1) (j) and should be listed in the compliance schedule, see CS 10.

2. Mechanical ventilation or air conditioning systems which are ducted through smoke or fire separations and could spread fire or smoke to other firecells are to be included on this compliance schedule. For example, a system that included a central plant serving more than one floor, or plant serving a single floor having more than one firecell or smokecell.

3. Where failure of a system is readily apparent and likely to result in occupant complaints before health or safety are threatened, and does not serve all or a major part of the building, the system need not be a compliance schedule item. Examples are package units serving a single office and extract fans in cooking areas and toilet spaces, where failure may cause annoyance or discomfort but the effects are unlikely to be life threatening.
CS 10 Other Mechanical, Electrical, Hydraulic or Electronic Systems

Any other mechanical, electrical, hydraulic or electronic system whose proper operation is necessary for compliance with the Building Act, shall have inspection and maintenance procedures determined by a person who, on the basis of experience and qualifications, is competent to do the work.

The procedures shall be contained in the compliance schedule and include the nature and frequencies of inspection and the required maintenance, and identify which activities may be undertaken by the owner, and which must be undertaken by independent qualified persons.

COMMENT:
1. This requirement is intended to provide the necessary flexibility for including in compliance schedules:
   - specialist building elements generally peculiar to a limited number of buildings, and
   - new systems which may be developed in the future.

2. The systems included should be restricted to those in which a failure is likely to go undetected until a life threatening situation has occurred. Examples are laboratory fume cupboards (for which inspection and maintenance procedures are given in NZS 7203), automatic locking security doors which could trap people within a building, and exitway pressurisation systems.
A Inspections

Building maintenance units shall be inspected 3 monthly, 6 monthly and annually.
Inspections shall be in accordance with Clauses 21.1.4 and 21.1.5 of BS 6037: 1990.
The annual testing shall be as described in Clause 19.2 of that document.

B Maintenance

Building maintenance units shall be maintained in accordance with Clause 21 of BS 6037: 1990, together with any additional requirements of the manufacturer.

COMMENT:
In using BS 6037: 1990, references to overseas legislation shall be read as references to corresponding New Zealand legislation.

C Persons Responsible

The 3 monthly inspections shall be undertaken by the owner. The 6 monthly and annual inspections and all maintenance procedures shall be undertaken by independent qualified persons.
CS 12 Signs

A Inspections

Signs shall be inspected regularly to ensure continued effectiveness, and in particular that they are of the correct type, are present and in the right locations, and are legible.

Inspections of signs required for emergency purposes to be illuminated, shall (as for emergency lighting) be done monthly. For other signs inspections shall be done annually.

B Maintenance

Signs shall be refurbished before they become illegible, and shall be replaced immediately should they be missing.

Defects in illuminated emergency signs shall be remedied immediately they are apparent.

C Persons Responsible

The above monthly inspection shall be undertaken by the building owner. Annual inspection shall be undertaken by independent qualified persons.

Maintenance shall be undertaken by the owner.
A Inspections
Means of escape shall be inspected:
• Daily, when the building is in use, for crowd occupancies (purpose groups CS, CL, CO and CM).
• Monthly in other occupancies.
• Annually for all occupancies.
Inspections shall be made to ensure that the passive and active features of the means of escape continue to perform as designed for safe evacuation, and in particular that:

i) Escape routes are kept clear of obstacles and hazards such as uneven flooring or insecure handrails at all times.

ii) Exit doors are not locked, barred, or blocked so as to prevent occupants from leaving the building in the event of an emergency without the use of a key.

iii) Smoke-control doors, fire doors and associated fittings including self-closing devices, are undamaged and operate correctly. The doors are not kept open by methods other than hold-open devices that comply with the New Zealand Building Code and are in good working order.

iv) Sliding automatic doors fitted with emergency fail-safe systems operate as designed.

v) Stairwells and passageways which are designed specifically for means of escape from fire are not used as places of storage or places where refuse is allowed to accumulate.

vi) Flammable cleaning liquid or material or any other like flammable liquid or material is not stored near or within any part of the building used as a means of escape from fire, and is in non-combustible containers with close fitting lids.

vii) Fire separations show no signs of damage or deterioration which could adversely affect their fire resisting function, particularly with respect to closures and fire stopping.

viii) No new surface coatings have been applied unless their fire properties have been confirmed as acceptable by an independent qualified person.

B Maintenance
Means of escape shall be maintained at all times in a safe condition with particular attention to freedom from obstructions and from storage of combustibles, adequacy of handrails, proper operation of fire and smoke control doors, and ease of opening any doors leading into the escape route and at the final exit.

For automatic sliding doors, AS 4085 (also published as NZS 4239) Appendix A provides suitable guidelines for determining maintenance procedures.

C Persons Responsible
Daily and monthly inspections shall be undertaken by the building owner, and annual inspections by independent qualified persons. Maintenance shall be undertaken by the owner.
CS 14 Safety Barriers

A Inspections

a) All safety barriers shall be inspected annually to ensure that:
   i) the barrier is structurally sound and has not become damaged or corroded, and
   ii) no materials, rubbish or other objects are located near the safety barrier so as to permit the barrier to be climbed by a child under the age of six years.

b) Safety barriers required for compliance with the Fencing of Swimming Pools Act 1987 shall in addition to the requirements of a) above be inspected quarterly with particular attention to ensure that:

   Automatic closers on gates or doors effectively return the gate or door to the closed position and operate the latching device when the gate or door is released from a stationary position giving an opening width of no greater than 150 mm.

B Maintenance

Safety barriers shall be maintained in a structurally sound condition and, where applicable, self-closing gates and other components required for the protection of children shall be kept operable. Defects shall be remedied immediately they are apparent.

C Persons Responsible

The quarterly inspection procedures shall be undertaken by the owner. Annual inspections shall be undertaken by independent qualified persons. All maintenance shall be undertaken by the owner.
A  Inspections

Access and facilities for people with disabilities shall be inspected 6 monthly and annually to ensure that the building's provisions (if any) for access and facilities for people with disabilities are kept in good working order.

The inspection shall check the adequacy of accessible routes from street level or car park to spaces within the building, with particular attention to:

- Usability of accessible route to the principal entrance.
- Manoeuvre spaces in:
  - accessible routes,
  - accessible car parking spaces,
  - accessible toilet areas,
  - accessible laundry areas,
  - accessible kitchens.
- Handrails.
- Lighting levels.
- Door hardware.
- Grab rails in toilets.
- Lifts:
  - door opening times,
  - location and height of control panels,
  - handrails.

B  Maintenance

Defects shall be remedied immediately they become apparent.

C  Persons Responsible

The 6 monthly inspections shall be undertaken by the owner. The annual inspections shall be undertaken by independent qualified persons. Maintenance shall be undertaken by the owner.
CS 16 Fire Hose Reels

A Inspections

Fire hose reels shall be inspected monthly and annually to ensure continued effective operation. Monthly inspections shall be in accordance with NZS 4503 Clause 6.1.3, and annual inspections with Clause 6.2.

B Maintenance

Defects in fire hose reels shall be remedied immediately they are apparent.

C Persons Responsible

Maintenance and monthly inspections shall be undertaken by the owner. Annual inspections shall be undertaken by an independent qualified person.
The following Approved Documents have been published by the Building Industry Authority. AS indicates an acceptable solution, VM indicates a verification method. The Approved Document for any topic includes both the acceptable solution and verification method (where one has been adopted by the Authority).

**B  STABILITY**

B1 Structure

- AS1 VM1 General
- AS2 Timber barriers
- AS3 Small chimneys
- VM4 Foundations

B2 AS1 VM1 Durability

**C  FIRE SAFETY**

C1 AS1 VM1 Fire safety in buildings

**D  ACCESS**

D1 AS1 VM1 Access routes

- Mechanical installations for access

- AS1 Passenger carrying lifts
- AS2 Domestic and service lifts
- AS3 Escalators and moving walks

**E  MOISTURE**

E1 AS1 VM1 Surface water

E2 AS1 VM1 External moisture

E3 AS1 Internal moisture

**F  SAFETY OF USERS**

F1 VM1 Hazardous agents on site

F2 AS1 Hazardous building materials

F3 AS1 Hazardous substances and processes

F4 AS1 Safety from falling

F5 AS1 Construction and demolition hazards

F6 AS1 VM1 Lighting for emergency

F7 AS1 Warning systems

F8 AS1 Signs

**G  SERVICES AND FACILITIES**

G1 AS1 Personal hygiene

G2 AS1 Laundering

G3 AS1 Food preparation and prevention of contamination

G4 AS1 VM1 Ventilation

G5 AS1 Interior environment

G6 AS1 VM1 Airborne and impact sound

G7 AS1 VM1 Natural light

G8 AS1 VM1 Artificial light

G9 AS1 VM1 Electricity

G10 AS1 VM1 Piped services

G11 AS1 Gas as an energy source

G12 AS1 VM1 Water supplies

G13 Foul water

- AS1 VM1 Sanitary plumbing
- AS2 VM2 Drainage

G14 AS1 VM1 Industrial liquid waste

G15 AS1 Solid waste

**H  ENERGY EFFICIENCY**

H1 AS1 VM1 Energy efficiency
Index

(Revised by Amendment 6)

This is a complete index for the New Zealand Building Code and Approved Documents.

A

Access

see Access Routes, and Mechanical Installations for Access

Access chambers

see Maintenance access to drains

Access points

see Maintenance access to drains

Access to a facility

food and work areas ............................................G1/AS1 3.2, Figure 10

lobbies .........................................................G1/AS1 6.3.1

unisex facilities ..................................................G1/AS1 1.1.5 c)

Access Routes ...............D1/AS1 1.1.5, 1.2.2, 1.4.1, 1.5.1, 1.5.3 a),

1.5.4, 1.5.5, 1.6.1, 1.7.1, 1.8.1,

2.0, 5.1.1, 10.4.1, Figure 27

see also Accessible routes, Activity space, Doors, Escape routes,

Handrails, Height clearances, Level access routes, Mechanical

Installations for Access, People with disabilities, Ramps, Stairs,

Obstructions, Vehicles, Wheelchairs

access to buildings ............NZBC/D1.1, D1.3.1 (a) (b), D1.3.3 (a) (b)

access within buildings ................NZBC/D1.1, D1.3.1 (c), D1.3.3 (c), D1.3.5

corridors ........................................NZBC/D1.3.1 (c), F6.3.1

level access routes .................D1/AS1 2.0

protection from falling ......................D1/AS1 2.3

slip resistance .........................D1/AS1 2.1, Table 2

width ........................................D1/AS1 2.2

location ........................................D1/AS1 1.1

principal entrance .........................D1/AS1 1.1

service and maintenance personnel .........D1/AS1 11.0.4

Access to facilities ........NZBC/D1.3.3 (c), G1.3.5; G3/AS1 1.5.1, Figure 1

Accessible accommodation units ........D1/AS1 9.0, 9.1, 9.1.1, 9.2.1, Table 9

see also People with disabilities

bedrooms ...........................D1/AS1 9.2.1 c)

dining areas ..........................D1/AS1 9.2.1 c)

facilities .....................................D1/AS1 9.2

kitchens ......................................D1/AS1 9.2.1 b); G3/AS1 1.5.2, Figure 1

laundry ......................................G2/AS1 1.2, Figure 2

sitting areas ......................................D1/AS1 9.2.1 c)

toilets and baths ..................................D1/AS1 9.2.1 a)

Accessible routes ..................NZBC/D1.3.3, D1.3.4;

D1/AS1 1.1.1 to 1.1.3, 1.5.5 b), 2.1.1,

2.2.1, 7.0.1, 7.0.6, 11.0.1, Figure 27
access to performance areas .................... D1/AS1 8.2
Accessible units .......................... D1/AS1 1.1.3
Activity space ......................... NZBC/D1.3.2 (a), D1.3.4 (b), G5.1 (b),
G5.2.1 (b), G5.3.3
Aged, homes for
see Old people’s homes

Air
see also Ventilation
airflow control ....................... NZBC/H1.3.1 (b); H1/AS1 3.0
changes .............................. G4/VM1 1.0.1
ducts ................................. C/AS1 6.9.5, 6.19.14, 6.20.20, 6.20.21
purity .................................. G4/VM1 2.0
Air-handling systems ..................... G4/AS1 1.3.1 b)

Airborne and Impact Sound ...................... G6
impact insulation class (IIC) ............... NZBC/G6.3.2
noise transmission between abutting occupancies . NZBC/G6.1, G6.2
sound insulation tests ...................... G6/VM1 2.0
sound transmission class (STC) ............ NZBC/G6.3.1; G6/VM1 1.0

Alerting devices ......................... F7/AS1 1.1.5, 1.2.8, 2.1.2, 2.2.2 b)
audible .................................. F7/AS1 1.2.8, 2.1.2 c) f)
visual ................................... F7/AS1 2.1.2 c) f)

Alerting the Fire Service .................. F7/AS1 1.2.2, 1.2.7, 2.1.2 a), 2.2

Alternative solutions
accessible routes .......................... D1/AS1 11.0
bedding and backfilling drains .......... E1/AS1 3.9.8
gas as an energy source ................. G11/AS1 9.0
gas fuel appliances ....................... G4/AS1 3.0
gas reticulation ........................ G10/AS1 5.0
laundry tubs ............................ G2/AS1 1.0.3
open vented storage water heaters ....... G12/AS1 6.9.1
solid waste storage ..................... G15/AS1 3.1
storage water heaters

seismic restraint ........................ G12/AS1 6.11.4
thermal resistance ...................... E3/AS1 1.1.5

unvented (valve vented) storage water heaters G12/AS1 6.10.1,
Figure 14
watertightness testing .................... G12/AS1 7.5

Ancillary Buildings ..................... NZBC/A1 8.0, D1.2.1, D1.3.2 (h),
D1.3.3, G1.3.5, G8.2, G12.3.0

Apartments
see Housing, multi-unit dwellings
Appliances
  see Sanitary appliances

Aprons ............................... C/AS1 7.9.12, 7.9.13, Figure 7.2

Artificial Light ........................ G8; NZBC/H1.2 (c), H1.3.5;
  D1/AS1 1.5.4, 1.8, 4.5;
  adequate lighting ....................... NZBC/G8.2
  energy consumption ..................... H1/AS1 6.0
  minimum illuminance ................... NZBC/G8.3; D1/AS1 4.6.1, Table 8
  wattage required ...................... D1/AS1 4.6.1; G8/AS1 1.0.1

Asbestos
  see Hazardous Building Materials

Assembly care buildings
  see Communal non-residential buildings

Assembly service buildings
  see Communal non-residential buildings

Automatic extinguishers ........................ G11/AS1 6.0

B

Backflow prevention
  see Protection of water supplies

Balconies ........................... C/AS1 3.14.6 b), 3.14.7, 3.15.7,
  7.8.7, Figures 3.18 and 3.22

Banks .................................. NZBC/D1.3.4 (c) (iv)
  see also Commercial buildings

Barriers ............................... NZBC/F4.3.1, F4.3.4, F4.3.5, F5.3.2,
  F5.3.4; D1/AS1 1.7; F4/AS1 1.0; F5/AS1 1.0
  see also Access Routes, Handrails, Safety from Falling,
  Timber barriers
  accessible route ...................... D1/AS1 2.3.1
  balconies with fixed seating ........... F4/AS1 1.2.4, Figure 1
  construction ........................ F4/AS1 1.2, 2.0.1, Table 2
  fences ................................. F5/AS1 1.1, 1.1.2
    around water hazards ................ F5/AS1 1.2
  for specific hazards .................. F5/AS1 1.0.2
  gantries ................................ F4/AS1 1.3; F5/AS1 1.1.1
  heights .............................. F4/AS1 1.1, Table 1
  hoardings ............................ F5/AS1 1.1, 1.1.3, 1.1.5
    viewing windows ........................ F5/AS1 1.1.4
  panels in barriers .................... F4/AS1 1.2.3
  safety enclosures for ladders ....... D1/AS1 5.1.2, Figures 21 and 22
  scaffolding .......................... F4/AS1 2.0.2
  toeboards ............................ F5/AS1 1.4
types of barriers ........................................... F5/AS1 1.0.3
Basements ........................................... C/AS1 3.3.2 i), 3.7.1, 3.15.2, 4.5.15, 6.9.3, 6.14.4, Figure 3.19; E2/AS1 5.0, Figure 7
drainage ..................................................... E2/AS1 5.2
damp-proof membrane ..................................... E2/AS1 5.1
see also Floors, basement floors
Basins .................................................... G1/AS1 3.3, Figure 9, Table 1;
............................................................................... G13/AS1 3.3.2, 5.5.2, Table 2
Baths ....................................................... G1/AS1 2.4; G13/AS1 5.5.2, Table 2
Bedrooms
see Habitable spaces
Bidets ....................................................... G1/AS1 2.4; G13/AS1 5.5.2, Table 2
Boarding Houses
see Communal residential buildings
Boundary
see Notional boundary, Relevant boundaries
Bridges
see Ancillary buildings
Building construction
non-solid construction ........................................ H1/AS1 2.1.1
solid construction .......................................... H1/AS1 2.1.1
thermal envelope ........................................ H1/VM1 1.0, H1/AS1 2.0
thermal resistance (R-value) .......................... H1/VM1 1.4, H1/AS1 2.1.1, 2.2, 2.3
Building elements ..................................... NZBC/B1.2, B1.3.1, B1.3.2, B1.3.3,
.......................................................................... B2.3, E2.3.2, E2.3.3, E2.3.4, E2.3.5, E2.3.6,
.......................................................................... E3.2, E3.3.5, F3.3 (f), G3.3.2 (b) (c), G6.2,
.......................................................................... G9.3.1 (a) (e); B1/VM4 1.0.1;
.......................................................................... C/AS1 5.1.1, 5.2.1, 5.6.1
see also Floors, Ceilings, Roofs
elements in contact with the ground ................... NZBC/E2.3.3
primary ......................................................... C/AS1 5.1.1, 5.3.2, 5.3.3 a) c), 5.6.1 a),
.......................................................................... 5.7.1, 5.7.4, 5.7.7, 5.7.8, 5.9, 6.14.3, 7.1.2 b),
.......................................................................... 7.8.10 b), 7.9.4, 7.9.5, 7.10.2, 7.10.3, C7.1.1
requiring noise control .................................... G6/AS1 1.0.2, Figure 1
secondary ..................................................... C/AS1 5.1.1, 5.3.2, 5.3.3 b), 5.6.1 a),
.......................................................................... 5.7.1, 5.7.8, 7.1.2 b), 7.10.2, C7.1.1
unrated primary ........................................... C/AS1 5.9.4, Figure 5.2
Building height .......................................... C/AS1 5.7.6 c), 7.11.3, 7.11.4
Building papers ........................................... E2/AS1 2.0.1 c), 2.3.2 b) g),
.......................................................................... 2.3.5 a) b), 2.4.1 to 2.4.3, 2.5.1, 2.5.3
Building performance index

housing .................................................. .H1/VM1 1.2

Building site ......................................... .E1/VM1 3.2.2, 4.0.1, 4.1.10, .E1/AS1 1.0.1
evaluation ............................................. .E1/VM1 1.0.3

Buildings ............................................ .B1/AS3 1.9.2, 1.9.4; .D1/AS1 1.1.1, 1.1.2,
1.1.4, 10.1.4, 10.4.1; .E1/AS1 1.0.1; .F7/AS1 1.2.1,
1.2.7, 1.2.8, 1.5.1, 2.1.1, 2.1.2 b), 2.2.2 b) c)

air-supported structures ............................. .C/AS1 6.20.18
atriums ................................................... .C/AS1 6.22
building elements ..................................... .B1/VM4 2.0.3
building separation ................................... .NZBC/B1.3.3 (o)
car parking ............................................. .C/AS1 6.8.4, 6.10.3 to 6.10.6,
7.8.2, 7.9.16, Figure 6.2
carports .................................................. .C/AS1 7.8.10
commercial ............................................ .H1/AS1 1.0, 1.6
communal non-residential ......................... .H1/AS1 1.0.3
assembly care ......................................... .H1/AS1 1.0, 6.0
assembly service ..................................... .H1/AS1 1.0, 6.0
communal residential ................................ .H1/AS1 1.0

dwellings
attached and multi-unit ............................... .C/AS1 1.3.5, 1.3.6
detached ................................................ .C/AS1 1.3.3
earth buildings ....................................... .B1/VM1 8.0, B1/AS1 4.0
education ............................................. .C/AS1 3.8.4, 6.20.7
entrances ............................................... .D1/AS1 10.1.3
farm buildings ....................................... .B1/VM1 13.0
grandstands .......................................... .C/AS1 3.16.7
hospitals .............................................. .C/AS1 6.6.6
hotels, motels and accommodation ................ .C/AS1 2.2.3
housing ............................................... .H1/VM1 1.1, 1.2, H1/AS1 1.0, 2.0
detached dwellings ................................... .H1/VM1 1.1
group dwellings ...................................... .H1/VM1 1.1.1
multi-unit dwellings ............................... .H1/VM1 1.1, 1.2, H1/AS1 2.1.1
wharenui ............................................. .H1/VM1 1.1.1
industrial ............................................ .H1/AS1 1.0.2

intended life
see Durability

intended use
see Intended use

large buildings ....................................... .H1/VM1 1.3
masonry buildings ................................... .B1/AS3 1.1.1
membrane structures ................................ .NZBC/C4.1.1; .C/AS1 6.20.17 to 6.20.19
minimum floor level ................................ .E1/AS1 2.0, Figures 1 and 2
multi-storey buildings ............................. .C/AS1 2.2.5, 6.12.2
open air auditoriums ................................ .C/AS1 3.16.5
open sided buildings ............................... .C/AS1 7.8.8 to 7.8.10, Figure 7.10
purpose group classification .............. C/AS1 2.2, Table 2.1
reference building ................................ H1/AS1 2.1.1
remaining occupied during fire ................ C/AS1 5.6.8
residential community care ..................... C/AS1 2.4
seasonal use buildings ......................... F7/AS1 1.1.2 c)
single-floor buildings .......................... F7/AS1 1.1.2 a) b)
siteworks
   see Structure
small buildings ................................... H1/VM1 1.1
taverns .......................................... C/AS1 2.2.3
theatres ........................................ C/AS1 6.3.1, 6.19.9, Figure 6.13
three-floor buildings .......................... F7/AS1 1.1.2 b)
three storey buildings .......................... G13/AS1 Figure 7
timber framed buildings ...................... B1/AS3 1.1.1
two-floor buildings ............................. F7/AS1 1.1.2 a) b)
wharenui ........................................ C/AS1 3.3.2 h), 3.4.2 e), 6.7.9

C

Call points ....................................... F7/AS1 1.1.4

Camping grounds ......................... NZBC/G2.2, G2.3.4; G1/AS1 3.4.2,
   Tables 1 to 3; G2/AS1 Table 1
   see also Communal residential buildings

Car parking buildings
   see Commercial buildings, Vehicles

Carports
   see Outbuildings

Catchment characteristics ................. E1/VM1 1.0.2, 2.0.1, 2.1, 2.3, 4.2.1

Ceilings ......................................... NZBC/G6.3.1; G3/AS1 2.1.2, 2.2.3
   floor/ceiling assemblies .................... G6/AS1 1.0.3, Figure 3

Centres for handicapped persons
   see Communal non-residential buildings

Child care centres
   see Early childhood centres and Communal non-residential Buildings

Children ....................... NZBC/D1.3.3 (h), F4.3.3, F4.3.4 (f), F4.3.5 (a),
   F5.2 (d), F5.3.3, G15.3.2 (g); B1/AS2 1.0.2;
   D1/AS1 4.1.8 a); F4/AS1 1.2.1, Table 2; F5/AS1 1.0.2
   See also Early childhood centres

Chimneys ................................. B1/AS1 1.2, 8.0, B1/AS3 2.1;
   C/AS1 9.5, Figures 9.1, 9.2 and 9.3
   bracing units ............................... B1/AS3 1.9, 1.9.3, 1.9.6, Table 2
brick chimneys ................... B1/AS3 1.1, 1.1.3 a) b), 1.2.1 a), 1.6.2 a), 1.7.1, 1.7.6, 1.8.1, 1.8.5 a),
Figures 2 to 4 and 7, Table 1
cantilever height ......................... B1/AS3 1.1.2
chimney bases ........................ B1/AS3 1.1.3 a), 1.6.1, 1.9.4 b)
chimney breasts ....................... B1/AS3 1.5, Table 1
chimney depth ........................ B1/AS3 1.1.3
chimney height ........................ B1/AS3 1.1.2
chimney liners ........................ B1/AS3 1.1.4
chimney lintels ........................ B1/AS3 Table 1
chimney stacks ........................ B1/AS3 1.1.2, 1.6.1
chimney wall thicknesses ............... B1/AS3 1.2, 1.2.1
chimney width ........................ B1/AS3 1.1.3

cantilever height ........................ B1/AS3 1.1.2
chimney bases ........................ B1/AS3 1.1.3 a), 1.6.1, 1.9.4 b)
chimney breasts ....................... B1/AS3 1.5, Table 1
chimney depth ........................ B1/AS3 1.1.3
chimney height ........................ B1/AS3 1.1.2
chimney liners ........................ B1/AS3 1.1.4
chimney lintels ........................ B1/AS3 Table 1
chimney stacks ........................ B1/AS3 1.1.2, 1.6.1
chimney wall thicknesses ............... B1/AS3 1.2, 1.2.1
chimney width ........................ B1/AS3 1.1.3

cantilever height ........................ B1/AS3 1.1.2
chimney bases ........................ B1/AS3 1.1.3 a), 1.6.1, 1.9.4 b)
chimney breasts ....................... B1/AS3 1.5, Table 1
chimney depth ........................ B1/AS3 1.1.3
chimney height ........................ B1/AS3 1.1.2
chimney liners ........................ B1/AS3 1.1.4
chimney lintels ........................ B1/AS3 Table 1
chimney stacks ........................ B1/AS3 1.1.2, 1.6.1
chimney wall thicknesses ............... B1/AS3 1.2, 1.2.1
chimney width ........................ B1/AS3 1.1.3

cantilever height ........................ B1/AS3 1.1.2
chimney bases ........................ B1/AS3 1.1.3 a), 1.6.1, 1.9.4 b)
chimney breasts ....................... B1/AS3 1.5, Table 1
chimney depth ........................ B1/AS3 1.1.3
chimney height ........................ B1/AS3 1.1.2
chimney liners ........................ B1/AS3 1.1.4
chimney lintels ........................ B1/AS3 Table 1
chimney stacks ........................ B1/AS3 1.1.2, 1.6.1
chimney wall thicknesses ............... B1/AS3 1.2, 1.2.1
chimney width ........................ B1/AS3 1.1.3

cantilever height ........................ B1/AS3 1.1.2
chimney bases ........................ B1/AS3 1.1.3 a), 1.6.1, 1.9.4 b)
chimney breasts ....................... B1/AS3 1.5, Table 1
chimney depth ........................ B1/AS3 1.1.3
chimney height ........................ B1/AS3 1.1.2
chimney liners ........................ B1/AS3 1.1.4
chimney lintels ........................ B1/AS3 Table 1
chimney stacks ........................ B1/AS3 1.1.2, 1.6.1
chimney wall thicknesses ............... B1/AS3 1.2, 1.2.1
chimney width ........................ B1/AS3 1.1.3

cantilever height ........................ B1/AS3 1.1.2
chimney bases ........................ B1/AS3 1.1.3 a), 1.6.1, 1.9.4 b)
chimney breasts ....................... B1/AS3 1.5, Table 1
chimney depth ........................ B1/AS3 1.1.3
chimney height ........................ B1/AS3 1.1.2
chimney liners ........................ B1/AS3 1.1.4
chimney lintels ........................ B1/AS3 Table 1
chimney stacks ........................ B1/AS3 1.1.2, 1.6.1
chimney wall thicknesses ............... B1/AS3 1.2, 1.2.1
chimney width ........................ B1/AS3 1.1.3

cantilever height ........................ B1/AS3 1.1.2
chimney bases ........................ B1/AS3 1.1.3 a), 1.6.1, 1.9.4 b)
chimney breasts ....................... B1/AS3 1.5, Table 1
chimney depth ........................ B1/AS3 1.1.3
chimney height ........................ B1/AS3 1.1.2
chimney liners ........................ B1/AS3 1.1.4
chimney lintels ........................ B1/AS3 Table 1
chimney stacks ........................ B1/AS3 1.1.2, 1.6.1
chimney wall thicknesses ............... B1/AS3 1.2, 1.2.1
chimney width ........................ B1/AS3 1.1.3

cantilever height ........................ B1/AS3 1.1.2
chimney bases ........................ B1/AS3 1.1.3 a), 1.6.1, 1.9.4 b)
chimney breasts ....................... B1/AS3 1.5, Table 1
chimney depth ........................ B1/AS3 1.1.3
chimney height ........................ B1/AS3 1.1.2
chimney liners ........................ B1/AS3 1.1.4
chimney lintels ........................ B1/AS3 Table 1
chimney stacks ........................ B1/AS3 1.1.2, 1.6.1
chimney wall thicknesses ............... B1/AS3 1.2, 1.2.1
chimney width ........................ B1/AS3 1.1.3

cantilever height ........................ B1/AS3 1.1.2
chimney bases ........................ B1/AS3 1.1.3 a), 1.6.1, 1.9.4 b)
chimney breasts ....................... B1/AS3 1.5, Table 1
chimney depth ........................ B1/AS3 1.1.3
chimney height ........................ B1/AS3 1.1.2
chimney liners ........................ B1/AS3 1.1.4
chimney lintels ........................ B1/AS3 Table 1
chimney stacks ........................ B1/AS3 1.1.2, 1.6.1
chimney wall thicknesses ............... B1/AS3 1.2, 1.2.1
chimney width ........................ B1/AS3 1.1.3

Churches
see Communal non-residential buildings
Cinemas ........................................ NZBC/G5.3.5
see also Communal non-residential buildings

Classified uses ................................ NZBC/A1

Cleaners’ sinks .............................. G13/AS1 Table 2

Clubrooms
see Communal non-residential buildings

Cold water expansion valves (explosion control valves) . G12/AS1 6.3.3,
6.6.2, 6.6.3, Figures 8 to 10, Table 6
installation ..................................... G12/AS1 6.6.5
relief valve drains ........... G12/AS1 6.7, Figures 8 to 10 and 13

Colleges
see Communal non-residential buildings

Commercial buildings ............... NZBC/A1 5.0, E3.3.1, G3.2.1,
G3.3.1 (a) (b), G3.3.2 (b), G3.3.6, G5.2.1 (c),
G5.3.4, G8.2, G9.3.4, H1.2 (c);
G3/AS1 2.0.1; H1/AS1 1.0

Communal non-residential buildings .... NZBC/A1 4.0, E1.3.2, E3.3.1,
G5.2.1 (c), G5.3.4, G5.3.5, G8.2,
G9.3.4, H1.2 (c); H1/AS1 1.0.3
assembly care ............... NZBC/A1 4.0.3; H1/AS1 1.0, 6.0
assembly service ........ NZBC/A1 4.0.2, H1.2 (a); H1/AS1 1.0, 6.0
halls ...................... NZBC/G5.3.5
places of assembly .......... D1/AS1 8.0

Communal residential buildings ........ NZBC/A1 3.0, G5.2.1 (c),
G5.3.4, G8.2, G9.3.4; D1/AS1 9.0,
9.1.1; H1/AS1 1.0
community care .......... NZBC/A1 4.0.2
community service ............ NZBC/A1 3.0.2

Communes
see Housing, group dwellings

Community care buildings
see Communal residential buildings

Community service buildings .......... D1/AS1 1.1.3
see also Communal residential buildings

Computer centres
see Commercial buildings

Concealed spaces .............. C/AS1 6.18.1, 6.18.10
cavity barriers ................. C/AS1 6.18.1, 6.18.4 to 6.18.6
ceiling space firecells .......... C/AS1 6.12.8
ceiling space restrictions ............. C/AS1 6.18.7 to 6.18.10
in walls and floors .......................... C/AS1 6.18.4
within firecells .............................. C/AS1 6.18.2, 6.18.3, Figure 6.10
see also External Moisture, Internal Moisture

Concealed works .......................... B1/VM4 A1.2.1 b)

Concrete ..................................... B2/AS1 3.1.1
see also Design, concrete

Condensation
see Internal Moisture

Construction moisture ...................... E2/AS1 6.0
exterior joinery ................................ E2/AS1 6.0.2 b)
reconstituted wood products .............. E2/AS1 6.0.2 c)
sites ........................................... F5/AS1 1.0
barriers ........................................ F4/AS1 2.0
timber framing .............................. E2/AS1 4.2.6, 6.0.2 a)
timber weatherboards ...................... E2/AS1 6.0.2 b)

Construction and Demolition Hazards ........ F5
areas accessible to the public ............ NZBC/F5.3.2
barriers ..................................... NZBC/F5.3.2, F5.3.4
demolition sites ............................. F5/AS1 1.0
entry of children ........................... NZBC/F5.2 (d), F5.3.3
falling objects ............................ NZBC/F5.2 (a) (b), F5.3.1
lifting equipment ........................... NZBC/F5.3.4

Contaminants
see Hazardous agents on site, contaminants

Contaminated air discharge ............... G4/AS1 1.3.1 f)

Control panel ................................ F7/AS1 1.1.5, 1.2.2, 2.2.2 b)

Cooling towers ............................... HB CS 9

Corridors ..................................... C/AS1 6.13.1, Figure 6.5
see also Access Routes

Corrosives
see Hazardous Substances and Processes, Class 8

Creep
see Structure, loads

Cross connections
see Protection of water supplies

Cyclic loads
see Structure, loads
D

Dampness
see External Moisture, Internal Moisture

Dams
see Ancillary buildings

Dangerous Goods
see also Hazardous Building Materials, Hazardous Substances and Processes

compounds ........................................... F3/AS1 4.2
construction ........................................ F3/AS1 4.2.1
drainage ............................................. F3/AS1 4.2.4
isolation distances ............................... F3/AS1 4.5, Table 1
storage in bulk ................................... F3/AS1 4.2.3
storage not in bulk ............................. F3/AS1 4.2.2
depots ............................................. F3/AS1 4.2.1 a), b), 4.5.2, 4.8, 4.8.2, 6.2.2
ignition hazards ................................. F3/AS1 2.1.2
isolation distances .............................. F3/AS1 6.2.2 c) d), 6.2.3 b), Tables 5 and 6
type A ............................................. F3/AS1 1.2, 4.3, 4.5.1 b) c), 5.1.1, Tables 1 and 2
type B ............................................. F3/AS1 1.2, 4.5.1 b) c), 4.5.4 b), 5.1.1
type B1 ............................................. F3/AS1 1.2, 3.2.1, 3.3.1, 4.3, 6.2.2 ii), Tables 1 and 2
type B2 ............................................. F3/AS1 1.2, 3.4.1, 3.6.1 b), 4.3, Tables 1 and 2
type C1 ............................................. F3/AS1 1.2, 3.3.1, 5.1.1, Tables 1 and 2
type C2 ............................................. F3/AS1 1.2, 3.3.1, 4.3, 4.5.1 b), 6.2.2 i), 6.2.3 a), 5.1.1, Tables 1 and 2
type D ............................................. F3/AS1 1.2, 4.3, 4.5.1 b), 4.6.2 a), 5.1.1, Tables 1 and 2
type E ............................................. F3/AS1 1.2, 4.5.4 a), 4.5.5 c), 4.7.1, 4.7.12
type F ............................................. F3/AS1 1.2, 4.4, 4.7.1
type G ............................................. F3/AS1 1.2, 4.4
type H ............................................. F3/AS1 1.2, 4.7.1, 5.1.1
types of construction .......................... F3/AS1 4.2
workrooms ........................................ F3/AS1 1.2, 1.3 d), 1.4.1, 1.4.2, 1.5.1, 1.5.2, 1.6.2, 4.0.1 b), 4.2.1 b), 4.4.2, 4.7, 4.7.3, 4.7.5, 4.8.5
escape routes ..................................... F3/AS1 4.7.6
storage capacity ................................. F3/AS1 4.7.4
storage capacity inside workroom ............... F3/AS1 4.7.8
storage capacity outside workroom ............ F3/AS1 4.7.9

Day care institution
see Early childhood centres, Communal non-residential buildings

Dead ends
see Escape routes
Deflections
  see Structure

Demolition
  see Construction and Demolition Hazards

Dental surgeries ..................................NZBC/D1.3.4 (c) (iv)
  see also Commercial buildings

Design
  aluminium ..................................................B1/VM1 7.0
  concrete ...............................................B1/VM1 3.0
  drains
    see Drains
  foundations
    see Foundations
  loadings ..................................................B1/VM1 1.1, 2.0
  earthquake ..............................................B1/AS3 1.9, Table 2
  limit state .............................................B1/VM1 1.1.2, 5.2, 7.1
  non-limit state .......................................B1/VM1 1.1.3, 7.2
  site effects (local) or faults .....................B1/VM1 1.1.4
  masonry .................................................B1/VM1 4.0, B1/AS1 2.0, B1/AS3 1.3.3
  siteworks .............................................B1/VM1 10.0
  steel ....................................................B1/VM1 5.0
  strength reduction factor ..........................B1/VM4 2.0.1, 3.5.1, 4.7, Tables 1 and 4
  timber ..................................................B1/VM1 6.0, B1/AS1 3.0
    see also Timber barriers
  windows
    see Windows

Design loads
  see Structure, loads

Detached dwellings
  see Housing

Differential movement
  see Structure, loads

Disabled persons
  see People with disabilities

Discharge pipes .................................G3/AS1 1.1.5; G13/AS1 4.5.1,
  4.5.2, 4.6, 5.1.1, 5.5, 5.7.3,
  Figures 6 and 11, Table 4
  branch discharge pipes ..........................G13/AS1 Figure 7
  diameters .............................................G13/AS1 3.3.2, 4.3, 5.3,
  Table 6, G13/AS2 3.6, 4.2
  fixture discharge pipes ......................G13/AS1 Figures 7 and 8, Tables 2 and 4
  gradient ..............................................G13/AS1 4.4, 5.4, G13/AS2 3.5, Table 2
  waste pipes
    combined waste pipes .........................G13/AS1 Figure 5
developed lengths

Discharge stacks

see also Discharge pipes, Pipes
discharge stack vents

Discharge units

Dishwashing machine

Domestic buildings

see Housing

Doors

acceptable obstructions
accessible doors
accessible escape routes
automatic sliding doors
closers and latching
degree and width of opening
delayed action unlocking devices
direction of opening
door swings
fire doors
frameless glass doors

glazing

hold-open devices

lift landing doors

lobby doors

locking devices

markings

panic bolts

revolving doors, automatic doors and
access control systems

signs

smoke control doors

1 July 2001
subdividing escape routes .................................................. C/AS1 3.17
turnstiles ................................................................. D1/AS1 7.0.6
visibility ................................................................. D1/AS1 7.0.4
vision panels .......................................................... .C/AS1 3.17.6, 5.8.10
width ................................................................. D1/AS1 7.0.3

Downpipes .................................................... .E1/AS1 3.4.2 b), 3.7.8, 4.0, 5.1.1
installation ............................................................. .E1/AS1 4.3
materials ............................................................. .E1/AS1 4.1, Table 4
sizing ................................................................. .E1/AS1 4.2, Table 5

Downlights .................................................... .C/AS1 9.4

Drainage system .......................................................... G13/AS1 5.1.2, 5.5.2, 5.7.3, 5.7.4,
G13/AS2 1.0.2, 3.1.1, 3.3.2, 4.1.1, 5.10.1

Drains ............................................................. NZBC/G13.2, G13.3.1 (a), G13.3.2,
G13.3.3, G15.3.3; B1/VM1 11.0, B1/AS1 6.0; G13/AS1 4.2.2, G13/AS2 1.0
access points .................................................. .E1/AS1 3.7, 3.7.3, 3.7.7, 3.7.8
access chambers ................................................ .E1/VM1 5.0.1, E1/AS1 3.7.1,
3.7.2, 3.7.4, 3.7.5, Figure 12
inspection chambers ........................................... .E1/AS1 3.7.1, 3.7.2, 3.7.4, 3.7.5,
3.7.2, Figure 11
inspection points .............................................. .E1/AS1 3.7.1, 3.7.7
rodding points .................................................. .E1/AS1 3.7.1, 3.7.7 a), Figure 10
alignment ......................................................... .E1/AS1 3.3, 3.7.7 a), Figures 4 and 5
see also Drain, layout
bedding and backfilling ...................................... .E1/AS1 3.9, 3.9.2,
Figure 13; G13/AS2 Figure 7
alternative solutions ........................................ .E1/AS1 3.9.8
materials ......................................................... .E1/AS1 3.9.5; G13/AS2 Table 1
placing and compacting .................................. .E1/AS1 3.9.6; G13/AS2 5.5
proximity to buildings ........................................ .E1/AS1 3.9.7, Figure 14;
G13/AS1 5.6, Figure 8
trench slope .................................................. .E1/AS1 3.9.3
trench width .................................................. .E1/AS1 3.9.4
bends ............................................................... G13/AS2 3.1
bubble-up chamber system .................................... .E1/AS1 3.4.2, Figures 6 and 7
connections ....................................................... G13/AS2 3.2.1, Figure 1
construction ...................................................... G13/AS2 5.2, Figure 7
diameter
see Drains, sizing
disused drains ..................................................... G13/AS2 5.10
downstream water systems ..................................... E1/VM1 4.3
drain vent pipes ................................................... G13/AS2 Figure 3, Table 3
drains under buildings ........................................ .E1/AS1 3.7.6 to 3.7.8
gradient ........................................................... E1/AS1 3.3.1, 3.7.3 b); G13/AS1
Table 5, G13/AS2 3.5, Table 2
minimum gradient ................................................ .E1/AS1 3.4, Table 2
installation ...................................................... .G13/AS2 5.0, 5.5
joints ............................................................... E1/AS1 3.5, Table 3; G13/AS2 5.1
juncti0ns ........................................... G13/AS2 3.2
layout ........................................... E1/AS1 3.3.1, 3.7.3 a), Figures 4 and 5
leakage tests .................................... E1/VM1 8.0, E1/AS1 3.8
  high pressure air test ........................... E1/VM1 8.3
  low pressure air test ............................ E1/VM1 8.2
  water test ...................................... E1/VM1 8.1
maintenance access
  see Maintenance access to drains
materials ......................................... E1/AS1 3.1, Table 1;
                                      G13/AS2 2.0, Table 1
open water, upstream of site .............. E1/VM1 4.2
pipe water, upstream of site ................ E1/VM1 4.1
quantity ......................................... E1/VM1 4.1.10
tailwater depth .................................. E1/VM1 4.1.6, 4.1.7
proximity to buildings .......................... G13/AS2 5.6, Figure 8
secondary flow .................................... E1/VM1 4.0, E1/AS1 1.0.1 d)
  downstream drainage ........................... E1/VM1 4.3
flow ................................................ E1/VM1 4.1.11
headwater depth .................................. E1/VM1 4.1.4, 4.1.5, 4.1.8, 4.1.9,
  Figures 5 to 7, 10 and 11
site – outfall protection ........................ E1/VM1 7.0
sizing ............................................. E1/VM1 3.0, E1/AS1 3.2,
                                      Figure 3; G13/AS2 3.6, Table 2
energy losses ....................................... E1/VM1 5.0
hydraulic design of drains .................... E1/VM1 1.0.4, 3.2, Figures 6 and 7
  air entrainment ................................ E1/VM1 3.2.4
  headwater depth ................................. E1/VM1 3.2.2, Figure 5 a)
minimum size ...................................... E1/VM1 3.1
minimum velocity ................................ E1/VM1 6.0
pipe size decrease ............................... E1/VM1 5.0.2
soak pits ........................................... E1/VM1 9.0, Figure 13
sumps ............................................... E1/AS1 3.6.1, 3.6.2, Figures 8 and 9
surface water inlets ............................. E1/AS1 3.6
under buildings ................................. E1/AS1 3.7.6; G13/AS2 5.8, 5.9, Figure 13
upstream water systems ........................ E1/VM1 4.1, 4.2
ventilation ........................................ G13/AS2 4.0, Figures 4 to 6, Table 3
watertightness ..................................... G13/AS2 6.1.1

Draught diverters ................................. G4/AS1 2.3.2

Drinking fountains ............................... G13/AS1 Table 2

Durability ......................................... B2; B2/VM1 1.0, B2/AS1 1.2, Figure 1
code compliance certificate ..................... NZBC/B2.3
ease of access and replacement .............. B2/AS1 1.2.1
evaluation ......................................... B2/VM1 1.0, B2/AS1 1.2, Figure 1
  examples of requirement ..................... B2/AS1 1.3.1, Table 1
generic materials ................................ B2/AS1 3.0
in service history ................................ B2/VM1 1.1
  laboratory testing ............................ B2/VM1 1.2
similar materials .................................. B2/VM1 1.3
intended life ................................. NZBC/B1.3.1, B2.1, B2.3
5 year durability ............................. B2/AS1 Table 1
15 year durability ......................... B2/AS1 Table 1
50 year durability ......................... B2/AS1 Table 1
maintenance ................................ B2/AS1 2.0
normal ....................................... B2/AS1 2.1
scheduled .................................. B2/AS1 2.2
specified intended life ................. NZBC/B2.3
timber ....................................... B2/AS1 3.2

Dynamic loads
  see Structure, loads

E

Early childhood centres ................. NZBC/G2.2, G3.2.1, G3.3.1 (a) to (d),
       G5.2.1 (a), G5.3.1, G5.3.2, G7.2, G12.3.4;
       F2/AS1 1.3; G2/AS1 Table 1; G3/AS1 1.0.1;
       G5/AS1 1.0.3

  see also Communal non-residential buildings

Earth buildings ............................ B2/AS1 3.4; E2/AS1 2.6

Earth pressure
  see Structure, loads

Earth retaining structures ............... B1/VM4 2.0.3

Earthquakes
  see Structure, loads
  seismic resistance of building services .......... B1/VM1 14.0

Ease of access and replacement ........ B2/AS1 1.2.1

Effluents .................................. B1/VM4 A1.2.1 f)

Electrical codes of practice ........... G9/VM1 1.0.1, G9/AS1 1.0.1

Electricity ............................... G9
  electrical installations ................. NZBC/G9.1, G9.2, G9.3.1 to
       G9.3.3; G9/VM1 1.0
       domestic cooking and refrigeration ....... G3/AS1 1.4.1
       laundries ................................ G2/AS1 1.1.2
  electromechanical stress ...................... NZBC/G9.3.1 (d)
  essential services ........................ NZBC/G9.3.2
  external supply system ...................... NZBC/G9.3.3
  people with disabilities ................... NZBC/G9.3.4
  light switches ........................... G9/AS1 2.0.1 a) b)
  socket outlets ................................ G9/AS1 2.0.1 c)
  temperature ................................ NZBC/G9.3.1 (c) (d)
Emergency lighting
  see **Lighting for Emergency**

Enclosing rectangles ............... [C/AS1 7.3.6, 7.5, 7.6]
  building on sloping sites and
    buildings of irregular height .... [C/AS1 7.5.9, 7.5.10, Figure 7.7]
  exceptions for SH, SR and
    SA buildings .......... [C/AS1 7.5.7, 7.5.8, Figure 7.7]
Method 2 ............ [C/AS1 7.3.4 a), 7.3.6 to 7.3.8, 7.3.12, 7.5, Figures 7.5 to 7.7, Table 7.2]
Method 3 ............ [C/AS1 7.3.4 b), 7.3.8, 7.3.12, 7.6, Figure 7.8]
Method 4 .............. [C/AS1 7.3.4 c), 7.3.9, 7.7, Figure 7.9, Tables 7.3 and 7.4]

Energy cut-offs ............... [G12/AS1 6.4.1 c), 6.5.2]

**Energy Efficiency**
  [H1; E3/AS1 1.1.5; NZBC/H1.3.2; H1/VM1 1.2]
  building performance index (BPI) ...... [NZBC/H1.3.3 (d) (f); H1/AS1 4.0]
  heat gain ................ [NZBC/H1.3.4]
  heat loss ................ [NZBC/H1.3.4]
  heating .................. [NZBC/H1.3.2]
  indoor temperature and humidity .... [NZBC/H1.2 (a), H1.3.1]

Energy efficiency provisions
  airflow control ................ [H1/AS1 3.0]
  artificial lighting ............. [H1/AS1 1.0.3, 6.0]
  building performance index ....... [H1/VM1 1.2]
  hot water systems ............. [H1/AS1 5.0]
  internal moisture gain ........ [H1/VM1 1.2.1, H1/AS1 2.1.1]
  solar heat gain ................ [H1/AS1 4.0]

Entrances
  principal .................... [D1/AS1 1.1]

Environment
  see **Interior Environment**

Escalators
  see **Mechanical Installations for Access**

Escape height ............... [C/AS1 2.2.9 a), 3.3.4, 3.15.3 a), 3.15.6, 3.15.7 a), 3.18.1, 4.5.10 b), 5.3.3 c), 6.6.2, 6.9.2, 7.9.10, 7.10.7, Figure 3.20, Table 4.1]

Escape routes ............... [NZBC/F6.2, F6.3.2, F8.2 (a), F8.3.3 (a); C/AS1 3.1 to 3.4, 3.6.1, 3.7.1, 3.9.12 to 3.9.14, 3.11.4, 3.17.3, 3.17.5, 4.5.7, 7.10.4, Figures 3.1 to 3.5, Tables 3.1 and 3.2; D1/AS1 1.1.5; F3/AS1 4.7.6; F8/AS1 3.0]
  see also **Means of Escape**
  accessible .................. [C/AS1 3.3.7, 3.17.5 a]
  doors subdividing escape routes .... [C/AS1 3.17]
exitways .................................. C/AS1 3.3.2 a), 3.11, 3.12, 6.9, 6.16.7,
                        A2.1.1 Type 16, Figures 3.3 and 3.20,
                        Tables 2.1, 6.1 to 6.3
external exitways ................. C/AS1 3.16.4, 5.6.3 c), 7.9.1, 7.9.3
lighting ............................... C/AS1 3.19.1
lighting for emergency
                        see Fire safety precautions
pressurisation
                        see Fire safety precautions
split level exitways ............... C/AS1 3.15.8, Figure 3.24
ventilation of enclosed exitways .... C/AS1 6.9.6 to 6.9.10
external .................................. C/AS1 3.14
handrails .............................. C/AS1 3.3.3, 3.3.6 b), 3.9.8, 6.20.4 c)
height and width of escape routes .... C/AS1 3.3
height ................................ C/AS1 3.3.1
width ................................ C/AS1 3.3.2 to 3.3.5, 3.9.4 to 3.9.6,
                        3.9.12 e), 3.17.5, Figures 3.3, 3.4
                        and 3.6, Tables 3.2 and 3.4
length of escape routes ............ C/AS1 3.4, 3.5, 3.11.7, 6.13.1,
                        Figures 3.7, 3.9 and 3.10, Table 3.3
number of escape routes ........... C/AS1 3.2, Figure 3.2, Table 3.1
obstructions ......................... C/AS1 3.3.6, 3.4.2 c), 3.17.5 a) e), 3.18.3
access control systems ............. C/AS1 3.17.7
chains .................................. C/AS1 3.3.6
crowd control barriers ............. C/AS1 3.3.6
sliding bars ........................... C/AS1 3.3.6
turnstiles .............................. C/AS1 3.3.6
open paths ............................ C/AS1 2.2.8, 3.1.2, 3.1.3, 3.1.5, 3.3.2 f),
                        3.3.7, 3.4.1, 3.4.2, 3.8, 3.9, 3.17.3 a), 3.17.5 a),
                        A2.1.1 Type 16, Figures 3.1, 3.7, 3.9, 3.12 and
                        3.16, Table 3.3
dead end open paths .............. C/AS1 1.3.4 Step 2, 3.3.2 b),
                        3.4.2, 3.5.1, 3.10, 3.14.4, Table 3.3
increases in open path lengths .... C/AS1 3.5
intermediate floors ................. C/AS1 3.3.2 f), 3.4.1 a),
                        3.4.6, 3.9.13, Figure 3.9
length ............................. C/AS1 1.3.4 Step 2, 2.2.8, 3.1.3, 3.4.1,
                        3.4.2, 3.4.4, 3.4.6 to 3.4.8, 3.5,
                        3.15.1, Figures 3.7 and 3.9, Table 3.3
number of open paths ............. C/AS1 3.8.1
ramps ................................. C/AS1 3.1.4, 3.9.2, 3.14.7
separation of open paths ........ C/AS1 3.8.3, Figure 3.12
size of open paths .................. C/AS1 3.8.1
sloping floors and ceilings ....... C/AS1 3.4.8
special cases ........................ C/AS1 3.9
aisles ............................... C/AS1 3.9.3 to 3.9.9, Figure 3.15
exception for education buildings .... C/AS1 3.8.4
fixed seating ....................... C/AS1 3.9.3, Figures 3.13 to 3.15, Table 3.4
ladders .................................................. C/AS1 6.4.7 c), 3.10.2
long corridors ...................................... C/AS1 6.13, Figure 6.5
loose seating ......................................... C/AS1 3.9.10, 3.9.11
separate tenancies .................................... C/AS1 3.9.1
subdivision ............................................ C/AS1 6.13.1 a)
unenclosed stairs .................................... C/AS1 3.9.14
protected paths ....................................... C/AS1 3.1.2, 3.1.2, 3.7.1 a), 3.9.12, 3.9.13,
                                            3.11.1, 3.11.2, 3.15.3 b), 3.16.3,
                                            6.9.1, 6.9.6 a), 6.10.4 a), 6.11.3 b),
                                            Figures 3.1, 3.7, 3.8, 3.11, 3.19,
                                            3.28 and 3.30, Tables 2.1 and 6.1
floor area ................................................ C/AS1 3.4.3, 3.4.5
length .................................................. C/AS1 3.1.3, 3.4.1, 3.4.4, 6.13.1 a), Table 3.3
subdivision ............................................ C/AS1 6.13.1 a)
safe paths ............................................. C/AS1 3.1.2, 3.4.1 b), 3.7.1,
                                             3.9.14, 3.11.4 to 3.11.6, 3.11.9, 3.14.1,
                                             3.15.3 b), 3.15.6, 3.15.8 a), 3.16.1,
                                             3.16.6, 3.16.8, 3.16.9, 6.9.2 to 6.9.4,
                                             6.10.4 a), 6.22.2 d), 7.2.1 b), 7.7.1,
                                             A2.1.1 Type 13 Type 19,
                                             Figures 3.1, 3.8, 3.16, 3.19, 3.21,
                                             3.22, 3.24, 3.29 to 3.31 and 5.1,
                                             Tables 2.1, 6.1 and 7.4
glazing .................................................. C/AS1 5.8, Figure 5.1
horizontal safe paths .............................. C/AS1 3.11.6 a), 3.11.7, 3.11.8,
                                             3.17.9 b), 3.17.13 e), 6.9.8
length restrictions ................................... C/AS1 3.11.7, 3.15.5 c)
permitted activities .................................. C/AS1 3.12.2
subdivision ............................................ C/AS1 6.13.1 a)
vertical safe paths ................................... C/AS1 3.11.6 b), 3.11.7, 3.12.3,
                                             3.13, 3.16.3, 3.17.9 b), 3.17.12 a),
                                             3.17.13 e), 6.9.7, 6.9.11, A2.1.1 Type 14, Figure 6.1
signs .................................................... C/AS1 3.20
single escape routes ................................ C/AS1 3.15, Table 4.1 special application b)
active purpose groups .............................. C/AS1 3.15.3, 3.15.4
basements ............................................. C/AS1 3.15.2, Figure 3.19
bridges ................................................ C/AS1 3.15.7, Figure 3.23
external balconies ................................... C/AS1 3.15.7, Figure 3.22
external stairways ................................... C/AS1 3.15.7
intermediate floors .................................. C/AS1 6.22.2 c)
internal stairs ....................................... C/AS1 3.15.6, Figure 3.21
sleeping purpose groups ......................... C/AS1 3.15.5, Figure 3.21
split level exitways ................................ C/AS1 3.15.8, Figure 3.24
stairs ................................................... C/AS1 3.15.6, 3.15.7, Figures 3.21 to 3.23
surface finishes .................................... C/AS1 3.3.2 h), 3.4.2 e), Table 6.2

Equipotential bonding ............................... G12/AS1 9.0
earth bonding conductors ......................... G12/AS1 9.3
installation of conductors ........................................... G12/AS1 9.2
metallic sanitary fixtures ........................................... G12/AS1 9.2.2, Figure 20
metallic water supply pipes ........................................... G12/AS1 9.2.1, Figure 19

Escape through adjacent firecell ..................................... C/AS1 3.9.12, Figure 3.16
Escape through adjoining building ...................................... C/AS1 3.6, Figure 3.11

Evacuation time ....................................................... NZBC/F6.3.1

Exitways ................................................................. F7/AS1 1.2.6, 1.3.5 c), 1.5.2;
                                                 F8/AS1 3.1.1 a) b) c), 3.2.3 a) b)

pressurisation ......................................................... F7/AS1 1.3.7

Explosion
see Structure, loads, and Hazardous Substances and Processes

Explosives
see also Hazardous Substances and Processes, Class 1 Explosives
explosives manufacture .................................................. F3/AS1 2.1
water ingress into buildings ............................................ F3/AS1 2.1.3

Exterior joinery ......................................................... E2/AS1 2.0.1 b), 3.0, 6.0.2 b)

External Moisture ....................................................... E2
concealed spaces ....................................................... NZBC/E2.3.5
elements in contact with the ground ................................... NZBC/E2.3.3
external walls .......................................................... NZBC/E2.3.2
moisture present at completion of construction ........ NZBC/E2.3.6
roofs ................................................................. NZBC/E2.3.1, E2.3.2
snow ................................................................. NZBC/E2.3.1
suspended floors ....................................................... NZBC/E2.3.4
weathertightness ........................................................ E2/VM1 1.0

External walls ......................................................... C/AS1 3.14.3, 3.14.5, 3.14.6, 5.7.5,
                                                                                  5.7.6, 6.12.7, 7.1.1, 7.3, 7.4.1, 7.5 to 7.7,
                                                                                  7.8.7, 7.9.7, 7.9.10, 7.9.11, 7.10, 7.11.2,
                                                                                  D2.1.1 Clause 511.7.3, Figures 6.11, 6.12,
                                                                                  7.1, 7.3 and 7.11, Table 7.5
cladding ................................................................. C/AS1 7.9.18, 7.11.2, 7.11.3, C9.1, Table 7.5
fire resistance ratings .................................................. C/AS1 3.14.5, 3.14.6, 5.7.5,
                                                                                  5.7.6, 7.3.10, 7.4.3, 7.8.3 to 7.8.5,
                                                                                  7.8.10 c), 7.9.9, 7.9.16, 7.10
firecell separation .................................................... C/AS1 7.3, 7.8 to 7.10,
                                                                                  Figures 7.1 to 7.12, Tables 7.1 to 7.4
glazing ................................................................. C/AS1 7.3.3 c), 7.3.5 to 7.3.7, 7.4,
                                                                                  Figure 7.4, Table 7.1
return walls ............................................................ C/AS1 7.3.3 e), 7.3.9, 7.7, 7.10.5,
                                                                                  Figure 7.9, Tables 7.3 and 7.4
surface finishes ....................................................... C/AS1 7.1.2 c), 7.11.2 to 7.11.4
wing walls ............................................................. C/AS1 7.3.3 d), 7.3.9, 7.7, 7.10.5,
                                                                                  Tables 7.3 and 7.4
F

F rating
   see Fire resistance ratings

Factories
   see Industrial buildings

Falsework
   see Structure

Farm buildings
   see Buildings, farm buildings

FHC
   see Fire hazard category

FI
   see Flammability index

Filters
   see Strainers

Final exits .......................... C/AS1 3.1.2, 3.1.3, 3.14.5, 3.16.4, 3.17.1 c), 3.18.1, 6.20.18 a),
                                  Figures 3.1, 3.2, 3.12, 3.19, 3.24 and 3.31, Table 6.1; F8/AS1 3.1.1 a) b), 3.2.3 a)

Fire alarm systems
   see Fire safety precautions

Fire engineering design .................. F7/AS1 1.1.7, 1.4.1

Fire fighting facilities .................. C/AS1 8.2

Fire hazard categories (FHC) ......... C/AS1 1.3.2 Step 3, 2.2.1, 3.12.2 d), 3.12.3 c), 3.15.2 b), 3.15.3 a), 4.2.3,
                                   5.4.1 f) j), 6.6.7, 6.20.7, 6.20.15 a), 6.21.5 a), 6.22.1, 7.1.3, 7.3.2 b), 7.5.2, 7.5.3 Step 4, 7.7.5
                                   Step 5, 7.8.1, 7.8.2, 7.8.9 c) d), 7.9.8 b), 7.10.6 a), Figures 3.19, 3.20, 7.1 and
                                   7.10 Note 3, Tables 2.1, 5.1, 7.1 to 7.4

category 4 buildings ................. C/AS1 2.2.10, 5.6.10 to 5.6.12,
                                   7.8.1, 7.8.2, Table 2.1

Fire load energy density (FLED) ....... C/AS1 2.2.1 comments,
                                   2.2.10, Table 5.1

Fire resistance ratings (FRR) ........... C/AS1 1.3.2 Step 8, 1.3.4
                                   Steps 4 and 6, 1.3.5 b), 3.6.1 c), 3.14.6 c), 3.15.3 c), 3.16.6, 4.1.2, 4.3.2, 5.1, 5.2,
                                   5.9.5 a) b), 5.9.6, 6.2.1, 6.3.1, 6.6.1, 6.6.2, 6.6.5 to 6.6.7, 6.7.1, 6.7.2, 6.7.5, 6.7.6, 6.7.9,
                                   6.8.1, 6.9.2, 6.9.3, 6.10.1, 6.10.2, 6.10.5, 6.11.1,
                                   6.12.1, 6.12.6, 6.14, 6.15, 6.16.2, 6.16.3,
6.17.2, 6.18.8, 6.19.14, 7.2.1, 7.4.3, 7.8.1 a),
7.8.2 to 7.8.6, 7.8.10 b) c), 7.9.3, 7.9.4, 7.9.8 b),
7.9.13, 7.10, C7.1.1, D2.1 Clause 511.7.3,

Figure 7.10, Table 6.1

application of F and S ratings ......................... C/AS1 5.3
applying FRRs to building elements .................... C/AS1 5.7
concessions for multiple purpose groups ......... C/AS1 5.6.6, 5.6.7
determining F and S ratings ......................... C/AS1 5.4, 5.5
determining the FRR .................................. C/AS1 5.6
fire resistance tests ................................. C/AS1 5.9.6, C7.1.1
firecell rating (F) ................................. C/AS1 3.16.6, 4.1.2, 4.3.2, 4.4.1
Step 5, 4.5.7, 4.5.14, 5.2.2, 5.3.1, 5.3.2,
5.4, 5.5.1, 5.6.4, 5.6.8 a), 6.15.1, 6.16.2,
6.16.3, 6.20.15, 7.2.1 a), 7.10.2, 7.10.3, Table 4.1
firecells rated F0 ................................ C/AS1 6.2
floors .............................................. C/AS1 3.14.6 c), 3.15.3 c), 4.3.2,
5.6.3 d), 5.7.3, 6.10.3, 6.14, 6.15, 7.8.6
insulation rating ................................ C/AS1 5.1.1 c), 5.6.3 to 5.6.5,
5.8.10, 6.19.13, 7.8.1 a), Table 6.1 Notes
integrity rating .................................. C/AS1 5.1.1 b), 5.6.5, 5.8.2, 7.4.3
intermediate floors. ................................. C/AS1 4.5.16, 6.14.3
minimum FRRs .................................... C/AS1 5.7.9
open sided buildings .............................. C/AS1 7.8.10 b) c), Figure 7.10
reductions for sprinklered firecells ............... C/AS1 5.6.5
roofs .............................................. C/AS1 7.8.1, 7.9.3, 7.9.8 b),
Figures 7.1 and 7.11
small buildings .................................. C/AS1 7.10.6
stability rating .................................. C/AS1 5.1.1 a), 5.6.5, 5.9.4, 5.9.5
structural fire endurance rating (S) .......... C/AS1 2.2.10, 4.1.2, 4.2.3,
5.2.2, 5.3.1, 5.3.3, 5.4, 5.5.2, 5.5.3,
5.6.4, 5.6.8 a), 5.6.10, 6.10.5, 7.2.1,
7.4.3, 7.8.1 a), 7.8.5, 7.8.6, 7.10.2,
7.10.6, 7.10.9, Table 5.1

Fire resisting closures .............................. C/AS1 6.18.9, 6.19, C7.1.1, C8.1.1, Table 6.1
access panels ...................................... C/AS1 6.19.12
fire curtains ...................................... C/AS1 6.19.9, 6.19.10
fire dampers ..................................... C/AS1 6.3.2 f), 6.16.5 d), 6.19.14
fire doors  
see Doors
fire shutters ..................................... C/AS1 6.19.15 to 6.19.17
lift landing doors  
see Doors
smoke control doors  
see Doors
Fire safety

see Means of Escape, Outbreak of Fire, Spread of Fire, Structural Stability during Fire.

Fire safety precautions (FSP) ................. C/AS1 1.2.3, 1.3.2 Step 6, 2.3.1, 3.1.5, 4.2.6, 4.2.7, 4.3.1, 4.4.1, 4.5, 5.6.7, 6.10.1, 6.11.1, Appendix A, Table 4.1

domestic (Type 1) ................................. C/AS1 A2.1.1
emergency electrical power supply (Type 17) .............................. C/AS1 6.23.1 d), 6.23.3, 6.23.4, A2.1
emergency lighting (Type 16) .............................. C/AS1 3.19.2, 6.23.3 c), 6.23.4, A2.1
emergency lighting in exitways .............................. F7/AS1 1.5.2
fire alarm systems
activation of system .............................. F7/AS1 2.1.1
automatic ........................................ F7/AS1 1.1.3, 1.2.3 to 1.2.7
heat detectors .............................. F7/AS1 1.2.3, 1.2.6, 1.3.1, 1.3.2, 1.3.4, 1.3.5
high sensitivity smoke detection .............................. F7/AS1 1.1.7
installation and maintenance .............................. F7/AS1 1.1.3, 1.1.5, 1.2.6, 1.2.7, 1.3, 1.4, 1.5.3
manual (Type 2) .............................. C/AS1 4.5.3, 4.5.9, 4.5.10 b), A2.1; F7/AS1 1.1.1, 1.1.2, 1.2.2
means of communication with the Fire Service
see Alerting the Fire Service
modified smoke detection .............................. F7/AS1 1.2.5 to 1.2.7
requirements ........................................ F7/AS1 1.2.1
smoke detectors .............................. F7/AS1 1.1.6, 1.2.4, 1.2.9, 1.3, 1.4.1, 1.5.3
substitution of smoke detectors by heat detectors .............................. F7/AS1 1.3.5
fire hydrant systems (Type 18) .............................. C/AS1 8.2.2, A2.1
Fire Service lift controls (Type 15) .............................. C/AS1 8.2.5, A2.1; F7/AS1 1.5.2
fire sprinklers (Type 6) .............................. C/AS1 3.9.12 f), 3.15.3 a), 3.15.6, 3.15.7 a), 4.1.1 a), 4.5.10, 4.5.11, 5.6.12, 6.3.2 a) d), 6.6.8, 6.16.8, 6.18.10, 6.19.9, A2.1, Appendix D, Figure 7.2
concessions for sprinklers .............................. C/AS1 3.3.2 c), 3.4.8 d), 3.5.2, 3.14.3, 3.15.3 a), 3.15.6, 3.15.7 a), 3.16.3 b), 4.2.5, 5.5.3, 5.6.5, 5.6.6 b), 5.6.7, 5.8.7, 5.8.8, 6.3.1, 6.5.1, 6.7.2, 6.7.9, 6.9.2 c), 6.9.6 d), 6.9.11, 6.10.5, 6.13.1, 6.16.3, 6.20.5, 6.20.10, 6.20.15 a), 6.21.6 b), 6.22.3 a), 7.2.2, 7.3.12, 7.7.6, 7.9.3, 7.9.10, 8.1.1 e), Tables 4.1 Note 5, 6.2
residential ........................................ C/AS1 D3.1
with smoke detectors (Type 7) .............................. C/AS1 3.12.2 b), 4.5.10, 4.5.11, 6.22.2 g), A2.1
fire sprinkler systems
  automatic .................................. \textbf{F7/AS1} 1.2.8, 1.3.2, 1.3.4
  with smoke detectors ......................... \textbf{F7/AS1} 1.2.9

fire systems centre (Type 20) ............... \textbf{C/AS1} 8.2.3, 8.2.4, A2.1
heat detectors (Type 3) ...................... \textbf{C/AS1} 3.5.3, 3.5.5, 4.5.4,
  4.5.10, 4.5.11, 6.10.4 c),
  6.11.3 b), A2.1

hold-open devices .......................... \textbf{F7/AS1} 1.3.6, 1.5.2
manual (Type 2) .......................... \textbf{C/AS1} 4.5.3, 4.5.9, 4.5.10 b), A2.1
mechanical smoke extract .................... \textbf{F7/AS1} 1.3.8, 1.5.2
mechanical smoke extract (Type 11) ........ \textbf{C/AS1} 3.4.6 a),
  3.4.8 d), 6.21.5, 6.22.7 c),
  6.22.8 c), 6.22.11, 6.22.12,
  6.22.14, A2.1, B3.1.1,
  \textbf{}Table 6.6

modified smoke/heat detection (Type 5) .... \textbf{C/AS1} 3.5.4, A2.1
natural smoke venting ........................ \textbf{F7/AS1} 1.3.8, 1.5.2
natural smoke venting (Type 10) ........... \textbf{C/AS1} 3.4.6 a), 3.4.8 d),
  6.21.5, 6.22.7 b), 6.22.8 b) c),
  6.22.10, 6.22.14, A2.1,
  B3.1.1, \textbf{}Table 6.5

pressurisation of safe paths (Type 13) ...... \textbf{C/AS1} 3.7.1 b),
  3.11.6 b), 6.9.6, 6.9.11, 6.13.1,
  6.19.4 c), 6.21.2, 6.23.1 b), A2.1,
  \text{} B1.1.1, \text{} Table 6.1 Note 2;
  \textbf{F7/AS1} 1.3.7, 1.5.2

refuge areas (Type 19) ...................... \textbf{C/AS1} 3.13, A2.1, Figure 3.17
smoke control in air-handling systems (Type 9) \textbf{C/AS1} 6.23.2,
  A2.1; \textbf{F7/AS1} 1.5.2, 1.5.3

smoke detectors .......................... \textbf{F7/AS1} 1.1.6, 1.2.4, 1.2.9,
  1.3, 1.4.1, 1.5.3
smoke detectors (Type 4) .................... \textbf{C/AS1} 3.5.4, 3.5.5,
  3.12.2 b), 3.17.10, 4.5.4, 4.5.10, 4.5.11,
  6.22.2 g), 6.22.14, 6.23.1, A2.1, B1.1.1
voice communication system (Type 8) ........ \textbf{C/AS1} 3.16.3 d),
  8.2.6, A2.1

Fire separations .......................... \textbf{C/AS1} 1.3.5 b), 3.11.9, 3.15.3 c),
  4.1.1 a), 5.1.1, 5.3.2, 5.3.3 d) e), 5.6.5,
  5.6.6 b), 5.7.2, 5.7.4, 6.2.1, 6.3.1, 6.6,
  6.7, 6.8.1, 6.9.2, 6.9.3, 6.10.1, 6.10.2,
  6.10.5, 6.11.1, 6.11.2, 6.12, 6.14.4,
  6.14.4, 6.15.1 a), 6.16.2, 6.17, 6.18.4,
  6.18.7 to 6.18.10, 7.2.1, 7.2.2, \text{} Table 6.1
junctions ................................. \textbf{C/AS1} 6.12.4 to 6.12.7, 6.12.9,
  6.18.4, Figure 6.4
protected shafts .......................... \textbf{C/AS1} 6.16, Figure 6.8
Fire Service ........................................... C/AS1 4.2.6 c), 5.9.3 f), 6.21.2, 6.22.12 b), Part 8, A2.1.1 Type 15 and Type 20; F7/AS1 1.2.2, 1.2.7, 2.1.2 a), 2.2

see also Alerting the Fire Service
installation and maintenance ........................................... F7/AS1 1.1.3, 1.1.5, 1.2.6, 1.2.7, 1.3, 1.4, 1.5.3
manual ....................................................... F7/AS1 1.1.1, 1.1.2, 1.2.2
means of communication with ........................................... C/AS1 A1.3.1, A2.1.1
Type 2 and Type 7
requirements ....................................................... F7/AS1 2.1
activation of system ................................................. F7/AS1 2.1.1
smoke detectors ................................................. F7/AS1 1.2.5, 1.3, 1.4, 1.5.3
vehicular access ................................................. C/AS1 8.1.1, 8.1.2

Fire shutters
see Fire resisting closures

Fire spread
horizontal ........................................... C/AS1 4.1.1 b), 7.1.1 b), 7.3, 7.8
vertical ........................................... C/AS1 4.1.1 b), 7.1.1 a), 7.9
between different levels of the same building ........... C/AS1 7.9.10
to 7.9.15
external thermal insulation ........................................... C/AS1 7.9.18, 7.9.19,
Figure 7.12
from an adjacent lower roof ........................................... C/AS1 7.9.6 to 7.9.9,
Figure 7.11
roof car parking and storage ........................................... C/AS1 7.8.2, 7.9.16, 7.9.17

Fire stopping ........................................... C/AS1 6.12.5, 6.12.7 a), 6.12.9, 6.17,
6.18.1, 6.18.4, C7.1.1, C7.1.2,
Figures 6.4, 6.9 and 6.11
cavity barriers ........................................... C/AS1 6.18.4, 6.18.6, Figure 6.12
curtain walls ........................................... C/AS1 7.9.14, Figure 6.11
external thermal insulation ........................................... C/AS1 7.9.18, Figure 7.12
hollow construction ........................................... C/AS1 6.17.5, Figure 6.12
protected shafts .............. C/AS1 3.12.3 e), 6.16.4, 6.16.5 e), Figure 6.8
service outlets ........................................... C/AS1 6.17.6, Figure 6.9

Firecell rating (F)
see Fire resistance ratings

Firecells ........................................... F7/AS1 1.2.5 to 1.2.7, 1.3.1, 1.3.4, 1.3.5
basements ........................................... C/AS1 3.7, 4.5.15, 6.14.4
buildings remaining occupied during fire .............. C/AS1 5.6.8, 5.6.9
car parking ........................................... C/AS1 6.10.3 to 6.10.6
ceiling space firecells ........................................... C/AS1 6.12.8
concealed spaces ........................................... C/AS1 6.18.2, 6.18.3
concessions for multiple purpose groups .............. C/AS1 5.6.6, 5.6.7
construction ........................................... C/AS1 6.12
fire hazard category 4 .............. C/AS1 2.2.10, 5.6.10 to 5.6.12
fire safety precautions
see Fire safety precautions
firecells rated F0 ........................................... C/AS1 6.2
floor area limits ........................................... C/AS1 4.2.3 to 4.2.5
group sleeping areas .................................... C/AS1 4.5.16 to 4.5.18, 6.14.1 a),
intermediate floors ....................................... C/AS1 4.5.16 to 4.5.18, 6.14.1 a),
limited area atriums ..................................... C/AS1 6.22, Figure 6.14,
plant, boiler and incinerator rooms ..................... C/AS1 6.11.3, 6.11.4
protected shafts ........................................... C/AS1 6.16
provision of firecells ...................................... C/AS1 4.2
roofs ......................................................... C/AS1 7.8.1 to 7.8.5, 7.9.1 to 7.9.9
solid waste storage ....................................... C/AS1 6.10.2
suites ......................................................... C/AS1 2.2.9, 3.15.5, 6.6.5, 6.7.6,
limited area atriums ..................................... C/AS1 6.22, Figure 6.14,
plant, boiler and incinerator rooms ..................... C/AS1 6.11.3, 6.11.4
protected shafts ........................................... C/AS1 6.16
provision of firecells ...................................... C/AS1 4.2
roofs ......................................................... C/AS1 7.8.1 to 7.8.5, 7.9.1 to 7.9.9
solid waste storage ....................................... C/AS1 6.10.2
suites ......................................................... C/AS1 2.2.9, 3.15.5, 6.6.5, 6.7.6,
basement floors ........................................... \textit{C/AS1} 3.3.2 i), 3.15.2, 6.14.4, Figure 3.19
concealed spaces ...................................... \textit{C/AS1} 6.18.4, 6.18.5 a), 6.18.10
concrete slab on ground ............................... \textit{E2/AS1} 4.2, 6.0.2 d)
damp-proof membranes under slabs ............... \textit{E2/AS1} 4.2.1, 4.2.3, Figure 6
finished floor levels ................................. \textit{E2/AS1} 4.2.5
fire resistance ratings ............................... \textit{C/AS1} 3.14.6 c), 3.15.3 c), 4.1.1 a), 4.3.2, 4.5.7, 5.3.2, 5.6.3 d), 5.6.7, 5.7.3, 6.10.3, 6.12.2, 6.14.2 to 6.14.4, 6.15.1
floor projections ...................................... \textit{C/AS1} 3.3.2 f), 3.4.6, 3.9.13, 4.5.16 to 4.5.18, 5.6.3 d), 5.6.4 b), 6.10.3, 6.14.1 a), 6.14.3, 6.21, 6.22, A2.1.1 Type 10 and Type 11, B4.1.1, Figures 3.9 and 6.6, Tables 6.4 to 6.6
limited area intermediate floors ..................... \textit{C/AS1} 4.5.17, 6.21.4 a), 6.21.5, 6.21.6
lower floors .......................................... \textit{C/AS1} 3.16.9, 4.5.10, 4.5.11, 6.7.7, 6.9.3, Figure 3.5
more than one purpose group on a floor .......... \textit{C/AS1} 4.5.1 to 4.5.6, 5.6.10, 5.6.11
other floors in a building ............................ \textit{C/AS1} 4.5.8 to 4.5.11
same purpose group on different floors .......... \textit{C/AS1} 4.5.13
sloping floors and ceilings ......................... \textit{C/AS1} 3.4.8 a)
subfloor spaces ...................................... \textit{C/AS1} 6.15.1, 6.18.5 a), Figure 6.7
top floor firecells .................................... \textit{C/AS1} 4.5.14
upper floors .......................................... \textit{C/AS1} 3.15.3 b), 3.16.3 a), 4.5.11, 5.6.12, 5.7.6 b), 6.7.7, 6.8.2, 6.8.6, 7.5.7, Figure 3.5
wooden floors ........................................ \textit{C/AS1} 6.12.6, 6.20.14
floor/ceiling assemblies ............................ \textit{G6/AS1} 1.0.3, Figure 3
floor/wall junctions ................................ \textit{G6/AS1} 1.0.3, Figure 5
minimum floor level ................................. \textit{E1/AS1} 2.0, Figures 1 and 2
moisture ............................................... \textit{NZBC/E2.3.4}
slip resistant ........................................ \textit{NZBC/D1.3.3} (d); \textit{E2/AS1} 4.0; \textit{G15/AS1} 3.0.2
suspended timber floors ............................ \textit{E2/AS1} 4.1, Figure 5
subfloor vapour barriers ......................... \textit{E2/AS1} 4.1.1 b), 4.1.7, 4.1.8, 4.1.9
subfloor ventilation ................................ \textit{E2/AS1} 4.1.4, 4.1.5, 4.1.6, 4.1.8

Floor outlets ......................................... \textit{G13/AS1} 3.4
Floor wastes ........................................... \textit{E3/AS1} 2.0.1, 2.2, Figure 4
Flues .................................................. \textit{NZBC/G11.33}; \textit{G4/AS1} 2.3, 2.4; \textit{G11/AS1} 5.0
gas burning appliances ............................ \textit{C/AS1} 9.2
oil fired appliances ................................ \textit{C/AS1} 9.3
solid fuel appliances ............................... \textit{C/AS1} 9.1
fire damper .......................................................... G11/AS1 5.3
locations on dwellings .............................................. G4/AS1 2.4
materials .......................................................... G11/AS1 5.1
safety devices ...................................................... G11/AS1 5.2

Foamed plastics building materials ......................... C/AS1 6.20.1, 6.20.5,
6.20.11 to 6.20.13, 7.9.18,
Figure 7.12, Table 6.3

Food Preparation and Prevention of Contamination .......... G3
cooking ............................................................ NZBC/G3.3.1 (c);
G3/AS1 1.2.1, 1.4.1
energy supply ..................................................... NZBC/G3.3.3
location ........................................................... NZBC/G3.3.4
people with disabilities ......................................... NZBC/G3.3.5
preparation ........................................................ NZBC/G3.3.1 (b) (d), G3.3.2
prevention of contamination ................................... NZBC/G3.3.6
rinsing .............................................................. G3/AS1 1.1.1
storage ............................................................. NZBC/G3.3.1 (a); G3/AS1 1.3.1
refrigeration ....................................................... G3/AS1 1.3.2, 1.4.1
ventilation ........................................................ G3/AS1 1.3.2, 1.3.3, 1.3.4
surfaces .............................................................. G3/AS1 1.1.2, 1.1.3, Figure 1
utensil washing ................................................... NZBC/G3.3.1 (b), G3.3.2

Foul Water ......................................................... G13
see also Discharge pipes, Drains, Sanitary appliances,
Sanitary fixtures, Vent pipes, Water seals, Water traps
gravity flow ....................................................... NZBC/G13.3.1 (a), G13.3.2 (a)
odours ............................................................... NZBC/G13.1 (b), G13.3.1 (c),
G13.3.2 (e); G13/AS1 3.1.1
offensive matter ................................................... NZBC/G13.1 (b)
on-site disposal systems .......................................... NZBC/G13.3.4
see also Industrial Liquid Waste
outfalls ............................................................... NZBC/G13.2, G13.3.2
personal hygiene .................................................. NZBC/G13.1 (a)
plumbing system ................................................... NZBC/G13.2, G13.3.1
sewer ............................................................... NZBC/G13.3.3, G13.3.4, G15.3.3
three storey buildings ............................................. G13/AS1 Figure 7

Foundations ....................................................... B1/VM1 1.0.2, B1/VM4
see also Chimneys, foundations
design parameters
continuous vibration .............................................. B1/VM4 1.0.6
depth ............................................................... B1/VM4 2.0.4
ground stability ................................................... B1/VM4 1.0.4
long-term loading ............................................... B1/VM4 2.0.6
short-term loading .............................................. B1/VM4 2.0.6
serviceability deformations ................................... B1/VM4 1.0.3, Appendix B
pile foundations .................................................. B1/VM4 4.0
belled piles ........................................................ B1/VM4 4.0.3 b), 5.1.2
bulbed piles .............................................. B1/VM4 4.0.3 c)
concrete piles
  cast-in-situ ........................................ B1/VM4 3.4.4
  precast ............................................. B1/VM4 3.4.4, 5.1.1
downdrag ............................................. B1/VM4 4.5
nominal width ..................................... B1/VM4 4.0.3, 4.2, 4.6.1
notation ............................................. B1/VM4 4.1.1, Figure 5, Table 2
pile driving ........................................... B1/VM4 5.1.1
pile driving formula .............................. B1/VM4 4.0.1
pile groups
  design pile lateral strength .................. B1/VM4 4.0.4
  design pile vertical strength ............... B1/VM4 4.0.4
  ultimate lateral strength .................... B1/VM4 4.6.1, Table 3
  ultimate vertical strength .................... B1/VM4 4.4.1
single piles
  base resistance .................................. B1/VM4 4.1.3, Figures 3, 4
  column action .................................... B1/VM4 4.2
  design pile lateral strength ............... B1/VM4 4.0.4
  design pile vertical strength ............. B1/VM4 4.0.4
  lateral strength ................................ B1/VM4 4.3
    drained cohesionless soil ................ B1/VM4 4.3.4
    free head pile ............................... B1/VM4 4.3.2 a), 4.3.3 a), 4.3.4 a)
    restrained head pile ........................ B1/VM4 4.3.2 b), 4.3.3 b), 4.3.4 b)
    undrained cohesive soil ................... B1/VM4 4.3.2
    undrained consolidated soil .............. B1/VM4 4.3.3
  shaft resistance ............................... B1/VM4 4.1.4, Figure 5, Table 2
  ultimate axial compression .................. B1/VM4 4.0.1 to 4.0.3
  vertical strength ................................ B1/VM4 4.1.2
strength reduction factors ................... B1/VM4 4.7, Table 4
types
  concrete ......................................... B1/VM4 5.1.1, 5.1.2
  steel ............................................. B1/VM4 5.2.1, 5.2.2
  timber ............................................ B1/VM4 5.3
shallow foundations ............................. B1/VM4 3.0
  design bearing pressure ...................... B1/VM4 3.2.1, 3.2.4
  design bearing strength ...................... B1/VM4 3.2.3
  design sliding resistance .................... B1/VM4 3.4.6
  local shear .................................. B1/VM4 3.3.3
  moment loading ................................ B1/VM4 3.1.4
notation ........................................... B1/VM4 3.3.1, Figures 1 and 2
soils ............................................... B1/VM4 3.1.2, 3.4.3
strength reduction factors ................... B1/VM4 3.5, Table 1
surcharge .......................................... B1/VM4 3.1.3
  ultimate bearing strength ................. B1/VM4 3.1.1, 3.2.2, 3.3.2, Figure 3
  ultimate sliding resistance ............... B1/VM4 3.4.2
  ultimate sliding strength .................. B1/VM4 3.4.4, 3.4.5
see also Chimneys, foundations

FRR
see Fire resistance ratings
Fruit ripening chambers ........................................... F3/AS1 3.2.2

FSP
see Fire safety precautions

G

Garages
see Outbuildings

Gas ............................................................. G3/AS1 1.4.1

Gas as an Energy Source ........................................... G11
  automatic cut-offs ........................................... NZBC/G11.3.2
  flued appliances ........................................... NZBC/G11.3.3
  gas supply authority ...................................... NZBC/G11.3.6
  isolation devices .......................................... NZBC/G11.3.4
  meters ....................................................... NZBC/G11.3.6
     location ........................................... G11/AS1 8.0
  over pressure protection ................................ G11/AS1 3.0
  safe pressure ranges .................................... NZBC/G11.3.1
  service risers ............................................. NZBC/G11.3.6
  supply system ........................................... NZBC/G11.2, G11.3.1, G11.3.5

Gas burning appliances
  installation ................................................. C/AS1 9.2
  seismic restraint ........................................ C/AS1 9.2.2

Gases
see Hazardous Substances and Processes, Class 2 gases

Gas fuel appliances ........................................... G4/AS1 2.0, 3.0

Gas reticulation
  alternative solution ...................................... G10/AS1 5.0
  cleaning ................................................... G10/AS1 1.1
  tailpipes ................................................. G10/AS1 1.1.3
  concealed piping ........................................ G10/AS1 1.4
     in concrete .......................................... G10/AS1 1.4.1
     in enclosed spaces ................................ G10/AS1 1.4.2
  underground ............................................. G10/AS1 1.4.3, Table 3
  construction ............................................. G10/AS1 1.0
  corrosion control ....................................... G10/AS1 3.0
  design .................................................... G10/AS1 1.0.1 a)
installation ............................................ G10/AS1 1.2
bends and offsets ................................. G10/AS1 1.2.1 d)
risers .................................................. G10/AS1 1.2.1 c)
separation .......................................... G10/AS1 1.2.1 b)
supports ............................................. .G10/AS1 1.2.1 a), Table 2
isolating valves .................................... G10/AS1 2.0
materials ............................................ G10/AS1 1.0.1 b), Table 1
pipework in ducts ................................ G10/AS1 1.5
unventilated ducts ............................... G10/AS1 1.5.4
ventilated ducts .................................. G10/AS1 1.5.3
vent lines .......................................... .G10/AS1 4.0, Tables 4 and 5
welded joints ..................................... G10/AS1 1.3

Geology ........................................... B1/VM4 A1.2.1 a)

Glazing ............................................. NZBC/F2.3.3; B1/AS1 7.0; C/AS1 5.8, 6.19.11
see also Hazardous Building Materials
concession for sprinklers ...................... .C/AS1 5.8.7, 5.8.8
dimensions ........................................ C/AS1 5.8.3 to 5.8.5
fire resisting glazing .......................... C/AS1 5.8.1, 5.8.2, 7.3.3 c),
7.3.5, 7.3.7, 7.4, Figure 7.4, Table 7.1
human impact safety ............................ F2/AS1 1.1
in external walls .................................. C/AS1 5.8.2 a)
in fire doors ......................................... C/AS1 5.8.10
in fire separations .............................. C/AS1 5.8.1, 5.8.2
in safe paths ...................................... .C/AS1 5.8.1 c), 5.8.3 to 5.8.8, Figure 5.1
in smoke control doors ....................... C/AS1 5.8.10, 5.8.11
in smoke separations and protected paths .... C/AS1 5.8.9
modifications to NZS 4223 ................. .F2/AS1 1.2

Government agencies ......................... NZBC/D1.3.4 (c) (iv)
see also Commercial buildings

Government offices ............................. NZBC/D1.3.4 (c) (iv)
see also Commercial buildings

Grease traps ...................................... G13/AS2 3.4
capacity ........................................... G13/AS2 3.4.3, 3.4.4

Ground

good ground ...................................... B1/AS3 1.3.2
Ground conditions ............................. B1/VM4 1.0.2, Appendix A

Groundwater ................................. B1/VM4 1.0.2, Appendices A, B; G14/VM1 1.6.1
conditions ....................................... B1/VM4 1.0.2
seasonal changes ............................... B1/VM4 A1.2.1
tidal changes ..................................................B1/VM4 A1.2.1
Group sleeping areas .......... C/AS1 6.6.3, 6.6.4, 6.6.7, 6.7.2 to 6.7.4
Gully traps .................. G13/AS1 Figures 5 and 7, G13/AS2 3.3, Figures 2 and 3
construction .................... G13/AS2 3.3.1, Figure 4
overflow relief ................. G13/AS2 3.3.2
pipe diameters ................... G13/AS2 3.3.1
Gutters ..................................................E1/AS1 5.0
gradients ........................ E1/AS1 5.3
materials .......................... E1/AS1 5.2, Table 6
overflow outlets .................. E1/AS1 5.5
sizing ............................... E1/AS1 5.1, Figures 15 and 16
thermal movement .................... E1/AS1 5.4, Table 7

H

Habitable spaces ................ NZBC/E3.3.1, G5.2.1 (a), G5.3.1, G5.3.3, G6.2, G7.2; G6/AS1 1.0.2

Halls
  see Communal non-residential

Halls of residence
  see Communal residential

Handicapped people
  see People with disabilities

Handrails ....................... NZBC/D1.3.3 (j) (k), D1.3.4 (i); C/AS1 3.1.4, 3.3.3, 3.3.6 b), 3.9.8, 6.20.4 c); D1/AS1 1.5.2, 1.5.4 b), 1.6.1, 1.7, 5.2.1 g), 6.0, 6.0.1, 6.0.2, Figures 6 and 19
clearances ...................... D1/AS1 6.0.7, Figure 26
handrail profiles .................. D1/AS1 6.0.7 to 6.0.9, Figure 26
height ............................ D1/AS1 6.0.6, Figure 25
horizontal extensions .......... D1/AS1 6.0.4, 6.0.5, Figure 25
intermediate handrails .......... D1/AS1 6.0.2
relevant width ..................... D1/AS1 6.0.9, Figure 26
slope .......................... D1/AS1 6.0.4

Hazards to building elements .......... F1/VM1 2.7

Hazardous Agents on Site ................................. F1
  see also Site investigation
  assessment of sites ................ NZBC/F1.3.1
contaminants .............. F1/VM1 1.0.2 i), 2.1.2, 2.2.1 g), 2.2.2, 2.3.2, 2.5.1, 2.6.2 a) b) c) d), 2.6.3, Table 2
degradation of building materials .... F1/VM1 2.7
likely effects on people ........................................... NZBC/F1.3.2
hazardous agents ................................................. F1/VM1 1.0.2 i), 2.2.1, 2.3.2, 2.5.1, 2.5.5, Table 2
network utility operators ...................................... F1/VM1 2.2.1 f)
remedial work ....................................................... F1/VM1 2.6, Table 3
risk assessment ................................................... F1/VM1 1.0.2 ii), 2.5, 2.5.4

Hazardous Building Materials ................................. F2
see also Glazing
asbestos ............................................................... F2/AS1 2.0
brittle materials ................................................... NZBC/F2.3.3
harmful concentrations ........................................... NZBC/F2.3.1
transparent panels ............................................... NZBC/F2.3.2

Hazard category
see Fire hazard categories

Hazardous Substances and Processes .......................... F3
Class 1 Explosives .................................................. F3/AS1 2.0
definition ......................................................... F3/AS1 Appendix A
manufacture ....................................................... F3/AS1 2.1
Class 2 Gases ........................................................ F3/AS1 1.5.2, 3.0
aerosols .............................................................. F3/AS1 3.6
class 2 (a) gases ................................................... F3/AS1 3.1.2
class 2 (b) gases ................................................... F3/AS1 3.2
storage ............................................................... F3/AS1 3.2.1
class 2 (c) gases ................................................... F3/AS1 3.4
storage ............................................................... F3/AS1 3.4.1
class 2 (d) gases ................................................... F3/AS1 3.3
storage ............................................................... F3/AS1 3.3.1
class 2 (e) gases ................................................... F3/AS1 3.1.1 b), 3.4
storage ............................................................... F3/AS1 3.4.2
class 2 (f) gases ................................................... F3/AS1 3.1.1 a), 3.4
storage ............................................................... F3/AS1 3.4.1
class 2 (g) gases ................................................... F3/AS1 3.5
spillage ............................................................... F3/AS1 3.5.1
definition ......................................................... F3/AS1 Appendix A
Class 3 Flammable Liquids ....................................... F3/AS1 4.0
class 3 (a) flammable liquids .................................. F3/AS1 4.2.3 b), 4.5.5 a), 4.7.3 b), 4.7.4, 4.7.8, 4.7.9, 4.7.10, 4.7.12, 4.8.5 i)
class 3 (b) flammable liquids .................................. F3/AS1 3.6 c), 4.2.3 b), 4.5.1 a), 4.5.3, 4.5.5 a), 4.6.1, 4.7.3 c), 4.7.4, 4.7.8 to 4.7.10, 4.8.5 ii)
class 3 (c) flammable liquids .................................. F3/AS1 4.2.3 a), 4.5.1 a), 4.5.3, 4.5.5, 4.6.1
definition ......................................................... F3/AS1 Appendix A
drying rooms ....................................................... F3/AS1 4.7.11
flammable liquid workrooms ................................ F3/AS1 4.7
isolation distances .......................... F3/AS1 4.7.3, Table 4
wall thicknesses ............................. F3/AS1 Table 3
isolation distances .......................... F3/AS1 4.7.3, Table 4
spray painting ................................ F3/AS1 4.5.4
storage
in bulk ......................................... F3/AS1 4.2.2, 4.3.1, 4.5.1, 4.5.5
not in bulk .................................... F3/AS1 4.2.2, 4.3.1, 4.5.1, 4.5.5
storage tanks ................................ F3/AS1 4.6
Class 4 Flammable Solids ..................... F3/AS1 5.0
class 4.1A flammable solids ................. F3/AS1 5.1.1
class 4.1B flammable solids ................. F3/AS1 5.1.1
class 4.1C flammable solids ................. F3/AS1 5.1.1
class 4.2A flammable solids ................. F3/AS1 5.1.1
class 4.2B flammable solids ................. F3/AS1 5.1.1
class 4.3 flammable solids .................. F3/AS1 5.1.1
definition .................................... F3/AS1 Appendix A
storage depots ................................ F3/AS1 5.1
Class 5 Oxidising Substances ............... F3/AS1 6.0, 6.2.2
class 5A oxidising substances .............. F3/AS1 6.1.1, 6.2.2, Table 5
class 5B oxidising substances .............. F3/AS1 6.2.3, Table 6
construction .................................. F3/AS1 6.2
definition .................................... F3/AS1 Appendix A
sources of heat ................................ F3/AS1 6.1
Class 6 Toxic Substances
definition ..................................... F3/AS1 Appendix A
Class 7 Radioactive Substances
definition ..................................... F3/AS1 Appendix A
Class 8 Corrosives
definition ..................................... F3/AS1 Appendix A
explosions .................................... NZBC/F3.3 (c)
food preparation and utensil washing areas ........................................ NZBC/G3.3.2 (b)
hazardous substances associated
with building services ........................ NZBC/G10.1, G10.2
protected ignition sources .................. NZBC/F3.3 (d)
release of pressure .......................... NZBC/F3.3 (c)
released during fire .......................... NZBC/C3.2 (d), C3.3.10
rendering hazardous materials harmless ........................................ NZBC/F3.3 (e)
sewers and public drains .................... NZBC/F3.3 (b)
signs ............................................. NZBC/F3.3 (g)
surface finishes .............................. NZBC/F3.3 (f)
unauthorised access .......................... NZBC/F3.3 (a)

Hazardous wastes ............................ G14/VM1 1.3.2, 1.4.1 b), 1.9.1, 2.1.4, 2.2.1 b), 2.2.4, 2.3.7, 2.4.4, 3.1.3

Health camps
see Communal residential

Hearth ........................................ B1/AS3 1.4, 2.2, 2.2.1 to 2.2.3;
C/AS1 9.5, Figure 9.3
hearth slabs ........................................... .B1/AS3 2.2, 2.2.1 to 2.2.3
Heat detectors
   see Fire safety precautions
Heat transfer solid fuel appliances
   limiting heat transfer ....................................... .C/VM1 1.1
Heating
   see Energy Efficiency, Interior Environment
Height
   see Building height or Escape height
Height clearances .................. .D1/AS1 1.4, 1.4.1, Figure 3, Table 1
Hobs .............................................. .G3/AS1 1.2.1
Hospitals ..........................NZBC/D1.3.4 (c) (iv); G1/AS1 Table 4
   see also Communal residential
Hostels
   see Communal residential
Hot dip galvanising ........................... .B1/AS2 1.0.5 b), B1/AS3 1.8.6
Hot plates ........................................ .G3/AS1 1.2.1
Hot water supply
   see Water supplies, hot
Hotels .............................................. .D1/AS1 9.1.1
   see also Communal residential
Household units ..................................... .C/AS1 1.3.5, 1.3.6 b) c) e), 2.2.9 a),
   3.11.6, 3.15.5, 3.15.8, 3.20.1, 6.1.1,
   6.8.1, 6.14.3, 6.14.4, 6.20.1, 7.5.7,
   7.9.19, 7.10.7, 7.10.8, A2.1.1 Type 5,
   Table 6.2; F7/AS1 1.1.2 b), 1.2.5,
   1.2.6, 1.3.2; G6/AS1 1.0.2
Housing .........................................NZBC/A1 2.0, D1.3.3, E1.3.2, G1.3.5,
   G2.2, G3.2.1, G3.3.1 (a) to (d), G3.3.2 (c),
   G7.2, G12.3.4, G12.3.9, H1.3.2; F4/AS1
   Table 1; G3/AS1 1.0.1; G9/AS1 1.0;
   H1/VM1 1.1, 1.2, H1/AS1 1.0, 2.0
detached dwellings .............................NZBC/A1 2.0.2, C3.3.2,
   C3.3.4, D1.3.2 (i), F6.2, F7.3,
   F8.2, G15.2; H1/VM1 1.1
group dwellings ..............................NZBC/A1 2.0.4, G8.2; H1/VM1 1.1.1
multi-unit dwellings ............................NZBC/A1 2.0.3, C3.3.2, D1.3.2 (i),
   F6.2, F8.2, G8.2, G15.2;
   H1/VM1 1.1, 1.2, H1/AS1 2.1.1
wharenui ............................................ .H1/VM1 1.1.1
HVAC systems ................................. .F7/AS1 1.5.3
Identification of non-potable water supply ............... .G12/AS1 4.2.1
see also Water supplies

Illuminance ............................... .G1/AS1 4.4.3 b), Figure 11;
measurement ................................ .G8/VM1 1.0.1
minimum .................................... .G8/AS1 1.0.3

Impact insulation class (IIC) .......................... .G6/AS1 2.0

In-service history .............................. .B2/VM1 1.1

Industrial buildings .............................. .NZBC/A1 6.0, D1.3.2 (h), D1.3.3,
E3.3.1, G1.3.5, G3.2.1, G3.3.1 (a) (b),
G3.3.2 (b), G3.3.6, G8.2, G9.3.4,
G12.3.9, H1.2 (a); G1/AS1 Table 1;
G3/AS1 2.0.1; H1/AS1 1.0.2

Industrial Liquid Waste .......................... .G14
capacity ...................................... .NZBC/G14.3.2 (a)
collection ..................................... .G14/VM1 1.1.1, 1.3.2, 1.4
location of facilities ........................... .G14/VM1 1.4
contamination of potable water .................... .NZBC/G14.3.2 (c)
conveyance systems .............................. .G14/VM1 2.0
drainage ...................................... .G14/VM1 2.2
piping systems ................................ .G14/VM1 2.3, Table 2
pumps .......................................... .G14/VM1 2.4, Figure 2
corrosion ..................................... .G14/VM1 1.5.1, 1.5.2
disposal ........................................ .G14/VM1 1.1.1, Table 1
location of facilities ............................ .G14/VM1 1.4
to a natural waterway ........................... .G14/VM1 1.2.1 b)
to a sewer .................................... .G14/VM1 1.2.1 a), 1.3.1;
G14/AS1 1.2.1, 1.2.2
disposal systems ................................ .NZBC/G14.3.1
hazardous wastes
see Hazardous wastes
materials used in construction ...................... .G14/VM1 1.5.1
odours ........................................ .NZBC/G14.3.1 (c), G14.3.2 (f)
resource consents ................................ .NZBC/G14.3.2 (d)
safety facilities ................................ .G14/VM1 3.1.4
separate waste systems .......................... .G14/VM1 1.7.1
storage ........................................ .G14/VM1 1.1.1, 1.2.1 c), 1.3.2
containers ..................................... .NZBC/G14.3.1
location of facilities ............................ .G14/VM1 1.4
tanks
see Tanks
treatment ........................................ .G14/VM1 1.1.1, 1.2, 1.2.2, 1.3.2,
Figure 1, Table 1
location of facilities ........................................ G14/VM1 1.4

Inspection chambers
see Maintenance access to drains

Inspection points
see Maintenance access to drains

Insulation
see Fire resistance ratings

Integrity
see Fire resistance ratings

Intellectually handicapped persons
see People with disabilities

Intended Life
see Durability

Intended use .................................................. NZBC/B1.3.1, B1.3.2, D1.3.5 (a), E3.3.5, F1.3.2 (a), F3.3 (f), F4.3.2, G2.3.1, G3.2.1, G3.3.1 (a), G3.3.6, G5.2.1 (b), G9.2, G11.1 (c), G11.2, G12.3.5, G15.2

Interface with ancillary control systems ..................... F7/AS1 1.5

Interior Environment ........................................ G5
accessible reception areas ..................................... NZBC/G5.3.4
adequate activity space ..................................... NZBC/G5.1 (b), G5.2.1 (b)
see also Activity space
enhanced listening systems .................................. NZBC/G5.3.5, G5.3.6
internal temperature ........................................ NZBC/G5.1 (a), G5.2.1 (a), G5.3.1;
G5/AS1 1.0, Tables 1 and 2
unsafe installations ........................................ NZBC/G5.1 (c), G5.2.2, G5.3.2

Interior lighting
see Artificial Light ............................................. G8

Interior linings ............................................ G3/AS1 1.6, 2.2
ceilings ........................................................ G3/AS1 2.1.2, 2.2.3
floors ......................................................... G3/AS1 2.2.3, 2.2.4, 2.3.3 to 2.3.6
walls ......................................................... G3/AS1 1.6, 2.1.1, 2.1.2, 2.2.3, 2.2.4

Interior surfaces ........................................... G7/AS1 1.0.2 to 1.0.4, Table 1

Intermediate floors
see Floors

Internal Moisture ............................................. E3
concealed spaces .......................... NZBC/E3.3.6; E3/AS1 3.2.2
condensation .................................. E3/AS1 1.0.1, 1.1.5, 1.3
condensation channels ......................... E3/AS1 1.3
energy efficiency ............................. E3/AS1 1.1.5
floor surfaces ............................... NZBC/E3.3.3, E3.3.5
free water overflow .......................... NZBC/E3.2 (b), E3.3.2
fungal growth ................................. NZBC/E3.2 (a); E3/AS1 1.0.1
overflow ..................................... E3/AS1 2.0.1, 2.1, Figure 1
floor waste .................................. E3/AS1 2.0.1, 2.2
people with disabilities ...................... E3/AS1 3.3.2
steel framing ................................ E3/AS1 1.1.4 d)
thermal break ................................ E3/AS1 1.1.4 d)
thermal resistance .......................... NZBC/E3.3.1; E3/AS1 1.1
materials and installation ..................... E3/AS1 1.1.3
ventilation .................................. NZBC/E3.3.1; E3/AS1 1.0.1, 1.2
wall surfaces .................................. NZBC/E3.3.4, E3.3.5
water splash ................................ E3/AS1 3.0
basins ........................................ E3/AS1 3.2.2, Figure 3
baths ......................................... E3/AS1 3.2.2, Figure 3
joints in linings ............................. E3/AS1 3.2, Figure 2
lining materials .............................. E3/AS1 3.1, Figure 1
showers .................................... E3/AS1 3.3.1 to 3.3.5, Figures 4 and 5
sinks .......................................... E3/AS1 3.2.2, Figure 3
tubs .......................................... E3/AS1 3.2.2, Figure 3
urinals ...................................... E3/AS1 3.3.6
windows ..................................... E3/AS1 1.3.1

Isolating valves ............................... G12/AS1 3.7.1, 5.4.2

J

Jetties
  see Ancillary buildings

K

Kerbs ........................................... D1/AS1 1.5.4 a), Figure 6
  see also Ramps

Kindergartens
  see Early childhood centres and Communal non-residential

Kitchens
  see Food Preparation and Prevention of Contamination

Kitchen sinks ............................... G13/AS1 3.3.2, Figure 2, Table 2
L

Laboratory testing ........................................... B2/VM1 1.2

Ladders ................................................... D1/AS1 5.0, 5.1.1
see also Stairs and ladders

height ................................................... D1/AS1 5.1.2, 5.1.7
individual rung-type ladders .............. D1/AS1 5.1.1 c), 5.4, Figure 24

 clearance ........................................... D1/AS1 5.4.1 c)
 height ................................................... D1/AS1 5.4.1 c)
 rungs ................................................... D1/AS1 5.4.1 a)
tread width ........................................... D1/AS1 5.4.1 b)
width ................................................... D1/AS1 5.4.1 b)

landings ................................................... D1/AS1 5.3.2

length ................................................... D1/AS1 5.1.5, 5.1.7
width ................................................... D1/AS1 5.1.4
location ................................................... D1/AS1 5.1.3
rung spacing ........................................... D1/AS1 5.1.6
rung-type ladders ..................................... D1/AS1 5.1.1 b), 5.3, Figure 20
clearances ........................................... D1/AS1 5.3.1 e)
height ................................................... D1/AS1 5.3.1 d)
landings ................................................... D1/AS1 5.3.2, Figure 23
rungs ................................................... D1/AS1 5.3.1 b)
slope ................................................... D1/AS1 5.3.1 a)
width ................................................... D1/AS1 5.3.1 c)
safety enclosures ........................................ D1/AS1 5.1.2, Figures 21 and 22
step-type ladders ...................................... D1/AS1 5.1.1 a), 5.2, 5.2.1 a), Figure 19
clearances ........................................... D1/AS1 5.2.1 e)
height ................................................... D1/AS1 5.2.1 d)
horizontal openings ................................... D1/AS1 5.2.1 f)
slope ................................................... D1/AS1 5.2.1 a)
treads ................................................... D1/AS1 5.2.1 b)
width ................................................... D1/AS1 5.2.1 c)
types of ladders ....................................... D1/AS1 5.1.1

Landings ................................................... NZBC/D1.3.2 (l) (m), D1.3.4 (i)

Landslip ................................................... B1/VM4 A1.2.1

Laundering ............................................. G2; NZBC/G2.2, G2.3.1 to G2.3.4; G2/AS1 1.0
electricity supply ......................................... G2/AS1 1.1.2
laundry tubs ............................................. E3/AS1 3.2, 3.2.6, Figure 8; G2/AS1 1.0.1 a),
1.0.2, 1.1.1; G13/AS1 2.3.2,
Figure 2, Table 2
alternative solution ...................................... G2/AS1 1.0.3
capacity ................................................. G2/AS1 1.0.2 a)
size ....................................................... G2/AS1 1.0.2 b)
minimum dimensions ................................... G2/AS1 1.2.1, Figure 1
number of facilities .................................... G2/AS1 1.3.1, Table 1
overflow .................................................. NZBC/E3.3.2
people with disabilities ................................ NZBC/G2.3.4; G2/AS1 1.2.2, Figure 2
washing machines ..................................... G2/AS1 1.0.1 b), 1.1.2
water supply ............................................ G2/AS1 1.1.1, 1.1.2
Lavatories

see **Personal Hygiene**


Level access routes ........................... D1/AS1 2.0

protection from falling ........................ D1/AS1 2.3

slip resistance .......................... D1/AS1 2.1, Table 2

width .................................. D1/AS1 2.2

Libraries

see Communal non-residential

Lifts ........................................ C/AS1 3.12.3, 6.16.1, 6.16.5 b) c),

6.23.3 b); D1/AS1 12.0

see also **Mechanical Installations for Access**

doors ..................................... C/AS1 6.19.13, Table 6.1

Fire Service lift control ......................... C/AS1 8.2.5, A2.1.1 Type 15

lift motor room ................................ C/AS1 3.12.3 e), 6.16.5 c)

lift shafts

see Protected shafts

Light

see **Artificial Light, Natural Light, Lighting for Emergency**

Light switches ................................. G9/AS1 2.0.1 a) b)

Lighting ..................................... D1/AS1 1.5.4, 1.8

**Lighting for Emergency** ........................ F6; NZBC/H1.3.5

duration of illuminance ................... NZBC/F8.3.3 (b); F6/AS1 1.1.3

minimum illuminance ...................... NZBC/F6.3.1, G8.3

generators ................................ F6/AS1 1.1.6

illuminance – verification methods .......... F6/VM1 1.1

installation ................................ F6/AS1 1.1.2

location .................................. F6/AS1 1.1.1

maintenance ................................ F6/AS1 1.1.5

Lightning protection ......................... F3/AS1 2.1.4

Limited area atriums ....................... C/AS1 6.22, Figure 6.14, Tables 6.4 to 6.6

Limited area intermediate floors

see Floors

Liquid fuel

see **Piped Services, Hazardous Substances and Processes**

appliances ................................. C/AS1 9.7

Loadings

see Design, loadings
Loads
see Structure, loads

Location .............................................. D1/AS1 1.1
Location of heat and smoke detectors .................... F7/AS1 1.3
Low risk areas ......................................... F4/AS1 1.2.2

M

Maintenance ........................................... NZBC/B2.3.1, D2.3.1 (f), D2.3.4 (c),
E1.3.3 (d), G10.3.6, G11.3.4, G12.3.6 (d) (e),
G13.3.1 (d), G13.3.2 (d), G14.3.2 (h),
G15.3.2 (c); B2/AS1 2.0

normal ............................................. B2/AS1 2.1
scheduled ........................................... B2/AS1 2.2

Maintenance access to drains ................................ G13/AS2 5.7
access chambers ................................... E1/AS1 3.7.1, 3.7.2 b), 3.7.4,
3.7.5, Figure 12; G13/AS2 Figure 12
access points ...................................... E1/AS1 3.7, 3.7.3, 3.7.7, 3.7.8;
G13/AS2 5.7, Figures 9 to 12
inspection chambers ................................ E1/AS1 3.7.1, 3.7.2 b), 3.7.4,
3.7.5, Figure 11; G13/AS2 Figure 11
inspection points ................................... E1/AS1 3.7.1, 3.7.2 b);
G13/AS2 5.7, Figure 9
location ............................................. G13/AS2 5.7.4
rodding points ..................................... E1/AS1 3.7.1, 3.7.2 a),
Figure 10; G13/AS2 5.7.4, Figure 10

Maraes
see Housing, group dwellings

Masonry
see Design, masonry
masonry buildings ..................................... B1/AS3 1.1.1

Materials ................................................ B1/AS1 1.8
barriers ............................................. B1/AS2 1.0.3
bedding and backfilling ............................. E1/AS1 3.9.5; G13/AS2 2.1, Figure 7
brittle materials ..................................... NZBC/F2.3.3
degradation of building materials ................. F1/VM1 2.7
downpipes .......................................... E1/AS1 4.1, Table 4
drains ............................................. E1/AS1 3.1, Table 1; G13/AS2 2.0, Table 1
gas pipes ........................................... G11/AS1 5.1
piped services ...................................... G10/AS1 1.0.1 c), Table 1
rendering hazardous materials harmless .......... NZBC/F3.3 (e)
roof gutters ........................................ E1/AS1 5.2, Table 6
sanitary plumbing .................................. G13/AS1 2.1.1, Table 1
Means of Escape
see Escape routes, Evacuation time, Exitways, Final exits, Fire
hazard category, Open paths, Safe paths, Safe place, Travel distance

Mechanical Installations for Access
control system ..........................................................NZBC/D2.3.1 (e)
emergency conditions .................................................NZBC/D2.3.3
escalators ..............................................................NZBC/D1.3.3 (e)
lights .................................................................NZBC/D1.3.1 (c), D1.3.2 (c), D1.3.4 (c); D1/AS1 12.0
lighting ..............................................................NZBC/D2.3.2 (c)
loads .................................................................NZBC/D2.3.1 (a)
location of potentially dangerous equipment .......................NZBC/D2.3.4
people with disabilities ............................................NZBC/D2.3.5
servicing mechanical installations .................................NZBC/D2.1 (b)

Mechanical ventilation
see Ventilation

Medical consultancy rooms ........................................NZBC/D1.3.4 (c) (iv)
see also Communal non-residential

Mixing devices
see Water supply, hot

Moisture
see External Moisture, Internal Moisture, Surface Water

Motels .................................................................D1/AS1 9.1.1
see also Communal residential

Municipal offices ......................................................NZBC/D1.3.4 (c) (iv)
see also Commercial buildings

Museums
see Communal non-residential

N

Natural Light ............................................................G7
awareness of the outside environment ............................NZBC/G7.1, G7.2, G7.3.2
minimum illuminance ................................................NZBC/G7.3.1

Natural ventilation
see Ventilation

Network utility operators ...........................................NZBC/G11.3.6, G13.3.3, G15.3.3, H1.1;
F1/VM1 2.1.1 f); G14/AS1 1.2.1, 1.2.2
No-sky line condition .................. G7/AS1 1.0.3, Figure 3

Non-potable water supply
see Water supply

Non-return valves ................. G12/AS1 Figures 7 to 10, Table 6

Notional boundary .................. C/AS1 7.3.13 to 7.3.15, 7.5.3
Step 1, 7.7.1, Table 7.4

Nurses’ or Nursing homes
see Communal residential

O

Obstructions ......................... NZBC/D1.3.2 (b); D1/AS1 1.5
dangerous projections .................. D1/AS1 1.5.4, Figure 6
isolated columns .......................... D1/AS1 1.5.5, Figure 7
major projections .......................... D1/AS1 1.5.3, Figure 5
minor projections .......................... D1/AS1 1.5.1, 1.5.2, Figure 4

Occupancy .......................... D1/AS1 12.0

Occupants .......................... NZBC/D2.3.5 (b), G1.3.3 (e); C/AS1 1.3.2
Step 4, 3.1.1, 3.4.3, 3.8.4 a), 3.9.12 b),
3.17.3, 3.18.7, 4.2.6 a), 6.8.4
children .................................. C/AS1 3.15.1 e)
occupant densities ..................... C/AS1 2.3.3, 3.4.5 b), Table 2.2
occupant load .......................... F7/AS1 1.1.2 a), 2.1.1
occupant loads –
specific requirements and limitations .................. C/AS1 2.3,
3.3.2 d) e) f) g) i), 3.4.5, 3.4.8 c),
3.6.1 a) d), 3.9.11, 3.9.12 b) e),
3.10.1, 3.10.2, 3.12.2 b), 3.15.1 d),
3.16.3 c), 3.17.9 a), 4.4.1
Step 1 and Step 2, 4.5.15, 6.3.1,
6.3.2, 6.4.1, 6.20.6 a), 6.20.7 a),
6.20.19, 6.21.5 c), 6.22.2 c) d) f),
B4.1.1, Tables 3.1 and 4.1

Occupied spaces ..................... C/AS1 3.2.1, 3.3.2 d), 6.6.7,
6.7.4, 6.22.3, Tables 2.1 and 6.2;
G4/AS1 1.1.1, 1.2.1 a); G6/AS1 1.0.1

Odours
see Foul Water, Industrial Liquid Waste, Solid Waste

Offices
see Commercial buildings
Oil burning chambers ............................................ F3/AS1 1.5.2, 4.8.4
storage chambers ................................................ F3/AS1 1.5.2, 4.8.3

Oil fired appliances
installation .......................................................... C/AS1 9.3
seismic restraint ................................................... C/AS1 9.3.2

Old people's homes ............ NZBC/G2.2, G3.2.1, G3.3.1 (a) to (d), G5.2.1 (a) (b), G5.3.1 to G5.3.3, G5.3.5, G7.2, G12.3.4; G1/AS1 Table 4; G2/AS1 Table 1;
G3/AS1 1.0.1; G5/AS1 1.0.3, 2.0, Table 3
see also Communal residential buildings

Open fires ....................................................... C/AS1 9.5, Figures 9.1 and 9.3
Open paths ....................................................... F8/AS1 3.1.1 a)
see Escape routes

Openings
see Doors .......................................................... D1/AS1 7.0.1

Operating device ................................................... G12/AS1 6.3

Other property .................................................... C/AS1 4.3.2, 5.3.3 d), 6.1.1, 7.1.1 b), 7.3.1 b), 7.3.15 a), 7.7.1, 7.8.10 a), 7.9.1, 7.9.6 b), 7.9.10 d), Tables 6.1 and 7.3

Outbuildings ............ NZBC/A1 7.0, D1.2.1, D1.3.2, D1.3.3 (h) (i), G1.3.4, G8.2, G12.3.8; G1/AS1 Table 4
Outdoor air supply ................................................... G4/AS1 1.3.1 a) d)
Outside environment .............................................. G7/AS1 2.0.1
Ovens
see Food Preparation and Prevention of Contamination, cooking
Overflow ......................................................... E3/AS1 2.0
containment ....................................................... E3/AS1 2.0.1, 2.1, Figure 1
floor waste ...................................................... E3/AS1 2.0.1, 2.2

P
Parapets ......................................................... C/AS1 6.12.7 b), 7.1.2 e), 7.8.1 b), 7.8.2, 7.9.2 b), Figure 7.1
Pedestrians
see Access Routes
Penetrations ..................................................... C/AS1 3.12.3 e), 6.12.4, 6.12.9 d), 6.16.5 e), 6.17.1, 6.17.4, 6.17.5, 6.17.7, 6.18.6 c), 6.18.9, 6.20.13 a)
People with disabilities  
NZBC/F8.3.4; C/AS1 2.4, 3.15.1 e), 3.17.1 e); D1/AS1 1.1.4, Table 9; E3/AS1 3.3.2; F7/AS1 2.1.2 d) f); F8/AS1 5.0; G1/AS1 1.1.2, 1.2.2, 4.0, 4.1, 4.2, Figures 5 to 9, Tables 1 and 2; G2/AS1 1.2.2, Figure 2; G3/AS1 1.5.2; G5/AS1 3.0; G9/AS1 2.0; G12/AS1 8.0

accessible route identification  F8/AS1 5.0.1 a) b)
accessible routes  G1/AS1 4.1.1
electrical installations  NZBC/G9.3.4
enhanced listening systems  NZBC/G5.3.5, G5.3.6
facility identification  F8/AS1 5.0.1 b)
food preparation and cooking facilities  NZBC/G3.3.5
information and warning signs  NZBC/F8.2 (d), F8.3.4
listening system identification  F8/AS1 5.0.3, Figure 7
mechanical installations for access 

see Mechanical Installations for Access

personal hygiene facilities  NZBC/G1.3.5
provision of laundering facilities  NZBC/G2.3.4
usable water taps  G12/AS1 Figure 18
water supply  NZBC/G12.3.9

Personal Hygiene  G1; NZBC/G13.1 (a)
see also Sanitary fixtures

absence of facilities  NZBC/G1.1 (b)
access to facilities  NZBC/D1.3.3 (c), G1.3.5
location of facilities  NZBC/G1.3.4
non-water-borne disposal system  NZBC/G1.3.2 (h)
overflows from sanitary fixtures  NZBC/E3.3.2 to E3.3.4
people with disabilities  NZBC/G1.3.5; G1/AS1 1.1.2, 1.2.2, 4.0, 4.1, 4.2
privacy  G1/AS1 6.0
cubicles  G1/AS1 6.2, Figure 11
line of sight  G1/AS1 6.1, Figure 10
lobbies  G1/AS1 6.3
unisex facilities  G1/AS1 1.1.5
privies  G1/AS1 5.0.2
water-borne disposal system  NZBC/G1.3.2 (g), G13.1 (b)

Piles

see Foundations

Piped Services  G10

extreme temperatures  NZBC/G10.1, G10.2
gas pipes  NZBC/G10.3.2, G10.3.5
hazardous substances  NZBC/G10.1, G10.2
identification of piping systems  NZBC/G10.3.4
isolating devices  NZBC/G10.3.6
piping systems  NZBC/G10.3.1
preventing sound transmission  G6/AS1 1.0.1 c)
protection against corrosion  NZBC/G10.3.3
Pipes
see also Discharge pipes, Discharge stacks, Vent pipes
installation ........................................... G11/AS1 4.0
jointing methods ..................................... G13/AS1 6.1.1
materials ............................................. G13/AS1 2.1.1, Table 1
pressure ranges ..................................... G11/AS1 1.1
  flow velocities .................................... G11/AS1 1.4
pressures above 1.5 kPa .......................... G11/AS1 1.3
pressures below 1.5 kPa .......................... G11/AS1 1.2
sizing ............................................... G11/AS1 1.0
supports ............................................ G13/AS1 6.2.1, Table 7
thermal movement .................................. G13/AS1 6.3
watertightness ..................................... G13/AS1 7.0

Placement of detectors ............................. F7/AS1 1.4

Places of assembly ................................ D1/AS1 8.0
see also Communal non-residential

Plumbing systems
see Foul Water

Pools
see Swimming pools

Positive and negative pressure .................... G4/AS1 1.3.3

Potable water supply
see Water Supplies

Pressure limiting valves ........................... G12/AS1 5.3.3, 6.2.1, Figure 8, Table 6
Pressure reducing valves ........................... G12/AS1 5.3.2, 6.2.1, Figures 7 and 9, Table 6

Pressure regulators ................................ G11/AS1 2.1
Pressure relief valves .............................. G12/AS1 6.4.1 b), 6.6, Table 6
  installation ...................................... G12/AS1 6.6.5
  relief valve drains .............................. G12/AS1 6.7, Figures 12 and 13

Pressurisation of safe paths
see Fire safety precautions

Principal entrance .................................. D1/AS1 1.1

Prisons
see Communal residential

Privacy
see Personal Hygiene

Privies
see Personal Hygiene, privies

Protected paths
see Escape routes

Protected shafts ................................. C/AS1 6.10.4 a), 6.12.4, 6.16, Figure 6.8
Protecting other property

see Spread of Fire, Internal Moisture, Water Supplies

Protection of gas supply .......................... G11/AS1 7.0
contamination .................................. G11/AS1 7.1
low pressures ................................ G11/AS1 7.2

Protection of water supplies ...................... G12/AS1 3.4
air gaps ........................................... G12/AS1 3.5
backflow prevention devices .................... G12/AS1 3.6
atmospheric vacuum breakers ..................... G12/AS1 3.6.2,
3.6.4, 3.7.1, Table 2
double check valves ......................... G12/AS1 3.6.2, 3.7.2, Table 2
pressure vacuum breakers ..................... G12/AS1 3.6.1, 3.6.4,
3.7.1, Table 2
reduced pressure zone devices .................. G12/AS1 3.6.2,
3.6.4, 3.7.2, Table 2
cross connections ............................... G12/AS1 3.1, 3.2
hazard ............................................. G12/AS1 3.3
installation ...................................... G12/AS1 3.6.3, 3.6.4, 3.7.1
testing ........................................... G12/AS1 3.7

Purpose groups .................................. C/AS1 1.3.2 Step 3, 2.1.3, 2.2.1,
2.3.2, 3.4.2 b), 4.2.7 a) c), 4.5.1, 4.5.2,
4.5.8, 4.5.13, 5.6.6, 5.6.7, 5.8.4, 7.3.15 c),
7.5.10, 7.8.5, 7.9.6, 7.9.8 b), 7.11.3,
Tables 2.1, 3.1 to 3.3, 4.1, 6.1 to 6.3 and 7.5;
F6/AS1 1.1.3, 1.1.4, Table 2.1
active purpose groups ...................... C/AS1 3.15.1 b), 3.15.3,
4.4.1 Step 2, Table 4.1
concessions for multiple purpose groups ........ C/AS1 5.6.6, 5.6.7,
5.6.10, 5.6.11
fire hazard category 4 ...................... C/AS1 2.2.10, 5.6.10, 5.6.11
primary purpose group ...................... C/AS1 2.2.2, 2.2.4, 2.2.7,
4.2.7 c), 4.4.1 Step 1, 4.5.5,
6.10.1, 6.11.1, 6.11.2
residential community care .................... C/AS1 2.4
sleeping purpose groups ..................... C/AS1 3.9.12 f), 3.15.1 c),
3.15.5, 4.4.1 Step 2, 4.5.11, 5.3.3 a),
5.7.9, 6.1.2 b), 7.7.1, 7.8.10 a),
7.9.1, 7.9.16, 7.10.6 c), A1.2.1
Type 16, Tables 4.1 and 7.4
CL ........................................... C/AS1 2.2.3, 2.2.6, 3.5.2 a), 3.5.3 a),
3.5.4 a), 3.5.6 c), 3.16.1, 3.16.3, 3.16.7,
3.17.1 c), 3.17.9 a), 6.3, 6.20.7, 6.20.17,
6.20.18 d), 6.20.20, 6.22.1, A2.1.1 Type 16,
Tables 2.1, 3.1 to 3.3, 6.2 and 6.3; F7/AS1 1.3.5 b)
CM ........................................... C/AS1 3.5.2 a), 3.5.3 a), 3.5.4 a), 3.5.6 c),
3.15.1 b), 3.15.3, 3.15.4, 3.17.1 c), 6.4,
6.20.17, 6.20.20, 6.22.1, 7.9.10 b),
Figure 3.20, Tables 2.1, 3.1 to 3.3, 6.2 and 6.3;
F7/AS1 1.3.5 b)
Radioactive substances

see Hazardous Substances and Processes, Class 7

Ramps

C/AS1 3.1.4, 3.9.2, 3.14.7; D1/AS1 1.3.1, 1.3.2, 3.0
accessible ramps

D1/AS1 3.1.3, 6.0.2 to 6.0.4, Figure 9
slopes

D1/AS1 Table 3
width

D1/AS1 3.2
intermediate landings

D1/AS1 3.3.1, Table 5
length

D1/AS1 3.3.3
width

D1/AS1 3.3.2
kerb ramps

D1/AS1 3.4, Figure 10
landings

D1/AS1 3.3, Figure 25
service ramps

D1/AS1 3.1.2, Figure 8, Table 4
slip resistance

D1/AS1 3.1.4, Table 2
slopes ........................................... D1/AS1 3.1, 3.1.1
Recirculated air systems ......................... G4/AS1 1.3.1 e)
Reflectances .................................... G7/AS1 Table 2
   high .......................................... G7/AS1 1.0.3, 1.0.4, Table 1
   medium ....................................... G7/AS1 1.0.3, 1.0.4, Table 1

Refuge areas
   see Fire safety precautions

Refuse
   see Solid Waste

Reinforcing steel .............................. B1/AS3 1.3.2 b) c), 1.4, 1.6,
   1.6.1, 1.6.2, 1.8.5, 2.2.1 a), Table 1

Relevant boundaries ........................... C/AS1 2.2.8, 5.3.1, 5.3.3 a),
   5.4.1 g), 5.7.6 a), 5.9.4 c), 7.1.2 d),
   7.3.1 b), 7.3.4 to 7.3.6, 7.3.9, 7.3.12 b),
   7.3.15 a), 7.4.2, 7.5 to 7.8, 7.10.6,
   7.10.7, 7.11.4, Figures 7.3,
   7.7 to 7.9, Tables 7.1 to 7.5

Relief valve drains
   see Cold water expansion valves, Temperature relief valves,
   Temperature/pressure relief valves

Remedial work ............................... F1/VM1 2.6, Table 3

Restaurants .................................... G13/AS2 3.4.4
   see also Communal non-residential

Retirement villages
   see Communal residential

Risk assessment .............................. F1/VM1 1.0.2 ii), 2.5, 2.5.4

Rodding points
   see Maintenance access to drains

Roof lights .................................... C/AS1 3.1.1

   5.1.1 b), 6.12.1, 6.12.7, 6.18.5 c),
   6.20.5, 6.20.11, 7.2.1 b), 7.8.1, 7.9.3 to 7.9.9,
   Figures 7.1 and 7.11; E2/VM1 1.3,
   E2/AS1 1.0

car parking and storage ..................... C/AS1 7.8.2, 7.9.16, 7.9.17
claddings ..................................... E2/VM1 1.0, E2/AS1 1.0, 1.3, Table 2
corrosion ...................................... E2/AS1 1.3.4
eaves and projections ....................... C/AS1 2.2.8, 7.8.3 to 7.8.5
exterior surface finishes .................. C/AS1 7.11.1
fire spread .................................. C/AS1 7.1.1 a), 7.9.1, 7.9.2
fire venting ........................................... C/AS1 4.2.4, 5.4.1 i), 5.5.3, 6.3.2 b), 7.8.10 a)
flashings .............................................. E2/AS1 1.3.3, Figure 1
joints ...................................................... E2/AS1 1.0.2
moisture .................................................. NZBC/E2.3.1, E2.3.2
open sided buildings ...................... C/AS1 7.8.8, 7.8.9, 7.8.10 a) b),
                                  Figure 7.10
pitch ...................................................... E2/AS1 1.0.1, 1.1, Table 1
provisions for snow .............................. E2/AS1 1.2
roof spaces ............................................ C/AS1 6.12.8, 6.18.5 b) c),
                                  6.18.7, 6.18.8, 6.18.10
stopends ................................................ E2/AS1 1.3.3, Figure 1
underlays ............................................... E2/AS1 1.0.3, 1.0.4, 1.4, 2.4.2

Rubbish chutes
see Solid Waste

Run-off
estimation of run-off ..................................... E1/VM1 2.0
rational method .......................................... E1/VM1 2.0.1
rainfall intensity ...................................... E1/VM1 2.0.2, E1/AS1 Appendix A
run-off coefficient ..................................... E1/VM1 2.1, Table 1
slope correction ....................................... E1/VM1 2.1.3, Table 2
time of concentration .................................. E1/VM1 2.2.1, 2.3
alternative procedure .................................. E1/VM1 2.3.6, 2.3.7
catchment slopes ...................................... E1/VM1 2.3.7
open channel flow ...................................... E1/VM1 2.3.5
pipe flow ............................................... E1/VM1 2.3.4, Table 1
time of entry .......................................... E1/VM1 2.3.2
overland flow .......................................... E1/VM1 2.3.2 b), Figure 1
road channel flow ..................................... E1/VM1 2.3.2 b), Figure 2
time of network flow .................................. E1/VM1 2.3.3

S
S rating
see Fire resistance ratings

Safe paths ............................................. F7/AS1 1.3.1, 1.3.4; F8/AS1 3.2.3 b)
see also Escape routes

Safe place .............................................. NZBC/F7.3, F8.3.3 (a); C/AS1 3.1.1, 3.7.1,
                                  3.16.4, 3.16.8, 6.1.1, 6.22.7, A2.1.1
                                  Type 13 and Type 16

Safe trays
see Storage water heaters

Safe water temperatures
see Water Supplies, hot
Safety from Falling ........................................... F4
see also Barriers
accidental falls ............................................. NZBC/F4.2
children under 6 ........................................... NZBC/F4.3.4 (f)
gates ......................................................... NZBC/F4.3.5 (a)
impact of people ............................................ NZBC/F4.3.4 (d)
low risk areas ............................................... F4/AS1 1.2.2
pressure of people ......................................... NZBC/F4.3.4 (d)
provision of barriers ....................................... NZBC/F4.3.1
roofs with permanent access .............................. NZBC/F4.3.2
swimming pools ............................................ NZBC/F4.3.3, F4.3.5
  fencing .................................................... F4/AS1 3.0

Safety of users
see Hazardous Agents on Site, Hazardous Building Materials,
Hazardous Substances and Processes, Safety from Falling,
Construction and Demolition Hazards, Lighting for Emergency,
Warning Systems, Signs

Sanitary appliances ................................. NZBC/G13.2; G12/AS1 8.0.1, Table 1;
                                            G13/AS1 1.0.2, 3.3.1, Table 2
washing machines ................................. G13/AS1 Figure 2, Table 2

Sanitary fixtures ................................. NZBC/E3.3.2 to E3.3.4, G13.1,
                                            G13.2, G12.2, G12.3.3, G12.3.5,
                                            G12.3.6 (b), G13.2; G12/AS1 6.12.1, 6.14.2,
                                            Figure 20, Tables 1 and 3; G13/AS1 1.0.2, 3.3.1, Table 2
see also Basins, Bidets, Personal Hygiene, Showers, Urinals,
  WC pans
acceptable standards ...................................... G1/AS1 2.6
access
  pans ...................................................... G1/AS1 4.2.7
  people with disabilities ............................. G1/AS1 1.2.2, 4.1
basins ...................................................... G1/AS1 3.3, Figure 9, Table 1
bidets ...................................................... G1/AS1 2.4
communal sanitary fixtures .......................... G1/AS1 3.4
construction and installation ......................... G1/AS1 2.0
locations .................................................. G1/AS1 3.0, 4.2.1
non-flushing sanitary fixtures ......................... G1/AS1 5.0
privies ..................................................... G1/AS1 5.1.2
number of fixtures required .......................... G1/AS1 1.0, Figure 1, Tables 1 to 4
sanitary towel disposal ................................ G1/AS1 1.1.5 b), 1.2, 1.2.2
showers .................................................. G1/AS1 2.5, 4.2.3, 4.2.4,
  Figures 5 and 8, Table 2
soil fixtures ............................................. G1/AS1 3.1.1, 3.2.1, 3.2.2, 3.3.1
see also WC pans
space dimensions ....................................... G1/AS1 3.1, 4.2.2, 6.2.1,
  Figures 4 to 9
toilets
see WC pans
types of fixtures required ............... G1/AS1 1.0, Tables 1 and 2
urinals .................................. G1/AS1 2.3, 6.1.1, Table 1
bowl urinals .............................. G1/AS1 2.3.1, 2.3.3, 2.3.5
continuous wall urinals ................. G1/AS1 2.3.1, Figure 3
discharge system ....................... G1/AS1 2.3.2
flushing systems ....................... G1/AS1 2.3.5 to 2.3.8, Table 5
manually operated ...................... G1/AS1 2.3.8
stall urinals .............................. G1/AS1 2.3.1, 2.3.5
surface finishes ......................... G1/AS1 2.3.4
trough urinals ........................... G1/AS1 2.3.1 to 2.3.3

Sanitation
see Personal Hygiene

Schools
see Communal non-residential

SDI
see Smoke developed index

Seating ................................. C/AS1 2.3.5, 3.3.2 k), 3.3.6 c), 3.9.3,
3.9.4, 3.9.7 to 3.9.11, 3.16.5, 3.16.6,
6.5.1, Figures 3.13 to 3.15,
Tables 2.2 and 3.4
open air auditoriums (purpose group CO) ........... C/AS1 3.16.5,
3.16.6, 6.5.1

Security ............................... NZBC/G14.3.2 (g); F3/AS1 2.1.5, 4.1;
G14/VM1 1.9, G14/AS1 1.1

Serviceability limit states
see Structure, limit states

Services and facilities
see Personal Hygiene, Laundering, Food Preparation and Prevention
of Contamination, Ventilation, Interior Environment, Airborne and
Impact Sound, Natural Light, Artificial Light, Electricity, Piped Services,
Gas as an Energy Source, Water Supply, Foul Water, Industrial Liquid
Waste, Solid Waste

Settlement ............................. B1/VM4 4.0.3, Appendix B
differential settlement .................... B1/VM4 B1.0.2
factors affecting settlement .............. B1/VM4 B1.0.3

Sewers
see Foul Water

SFI
see Spread of flame index
Sheds
   see Outbuildings

Shops
   see Commercial buildings

Showers .................................. E3/AS1 3.2, 3.2.2, 3.2.5, Figures 5 and 7;
   G1/AS1 2.5, Figures 5 and 8,
   Table 2; G13/AS1 Table 2

Shrinkage
   see Structure, loads

Signs ................................. F8; NZBC/C2.3.3, D1.3.4 (a), D2.3.2 (d);
   C/AS1 3.3.6 a), 3.17.11 d), 3.20;
   D/AS1 1.1.1

escape routes .......................... NZBC/F8.2 (a), F8.3.3 (a)

exit ..................................... F8/AS1 3.0

alternative exit ....................... F8/AS1 3.2.3 b)

arrows .................................. F8/AS1 3.2.2, 3.3.2, Figure 3

backgrounds ........................... F8/AS1 3.3.3

colours ............................... F8/AS1 2.1, 3.4, 3.5.3 a), 4.1.3, Table 3

illumination ........................... F8/AS1 3.5

externally illuminated .............. F8/AS1 3.5.2

internally illuminated ............. F8/AS1 3.5.3

lighting supply ....................... F8/AS1 3.5.5

self-luminous ........................ F8/AS1 3.5.4

lettering ............................. F8/AS1 3.3.1, Table 4

location ............................... F8/AS1 3.1

no exit signs ........................ F8/AS1 3.2.3 a)

wording .............................. F8/AS1 3.2

fire safety ........................... F8/AS1 4.0, 6.4

call points .......................... F8/AS1 4.1, Figure 4

colours ............................... F8/AS1 4.1.3

fire and smoke control doors ....... F8/AS1 4.2

lifts .................................. F8/AS1 5.4.1

stairs for Fire Service personnel .. F8/AS1 6.4.3,

Figures 12 and 13

storage heights ...................... F8/AS1 6.4.2, Figure 11

hazard signs ........................... F8/AS1 6.0

dangerous goods ....................... F8/AS1 6.1

class 1 ............................... F8/AS1 6.1.4

class 2 ................................ F8/AS1 6.1.4

class 3 ................................ F8/AS1 6.1.4

      ............................... F8/AS1 6.1.4

class 5 ............................... F8/AS1 6.1.4

      ............................... F8/AS1 6.1.4

class 7 ................................ F8/AS1 6.1.4

      ............................... F8/AS1 6.1.4

colour ............................... F8/AS1 6.1.3, 6.1.4 a)

radioactivity warning symbol ...... F8/AS1 6.1.4 a), Figure 8

colour ............................... F8/AS1 6.1.3

layout ................................ F8/AS1 6.1.3
lettering ........................................... F8/AS1 6.1.3, 6.1.4
location ........................................ F8/AS1 6.1.4
electrical hazards .............................. F8/AS1 6.2, Figure 9
escalators and moving walks .................. F8/AS1 6.6, Figure 15
floor loadings ................................... F8/AS1 6.3
buildings ........................................ F8/AS1 6.3.1, Figure 10
lifting ............................................ F8/AS1 6.3.2
passenger lifts .................................. F8/AS1 6.3.2 a)
service lifts ..................................... F8/AS1 6.3.2 b)
hazardous substances and processes ........... NZBC/F3.3 (g)
identification of hazards ....................... NZBC/F8.2 (c), F8.3.2
machine rooms .................................. F8/AS1 6.5, Figure 14
non-potable water .............................. F8/AS1 6.7, Figure 16
lighting for emergency ......................... NZBC/F6.3.2, F8.3.3 (b)
people with disabilities ......................... NZBC/F8.2 (d), F8.3.4; F8/AS1 5.0
access symbol .................................. F8/AS1 5.0.2 c), Figure 6
layout ............................................. F8/AS1 5.0.2, Figure 5
listening systems ............................... F8/AS1 5.0.3, Figure 7
readability ........................................ NZBC/F8.3.1
lettering type and proportions ................. F8/AS1 1.0, Table 1
safety ............................................. F8/AS1 2.0, 3.2.1
cautions ........................................ F8/AS1 2.2, 6.1.2, 6.2.2, Figure 2
colours .......................................... F8/AS1 2.1, Table 3
layout ............................................ F8/AS1 2.2
prohibition and stop signs ...................... F8/AS1 2.2.1, 6.7.1, Figure 1
safe condition signs ........................... F8/AS1 2.2.3
safety symbols .................................. F8/AS1 2.3
visibility ......................................... NZBC/F8.3.1, F8.3.3 (b)

Single escape routes
see Escape routes

Sinks .............................................. E3/AS1 3.2.6, Figure 8;
G3/AS1 1.1.5, G13/AS1 Table 2
see also Basins, Cleaners’ sinks, Kitchen sinks

Site characteristics ............................. B1/VM4 Appendix A

Site investigation ............................... B1/VM4 3.5.1, 4.7.1,
Appendix A; F1/VM1 1.0.3, 2.0, Figure 1
analysis ........................................... F1/VM1 2.4
assessment ....................................... F1/VM1 1.0.3, 2.5, Figure 2
detailed investigation ......................... B1/VM4 A1.3; F1/VM1 1.0.2 c), 2.3
history and records ............................ F1/VM1 2.1
preliminary investigation ...................... B1/VM4 A1.2; F1/VM1 1.0.2 b), 2.2
previous industrial use of site ................ F1/VM1 2.1.1, Table 1
recording information ........................ B1/VM4 A1.4

Site specific considerations ................... B2/VM1 1.2
Siteworks
  see Design, siteworks

Skylights .............................................. F3/AS1 1.4.2, 4.7.8 d)

Slip resistance .......... D1/VM1 1.0, D1/AS1 2.1, 3.1.4, 4.1.4 c), Table 2

Slopes .................................................. D1/AS1 1.2
  acceptable slopes .................................. D1/AS1 1.2.1, Figure 2
  changes in level ................................... D1/AS1 1.3, 1.3.1
  cross falls ........................................ D1/AS1 1.2.2

Slope stability ................................. B1/VM4 1.0.4

Small chimneys
  see Chimneys

Smoke ........................................... NZBC/C3.3.1, C3.3.2, C3.3.4, C3.3.7, C3.3.8

Smoke alarms .............................. F7/AS1 3.1.1, 3.1.2
  alarm system .................................. F7/AS1 3.2.1, 3.2.2, 3.2.3, 3.2.4
  location .......................................... F7/AS1 3.3.1, 3.3.2
  maintenance ..................................... F7/AS1 3.4.1

Smoke control ......... C/AS1 3.11.9, 6.19.1, 6.19.12, 6.19.13, Table 6.1
  see also Fire safety precautions
  car parking ..................................... C/AS1 6.10.4 b), 6.10.6
  doors
    see Doors
  in air handling systems
    see Fire safety precautions
  intermediate floors ...................... C/AS1 3.4.6 a), 3.9.13 d), 4.5.17, 4.5.18, 6.21.3, 6.21.4
  limited area atriums ................... C/AS1 4.5.18, 6.21.4 b), 6.22.1, 6.22.7, 6.22.8, Figure 6.14, Table 6.4
  long corridors .................................. C/AS1 6.13.1, Figure 6.5
  mechanical smoke extract
    see Fire safety precautions
  natural smoke venting
    see Fire safety precautions
  pressurisation
    see Fire safety precautions
  smoke reservoirs ...................... C/AS1 6.22.2 f), 6.22.5, 6.22.7 to 6.22.10, A2.1.1 Type 10 and Type 11, Figure 6.14, Table 6.4
  systems ............................. C/AS1 3.4.6 a), 3.4.8 d), 3.9.13 d), 4.5.17, 6.21.5, 6.23.3 a), A2.1.1 Type 9, Type 10 Type 11 Type 17, B1.1.1, B2.2.1 Step 2, B3.1.1
  ventilation .......................... C/AS1 3.14.7, 6.9.6 to 6.9.8, 6.10.6
  vertical safe paths ........................ C/AS1 6.9.11, Figure 6.1

Smokecells .......... C/AS1 3.4.6 b), 4.2.2, 6.1.2 a), 6.4.1, 6.9.1, 6.12.4

Smoke detectors
  see Fire safety precautions
Smoke developed index (SDI) .......................... C/AS1 6.18.2 d), 6.20.3, 6.20.5, 6.20.7 c) d), C5.1.1 d), Table 6.2

Smoke separations .............................. C/AS1 3.8.3 b), 3.11.1, 3.17.12 b), 6.1.2 c), 6.3.1, 6.6.4 b), 6.6.6 b), 6.9.6 e), 6.9.11, 6.10.1, 6.12.3, 6.12.4, 6.12.9, 6.13.1, 6.19.1, Table 6.1

glazing ............................................. C/AS1 5.8.9
smoke seals ................................. C/AS1 6.12.9, 6.19.2 b), 6.19.4

Smoke spread
see Smoke control

Snow
see Structure, loads

Socket outlets
see Electricity, people with disabilities

Soil fixtures .............................. G1/AS1 3.1.1, 3.2.1, 3.2.2, 3.3.1
see also WC pans

Soil properties ..................... B1/VM4 1.0.5, 2.0.6, 2.0.7, Appendix A

Soil shrinkage and expansion ........ B1/VM4 3.1.2, 3.4.3, A1.2.1

Soils
adverse moisture conditions .......... B1/VM4 1.0.2

Solid fuel appliances

domestic .................................. B1/AS3 2.0
installation .................................. C/AS1 9.1
seismic restraint ......................... C/AS1 9.1.2

Solid plastering .............................. B2/AS1 3.3

Solid Waste .......................... G15
chutes ........................................... C/AS1 3.12.1, 6.16.6, 6.16.7
collection ........................ NZBC/G15.2, G15.3.1
holding ........................................ NZBC/G15.2, G15.3.1
sewer ......................................... NZBC/G15.3.3
storage ........................................ C/AS1 3.12.1, 6.10.2, G15/AS1 1.0.1, 3.0, Figure 1
alternative solution ................... G15/AS1 3.1
capacity ....................................... G15/AS1 1.0.1
location ........................................ G15/AS1 2.0.1
floors ........................................... G15/AS1 3.0.2
walls ........................................... G15/AS1 3.0.3
water supply ............................. G15/AS1 3.0.7
windows ...................................... G15/AS1 3.0.4, 3.0.6
space required ............................. G15/AS1 1.0.2
vehicle access ........................................... G15/AS1 3.0.10
ventilation ........................................... G15/AS1 1.0.3, 3.0.8, 3.0.9
temperature ........................................... NZBC/G15.3.1 (d)
waste disposal units ................................. NZBC/G15.3.3
waste (rubbish) chutes ......................... NZBC/G15.3.2; G15/AS1 4.0, Figure 2
  cleaning ........................................... G15/AS1 4.0.3
  odours ........................................... NZBC/G15.3.2 (d)
rack restricted access ......................... NZBC/G15.3.2 (g)
spread of fire ......................................... NZBC/G15.3.2 (e)

Sound insulation tests
  see Airborne and Impact Sound

Sound transmission class (STC)
  see Airborne and Impact Sound

Space requirements ............................... G5/AS1 2.0, Table 3

Spandrels .............................................. C/AS1 7.1.2 e), 7.9.12, 7.9.13, Figure 7.2

Specified intended life
  see Durability

Spread of Fire
  automatic fire suppression systems ............ NZBC/C3.3.6
    see also Fire safety precautions
  automatic smoke control systems ............ NZBC/C3.3.8
    see also Smoke control
  concealed spaces .................................... NZBC/C3.3.4
  protect adjacent property ................... NZBC/C3.1 (c), C3.2 (c)
  resistant to spread of fire ................... NZBC/C2.3.3, C3.3.1
  rubbish chutes ..................................... NZBC/G15.3.2
  safeguard the environment .................. NZBC/C3.1 (d), C3.2 (d)
  safety while evacuating ..................... NZBC/C3.1 (a)
    see also Means of Escape

Spread of flame index (SFI) ....................... C/AS1 6.18.2 d), 6.20.3, 6.20.5, 6.20.7 c) d), C5.1.1 b), Table 6.2

Sprinklers
  see Fire safety precautions

Stability
  see Fire resistance ratings, Structure

Stadiums
  see Communal non-residential

Staircase
  see Stairways
Stairs
see Stairways

Stairs and ladders ....................... \textbf{C/AS1} 3.1.4, 3.4.1 a), 3.4.7, 3.9.14, 3.15.9, Figures 3.6, 3.10 and 3.21
curved and spiral stairs ................. \textbf{C/AS1} 3.3.5, 3.4.7 a) b)
external stairways ..................... \textbf{C/AS1} 3.14.6 c), 3.14.7, 3.15.4, 3.15.7, Figures 3.22 and 3.23
stairways ............................... \textbf{C/AS1} 3.3.3, 3.3.4, 3.3.6 b), 3.4.5, 3.11.8, 3.12.3, 3.15.6, 5.8.2 c), 6.9.3, 6.9.10, 7.5.7

Stairways ....................... \textbf{NZBC/D1.3.2 (f) to (i), D1.3.4 (g) (h); D1/AS1} 4.0
see also Access Routes, accessible routes and ladders
accessible stairs ........................ \textbf{D1/AS1} 4.1.7, 4.1.8 b), 4.2.1, 6.0.1 to 6.0.4, Figure 11, Tables 6 to 8
common stairs .......................... \textbf{D1/AS1} 4.1.8, 4.2.1, Figure 11, Tables 6 to 8
curved stairs ........................... \textbf{D1/AS1} 4.1.3, 4.4, Figure 17
landings .............................. \textbf{D1/AS1} 4.3, 4.3.1, 4.3.6 c), 4.6.2 c), Figures 14 and 25
direction changes ....................... \textbf{D1/AS1} Figure 16
length .................................. \textbf{D1/AS1} 4.3.4, 4.3.6 c)
maximum rise ........................... \textbf{D1/AS1} 4.3.2, Table 7
obstructions ........................... \textbf{D1/AS1} 4.3.5, Figure 15
width .................................. \textbf{D1/AS1} 4.3.3
lighting ............................... \textbf{D1/AS1} 4.5, 4.5.2, Table 8
pitch .................................. \textbf{D1/AS1} 4.1, Figure 11, Table 6
pitch lines .............................. \textbf{D1/AS1} 4.1.3, 4.4.1, 4.4.2, 4.5.1, 4.5.2
private stairs ........................ \textbf{D1/AS1} 4.6.2, Figure 11, Tables 6 and 8
main .................................. \textbf{D1/AS1} Figure 11, Table 6
minor .................................. \textbf{D1/AS1} 4.5.1, Figure 11, Table 6
risers .................................. \textbf{D1/AS1} 4.1, 4.1.2, 4.1.3, 4.1.8, 4.4.2, 4.5.1, Figures 11 and 12, Table 6
secondary .............................. \textbf{D1/AS1} 4.5.1, Figure 11, Table 6
service stairs ........................ \textbf{D1/AS1} 4.5.1, Figure 11, Tables 6 and 8
slip resistance ........................ \textbf{D1/AS1} 4.1.4 c), Table 2
spiral stairs ........................... \textbf{D1/AS1} 4.1.3, 4.4.1
treads ................................. \textbf{D1/AS1} 4.1, 4.1.2 to 4.1.7, 4.5.1, 4.6, Figures 11 to 13, Table 6
tapered treads .......................... \textbf{D1/AS1} 4.4, Figure 17
visibility ............................. \textbf{D1/AS1} 4.3.6, 4.6, Table 8; \textbf{G8/AS1} 1.0.3
width .................................. \textbf{D1/AS1} 4.2, 4.2.1, 4.4.1, 4.5.2, 4.5.3, 6.0.1
winders ............................... \textbf{D1/AS1} 4.5, Figure 18

Standard test
see Test methods

Stationary internal combustion engines .................. \textbf{F3/AS1} 4.7.12

Steel
see Design, steel
Steel framing .......................................................... E3/AS1 1.1.4 d)

Storage water heaters .......................... NZBC/H1.3.4; G12/AS1 6.2, 6.3.1,
                                      6.6.3, 6.6.5, 6.7.2, 6.8 to 6.11,
                                      Table 5; H1/AS1 5.0

see also Water heaters

drain pipes .................................................. G12/AS1 4.10.3

open vented .............................................. G12/AS1 6.3.2, Figures 6 and 7

free outlet type ........................................ G12/AS1 6.1.2, 6.4.2

mains pressure supply ....................... G12/AS1 6.2.1, Figure 8, Table 5

tank supply ............................................. G12/AS1 6.1.1, Figure 6, Table 5

safe trays ................................................. G12/AS1 5.2.3, 6.11.3

seismic restraint ................................. G12/AS1 6.11.5, Figure 4

unvented

see Storage water heaters, valve vented

valve vented ........................................... G12/AS1 6.3 to 6.7, Figure 8

Storage water tanks

see Tanks

Strainers (filters) .............................. G12/AS1 6.2.1

Structural fire endurance rating (S)

see Fire resistance ratings

Structural integrity

see Structure, Structural Stability During Fire

Structural Stability During Fire

consequential collapse ......................... NZBC/C4.3.3

fire hazards ........................................... NZBC/C4.3.1

fire intensity ......................................... NZBC/C4.3.1

fire load ............................................... NZBC/C4.3.1

fire resistance ....................................... NZBC/C4.3.1, C4.3.2, C4.3.3

Structural stability

see Fire resistance ratings

Structure ...................................................... B1

building instability ............................. NZBC/B1.1

collapse ................................................. NZBC/B1.2

damage ............................................... NZBC/B1.2

deflections ........................................... NZBC/B1.2

demolition ............................................ NZBC/B1.3.6

design

concrete ................................................. B1/VM1 3.0

drains

see Drains

foundations

see Foundations

loadings .............................................. B1/VM1 1.1, 2.0

earthquake ........................................... B1/AS3 1.9, Table 2
limit state ........................................... B1/VM1 1.1.2, 5.2, 7.1
non-limit state ...................................... B1/VM1 1.1.3, 7.2
site effects (local) or faults ...................... B1/VM1 1.1.4
masonry ........................................... B1/VM1 4.0, B1/AS1 2.0, B1/AS3 1.3.3
siteworks .......................................... B1/VM1 10.0
steel ................................................ B1/VM1 5.0
strength reduction factor ......................... B1/VM4 2.0.1, 3.5.1, 4.7, Tables 1 and 4
timber ............................................. B1/VM1 6.0, B1/AS1 3.0
               see also Timber barriers
windows
               see Windows
failure ............................................. NZBC/B1.1
limit states
               serviceability limit state ............. NZBC/B1.3.1, B1.3.2, B1.3.5
               ultimate limit state .................... NZBC/B1.3.1, B1.3.2, B1.3.5
loads ............................................. NZBC/B1.2, B1.3.3
creep ............................................. NZBC/B1.3.3
cyclic loads ....................................... NZBC/B1.3.3
differential movement ............................ NZBC/B1.3.3
dynamic loads ..................................... NZBC/B1.3.3
earth pressure ..................................... NZBC/B1.3.3
earthquake ........................................ NZBC/B1.3.3
               seismic resistance of building services .... B1/VM1 14.0
explosion ......................................... NZBC/B1.3.3
liquid ............................................. NZBC/B1.3.3
shrinkage .......................................... NZBC/B1.3.3
snow .............................................. NZBC/B1.3.3
wind .............................................. NZBC/B1.3.3
sitework .......................................... NZBC/B1.3.3
stability ......................................... NZBC/B1.3.6, B1.3.7
tanks ............................................... G12/AS1 5.2.7, Figure 4
               seismic restraint ...................... G14/VM1 2.3.2
temporary support ................................ NZBC/B1.3.5
vibrations ........................................ NZBC/B1.3.2
Stucco ............................................. B1/AS1 5.0
Subsidence ......................................... B1/VM4 A1.2.1 (a)
Suites
               see Firecells
Surface finishes ................................. C/AS1 6.1.2 e), 6.20, Tables 6.2 and 6.3
ceilings ........................................... C/AS1 6.20.3, 6.20.5, 6.20.6, 6.20.11, 6.20.15 a)
extceptions ........................................ C/AS1 6.20.4
exterior surfaces .................................. C/AS1 7.1.2 c), 7.8.6, 7.11
flooring and floor coverings ...................... C/AS1 6.20.8 to 6.20.10, 6.20.14, C2.1
wharenui .......................................... C/AS1 3.3.2 h), 3.4.2 e), Table 2.2
Surface Water .............................................. E1
see also Run-off, drains
2% probability storm
{50 year return period} ....................... NZBC/E1.3.1
10% probability storm
{10 year return period} ....................... NZBC/E1.3.2
drainage systems .............................. NZBC/E1.3.3

Suspended flexible fabrics ......................... C/AS1 6.20.1,
6.20.16 to 6.20.19, C3.1, Table 6.2

Suspended timber floors ......................... E2/AS1 4.1, Figure 5

Swimming pools
see Safety from Falling
fencing ................................................... F4/AS1 3.0

Tanks .................................................. F3/AS1 4.2.3 a)
industrial liquid waste ......................... G14/VM1 1.4.1 c), 1.4.3, 3.0,
Figure 3, Table 3
oil storage tanks ............................... F3/AS1 4.6, 4.6.2
capacity ........................................ F3/AS1 4.6.4
on upper floors ................................ F3/AS1 4.6.3
storage of hazardous substances ............ F3/AS1 3.2.1, 3.3.1,
3.4.1, 3.6, 4.3, 4.4
water tanks ....................................... G12/AS1 5.2, 6.2.1
access .............................................. G12/AS1 5.2.5, Figure 4
covers ............................................. G12/AS1 5.2.4
location ........................................ G12/AS1 5.2.1
overflow pipes ..................................... G12/AS1 5.2.2, Figure 4
safe trays ......................................... G12/AS1 5.2.3, Figure 4
seismic restraint ..................... G12/AS1 5.2.7, Figure 4; G14/VM1 2.3.2
structural support ....................... G12/AS1 5.2.7, Figure 4
water storage tanks ...................... G12/AS1 5.1

Taverns
see Communal non-residential

Temperature
see Electricity, Energy Efficiency, Interior Environment, Outbreak of
Fire, Piped Services, Solid Waste, Structure, load, Water Supplies

Temperature control
see Interior Environment, interior temperature

Temperature/pressure relief valves ........................ G12/AS1 6.4.1, Figure 8, Table 6
installation .................................................. G12/AS1 6.6.5
relief valve drains ............................... G12/AS1 6.7, Figures 12 and 13
Test methods ........................................... C/AS1 Appendix C
fire properties of external wall cladding systems .... C/AS1 C9.1
fire resistance ........................................ C/AS1 C7.1
fire resisting closures ................................ C/AS1 C8.1
flame barriers ........................................... C/AS1 C10.1
flamability of floor coverings ....................... C/AS1 C2.1
flamability of membrane structures ............... C/AS1 C4.1
flamability of suspended flexible fabrics ........ C/AS1 C3.1
non-combustibility of materials ................... C/AS1 C6.1
properties of lining materials ...................... C/AS1 C5.1
Theatres .............................................. NZBC/G5.3.5
  see also Communal non-residential
Thermal break ......................................... E3/AS1 1.1.4 d)
Thermal resistance (R-value) ........................ E3/AS1 1.1; H1/VM1 1.4, H1/AS1 2.1.1, 2.2, 2.3
  alternative solution ................................ E3/AS1 1.1.5
  materials and installation ...................... E3/AS1 1.1.3
Thermostats ........................................ G12/AS1 6.3.5, 6.5.1
Thresholds ........................................... D1/AS1 1.3.2
Timber ................................................. B2/AS1 3.2
  see also Design, timber
  framed buildings ................................. B1/AS3 1.1.1
  framing ........................................... E2/AS1 6.0.2 a)
  weatherboards ...................................... E2/AS1 6.0.2 b)
Timber barriers ...................................... B1/AS1 1.2, 9.0, B1/AS2 1.0
  see also Barriers and Safety from Falling
  alternative details ............................... B1/AS2 2.7
  balusters ......................................... B1/AS2 2.1.1, 2.2.1, 2.2.2, 2.3, 2.4.1,
  ................................................... 2.7.1, 2.7.2, Figures 2 to 4, Tables 1 to 3 and 5
  connections ....................................... B1/AS2 1.0.5 b) c), 2.2.2, 2.3.3 to 2.3.9,
  ................................................... 2.5.2, 2.5.3, 2.7.2, Figures 2 to 4, Tables 3 and 4
  construction ....................................... B1/AS2 2.0
  dimensions of timber .............................. B1/AS2 1.0.4
  exposed to the weather ......................... B1/AS2 1.0.5
  joists ............................................... B1/AS2 2.1.1, 2.3.8
  ................................................... B1/AS2 2.1.1, 2.3.4, 2.3.6, 2.3.8
  boundary joists ................................. B1/AS2 2.1.1, 2.3.2, 2.3.4, 2.3.5, Figure 4
  end joists ...................................... B1/AS2 2.3.2, 2.3.4, 2.3.6, Figure 4
  intermediate joists ............................. B1/AS2 2.3.2, 2.3.3, Figure 3, Table 3
  materials ......................................... B1/AS2 1.0.3
  moisture content ................................ B1/AS2 2.6.1
  palings .......................................... B1/AS2 2.1.1, 2.5
rails
  bottom rails ............................................. **B1/AS2** 2.1.1, 2.4, 2.5.1, 2.7.2, Table 5
  top rails .................................................. **B1/AS2** 2.1.1, 2.2, 2.3.1, 2.5.1,
                                          2.5.3, 2.7.1, 2.7.2, Figure 1,
                                          Tables 1 and 2

Timber connections .............................................. **B1/AS2** 1.0.5 b) c)

Time-share accommodation
  see Communal residential

Toilets
  see **Personal Hygiene**, WC Pans

Toxic substances
  see **Hazardous Substances and Processes**, Class 6

Transport terminals
  see Commercial buildings

Travel distance ................................................... **NZBC/C2.3.1 (d), C2.3.2, C3.3.1 (a)**

Tunnels
  see Ancillary buildings

Turnstiles
  see Doors

U

Ultimate limit states
  see **Structure**, limit states

Universities
  see Communal non-residential

Unprotected areas ................................................. **C/AS1** 3.14.3, 3.14.6, 5.1.1 b),
                                                           7.1.2 d), 7.3, 7.4.1 a), 7.4.2, 7.5.2 to 7.5.6,
                                                           7.5.8, 7.6.4, 7.7.1, 7.7.3, 7.7.5 Step 2 and Step 3,
                                                           7.8.9, 7.8.10 c), 7.9.10, 7.9.11, 7.9.13,
                                                           Figures 7.3 to 7.5, Tables 7.2 to 7.4

  fire resisting glazing (Type B) ........................ **C/AS1** 5.8.2 a), 7.4.1 a),
                                           7.4.2 to 7.4.4, Figure 7.4, Table 7.1

  small openings (Type A) .............................. **C/AS1** 7.4.1 a), 7.4.2, 7.4.4, Figure 7.4

Urinals ......................................................... **E3/AS1** 3.2, 3.2.1; **G1/AS1** 2.3,
                                                         6.1.1, Table 1; **G13/AS1** Table 2

  bowl urinals .............................................. **G1/AS1** 2.3.1, 2.3.3, 2.3.5

  continuous wall urinals ............................... **G1/AS1** 2.3.1, Figure 3

  discharge system ....................................... **G1/AS1** 2.3.2

  flushing systems ...................................... **G1/AS1** 2.3.5 to 2.3.8, Table 5
manually operated ..............................................G1/AS1 2.3.8
stall urinals ....................................................G1/AS1 2.3.1, 2.3.5
surface finishes ..............................................G1/AS1 2.3.4
trough urinals ....................................................G1/AS1 2.3.1 to 2.3.3

Utensil washing ..............................................G3/AS1 1.1.1

V

Vacuum relief valves ..........................................G12/AS1 Table 6

Vehicles .........................................................NZBC/D1.1, D1.2.2, D1.3.1 (d) (e), D1.3.5, G14.3.2 (b); D1/AS1 10.0; G14/VM1 1.8, 2.1.5; G15/AS1 3.0.10
car parking areas ..............................................D1/AS1 10.1
accessible car parking spaces ..............................D1/AS1 10.1, 10.2
commercial vehicles .........................................D1/AS1 11.0.2
loading spaces ..................................................D1/AS1 11.0.2

Vent pipes .........................................................G12/AS1 6.3.2, 6.8; G13/AS1 5.2, Figures 5 to 8, 10 and 12, Table 5;
G13/AS2 Figures 5 and 6

diameter ..........................................................G12/AS1 6.8.2 b), G13/AS1 Table 6
fixture vent pipes .............................................G13/AS1 5.2, Figures 5 to 8, 10 and 11, Tables 5 and 6

height ..............................................................G13/AS1 5.4
installation ........................................................G12/AS1 6.8.2 d)

gradient ............................................................G13/AS1 5.4

insulation ..........................................................G12/AS1 6.8.3

relief vent pipes ................................................G13/AS1 5.6, Figure 7

termination .......................................................G12/AS1 6.8.2 c); G13/AS1 5.7.3, Figure 12

Ventilation .........................................................G4; NZBC/H1.3.1 (b); C/AS1 6.9.6
airflow control ..................................................NZBC/H1.3.1 (b); H1/AS1 3.0
air handling systems .........................................G4/AS1 1.3.1 b)
air purity .........................................................NZBC/G4.3.1; G4/VM1 2.0
bacteria, pathogens and allergens ............................NZBC/G4.3.2
balconies, bridges and open stairways .....................C/AS1 3.14.7
car park ............................................................G4/AS1 1.3.2
contaminated air
  discharge .......................................................G4/AS1 1.3.1 f)
  disposal ..........................................................NZBC/G4.3.4
  removal ..........................................................NZBC/G4.3.3
cross-ventilation for car parking .........................C/AS1 6.10.4, 6.10.6
drains .............................................................G13/AS2 4.0, Figures 4 to 6, Table 3
extract ventilation .......................................... G4/AS1 1.3.1 c)
fixed combustion appliances ............................ NZBC/G4.3.5
flues ......................................................... G4/AS1 2.3, 2.4
gas burning appliances .................................... C/AS1 9.2.2
gas-fuel appliances ....................................... G4/AS1 2.0, 3.0
maximum occupancy ........................................ NZBC/G4.2
mechanical ventilation systems .......................... NZBC/C3.3.7, G4.3.2;
.......................... G4/AS1 1.3, 2.2
natural ....................................................... G4/AS1 1.2, 2.1
natural smoke ventilation
see Fire safety precautions
number of air changes ....................................... C/AS1 9.3.2
outdoor air supply ......................................... NZBC/G4.3.1
positive and negative pressure ............................ G4/AS1 1.3.3
prevention of internal moisture ............................ NZBC/E3.3.1
rate .......................................................... G4/VM1 1.0.1
recirculated air systems ..................................... G4/AS1 1.3.1 e)
safe paths .................................................... C/AS1 6.9.6 to 6.9.10
solid fuel appliances ...................................... C/AS1 9.1.2

Verification method . . . . . . . G12/VM1 1.0; G13/VM1 1.0.1, G13/VM2 1.0.1

Vibrations
see Structure

W

Walls .......................................................... NZBC/B2.3.1 (a), C3.3.1, C3.3.5, E2.3.2, E2.3.3, E2.3.4, E3.3.5, G6.3.1; C/AS1 5.3.2,
............................ 5.7.2, 6.10.6, 6.12.1, 6.12.6, 6.16.2, 6.16.3,
............................ 6.18.5 c), 6.20.3, 6.20.4 d f), 6.20.5, 6.20.6,
............................ 6.20.11, 6.20.15 a), 7.8.9, 7.9.5, 7.9.18,
............................ Table 6.2; E2/AS1 2.0; G3/AS1 1.6,
............................ 2.1.1, 2.1.2, 2.2.3, 2.2.4
cavities and concealed spaces ............................. C/AS1 6.18.4, Figures 6.11
............................ and 6.12
cellulose-cement board ...................................... E2/AS1 2.3.3 a)
claddings .................................................... E2/AS1 2.0.1 a) b) c)
curtain walls ................................................ C/AS1 6.18.4, 7.9.14, Figure 6.11
external walls ............................................... NZBC/E2.3.2
see also Unprotected areas
floor/wall junctions ........................................ G6/AS1 1.0.3, Figure 5
framing ......................................................... E2/AS1 2.0.1 d)
internal/external wall junctions ........................ G6/AS1 1.0.3, Figure 4
joints ........................................................ E2/AS1 2.0.1 b)
light-weight claddings ..................................... E2/AS1 2.5
masonry veneer ............................................. E2/AS1 2.2, Figure 3
with suspended timber floor ............................. E2/AS1 Figure 3
sheathing .................................................... E2/AS1 2.4
solid plaster ........................................... E2/AS1 2.3, Figure 4
non-rigid backings .................................. E2/AS1 2.3.4, 2.3.5
rigid backings ...................................... E2/AS1 2.3.3
surface finishes ...................................... NZBC/C3.3.1
theatre proscenium walls ..................... C/AS1 6.3.1, 6.3.2 f), 6.19.9,
6.19.10, 6.19.11, Figure 6.13
timber framing ...................................... E2/AS1 2.3, 6.0.2 a)
timber weatherboards .......................... E2/AS1 2.1, 6.0.2 b)
batten-jointed vertical weatherboards . E2/AS1 2.1.2 b), Figure 2
lap-jointed horizontal weatherboards . E2/AS1 2.1.2 a), Figure 2
shiplap vertical weatherboards .......... E2/AS1 2.1.2 c), Figure 2
wall framing ......................................... E2/AS1 4.2.6
wall assemblies ..................................... G6/AS1 1.0.3, Figure 2

Warehouses
see Industrial buildings

Warning Systems .......................................... F7
see also Alarm systems
combined fire detection and warning system ...... NZBC/F7.3

Wash-down areas .......................... G3/AS1 2.3

Washing machines
see Sanitary appliances

Waste chutes
see Solid Waste

Waste disposal units .......................... NZBC/G15.3.3; G13/AS1 Figure 2, Table 2

Waste pipes
see Discharge pipes, Pipes

Water
see External Moisture, Foul Water, Internal Moisture, Surface Water,
Water Supplies

Water heaters .......................... G12/AS1 6.1, Table 5
installation ......................................... G12/AS1 6.11
instantaneous water heaters ............................ G12/AS1 6.1.1, Table 5
storage water heaters ................................ G12/AS1 4.14
wet back water heaters ......................... G12/AS1 6.13, Figure 15

Water main ........................................ G12/AS1 3.1.1, 3.2.1 b), 5.1.1

Water seals ........................................... G1/AS1 2.1.1 c), Figure 1;
G13/AS1 1.0.3, 3.2.1, Figure 1, Table 1,
G13/AS2 3.3.1

Water splash ........................................ E3/AS1 3.0
basins ............................................ E3/AS1 3.2.2, Figure 3
baths ........................................ E3/AS1 3.2.2, Figure 3
lining materials ............................. E3/AS1 3.1, Figure 1
joints in linings ................................ E3/AS1 3.2, Figure 2
showers ...................................... E3/AS1 3.3.1 to 3.3.5, Figures 4 and 5
sinks ........................................ E3/AS1 3.2.2, Figure 3
tubs .......................................... E3/AS1 3.2.2, Figure 3
urinals ...................................... E3/AS1 3.3.6

Water supply systems ................. G12/VM1 1.0, G12/AS1 5.0
installation ................................ G12/AS1 5.2
anchor points ................................ G12/AS1 7.1.2
electrochemical compatibility ......... G12/AS1 7.1.1
in concrete or masonry ..................... G12/AS1 7.3.3
pipe supports ................................ G12/AS1 7.1
spacing ..................................... G12/AS1 7.1.3, Table 7
pipes below ground ......................... G12/AS1 7.3.2
protection from damage .................... G12/AS1 7.3
protection from freezing ................... G12/AS1 7.2
protection from frosts ....................... G12/AS1 3.6.3
maintenance facilities ..................... G12/AS1 5.2
materials ................................... G12/AS1 2.0, Table 1
pressure limitations ....................... G12/AS1 2.2.2 a)
temperature limitations ..................... G12/AS1 2.2.2 a)
pipe size .................................... G12/AS1 5.3, Table 4
flow rates .................................. G12/AS1 5.3.1, Table 3
watertightness ............................... G12/AS1 7.5

Water Supplies .............................. G12
access for maintenance ..................... NZBC/G12.3.6 (d)
backflow prevention devices ............. NZBC/G12.3.6 (e)
cold ........................................... G12/AS1 1.1.4
drinking water .............................. NZBC/G12.2
energy efficiency ......................... NZBC/H1.2, H1.3.4; H1/AS1 5.0
hot ........................................... G12/AS1 1.1.4, Figure 1; G12/AS1 6.0
mixing devices
  tempering valves ........................ G12/AS1 6.14.2, Figure 16
  pipe sizes ................................ G12/AS1 6.12, Table 4
  safe water temperatures ................ G12/AS1 6.14
isolation of system ....................... NZBC/G12.3.6 (e)
leakage ..................................... NZBC/G12.3.6 (c)
laundries .................................. G2/AS1 1.1.1, 1.1.2
mains ....................................... G12/AS1 3.1.1, 3.2.1 b), 5.1.1
non-potable water ......................... NZBC/G12.3.2; G12/AS1 4.1
  outlet identification ..................... G12/AS1 4.2.1, Figure 3
people with disabilities ................... NZBC/G12.3.9
potable water ............................. NZBC/G12.3.1, G12.3.6 (a); G12/AS1 3.0, 4.0; G14/VM1 1.6.2
  pressure vessels ......................... NZBC/G12.1 (b); G12.3.7 (a)
sanitary appliances ........................ NZBC/G12.2, G12.3.3, G12.3.5, G12.3.6 (b)
sanitary fixtures .................NZBC/G12.2, G12.3.3, G12.3.4, G12.3.5, G12.3.6 (b)

solid waste areas ..................G15/AS1 3.0.7, 4.0.3

water storage vessels ..............NZBC/G12.3.7, G12.3.8

see also Storage water heaters

water temperature .................NZBC/G12.1 (b) (c), G12.3.3 to G12.3.5, G12.3.7 (b), G12.3.8

Water tanks

see Tanks

Water traps ..........................G13/AS1 3.0, Figure 1
dimensions ..........................G13/AS1 3.2.1, Figure 1
location ..................................G13/AS1 3.3
multiple outlets ......................G13/AS1 3.3.2, Figure 2

WC pans .............................G1/AS1 2.1, 3.1.1, 4.2.2, Figures 4 to 6, Table 1; G13/AS1 3.2.1, Figures 1 and 6, Tables 2 and 5
cisterns ................................G1/AS1 2.2.2
cubicles ................................G1/AS1 6.2, Figure 11
flushing systems ....................G1/AS1 2.1.1 f), 2.2, 4.2.6
surface finish .........................G1/AS1 2.1.1 a)
water seals ...........................G1/AS1 2.1.1 c), Figure 2

Weather stops .......................D1/AS1 1.3.2

Weathertightness ....................E2/VM1 1.0

Whare Runanga

see Communal non-residential, assembly service

Wharenui ............................H1/VM1 1.1.1

Wheelchairs ..........................D1/AS1 7.0.1

see also People with disabilities, Accessible routes

spaces for wheelchairs .............D1/AS1 8.1, 8.1.2, Figure 30
wheelchair access ...................NZBC/D1.3.4 (b) (d) (e)

Wind

see Structure, loads

Wind barriers .......................E2/AS1 2.5

Windows .............................B1/VM1 12.0; C/AS1 3.1.4, 6.20.4 c);
E2/VM1 1.1, 1.2, E2/AS1 3.1, E3/AS1 1.3.1;
F3/AS1 1.4, 4.4.2, 4.7.7, 4.7.8 d); F4/AS1 1.2.3, 4.0;
G7/AS1 1.0.1 to 1.0.3, 2.0.1,
Figures 1 and 2; G15/AS1 3.0.4, 3.0.6

see also Natural Light

fire windows

see Glazing

glazing ..............................B1/AS1 7.0
restrictions ..........................F3/AS1 1.4.3
used for escape . . . . . . C/AS1 3.3.6 d), 3.18, 6.20.6 b), Figure 3.32

Work camps . . . . . . . . . . . . . NZBC/G2.2, G3.2.1, G3.3.1 (a) to (d);
G2/AS1 Table 1; G3/AS1 1.0.1

see also Communal residential, community service
## Contents

<table>
<thead>
<tr>
<th></th>
<th>Page</th>
<th></th>
<th>Page</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>General Provisions</td>
<td>153</td>
<td>G</td>
<td>Services and Facilities</td>
</tr>
<tr>
<td>A1</td>
<td>Classified uses</td>
<td>153</td>
<td>G1</td>
<td>Personal hygiene</td>
</tr>
<tr>
<td>A2</td>
<td>Interpretation</td>
<td>155</td>
<td>G2</td>
<td>Laundering</td>
</tr>
<tr>
<td>B</td>
<td>Stability</td>
<td>157</td>
<td>G3</td>
<td>Food preparation and prevention of contamination</td>
</tr>
<tr>
<td>B1</td>
<td>Structure</td>
<td>157</td>
<td>G4</td>
<td>Ventilation</td>
</tr>
<tr>
<td>B2</td>
<td>Durability</td>
<td>160</td>
<td>G5</td>
<td>Interior environment</td>
</tr>
<tr>
<td>C</td>
<td>Fire Safety</td>
<td>163</td>
<td>G6</td>
<td>Airborne and impact sound</td>
</tr>
<tr>
<td>C1</td>
<td>Outbreak of fire</td>
<td>163</td>
<td>G7</td>
<td>Natural light</td>
</tr>
<tr>
<td>C2</td>
<td>Means of escape</td>
<td>164</td>
<td>G8</td>
<td>Artificial light</td>
</tr>
<tr>
<td>C3</td>
<td>Spread of fire</td>
<td>166</td>
<td>G9</td>
<td>Electricity</td>
</tr>
<tr>
<td>C4</td>
<td>Structural stability during fire</td>
<td>169</td>
<td>G10</td>
<td>Piped services</td>
</tr>
<tr>
<td>D</td>
<td>Access</td>
<td>171</td>
<td>G11</td>
<td>Gas as an energy source</td>
</tr>
<tr>
<td>D1</td>
<td>Access routes</td>
<td>171</td>
<td>G12</td>
<td>Water supplies</td>
</tr>
<tr>
<td>D2</td>
<td>Mechanical installations for access</td>
<td>176</td>
<td>G13</td>
<td>Foul water</td>
</tr>
<tr>
<td>E</td>
<td>Moisture</td>
<td>179</td>
<td>G14</td>
<td>Industrial liquid waste</td>
</tr>
<tr>
<td>E1</td>
<td>Surface water</td>
<td>179</td>
<td>G15</td>
<td>Solid waste</td>
</tr>
<tr>
<td>E2</td>
<td>External moisture</td>
<td>181</td>
<td>H</td>
<td>Energy Efficiency</td>
</tr>
<tr>
<td>E3</td>
<td>Internal moisture</td>
<td>182</td>
<td>H1</td>
<td>Energy efficiency</td>
</tr>
<tr>
<td>F</td>
<td>Safety of Users</td>
<td>185</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F1</td>
<td>Hazardous agents on site</td>
<td>185</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F2</td>
<td>Hazardous building materials</td>
<td>186</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F3</td>
<td>Hazardous substances and processes</td>
<td>187</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F4</td>
<td>Safety from falling</td>
<td>189</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F5</td>
<td>Construction and demolition hazards</td>
<td>191</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F6</td>
<td>Lighting for emergency</td>
<td>193</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F7</td>
<td>Warning systems</td>
<td>194</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F8</td>
<td>Signs</td>
<td>195</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A General Provisions

A1 Classified Uses

**FIRST SCHEDULE - continued**

Clause A1-CLASSIFIED USES

1.0 EXPLANATION

1.0.1 For the purposes of this building code buildings are classified according to type, under seven categories.

1.0.2 A building with a given classified use may have one or more intended uses as defined in the Act.

2.0 Housing

2.0.1 Applies to buildings or use where there is self care and service (internal management). There are three types:

2.0.2 Detached Dwellings
   Applies to a building or use where a group of people live as a single household or family. Examples: a holiday cottage, boarding house accommodating fewer than 6 people, dwelling or hut.

2.0.3 Multi-unit Dwelling
   Applies to a building or use which contains more than one separate household or family. Examples: an attached dwelling, flat or multi-unit apartment.

2.0.4 Group Dwelling
   Applies to a building or use where groups of people live as one large extended family. Examples: within a commune or marae.

3.0 COMMUNAL RESIDENTIAL

3.0.1 Applies to buildings or use where assistance or care is extended to the principal users. There are two types:

3.0.2 Community Service
   Applies to a residential building or use where limited assistance or care is extended to the principal users. Examples: a boarding house, hall of residence, holiday cabin, hostel, hotel, motel, nurses’ home, retirement village, time-share accommodation, a work camp, or camping ground.

3.0.3 Community Care
   Applies to a residential building or use where a large degree of assistance or care is extended to the principal users. There are two types:
   - Unrestrained; where the principal users are free to come and go. Examples: a hospital, an old people’s home or a health camp.
   - Restrained; where the principal users are legally or physically constrained in their movements. Examples: a borstal or drug rehabilitation centre, an old people’s home where substantial care is extended, a prison or hospital.

4.0 COMMUNAL NON-RESIDENTIAL

4.0.1 Applies to a building or use being a meeting place for people where care and service is provided by people other than the principal users. There are two types:
4.0.2 Assembly Service
Applies to a building or use where limited care and service is provided. Examples: a church, cinema, clubroom, hall, museum, public swimming pool, stadium, theatre, or whare runanga (the assembly house).

4.0.3 Assembly Care
Applies to a building or use where a large degree of care and service is provided. Examples: an early childhood centre, college, day care institution, centre for handicapped persons, kindergarten, school or university.

5.0 COMMERCIAL
5.0.1 Applies to a building or use in which any natural resources, goods, services or money are either developed, sold, exchanged or stored. Examples: an amusement park, auction room, bank, car-park, catering facility, coffee bar, computer centre, fire station, funeral parlour, hairdresser, library, office (commercial or government), police station, post office, public laundry, radio station, restaurant, service station, shop, showroom, storage facility, television station or transport terminal.

6.0 INDUSTRIAL
6.0.1 Applies to a building or use where people use material and physical effort to:
   (a) extract or convert natural resources,
   (b) produce goods or energy from natural or converted resources,
   (c) repair goods, or
   (d) store goods (ensuing from the industrial process).
   Examples: an agricultural building, agricultural processing facility, aircraft hanger, factory, power station, sewage treatment works, warehouse or utility.

7.0 OUTBUILDINGS
7.0.1 Applies to a building or use which may be included within each classified use but are not intended for human habitation, and are accessory to the principal use of associated buildings. Examples: a carport, farm building, garage, greenhouse, machinery room, private swimming pool, public toilet, or shed.

8.0 ANCILLARY
8.0.1 Applies to a building or use not for human habitation and which may be exempted from some amenity provisions, but which are required to comply with structural and safety-related aspects of the building code. Examples: a bridge, derrick, fence, free standing outdoor fireplace, jetty, mast, path, platform, pylon, retaining wall, tank, tunnel or dam.
A2 Interpretation

This Clause of the New Zealand Building Code lists defined words used within the code. Those definitions, plus defined word or terms used in the Approved Documents are included in the section on definitions in this Handbook.
# B Stability

## B1 Structure

### First Schedule—continued

<table>
<thead>
<tr>
<th>Clause B1—STRUCTURE</th>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OBJECTIVE</strong></td>
<td><strong>B1.1</strong> The objective of this provision is to:</td>
<td></td>
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<tr>
<td></td>
<td>(a) Safeguard people from injury caused by structural failure,</td>
<td></td>
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<tr>
<td></td>
<td>(b) Safeguard people from loss of amenity caused by structural behaviour, and</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(c) Protect other property from physical damage caused by structural failure.</td>
<td></td>
</tr>
<tr>
<td><strong>FUNCTIONAL REQUIREMENT</strong></td>
<td><strong>B1.2</strong> Buildings, building elements and sitework shall withstand the combination of loads that they are likely to experience during construction or alteration and throughout their lives.</td>
<td></td>
</tr>
<tr>
<td><strong>PERFORMANCE</strong></td>
<td><strong>B1.3.1</strong> Buildings, building elements and sitework shall have a low probability of rupturing, becoming unstable, losing equilibrium, or collapsing during construction or alteration and throughout their lives.</td>
<td></td>
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<tr>
<td></td>
<td><strong>B1.3.2</strong> Buildings, building elements and sitework shall have a low probability of causing loss of amenity through undue deformation, vibratory response, degradation, or other physical characteristics throughout their lives, or during construction or alteration when the building is in use.</td>
<td></td>
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<td></td>
<td><strong>B1.3.3</strong> Account shall be taken of all physical conditions likely to affect the stability of buildings, building elements and sitework, including:</td>
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<tr>
<td></td>
<td>(a) Self-weight,</td>
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<td></td>
<td>(b) Imposed gravity loads arising from use,</td>
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<tr>
<td></td>
<td>(c) Temperature,</td>
<td></td>
</tr>
</tbody>
</table>
### FIRST SCHEDULE—continued

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td>(d) Earth pressure,</td>
<td></td>
</tr>
<tr>
<td>(e) Water and other liquids,</td>
<td></td>
</tr>
<tr>
<td>(f) Earthquake,</td>
<td></td>
</tr>
<tr>
<td>(g) Snow,</td>
<td></td>
</tr>
<tr>
<td>(h) Wind,</td>
<td></td>
</tr>
<tr>
<td>(i) Fire,</td>
<td></td>
</tr>
<tr>
<td>(j) Impact,</td>
<td></td>
</tr>
<tr>
<td>(k) Explosion,</td>
<td></td>
</tr>
<tr>
<td>(l) Reversing or fluctuating effects,</td>
<td></td>
</tr>
<tr>
<td>(m) Differential movement,</td>
<td></td>
</tr>
<tr>
<td>(n) Vegetation,</td>
<td></td>
</tr>
<tr>
<td>(o) Adverse effects due to insufficient separation from other buildings,</td>
<td></td>
</tr>
<tr>
<td>(p) Influence of equipment, services, non-structural elements and contents,</td>
<td></td>
</tr>
<tr>
<td>(q) Time dependent effects including creep and shrinkage, and</td>
<td></td>
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<tr>
<td>(r) Removal of support.</td>
<td></td>
</tr>
</tbody>
</table>

**B1.3.4** Due allowance shall be made for:

- The consequences of failure,
- The intended use of the building,
- Effects of uncertainties resulting from construction activities, or the sequence in which construction activities occur,
- Variation in the properties of materials and the characteristics of the site, and
- Accuracy limitations inherent in the methods used to predict the stability of buildings.

**B1.3.5** The demolition of buildings shall be carried out in a way that avoids the likelihood of premature collapse.

**B1.3.6** Sitework, where necessary, shall be carried out to:
### FIRST SCHEDULE—continued

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Provide stability for construction on the site, and</td>
<td></td>
</tr>
<tr>
<td>(b) Avoid the likelihood of damage to other property.</td>
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</tr>
<tr>
<td><strong>B1.3.7</strong> Any sitework and associated supports shall take account of the</td>
<td></td>
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<tr>
<td>effects of:</td>
<td></td>
</tr>
<tr>
<td>(a) Changes in ground water level,</td>
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</tr>
<tr>
<td>(b) Water, weather and vegetation, and</td>
<td></td>
</tr>
<tr>
<td>(c) Ground loss and slumping.</td>
<td></td>
</tr>
</tbody>
</table>
First Schedule - continued
Clause B2-DURABILITY

Provisions

Objectives
B2.1 The objective of this provision is to ensure that a building will throughout its life continue to satisfy the other objectives of this code.

Functional Requirement
B2.2 Building materials, components and construction methods shall be sufficiently durable to ensure that the building, without reconstruction or major renovation, satisfies the other functional requirements of this code throughout the life of the building.

Performance
B2.3.1 Building elements must, with only normal maintenance, continue to satisfy the performance requirements of this code for the lesser of the specified intended life of the building, if stated, or:
(a) The life of the building, being not less than 50 years, if:
   (i) Those building elements (including floors, walls, and fixings) provide structural stability to the building, or
   (ii) Those building elements are difficult to access or replace, or
   (iii) Failure of those building elements to comply with the building code would go undetected during both normal use and maintenance of the building.
(b) 15 years if:
   (i) Those building elements (including the building envelope, exposed plumbing in the subfloor space, and in-built chimneys and flues) are moderately difficult to access or replace, or

Performance B2.3.1 applies from the time of issue of the applicable code compliance certificate. Building elements are not required to satisfy a durability performance which exceeds the specified intended life of the building.
FIRST SCHEDULE - continued

(ii) Failure of those building elements to comply with the building code would go undetected during normal use of the building, but would be easily detected during normal maintenance.

(c) 5 years if:

(i) The building elements (including services, linings, renewable protective coatings, and fixtures) are easy to access and replace, and

(ii) Failure of those building elements to comply with the building code would be easily detected during normal use of the building.

B2.3.2 Individual building elements which are components of a building system and are difficult to access or replace must either:

(a) All have the same durability, or

(b) Be installed in a manner that permits the replacement of building elements of lesser durability without removing building elements that have greater durability and are not specifically designed for removal and replacement.
### C Fire Safety

#### C1 Outbreak of Fire

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OBJECTIVE</strong></td>
<td></td>
</tr>
<tr>
<td>C1.1 The objective of this provision is to safeguard people from injury or illness caused by fire.</td>
<td></td>
</tr>
<tr>
<td><strong>FUNCTIONAL REQUIREMENT</strong></td>
<td></td>
</tr>
<tr>
<td>C1.2 In buildings fixed appliances using the controlled combustion of solid, liquid or gaseous fuel, shall be installed in a way which reduces the likelihood of fire.</td>
<td></td>
</tr>
<tr>
<td><strong>PERFORMANCE</strong></td>
<td></td>
</tr>
<tr>
<td>C1.3.1 Fixed appliances and services shall be installed so as to avoid the accumulation of gases within the installation and in building spaces, where heat or ignition could cause uncontrolled combustion or explosion.</td>
<td></td>
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<tr>
<td>C1.3.2 Fixed appliances shall be installed in a manner that does not raise the temperature of any building element by heat transfer or concentration to a level that would adversely affect its physical or mechanical properties or function.</td>
<td></td>
</tr>
</tbody>
</table>
C2 Means of Escape

FIRST SCHEDULE - continued

Clause C2-MEANS OF ESCAPE

Provisions

OBJECTIVE
C2.1 The objective of this provision is to:
(a) Safeguard people from injury or illness from a fire while escaping to a safe place, and
(b) Facilitate fire rescue operations.

FUNCTIONAL REQUIREMENT
C2.2 Buildings shall be provided with means of escape from fire which:
(a) Give people adequate time to reach a safe place without being overcome by the effects of fire, and
(b) Give fire service personnel adequate time to undertake rescue operations.

PERFORMANCE
C2.3.1 The number of open paths available to each person escaping to an exitway or final exit shall be appropriate to:
(a) The travel distance.
(b) The number of occupants,
(c) The fire hazard, and
(d) The fire safety systems installed in the firecell.

C2.3.2 The number of exitways or final exits available to each person shall be appropriate to:
(a) The open path travel distance,
(b) The building height,
(c) The number of occupants,
(d) The fire hazard, and
(e) The fire safety systems installed in the building.

C2.3.3 Escape routes shall be:
(a) Of adequate size for the number of occupants,
### FIRST SCHEDULE - continued

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) Free of obstruction in the direction of escape,</td>
<td>Performance C2.3.3(b) must not prevent a door that forms part of an escape route from</td>
</tr>
<tr>
<td></td>
<td>being locked if the person who locks it is satisfied that no-one is in that part of</td>
</tr>
<tr>
<td></td>
<td>the building served by the escape route and that no one is likely to enter that part</td>
</tr>
<tr>
<td></td>
<td>of the building, except in an emergency, without unlocking that door.</td>
</tr>
<tr>
<td>(c) Of length appropriate to the mobility of the people using them,</td>
<td></td>
</tr>
<tr>
<td>(d) Resistant to the spread of fire as required by Clause C3 “Spread of</td>
<td></td>
</tr>
<tr>
<td>Fire”,</td>
<td></td>
</tr>
<tr>
<td>(e) Easy to find as required by Clause F8 “Signs”,</td>
<td></td>
</tr>
<tr>
<td>(f) Provided with adequate illumination as required by Clause F6 “Lighting</td>
<td></td>
</tr>
<tr>
<td>for Emergency”, and</td>
<td></td>
</tr>
<tr>
<td>(g) Easy and safe to use as required by Clause D1.3.3 “Access Routes”.</td>
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</tr>
</tbody>
</table>
### OBJECTIVE

**C3.1** The objective of this provision is to:

(a) Safeguard people from injury or illness when evacuating a building during fire.

(b) Provide protection to fire service personnel during firefighting operations.

(c) Protect adjacent household units, other residential units, and other property from the effects of fire.

(d) Safeguard the environment from adverse effects of fire.

### FUNCTIONAL REQUIREMENT

**C3.2** Buildings shall be provided with safeguards against fire spread so that:

(a) Occupants have time to escape to a safe place without being overcome by the effects of fire,

(b) Firefighters may undertake rescue operations and protect property,

(c) Adjacent household units, other residential units, and other property are protected from damage, and

(d) Significant quantities of hazardous substances are not released into the environment during fire.

### PERFORMANCE

**C3.3.1** Interior surface finishes on walls, floors, ceilings and suspended building elements, shall resist the spread of fire and limit the generation of toxic gases, smoke and heat, to a degree appropriate to:

(a) The travel distance,

(b) The number of occupants,

---

Requirement C3.2(d) applies only to buildings where significant quantities of hazardous substances are stored and processed.
## FIRST SCHEDULE - continued

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td>(c) The fire hazard, and</td>
<td>Performance C3.3.2(b) does not apply to Detached Dwellings or within household units of Multi-unit Dwellings.</td>
</tr>
<tr>
<td>(d) The active fire safety systems installed in the building.</td>
<td></td>
</tr>
</tbody>
</table>

**C3.3.2 Fire separations** shall be provided within buildings to avoid the spread of fire and smoke to:

(a) Other firecells,
(b) Spaces intended for sleeping, and
(c) Household units within the same building or adjacent buildings.
(d) Other property.

**C3.3.3 Fire separations** shall:

(a) Where openings occur, be provided with fire resisting closures to maintain the integrity of the fire separations for an adequate time, and
(b) Where penetrations occur, maintain the fire resistance rating of the fire separation.

**C3.3.4 Concealed spaces and cavities within buildings** shall be sealed and subdivided where necessary to inhibit the unseen spread of fire and smoke.

**C3.3.5 External walls and roofs** shall have resistance to the spread of fire, appropriate to the fire load within the building and to the proximity of other household units, other residential units and other property.

**C3.3.6 Automatic fire suppression systems** shall be installed where people would otherwise be:

(a) Unlikely to reach a safe place in adequate time because of the number of storeys in the building,
(b) Required to remain within the building without proceeding directly to a final exit, or where the evacuation time is excessive.

Performance C3.3.4 shall not apply to Detached Dwellings.
### FIRST SCHEDULE - continued

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td>(e) Unlikely to reach a safe place due to confinement under institutional care because of mental or physical disability, illness or legal detention, and the evacuation time is excessive, or</td>
<td>Performance C3.3.10 applies only to buildings where significant quantities of hazardous substances are stored or processed.</td>
</tr>
<tr>
<td>(d) At high risk due to the fire load and fire hazard within the building.</td>
<td></td>
</tr>
<tr>
<td>C3.3.7 Air conditioning and mechanical ventilation systems shall be constructed to avoid circulation of smoke and fire between firecells.</td>
<td></td>
</tr>
<tr>
<td>C3.3.8 Where an automatic smoke control system is installed, it shall be constructed to:</td>
<td></td>
</tr>
<tr>
<td>(a) Avoid the spread of fire and smoke between firecells, and</td>
<td></td>
</tr>
<tr>
<td>(b) Protect escape routes from smoke until the occupants have reached a safe place.</td>
<td></td>
</tr>
<tr>
<td>C3.3.9 The fire safety systems installed shall facilitate the specific needs of fire service personnel to:</td>
<td></td>
</tr>
<tr>
<td>(a) Carry out rescue operations, and</td>
<td></td>
</tr>
<tr>
<td>(b) Control the spread of fire.</td>
<td></td>
</tr>
<tr>
<td>C3.3.10 Environmental protection systems shall ensure a low probability of hazardous substances being released to:</td>
<td></td>
</tr>
<tr>
<td>(a) Soils, vegetation or natural waters,</td>
<td></td>
</tr>
<tr>
<td>(b) The atmosphere, and</td>
<td></td>
</tr>
<tr>
<td>(c) Sewers or public drains.</td>
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</table>
C4 Structural Stability During Fire


FIRST SCHEDULE—continued

**Clause C4—STRUCTURAL STABILITY DURING FIRE**

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
</table>

**OBJECTIVE**

C4.1 The objective of this provision is to:

(a) Safeguard people from injury due to loss of structural stability during fire, and
(b) Protect household units and other property from damage due to structural instability caused by fire.

**FUNCTIONAL REQUIREMENT**

C4.2 Buildings shall be constructed to maintain structural stability during fire to:

(a) Allow people adequate time to evacuate safely,
(b) Allow fire service personnel adequate time to undertake rescue and firefighting operations, and
(c) Avoid collapse and consequential damage to adjacent household units or other property.

**PERFORMANCE**

C4.3.1 Structural elements of buildings shall have fire resistance appropriate to the function of the elements, the fire load, the fire intensity, the fire hazard, the height of the buildings and the fire control facilities external to and within them.

C4.3.2 Structural elements shall have a fire resistance of no less than that of any element to which they provide support within the same firecell.

C4.3.3 Collapse of elements having lesser fire resistance shall not cause the consequential collapse of elements required to have a higher fire resistance.
### D Access

#### D1 Access Routes

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OBJECTIVE</strong></td>
<td></td>
</tr>
<tr>
<td>D1.1 The objective of this provision is:</td>
<td></td>
</tr>
<tr>
<td>(a) Safeguard people from injury during movement into, within and out of buildings.</td>
<td></td>
</tr>
<tr>
<td>(b) Safeguard people from injury resulting from the movement of vehicles into, within and out of buildings, and</td>
<td></td>
</tr>
<tr>
<td>(c) Ensure that people with disabilities are able to enter and carry out normal activities and functions within buildings.</td>
<td></td>
</tr>
<tr>
<td><strong>FUNCTIONAL REQUIREMENT</strong></td>
<td></td>
</tr>
<tr>
<td>D1.2.1 <em>Buildings</em> shall be provided with reasonable and adequate access to enable safe and easy movement of people.</td>
<td></td>
</tr>
<tr>
<td>D1.2.2 Where a building is provided with loading or parking spaces, they shall be constructed to permit safe and easy unloading and movement of vehicles, and to avoid conflict between vehicles and pedestrians.</td>
<td></td>
</tr>
<tr>
<td><strong>PERFORMANCE</strong></td>
<td></td>
</tr>
<tr>
<td>D1.3.1 <em>Access routes</em> shall enable people to:</td>
<td></td>
</tr>
<tr>
<td>(a) Safely and easily approach the main entrance of buildings from the apron or construction edge of a building,</td>
<td></td>
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<tr>
<td>(b) Enter buildings,</td>
<td></td>
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<tr>
<td>(c) Move into spaces within buildings by such means as corridors, doors, stairs, ramps and lifts,</td>
<td></td>
</tr>
<tr>
<td>(d) Manoeuvre and park cars, and</td>
<td></td>
</tr>
<tr>
<td>(e) Manoeuvre and park delivery vehicles required to use the loading space.</td>
<td></td>
</tr>
<tr>
<td>Objective D1.1(c) shall apply only to those buildings to which section 25 of the Disabled Persons Community Welfare Act 1975 applies.</td>
<td></td>
</tr>
<tr>
<td>Requirement D1.2.1 shall not apply to Ancillary buildings or Outbuildings.</td>
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<tr>
<td>Provisions</td>
<td>Limits on application</td>
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</tr>
<tr>
<td><strong>D1.3.2</strong> At least one access route shall have features to enable people with disabilities to:</td>
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</tr>
<tr>
<td>(a) Approach the building from the street boundary or, where required to be provided, the building car park,</td>
<td></td>
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<tr>
<td>(b) Have access to the internal space served by the principal access, and</td>
<td></td>
</tr>
<tr>
<td>(c) Have access to and within those spaces where they may be expected to work or visit, or which contain facilities for personal hygiene as required by Clause G1 &quot;Personal Hygiene&quot;.</td>
<td></td>
</tr>
<tr>
<td><strong>D1.3.3</strong> Access routes shall:</td>
<td></td>
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<tr>
<td>(a) Have adequate activity space,</td>
<td></td>
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<tr>
<td>(b) Be free from dangerous obstructions and from any projections likely to cause an obstruction,</td>
<td></td>
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<tr>
<td>(c) Have a safe cross fall, and safe slope in the direction of travel,</td>
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<tr>
<td>(d) Have adequate slip-resistant walking surfaces under all conditions of normal use,</td>
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<tr>
<td>(e) Include stairs to allow access to upper floors irrespective of whether an escalator or lift has been provided,</td>
<td></td>
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<tr>
<td>(f) Have stair treads, and ladder treads or rungs which:</td>
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<tr>
<td>(i) provide adequate footing, and</td>
<td></td>
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<tr>
<td>(ii) have uniform rise within each flight and for consecutive flights,</td>
<td></td>
</tr>
<tr>
<td>(g) Have stair treads with a leading edge that can be easily seen.</td>
<td></td>
</tr>
<tr>
<td>Performance D1.3.2 shall not apply to Housing, Outbuildings, Ancillary buildings, and to Industrial buildings where no more than 10 people are employed.</td>
<td></td>
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</table>
FIRST SCHEDULE—continued

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td>(h) Have stair treads which prevent children falling through or becoming held fast between treads, where open risers are used,</td>
<td>Performance D1.3.3 (h) shall not apply within Industrial buildings, Outbuildings and Ancillary buildings.</td>
</tr>
<tr>
<td>(i) Not contain isolated steps,</td>
<td>Performance D1.3.3 (i) shall not apply with Detached Dwellings or within household units of Multi-unit Dwellings, or to Outbuildings and Ancillary buildings.</td>
</tr>
<tr>
<td>(j) Have smooth, reachable and graspable handrails to provide support and to assist with movement along a stair or ladder,</td>
<td>Performance D1.3.3 (j) shall not apply to isolated steps.</td>
</tr>
<tr>
<td>(k) Have handrails of adequate strength and rigidity as required by Clause B1 “Structure”,</td>
<td></td>
</tr>
<tr>
<td>(l) Have landings of appropriate dimensions and at appropriate intervals along a stair or ramp to prevent undue fatigue,</td>
<td></td>
</tr>
<tr>
<td>(m) Have landings of appropriate dimensions where a door opens from or onto a stair, ramp or ladder so that the door does not create a hazard, and</td>
<td></td>
</tr>
<tr>
<td>(n) Have any automatically controlled doors constructed to avoid the risk of people becoming caught or being struck by moving parts.</td>
<td></td>
</tr>
<tr>
<td><strong>D1.3.4</strong> An accessible route, in addition to the requirement of Clause D1.3.3, shall:</td>
<td></td>
</tr>
<tr>
<td>(a) Be easy to find, as required by Clause F8 “Signs”,</td>
<td></td>
</tr>
<tr>
<td>(b) Have adequate activity space to enable a person in a wheelchair to negotiate the route while permitting an ambulant person to pass,</td>
<td></td>
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</table>
FIRST SCHEDULE—continued

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
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</thead>
<tbody>
<tr>
<td>(c) Include a lift complying with Clause D2 “Mechanical Installations for Access” to upper floors where:</td>
<td></td>
</tr>
<tr>
<td>(i) buildings are four or more storeys high,</td>
<td></td>
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<tr>
<td>(ii) buildings are three storeys high and have a total design occupancy of 50 or more persons on the two upper floors,</td>
<td></td>
</tr>
<tr>
<td>(iii) buildings are two storeys high and have a total design occupancy of 40 or more persons on the upper floor, or</td>
<td></td>
</tr>
<tr>
<td>(iv) an upper floor, irrespective of design occupancy, is to be used for the purposes of public reception areas of banks, central, regional and local government offices and facilities, hospitals, medical and dental surgeries, and medical, paramedical and other primary health care centres,</td>
<td></td>
</tr>
<tr>
<td>(d) Contain no thresholds or upstands forming a barrier to an unaided wheelchair user,</td>
<td></td>
</tr>
<tr>
<td>(e) Have means to prevent the wheel of a wheelchair dropping over the side of the accessible route,</td>
<td></td>
</tr>
<tr>
<td>(f) Have doors and related hardware which are easily used,</td>
<td></td>
</tr>
<tr>
<td>(g) Not include spiral stairs, or stairs having open risers,</td>
<td></td>
</tr>
<tr>
<td>(h) Have stair treads with leading edge which is rounded, and</td>
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</tbody>
</table>
FIRST SCHEDULE—continued

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
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</thead>
<tbody>
<tr>
<td>(i) Have handrails on both sides of the accessible route when the slope</td>
<td></td>
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<tr>
<td>of the route exceeds 1 in 20. The handrails shall be continuous along</td>
<td></td>
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<tr>
<td>both sides of the stair, ramp and landing except where the handrail</td>
<td></td>
</tr>
<tr>
<td>is interrupted by a doorway.</td>
<td></td>
</tr>
<tr>
<td><strong>D1.3.5</strong> Vehicle spaces and circulation routes shall have:</td>
<td></td>
</tr>
<tr>
<td>(a) Dimensions appropriate to the intended use,</td>
<td></td>
</tr>
<tr>
<td>(b) Appropriate crossfall, and slope in the direction of travel,</td>
<td></td>
</tr>
<tr>
<td>(c) Adequate queuing and circulation space, and</td>
<td></td>
</tr>
<tr>
<td>(d) Adequate sight distances.</td>
<td></td>
</tr>
<tr>
<td><strong>D1.3.6</strong> Vehicle spaces for use by people with disabilities, shall, in</td>
<td></td>
</tr>
<tr>
<td>addition to the requirements of Clause D1.3.5, be:</td>
<td></td>
</tr>
<tr>
<td>(a) Provided in sufficient numbers,</td>
<td></td>
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<tr>
<td>(b) Located to avoid conflict between vehicles and people using or</td>
<td></td>
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<tr>
<td>moving to or from the space, and</td>
<td></td>
</tr>
<tr>
<td>(c) Easy to find as required by Clause F8 Signs.</td>
<td></td>
</tr>
</tbody>
</table>
**FIRST SCHEDULE - continued**

**Clause D2—MECHANICAL INSTALLATIONS FOR ACCESS**

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
</table>
| **OBJECTIVE**
D2.1 The objective of this provision is to:
(a) Safeguard people from injury and loss of amenity while using mechanical installations for movement into, within and out of buildings,
(b) Safeguard maintenance personnel from injury while servicing mechanical installations for access, and
(c) Ensure that people with disabilities are able to carry out normal activities and processes within buildings.
| Objective D2.1(c) shall apply only to those buildings to which section 47A of the Act applies. |

**FUNCTIONAL REQUIREMENT**
D2.2 Mechanical installations for access into, within and out of buildings shall provide for the safe and easy movement of people, and for the safety of maintenance personnel.

**PERFORMANCE**
D2.3.1 Mechanical installations for access shall:
(a) Move people safely, and stop and hold as required for the normal use of the installation, for all loads up to and including 25% in excess of the rated load,
(b) Not produce excessive acceleration or deceleration,
(c) Be constructed to avoid the likelihood of people falling, tripping, becoming caught, being able to touch or be struck by moving parts, sharp edges or projections, under both normal and reasonably foreseeable abnormal conditions of use.
FIRST SCHEDULE - continued

Provisions

(d) Be constructed to prevent collision between components, or between components and the building,

(e) Have a control system that ensures safe abnormal operation in the event of overloading or failure of any single component, and

(f) Be capable of being isolated for inspection, testing and maintenance.

D2.3.2 Mechanical installations for access shall be provided with:

(a) Adequate control over normal use, to ensure people’s safety throughout any operation involving starting, stopping or changing the direction of travel,

(b) Notification of position, where people are fully enclosed and the installation serves more than two levels,

(c) Adequate lighting and ventilation for both normal and emergency use, and

(d) Signs as required by Clause F8 “Signs”.

D2.3.3 Mechanical installations for access shall, for emergency purposes, be provided with a means of:

(a) Calling outside help,

(b) Releasing people safely,

(c) Safeguarding people from exposure to hazardous situations, and

(d) Allowing authorised personnel to override the normal running procedure and take exclusive control of the installation.

D2.3.4 Potentially dangerous equipment shall be located in spaces which:

Limits on application

Performance D2.3.3(d) shall not apply to installations travelling less than 15 m vertically.
###FIRST SCHEDULE—continued

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Are secure from unauthorised entry and contain only equipment associated with the installation,</td>
<td></td>
</tr>
<tr>
<td>(b) Are appropriately sized and suitably guarded to provide <em>adequate</em> safe working areas for maintenance personnel,</td>
<td></td>
</tr>
<tr>
<td>(c) Are provided with <em>adequate</em> power and lighting for maintenance, and</td>
<td></td>
</tr>
<tr>
<td>(d) Have an environment that ensures the safe operation of the equipment under all likely conditions of use.</td>
<td></td>
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</tbody>
</table>

**D2.3.5** Mechanical installations on accessible routes shall:

- (a) Where the passenger conveyor is manually controlled, provide:
  - (i) controls which are easily identifiable and easy to use,
  - (ii) *adequate* notification that the passenger conveyor has registered a summoning call, and
  - (iii) *adequate* notification that the passenger conveyor has arrived, and of its future direction of travel,

- (b) Where the passenger conveyor is fully enclosed and serves more than two levels, provide an *adequate* means of informing occupants of their location,

- (c) Where appropriate, have doors which:
  - (i) are power operated,
  - (ii) are readily distinguishable from their surroundings, and
  - (iii) where automatic, remain open sufficiently long to enable people with disabilities to pass through, and

- (d) Have *handrails* within the passenger conveyor.
E Moisture

E1 Surface Water

**First Schedule - continued**

Clause E1 - Surface Water

**OBJECTIVE**

**E1.1** The objective of this provision is to:

(a) Safeguard people from injury or illness, and other property from damage, caused by surface water, and

(b) Protect the outfalls of drainage systems.

**FUNCTIONAL REQUIREMENT**

**E1.2** Buildings and sitework shall be constructed in a way that protects people and other property from the adverse effects of surface water.

**PERFORMANCE**

**E1.3.1** Except as otherwise required under the Resource Management Act 1991 for the protection of other property, surface water, resulting from an event having a 10% probability of occurring annually and which is collected or concentrated by buildings or sitework, shall be disposed of in a way that avoids the likelihood of damage or nuisance to other property.

**E1.3.2** Surface water, resulting from an event having a 2% probability of occurring annually, shall not enter buildings.

**E1.3.3** Drainage systems for the disposal of surface water shall be constructed to:

(a) Convey surface water to an appropriate outfall using gravity flow where possible,

(b) Avoid the likelihood of blockages,

(c) Avoid the likelihood of leakage, penetration by roots, or the entry of ground water where pipes or lined channels are used.

Performance E1.3.2 shall apply only to Housing, Communal Residential and Communal Non-residential buildings.
<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td>(d) Provide reasonable access for maintenance and clearing blockages,</td>
<td></td>
</tr>
<tr>
<td>(e) Avoid the likelihood of damage to any <em>outfall</em>, in a manner acceptable</td>
<td></td>
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<tr>
<td>to the <em>network utility operator</em>, and</td>
<td></td>
</tr>
<tr>
<td>(f) Avoid the likelihood of damage from superimposed loads or normal</td>
<td></td>
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<tr>
<td>ground movements.</td>
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</table>
### Clause E2—EXTERNAL MOISTURE

#### PROVISIONS

<table>
<thead>
<tr>
<th>Provision</th>
<th>Limit on application</th>
</tr>
</thead>
<tbody>
<tr>
<td>E2.1 The objective of this provision is to safeguard people from illness or injury which could result from external moisture entering the building.</td>
<td>Requirement E2.2 shall not apply to buildings in which moisture from outside would result in effects which are no more harmful than those likely to arise indoors during normal use.</td>
</tr>
<tr>
<td>E2.2 Buildings shall be constructed to provide adequate resistance to penetration by, and the accumulation of, moisture from the outside.</td>
<td></td>
</tr>
<tr>
<td>E2.3.1 Roofs shall shed precipitated moisture. In locations subject to snowfalls, roofs shall also shed melted snow.</td>
<td></td>
</tr>
<tr>
<td>E2.3.2 Roofs and exterior walls shall prevent the penetration of water that could cause undue dampness, or damage to building elements.</td>
<td></td>
</tr>
<tr>
<td>E2.3.3 Walls, floors and structural elements in contact with the ground shall not absorb or transmit moisture in quantities that could cause undue dampness, or damage to building elements.</td>
<td></td>
</tr>
<tr>
<td>E2.3.4 Building elements susceptible to damage shall be protected from the adverse effects of moisture entering the space below suspended floors.</td>
<td></td>
</tr>
<tr>
<td>E2.3.5 Concealed spaces and cavities in buildings shall be constructed in a way which prevents external moisture being transferred and causing condensation and the degradation of building elements.</td>
<td></td>
</tr>
<tr>
<td>E2.3.6 Excess moisture present at the completion of construction, shall be capable of being dissipated without permanent damage to building elements.</td>
<td></td>
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</table>
## E3 Internal Moisture

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OBJECTIVE</strong></td>
<td>Performance E3.3.1 shall not apply to Communal Non-residential, Commercial, Industrial, Outbuildings or Ancillary buildings.</td>
</tr>
<tr>
<td><strong>E3.1</strong> The objective of this provision is to:</td>
<td></td>
</tr>
<tr>
<td>(a) Safeguard people against illness or injury which could result from accumulation of internal moisture, and</td>
<td></td>
</tr>
<tr>
<td>(b) Protect household units from damage caused by free water from another occupancy in the same building.</td>
<td></td>
</tr>
<tr>
<td><strong>E3.2</strong> Buildings shall be constructed to avoid the likelihood of:</td>
<td></td>
</tr>
<tr>
<td>(a) Fungal growth or the accumulation of contaminants on linings and other building elements,</td>
<td></td>
</tr>
<tr>
<td>(b) Free water overflow penetrating to an adjoining household unit, and</td>
<td></td>
</tr>
<tr>
<td>(c) Damage to building elements being caused by use of water.</td>
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<tr>
<td>Provisions</td>
<td>Limits on application</td>
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<tr>
<td>----------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>E3.3.5 Surfaces of building elements likely to be splashed or become</td>
<td></td>
</tr>
<tr>
<td>contaminated in the course of the intended use of the building, shall be</td>
<td></td>
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<tr>
<td>impervious and easily cleaned.</td>
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<tr>
<td>E3.3.6 Water splash shall be prevented from penetrating behind linings or</td>
<td></td>
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<tr>
<td>to concealed spaces.</td>
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</table>
## F Safety of Users

### F1 Hazardous Agents on Site

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
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<tbody>
<tr>
<td><strong>OBJECTIVE</strong></td>
<td></td>
</tr>
<tr>
<td>F1.1 The objective of this provision is to safeguard people from injury or illness caused by hazardous agents or contaminants on a site.</td>
<td></td>
</tr>
<tr>
<td><strong>FUNCTIONAL REQUIREMENT</strong></td>
<td></td>
</tr>
<tr>
<td>F1.2 Buildings shall be constructed to avoid the likelihood of people within the building being adversely affected by hazardous agents or contaminants on the site.</td>
<td></td>
</tr>
<tr>
<td><strong>PERFORMANCE</strong></td>
<td></td>
</tr>
<tr>
<td>F1.3.1 Sites shall be assessed to determine the presence and potential threat of any hazardous agents or contaminants.</td>
<td></td>
</tr>
<tr>
<td>F1.3.2 The likely effect of any hazardous agent or contaminant on people shall be determined taking account of:</td>
<td></td>
</tr>
<tr>
<td>(a) The intended use of the building,</td>
<td></td>
</tr>
<tr>
<td>(b) The nature, potency or toxicity of the hazardous agent or contaminant, and</td>
<td></td>
</tr>
<tr>
<td>(c) The protection afforded by the building envelope and building systems.</td>
<td></td>
</tr>
</tbody>
</table>
FIRST SCHEDULE—continued

Clause F2—HAZARDOUS BUILDING MATERIALS

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
</table>

**OBJECTIVE**

F2.1 The objective of this provision is to safeguard people from injury and illness caused by exposure to hazardous building materials.

**FUNCTIONAL REQUIREMENT**

F2.2 Building materials which are potentially hazardous, shall be used in ways that avoid undue risk to people.

**PERFORMANCE**

F2.3.1 The quantities of gas, liquid, radiation or solid particles emitted by materials used in the construction of buildings, shall not give rise to harmful concentrations at the surface of the material where the material is exposed, or in the atmosphere of any space.

F2.3.2 Transparent panels capable of being mistaken for an unimpeded path of travel shall be marked to make them visible.

F2.3.3 Glass or other brittle materials with which people are likely to come into contact shall:
(a) If broken on impact, break in a way which is unlikely to cause injury, or
(b) Resist a reasonably foreseeable impact without breaking, or
(c) Be protected from impact.

Performance F2.3.2 does not apply to Housing
F3 Hazardous Substances and Processes

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
</table>
| **OBJECTIVE**
**F3.1** The objective of this provision is to safeguard people from injury or illness, and other property from damage, caused by hazardous substances or processes in buildings. |
| **FUNCTIONAL REQUIREMENT**
**F3.2** Buildings where hazardous substances are stored and hazardous processes undertaken, shall be constructed to provide adequate protection to people and to other property. |
| **PERFORMANCE**
**F3.3** Spaces in buildings where hazardous substances are stored, handled or used, or where hazardous processes are undertaken, shall be located and constructed to protect people, and other property, under both normal and reasonably foreseeable abnormal conditions, and shall be provided with:
(a) Means of restricting unauthorised access,
(b) Means of preventing hazardous substances, or other materials unacceptable to the network utility operator, from entering sewers or public drains,
(c) Means of allowing the harmless release of pressure where there is a significant risk of explosion occurring,
(d) Protected ignition sources where flammable or explosive goods are stored,
(e) Means of rendering harmless by ventilation, containment, dilution, or chemical or biological action, any radioactive, toxic or flammable vapours, gases or materials which may escape from pipes, vessels or containers,
<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td>(f) Impervious, easily cleaned surface finishes on building elements likely to be splashed or become contaminated in the course of the intended use of the building, and</td>
<td></td>
</tr>
<tr>
<td>(g) Signs as required by Clause F8 “Signs”.</td>
<td></td>
</tr>
</tbody>
</table>
F4 Safety from Falling

**FIRST SCHEDULE - continued**

**Clause F4-SAFETY FROM FALLING**

**Provisions**

**OBJECTIVE**

F4.1 The objective of this provision is to safeguard people from injury caused by falling.

**FUNCTIONAL REQUIREMENT**

F4.2 Buildings shall be constructed to reduce the likelihood of accidental fall.

**PERFORMANCE**

F4.3.1 Where people could fall 1 metre or more from an opening in the external envelope or floor of a building, or from a sudden change of level within or associated with a building, a barrier shall be provided.

F4.3.2 Roofs with permanent access shall have barriers provided.

F4.3.3 Swimming pools have a depth of water exceeding 400mm, shall have barriers provided.

F4.3.4 Barriers shall:

(a) Be continuous and extend for the full extent of the hazard,
(b) Be of appropriate height,
(c) Be constructed with adequate rigidity,
(d) Be of adequate strength to withstand the foreseeable impact of people and, where appropriate, the static pressure of people pressing against them.
(e) Be constructed to prevent people from falling through them, and

**Limits on application**

Performance F4.3.1 shall not apply where such a barrier would be incompatible with the intended use of an area, or to temporary barriers on construction sites where the possible fall is less than 3 metres or to buildings providing pedestrian access in remote locations where the route served presents similar natural hazards.

Performance F4.3.3 shall not apply to any pool exempted under section 5 of the Fencing of Swimming Pools Act 1987.
<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td>(f) In the case of a swimming pool, restrict the access of children under 6 years of age to the pool or the immediate pool area.</td>
<td>Performance F4.3.4 (f) shall not apply to any pool exempted under section 5 of the Fencing of Swimming Pools Act 1987.</td>
</tr>
<tr>
<td>(g) Restrict the passage of children under 6 years of age when provided to guard a change of level in areas likely to be frequented by them.</td>
<td></td>
</tr>
</tbody>
</table>

**F4.3.5** Barriers to swimming pools shall have in addition to performance F4.3.4:

(a) All gates and doors fitted with latching devices not readily operated by children, and constructed to automatically close and latch when released from any stationary position 150 mm or more from the closed and secured position, but excluding sliding and sliding-folding doors that give access to the immediate pool surround from a building that forms part of the barrier, and

(b) No permanent objects on the outside of the barrier that could provide a climbing step.
F5 Construction and Demolition Hazards

FIRST SCHEDULE - continued
Clause F5-CONSTRUCTION AND DEMOLITION HAZARDS

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
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</thead>
<tbody>
<tr>
<td><strong>OBJECTIVE</strong></td>
<td></td>
</tr>
<tr>
<td><strong>F5.1</strong> The objective of this provision is to safeguard people from injury, and other property from damage, caused by construction or demolition site hazards.</td>
<td></td>
</tr>
<tr>
<td><strong>FUNCTIONAL REQUIREMENT</strong></td>
<td></td>
</tr>
<tr>
<td><strong>F5.2</strong> Construction and demolition work on buildings shall be performed in a manner that avoids the likelihood of:</td>
<td></td>
</tr>
<tr>
<td>(a) Objects falling onto people on or off the site,</td>
<td></td>
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<tr>
<td>(b) Objects falling on property off the site,</td>
<td></td>
</tr>
<tr>
<td>(c) Other hazards arising on the site affecting people off the site and other property, and</td>
<td></td>
</tr>
<tr>
<td>(d) Unauthorised entry of children to hazards on the site.</td>
<td></td>
</tr>
<tr>
<td><strong>PERFORMANCE</strong></td>
<td></td>
</tr>
<tr>
<td><strong>F5.3.1</strong> Suitable construction methods shall be used to avoid the likelihood of tools or materials falling onto places where people might be present.</td>
<td></td>
</tr>
<tr>
<td><strong>F5.3.2</strong> Where construction or demolition work presents a hazard in places to which the public has access, barriers shall be provided and shall:</td>
<td></td>
</tr>
<tr>
<td>(a) Be of appropriate height and construction to prevent site hazards from harming traffic or passersby,</td>
<td></td>
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<tr>
<td>(b) Be difficult to climb,</td>
<td></td>
</tr>
<tr>
<td>(c) Have no openings other than those approved by the territorial authority for access and viewing,</td>
<td></td>
</tr>
<tr>
<td>(d) Have no gates or doors which project beyond the site when opened,</td>
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</tbody>
</table>
### FIRST SCHEDULE - continued

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td>(c) Contain no projection that would be a hazard to traffic or people, and</td>
<td></td>
</tr>
<tr>
<td>(f) Be clearly marked where the barrier itself may otherwise present a hazard to traffic or passersby.</td>
<td></td>
</tr>
<tr>
<td><strong>F5.3.3</strong> Where a construction or demolition site contains any hazard which might be expected to attract the unauthorised entry of children, the hazard shall be enclosed to restrict access by children.</td>
<td></td>
</tr>
<tr>
<td><strong>F5.3.4</strong> Suitable barriers shall be constructed to provide a safe route for people where lifting equipment creates a risk of accident from objects falling on a place of public access, or where a similar risk results from the height at which construction or demolition work is being carried out.</td>
<td></td>
</tr>
</tbody>
</table>
**F6 Lighting for Emergency**

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OBJECTIVE</strong></td>
<td>Requirement F6.2 shall not apply to Detached Dwellings, household units within Multi-unit Dwellings, Outbuildings or Ancillary buildings.</td>
</tr>
<tr>
<td><strong>F6.1</strong> The objective of this provision is to safeguard people from injury due to inadequate lighting being available during an emergency.</td>
<td>Performance F6.3.1 shall not apply to spaces infrequently inhabited such as plant rooms, storage areas and service tunnels.</td>
</tr>
<tr>
<td><strong>FUNCTIONAL REQUIREMENT</strong></td>
<td></td>
</tr>
<tr>
<td><strong>F6.2</strong> Buildings shall be provided with adequate lighting within all escape routes in an emergency.</td>
<td></td>
</tr>
<tr>
<td><strong>PERFORMANCE</strong></td>
<td></td>
</tr>
<tr>
<td><strong>F6.3.1</strong> An illuminance of 1 lux minimum shall be maintained at floor level throughout buildings for a period equal to 1.5 times the evacuation time or 30 minutes, whichever is the greater.</td>
<td></td>
</tr>
<tr>
<td><strong>F6.3.2</strong> Signs to indicate escape routes shall be provided as required by Clause F8 “Signs”.</td>
<td></td>
</tr>
</tbody>
</table>
### Clause F7 - WARNING SYSTEMS

#### OBJECTIVE

F7.1 The objective of this provision is to safeguard people from injury or illness due to lack of awareness of an emergency.

#### FUNCTIONAL REQUIREMENT

F7.2 Buildings shall be provided with appropriate means of warning people to escape to a safe place in an emergency.

#### PERFORMANCE

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td>F7.3.1 A means of warning must alert people to the emergency in adequate time for them to reach a safe place.</td>
<td>Performance F7.3 does not apply to Outbuildings or Ancillary buildings.</td>
</tr>
<tr>
<td>F7.3.2 Appropriate means of detection and warning for fire must be provided within each household unit.</td>
<td></td>
</tr>
<tr>
<td>F7.3.3 Appropriate means of warning for fire and other emergencies must be provided in buildings as necessary to satisfy the other performance requirements of this code.</td>
<td></td>
</tr>
</tbody>
</table>

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**Amend 8 Apr 2003**
### FIRST SCHEDULE - continued

#### Clause F8–SIGNS

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OBJECTIVE</strong></td>
<td></td>
</tr>
<tr>
<td><strong>F8.1</strong> The objective of this provision is to:</td>
<td></td>
</tr>
<tr>
<td>(a) Safeguard people from injury or illness resulting from inadequate identification of escape routes, or of hazards within or about the building,</td>
<td></td>
</tr>
<tr>
<td>(b) Safeguard people from loss of amenity due to inadequate direction, and</td>
<td></td>
</tr>
<tr>
<td>(c) Ensure that people with disabilities are able to carry out normal activities and processes within buildings.</td>
<td></td>
</tr>
</tbody>
</table>

| **FUNCTIONAL REQUIREMENT**                                                |                                                                                       |
| **F8.2** Signs shall be provided in and about buildings to identify:      |                                                                                       |
| (a) Escape routes,                                                        |                                                                                       |
| (b) Emergency related safety features,                                   |                                                                                       |
| (c) Potential hazards,                                                    |                                                                                       |
| (d) Accessible routes and facilities for people with disabilities.        |                                                                                       |

| **PERFORMANCE**                                                          |                                                                                       |
| **F8.3.1** Signs shall be clearly visible and readily understandable under all conditions of foreseeable use. |                                                                                       |
| **F8.3.2** Signs indicating potential hazards shall be provided in sufficient locations to notify people before they encounter the hazard. |                                                                                       |
| **F8.3.3** Signs to facilitate escape shall:                             |                                                                                       |
| (a) Be provided in sufficient locations to identify escape routes and guide people to a safe place, and |                                                                                       |
### FIRST SCHEDULE - continued

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) Remain visible in the event of a power failure of the main lighting supply, for the same duration as required by Clause F6 “Lighting for Emergency”.</td>
<td></td>
</tr>
<tr>
<td><strong>F8.3.4</strong> Signs shall be provided in sufficient locations to identify accessible routes and facilities provided for people with disabilities.</td>
<td></td>
</tr>
</tbody>
</table>
G Services and Facilities

G1 Personal Hygiene

1992/150

Building Regulations 1992

FIRST SCHEDULE—continued

Clause G1—PERSONAL HYGIENE

Provisions

OBJECTIVE

G1.1 The objective of this provision is to:

(a) Safeguard people from illness caused by infection or contamination,

(b) Safeguard people from loss of amenity arising from the absence of appropriate personal hygiene facilities, and

(c) Ensure people with disabilities are able to carry out normal activities and processes within buildings.

FUNCTIONAL REQUIREMENT

G1.2 Buildings shall be provided with appropriate spaces and facilities for personal hygiene.

PERFORMANCE

G1.3.1 Sanitary fixtures shall be provided in sufficient number and be appropriate for the people who are intended to use them.

G1.3.2 Sanitary fixtures shall be located, constructed and installed to:

(a) Facilitate sanitation,

(b) Avoid risk of food contamination,

(c) Avoid harbouring dirt or germs,

(d) Provide appropriate privacy,

(e) Avoid affecting occupants of adjacent spaces from the presence of unpleasant odours, accumulation of offensive matter, or other source of annoyance,

(f) Allow effective cleaning,

Limits on application

Objective G1.1 (c) shall apply only to those buildings to which section 25 of the Disabled Persons Community Welfare Act 1975 applies.
<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td>(g) Discharge to a plumbing and drainage system as required by Clause G13 “Foul Water” when water-borne disposal is used, and</td>
<td>Performance G1.3.4 shall not apply to Housing, Outbuildings, Ancillary buildings, and to Industrial buildings where no more than 10 people are employed.</td>
</tr>
<tr>
<td>(h) Provide a healthy safe disposal system when non-water-borne disposal is used.</td>
<td></td>
</tr>
</tbody>
</table>

G1.3.3 Facilities for personal hygiene shall be provided in convenient locations.

G1.3.4 Personal hygiene facilities provided for people with disabilities shall be accessible.
### G2 Laundering

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
</table>
| **OBJECTIVE**

G2.1 The objective of this provision is to ensure:

(a) *Adequate amenities* for people to do laundering, and

(b) That *people with disabilities* are able to carry out normal activities and processes within buildings.

**FUNCTIONAL REQUIREMENT**

G2.2 *Buildings* shall be provided with *adequate* space and facilities for laundering.

**PERFORMANCE**

G2.3.1 Facilities shall have capacity for the *intended use*, and consist of *fixtures*, or space and services for appliances.

G2.3.2 Space shall be *adequate* in size to provide for the installation and use of *fixtures* or appliances.

G2.3.3 Space and facilities shall be provided within each accommodation unit or may be grouped elsewhere in a convenient location.

G2.3.4 *Accessible facilities* shall be provided for *people with disabilities*.

Objective G2.1 (b) shall apply to those *buildings* to which section 25 of the Disabled Persons Community Welfare 1975 Act applies.

Requirement G2.2 shall apply only to *Housing*, old people's homes, early childhood centres, camping grounds and work camps.

Performance G2.3.4 shall apply only to camping grounds.
OBJECTIVE

G3.1 The objective of this provision is to:
(a) Safeguard people from illness due to contamination,
(b) Enable hygienic food preparation without loss of amenity, and
(c) Ensure that people with disabilities are able to carry out normal activities and processes within buildings.

FUNCTIONAL REQUIREMENT

G3.2.1 Buildings shall be provided with space and facilities for the hygienic storage, preparation and cooking of food, that are adequate for the intended use of the building.

G3.2.2 Buildings used for the storage, manufacture of processing of food, including animal products, shall be constructed to safeguard the contents from contamination.

G3.2.3 Buildings used for the medical treatment of humans or animals, or the reception of dead bodies, shall be constructed to avoid the spread of contamination from the building contents.

PERFORMANCE

G3.3.1 Food preparation facilities shall be hygienic and include:
(a) Space for a refrigerator, or a perishable food storage area capable of being cooled and protected from vermin and insects.

Limits on application

Objective G3.1 (c) shall apply only to those buildings to which section 47A of the Act applies.

Requirement G3.2.1 shall apply to Housing, work camps, old people’s homes and early childhood centres, and where appropriate shall also apply to Commercial and Industrial buildings whose intended uses include the manufacture, preparation, packaging or storage of food.

Performance G3.3.1 (a) and (b) shall apply to Housing, work camps, old people’s homes, early childhood centres and Commercial or Industrial buildings whose intended uses include the handling of perishable food.
**FIRST SCHEDULE - continued**

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) Means for food rinsing, utensil washing and waste water disposal.</td>
<td>Performance G3.3.1 (c) shall apply to <em>Housing</em>, work camps, old people's homes and early childhood centres.</td>
</tr>
<tr>
<td>(c) Means for cooking food, and</td>
<td>Performance G3.3.1 (d) shall apply to <em>Housing</em>, work camps, old people's homes and early childhood centres.</td>
</tr>
<tr>
<td>(d) Space and a surface for food preparation.</td>
<td></td>
</tr>
</tbody>
</table>

**G3.3.2** Spaces for food preparation and utensil washing shall have:

(a) Interior linings and work surfaces shall be impervious and easily cleaned,

(b) All building elements constructed with materials which are free from hazardous substances which could cause contamination to the building contents, and

(c) Exposed building elements located and shaped to avoid the accumulation of dirt.

**G3.3.3** An adequate energy supply shall be provided, appropriately located for use by cooking and refrigeration appliances.

**G3.3.4** Space and facilities shall be provided within each household unit, or grouped elsewhere in a convenient location.

**G3.3.5** Where facilities are provided for people with disabilities they shall be accessible.
### FIRST SCHEDULE - continued

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>G3.3.6</strong> Spaces in buildings shall be protected from the likelihood of contamination or vermin entering areas used for the storage, processing or preparation of food, and shall have a means of preventing contamination spreading from these areas to other spaces.</td>
<td>Performance G3.3.6 shall apply to Commercial or Industrial buildings whose intended uses include the handling of perishable food, the medical treatment of humans or animals, the slaughter of animals or the reception of dead bodies.</td>
</tr>
</tbody>
</table>
### G4 Ventilation

#### FIRST SCHEDULE - continued

**Clause G4-VENTILATION**

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OBJECTIVE</strong></td>
<td></td>
</tr>
<tr>
<td>G4.1 The objective of this provision is to safeguard people from illness or loss of amenity due to lack of fresh air.</td>
<td></td>
</tr>
<tr>
<td><strong>FUNCTIONAL REQUIREMENT</strong></td>
<td></td>
</tr>
<tr>
<td>G4.2 Spaces within <em>buildings</em> shall be provided with <em>adequate</em> ventilation consistent with their maximum occupancy and their <em>intended use</em>.</td>
<td></td>
</tr>
<tr>
<td><strong>PERFORMANCE</strong></td>
<td></td>
</tr>
<tr>
<td>G4.3.1 Spaces within <em>buildings</em> shall have means of ventilation with <em>outdoor air</em> that will provide an <em>adequate</em> number of air changes to maintain air purity.</td>
<td></td>
</tr>
<tr>
<td>G4.3.2 Mechanical air-handling systems shall be constructed and maintained in a manner that prevents harmful bacteria, pathogens and allergens from multiplying within them.</td>
<td></td>
</tr>
<tr>
<td>G4.3.3 <em>Buildings</em> shall have a means of collecting or otherwise removing the following products from the spaces in which they are generated:</td>
<td></td>
</tr>
<tr>
<td>(a) Cooking fumes and odours,</td>
<td></td>
</tr>
<tr>
<td>(b) Moisture from laundering, utensil washing, bathing and showering,</td>
<td></td>
</tr>
<tr>
<td>(c) Odours from sanitary and waste storage spaces,</td>
<td></td>
</tr>
<tr>
<td>(d) Gaseous by-products and excessive moisture from commercial or industrial processes,</td>
<td></td>
</tr>
<tr>
<td>(e) Poisonous fumes and gases,</td>
<td></td>
</tr>
<tr>
<td>(f) Flammable fumes and gases,</td>
<td></td>
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<tr>
<td>(g) Airborne particles,</td>
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<tr>
<td>(h) Bacteria, viruses or other pathogens, or</td>
<td></td>
</tr>
<tr>
<td>(i) Products of combustion.</td>
<td></td>
</tr>
<tr>
<td>Provisions</td>
<td>Limits on application</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>G4.3.4 Contaminated air shall be disposed of in a way which avoids creating a nuisance or hazard to people and other property.</td>
<td></td>
</tr>
<tr>
<td>G4.3.5 The quantities of air supplied for ventilation shall meet the additional demands of any fixed combustion appliances.</td>
<td></td>
</tr>
</tbody>
</table>
### FIRST SCHEDULE -continued

#### Clause G5-INTERIOR ENVIRONMENT

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
</table>
| **OBJECTIVE**  
**G5.1** The objective of this provision is to:  
(a) Safeguard people from illness caused by low air temperature,  
(b) Safeguard people from injury or loss of amenity caused by inadequate activity space,  
(c) Safeguard people from injury caused by unsafe installations, and  
(d) Ensure that people with disabilities are able to carry out normal activities and processes within buildings.  
**FUNCTIONAL REQUIREMENT**  
**G5.2.1** Buildings shall be constructed to provide:  
(a) An adequate, controlled interior temperature,  
(b) Adequate activity space for the intended use, and  
(c) Accessible spaces and facilities.  
**G5.2.2** Heating appliances in buildings shall be installed in a way that reduces the likelihood of injury.  
**PERFORMANCE**  
**G5.3.1** Habitable spaces, bathrooms and recreation rooms shall have the provision for maintaining the internal temperature at no less that 16ºC measured at 750 mm above floor level, while the space is adequately ventilated.  
| Objective G5.1 (d) shall apply to those buildings to which section 25 of the Disabled Persons Community Welfare Act 1975 applies.  
Requirement G5.2.1 (a) shall apply only to habitable spaces, bathrooms and recreation rooms in old people's homes and early childhood centres.  
Requirement G5.2.1 (b) shall apply only to old people's homes.  
Requirement G5.2.1 (c) shall apply only to Communal Residential, Communal Non-residential, and Commercial buildings.  
Performance G5.3.1 shall apply only to old people's homes and early childhood centres. |
### FIRST SCHEDULE - continued

**Provisions**

| **G5.3.2** Heating appliances, and any attached cables, pipes or other fittings shall be securely fixed in place. |
| **G5.3.3** Habitable spaces shall have sufficient space for activity, furniture, and sanitary and mobility aids. |
| **G5.3.4** Where reception counters or desks are provided for public use, at least one counter or desk shall be accessible. |
| **G5.3.5** Buildings shall be provided with listening systems which enable enhanced hearing by people with hearing aids. |
| **G5.3.6** Enhanced listening systems shall be identified by signs complying the Clause F8 “Signs”. |

**Limits on application**

- Performance G5.3.2 shall apply only to old people’s homes and early childhood centres.
- Performance G5.3.3 shall apply only to old people’s homes.
- Performance G5.3.4 applies only to Communal Residential, Communal Non-Residential, and Commercial buildings.
- Performance G5.3.5 applies only to:
  - (a) Communal Non-residential assembly spaces occupied by more than 250 people, and
  - (b) Any theatre, cinema, or public hall, and
  - (c) Assembly spaces in old people’s homes occupied by more than 20 people.
## G6 Airborne and Impact Sound

<table>
<thead>
<tr>
<th>Provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OBJECTIVE</strong></td>
</tr>
<tr>
<td>G6.1 The objective of this provision is to safeguard people from illness or loss of amenity as a result of undue noise being transmitted between abutting occupancies.</td>
</tr>
<tr>
<td><strong>FUNCTIONAL REQUIREMENT</strong></td>
</tr>
<tr>
<td>G6.2 Building elements which are common between occupancies, shall be constructed to prevent undue noise transmission from other occupancies or common spaces, to the habitable spaces of household units.</td>
</tr>
<tr>
<td><strong>PERFORMANCE</strong></td>
</tr>
<tr>
<td>G6.5.1 The Sound Transmission Class of walls, floors and ceilings, shall be no less than 55.</td>
</tr>
<tr>
<td>G6.5.2 The Impact Insulation Class of floors shall be no less than 55.</td>
</tr>
</tbody>
</table>

NEW ZEALAND BUILDING CODE HANDBOOK

BUILDING INDUSTRY AUTHORITY

1 December 1995
Clause G7—NATURAL LIGHT

OBJECTIVE
G7.1 The objective of this provision is to safeguard people from illness or loss of amenity due to isolation from natural light and the outside environment.

FUNCTIONAL REQUIREMENT
G7.2 Habitable spaces shall provide adequate openings for natural light and for a visual awareness of the outside environment.

PERFORMANCE
G7.3.1 Natural light shall provide an illuminance of no less than 30 lux at floor level for 75% of the standard year.
G7.3.2 Openings to give awareness of the outside shall be transparent and provided in suitable locations.

Limits on application
Requirement G7.2 shall apply only to Housing, old people’s homes and early childhood centres.
### Clause G8—ARTIFICIAL LIGHT

**Provisions**

**OBJECTIVE**

G8.1 The objective of this provision is to safeguard people from injury due to lack of adequate lighting.

**FUNCTIONAL REQUIREMENT**

G8.2 Spaces within buildings used by people, shall be provided with adequate artificial lighting which, when activated in the absence of sufficient natural light, will enable safe movement.

<table>
<thead>
<tr>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirement G8.2 shall apply to:</td>
</tr>
<tr>
<td>(a) All exitways in Multi-unit Dwellings, Group Dwellings and Communal Residential, Commercial and Non-residential, Commercial and Industrial buildings,</td>
</tr>
<tr>
<td>(b) All access routes except those in Outbuildings and Ancillary buildings, and</td>
</tr>
<tr>
<td>(c) All common spaces within Multi-unit Dwellings, Group Dwellings, and Communal Residential and Communal Non-residential buildings.</td>
</tr>
</tbody>
</table>

**PERFORMANCE**

G8.3 Illuminance at floor level shall be no less than 20 lux.

Performance G8.3 shall not apply in emergencies, for which Illuminance requirements are given in Clause F6 “Lighting for Emergency”.

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*NEW ZEALAND BUILDING CODE HANDBOOK*

BUILDING INDUSTRY AUTHORITY

1 December 1995
# Clause G9—ELECTRICITY

## Objective

G9.1 The objective of this provision is to ensure that:

- (a) In buildings supplied with electricity, the electrical installation has safeguards against outbreak of fire and personal injury, and
- (b) People with disabilities are able to carry out normal activities and processes within buildings.

## Functional Requirement

G9.2 Where provided in a building, electrical installations shall be safe for their intended use.

## Performance

G9.3.1 The electrical installation shall incorporate systems to:

- (a) Protect people from contact with parts of the installation which are live during normal operation, and to prevent parts of the installation or other building elements becoming live during fault conditions,
- (b) Permit the safe isolation of the installation and of electrical fittings and appliances,
- (c) Safeguard people from excessive temperatures resulting from either normal operation of electrical equipment, or from currents which could exceed the installation rating,
- (d) Safeguard people from injury which may result from electromechanical stress in electrical components caused by currents in excess of the installation rating.

### Objective G9.1 (b)

Objective G9.1 (b) shall apply only to those buildings to which section 25 of the Disabled Persons Community Welfare Act 1975 applies.
### FIRST SCHEDULE—continued

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td>(e) Protect building elements from risk of ignition, impairment of their physical or mechanical properties, or function, due to temperature increases resulting from heat transfer or electric arc,</td>
<td>Performance G9.3.4 shall not apply to Housing, Outhouses, Ancillary buildings, and to Industrial buildings where no more than 10 people are employed.</td>
</tr>
<tr>
<td>(f) Operate safely in its intended environment, and</td>
<td></td>
</tr>
<tr>
<td>(g) Safeguard against ignition of the surrounding atmosphere where it is potentially flammable or explosive.</td>
<td></td>
</tr>
</tbody>
</table>

**G9.3.2** An electrical installation supplying an essential service shall:

(a) Maintain the supply for a time appropriate to that service, and

(b) Be capable of being isolated from the supply system, independently of the remainder of the installation.

**G9.3.3** An electrical installation connected to an electrical supply system, shall contain safeguards which protect the safety features of the external supply.

**G9.3.4** In buildings intended for use by people with disabilities, light switches and plug socket outlets shall be accessible and usable.
**G10 Piped Services**

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OBJECTIVE</strong></td>
<td></td>
</tr>
<tr>
<td>G10.1 The objective of this provision is to safeguard people from injury</td>
<td></td>
</tr>
<tr>
<td>or illness caused by extreme temperatures or hazardous substances</td>
<td></td>
</tr>
<tr>
<td>associated with building services.</td>
<td></td>
</tr>
<tr>
<td><strong>FUNCTIONAL REQUIREMENT</strong></td>
<td></td>
</tr>
<tr>
<td>G10.2 In buildings provided with potentially hazardous services containing</td>
<td></td>
</tr>
<tr>
<td>hot, cold, flammable, corrosive or toxic fluids, the installations shall</td>
<td></td>
</tr>
<tr>
<td>be constructed to provide adequate safety for people.</td>
<td></td>
</tr>
<tr>
<td><strong>PERFORMANCE</strong></td>
<td></td>
</tr>
<tr>
<td>G10.3.1 Piping systems shall be constructed to avoid the likelihood of:</td>
<td></td>
</tr>
<tr>
<td>(a) Significant leakage or damage during normal or reasonably foreseeable</td>
<td></td>
</tr>
<tr>
<td>abnormal conditions,</td>
<td></td>
</tr>
<tr>
<td>(b) Detrimental contamination of the contents by other substances,</td>
<td></td>
</tr>
<tr>
<td>(c) Adverse interaction between services, or between piping and electrical</td>
<td></td>
</tr>
<tr>
<td>systems, and</td>
<td></td>
</tr>
<tr>
<td>(d) People having contact with pipes which could cause them harm.</td>
<td></td>
</tr>
<tr>
<td>G10.3.2 Provision shall be made for the ready removal of moisture or</td>
<td></td>
</tr>
<tr>
<td>condensate in gas pipes.</td>
<td></td>
</tr>
<tr>
<td>G10.3.3 Pipes shall be protected against corrosion in the environment of</td>
<td></td>
</tr>
<tr>
<td>their use.</td>
<td></td>
</tr>
<tr>
<td>G10.3.4 Piping systems shall be identified with markings if the contents</td>
<td></td>
</tr>
<tr>
<td>are not readily apparent from the location or associated equipment.</td>
<td></td>
</tr>
<tr>
<td>Provisions</td>
<td>Limits on application</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
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</tr>
<tr>
<td><strong>G10.3.5</strong> Enclosed spaces shall be constructed to avoid the likelihood of accumulating vented or leaking gas.</td>
<td></td>
</tr>
<tr>
<td><strong>G10.3.6</strong> Piped systems shall have isolation devices which permit the installation or individual items of apparatus to be isolated from the supply system, for maintenance, testing, fault detection and repair.</td>
<td></td>
</tr>
</tbody>
</table>
## Objective

G11.1 The objective of this provision is to:

(a) Safeguard people from injury arising from the use of gas as an energy source,

(b) Safeguard people and other property from the risk of fire or explosion, and

(c) Safeguard people from loss of amenity due to the gas supply being inadequate for the intended use.

## Functional Requirement

G11.2 In buildings where gas is used as an energy source, the supply system shall be safe and adequate for its intended use.

## Performance

G11.3.1 Supply systems shall be constructed to maintain a safe pressure range appropriate to the appliances and the type of gas used.

G11.3.2 The gas supply to all appliances in a single ventilated space, shall be fitted with an automatic cut-off activated by failure of any continuous forced ventilation system used for combustion, ventilation or safe operation of a fixed gas appliance.

G11.3.3 A flued fixed gas appliance shall have no adverse interaction with any other flued appliance.

G11.3.4 Supply systems shall have isolation devices which permit the whole installation, or individual items of apparatus, to be isolated from the supply for maintenance, testing, fault detection or repair.
### 1992/150 Building Regulations 1992

**FIRST SCHEDULE—continued**

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>G11.3.5</strong> Where gas is supplied from an external source, the supply system within buildings shall be constructed to avoid the likelihood of:</td>
<td></td>
</tr>
<tr>
<td>(a) Contamination of the external supply from other gas sources within the building,</td>
<td></td>
</tr>
<tr>
<td>(b) Adverse effects on the pressure of the external supply, and</td>
<td></td>
</tr>
<tr>
<td>(c) The external supply pipe acting as an earthing conductor.</td>
<td></td>
</tr>
<tr>
<td><strong>G11.3.6</strong> The location and installation of meters and service risers shall meet the requirements of the network utility operator.</td>
<td></td>
</tr>
</tbody>
</table>
### G12 Water Supplies

#### Provisions

**Objective**

**G12.1** The objective of this provision is to—

(a) safeguard people from illness caused by contaminated water;

(b) safeguard people from injury caused by hot water system explosion, or from contact with excessively hot water;

(c) safeguard people from loss of amenity arising from—
   (i) a lack of hot water for personal hygiene; or
   (ii) water for human consumption, which is offensive in appearance, odour or taste;

(d) ensure that people with disabilities are able to carry out normal activities and functions within buildings.

**Functional requirement**

**G12.2** Buildings provided with water outlets, sanitary fixtures, or sanitary appliances must have safe and adequate water supplies.

**Performance**

**G12.3.1** Water intended for human consumption, food preparation, utensil washing, or oral hygiene must be potable.

**G12.3.2** A potable water supply system shall be—

(a) protected from contamination; and

(b) installed in a manner which avoids the likelihood of contamination within the system and the water main; and

(c) installed using components that will not contaminate the water.

**G12.3.3** A non-potable water supply system used for personal hygiene shall be installed in a manner that avoids the likelihood of illness or injury being caused by the system.

**G12.3.4** Water pipes and outlets provided with non-potable water shall be clearly identified.

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### Schedule

**Schedule**

New clause G 12 substituted in First Schedule of principal regulations

**Clause G 12-Water Supplies**

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
</table>
| **Objective**

**G12.1** The objective of this provision is to—

(a) safeguard people from illness caused by contaminated water;

(b) safeguard people from injury caused by hot water system explosion, or from contact with excessively hot water;

(c) safeguard people from loss of amenity arising from—
   (i) a lack of hot water for personal hygiene; or
   (ii) water for human consumption, which is offensive in appearance, odour or taste;

(d) ensure that people with disabilities are able to carry out normal activities and functions within buildings.

**Functional requirement**

**G12.2** Buildings provided with water outlets, sanitary fixtures, or sanitary appliances must have safe and adequate water supplies.

**Performance**

**G12.3.1** Water intended for human consumption, food preparation, utensil washing, or oral hygiene must be potable.

**G12.3.2** A potable water supply system shall be—

(a) protected from contamination; and

(b) installed in a manner which avoids the likelihood of contamination within the system and the water main; and

(c) installed using components that will not contaminate the water.

**G12.3.3** A non-potable water supply system used for personal hygiene shall be installed in a manner that avoids the likelihood of illness or injury being caused by the system.

**G12.3.4** Water pipes and outlets provided with non-potable water shall be clearly identified. |

Objective G12.1(d) shall apply only to those buildings to which section 47A of the Act applies.
<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
</table>
| **G12.3.5** Sanitary fixtures and sanitary appliances must be provided with hot water when intended to be used for:  
  (a) utensil washing; and  
  (b) personal washing, showering, or bathing. | Performance G12.3.5(b) shall apply only to housing, retirement homes and early childhood centres. |
| **G12.3.6** Where hot water is provided to sanitary fixtures and sanitary appliances, used for personal hygiene, it must be delivered at a temperature that avoids the likelihood of scalding. | |
| **G12.3.7** Water supply systems must be installed in a manner that:  
  (a) pipes water to sanitary fixtures and sanitary appliances flow rates that are adequate for the correct functioning of those fixtures and appliances under normal conditions; and  
  (b) avoids the likelihood of leakage; and  
  (c) allows reasonable access to components likely to need maintenance; and  
  (d) allows the system and any backflow prevention devices to be isolated for testing and maintenance. | |
| **G12.3.8** Vessels used for producing or storing hot water must be provided with safety features that:  
  (a) relieve excessive pressure during both normal and abnormal conditions; and  
  (b) limit temperatures to avoid the likelihood of flash steam production in the event of rupture. | |
| **G12.3.9** A hot water system must be capable of being controlled to prevent the growth of legionella bacteria. | Performance G12.3.10 applies only to those buildings to which section 47A of the Act applies. |
| **G12.3.10** Water supply taps must be accessible and usable for people with disabilities. | |

Clerk of the Executive Council.
# G13 Foul Water

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
</table>

## Objective
G13.1 The objective of this provision is to:

(a) Safeguard people from illness due to infection or contamination resulting from personal hygiene activities, and

(b) Safeguard people from loss of amenity due to the presence of unpleasant odours or the accumulation of offensive matter resulting from foul water disposal.

## Functional Requirement
G13.2 Buildings, in which sanitary fixtures and sanitary appliances using water-borne waste disposal are installed, shall be provided with an adequate plumbing and drainage system to carry foul water to appropriate outfalls.

## Performance
G13.3.1 The plumbing system shall be constructed to:

(a) Convey foul water from buildings to a drainage system,

(b) Avoid the likelihood of blockage and leakage,

(c) Avoid the likelihood of foul air and gases entering buildings, and

(d) provide reasonable access for maintenance and clearing blockages.

G13.3.2 The drainage system shall:

(a) Convey foul water to an appropriate outfall,

(b) Be constructed to avoid the likelihood of blockage,
(c) Be supported, jointed and
protected in a way that will
avoid the likelihood of
penetration of roots or the
entry of ground water,
(d) Be provided with reasonable
access for maintenance and
clearing blockages,
(e) Be ventilated to avoid the
likelihood of foul air and gases
accumulating in the drainage
system and sewer, and
(f) Be constructed to avoid the
likelihood of damage from
superimposed loads or normal
ground movement.

G15.3.3 Where a sewer connection
is available, the drainage system
shall be connected to the sewer,
and the connection shall be made
in a manner that avoids damage
to the sewer and is to the approval
of the network utility operator.

G15.3.4 Where no sewer is
available, an adequate on-site
disposal system shall be provided
for foul water in the same manner
as detailed in clause G14
“Industrial Liquid Waste”.
## G14 Industrial Liquid Waste

### FIRST SCHEDULE—continued

Clause G14—INDUSTRIAL LIQUID WASTE

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OBJECTIVE</strong></td>
<td></td>
</tr>
<tr>
<td>G14.1 The objective of this provision is to safeguard people from injury or illness caused by infection or contamination resulting from industrial liquid waste.</td>
<td></td>
</tr>
<tr>
<td><strong>FUNCTIONAL REQUIREMENT</strong></td>
<td></td>
</tr>
<tr>
<td>G14.2 Buildings in which industrial liquid waste is generated shall be provided with adequate spaces and facilities for the safe and hygienic collection, holding, treatment and disposal of the waste.</td>
<td></td>
</tr>
<tr>
<td><strong>PERFORMANCE</strong></td>
<td></td>
</tr>
<tr>
<td>G14.3.1 Industrial liquid waste shall be conveyed to storage containers and within disposal systems in a way which will:</td>
<td></td>
</tr>
<tr>
<td>(a) Transfer wastes from buildings safely and hygienically,</td>
<td></td>
</tr>
<tr>
<td>(b) Avoid the likelihood of blockage and leakage,</td>
<td></td>
</tr>
<tr>
<td>(c) Avoid the likelihood of foul air and gases entering buildings,</td>
<td></td>
</tr>
<tr>
<td>(d) Provides reasonable access for clearing of blockages.</td>
<td></td>
</tr>
<tr>
<td>G14.3.2 Facilities for the storage, treatment, and disposal of industrial liquid waste shall be constructed:</td>
<td></td>
</tr>
<tr>
<td>(a) With adequate capacity for the volume of waste and the frequency of disposal,</td>
<td></td>
</tr>
<tr>
<td>(b) With adequate vehicle access for collection if required,</td>
<td></td>
</tr>
<tr>
<td>(c) To avoid the likelihood of contamination of any potable water supplies in compliance with Clause G12 “Water Supplies”,</td>
<td></td>
</tr>
<tr>
<td>Provisions</td>
<td>Limits on application</td>
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</tr>
<tr>
<td>(d) To avoid the likelihood of contamination of soils, ground water and waterways except as permitted under the Resource Management Act 1991.</td>
<td></td>
</tr>
<tr>
<td>(e) From materials which are impervious both to the waste for which disposal is required, and to water,</td>
<td></td>
</tr>
<tr>
<td>(f) To avoid the likelihood of foul air and gases accumulating within or entering into buildings,</td>
<td></td>
</tr>
<tr>
<td>(g) To avoid the likelihood of unauthorised access by people, and</td>
<td></td>
</tr>
<tr>
<td>(h) To permit easy cleaning and maintenance.</td>
<td></td>
</tr>
</tbody>
</table>
### G15 Solid Waste

**First Schedule - continued**

<table>
<thead>
<tr>
<th>Clauses</th>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective</strong>&lt;br&gt;G15.1</td>
<td>The objective of this provision is to safeguard people from injury or illness caused by infection or contamination from solid waste.</td>
<td>Requirement G15.2 shall not apply to Detached Dwellings, household units of Multi-unit Dwellings, Outbuildings or Ancilliary buildings if there is independent access or private open space at ground level.</td>
</tr>
<tr>
<td><strong>Functional Requirement</strong>&lt;br&gt;G15.2</td>
<td>Buildings shall 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 buildings.</td>
<td></td>
</tr>
<tr>
<td><strong>Performance</strong>&lt;br&gt;G15.3.1</td>
<td>Where provision is made within buildings for the collection and temporary holding of solid waste, the spaces provided shall be:</td>
<td></td>
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<tr>
<td></td>
<td>(a) Of sufficient size for the volume of waste and frequency of disposal,</td>
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<tr>
<td></td>
<td>(b) Provided with reasonable access for the depositing and collection of the waste,</td>
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<td></td>
<td>(c) Capable of maintaining sanitary conditions having regard to the types of waste and storage containers, and</td>
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<tr>
<td></td>
<td>(d) Capable of maintaining the appropriate temperature for the type of waste stored.</td>
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<tr>
<td>G15.3.2</td>
<td>Where a rubbish chute is provided, it shall be located and constructed to:</td>
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<tr>
<td></td>
<td>(a) Convey the solid waste to an appropriate storage container,</td>
<td></td>
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<tr>
<td></td>
<td>(b) Avoid the likelihood of blockage or leakage,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(c) Permit easy cleaning and maintenance,</td>
<td></td>
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</tbody>
</table>


<table>
<thead>
<tr>
<th><strong>Provisions</strong></th>
<th><strong>Limits on application</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(d) Avoid the likelihood of foul air or gases accumulating or entering the building,</td>
<td></td>
</tr>
<tr>
<td>(e) Avoid the likelihood of the spread of fire beyond the refuse chute,</td>
<td></td>
</tr>
<tr>
<td>(f) Have openings that allow waste to be safely deposited in the chute, and</td>
<td></td>
</tr>
<tr>
<td>(g) Restrict access by children, animals and vermin.</td>
<td></td>
</tr>
</tbody>
</table>

**G15.3.3** Where it is acceptable to the *network utility operator*, solid waste which has been suitably treated for disposal to a *sewer* may be discharged via a *foul water drain* complying with Clause G13 “Foul Water”.

**ARCHIVED**
## Building Code Regulations 2000

### H Energy Efficiency

#### H1 Energy Efficiency Provisions

<table>
<thead>
<tr>
<th>Provisions</th>
<th>Limits on application</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective</strong></td>
<td></td>
</tr>
<tr>
<td><strong>H1.1</strong> The objective of this provision is to facilitate efficient use of energy.</td>
<td>Objective H1.1 applies only when the energy is sourced from a network utility operator or a depletable energy resource.</td>
</tr>
<tr>
<td><strong>Functional requirement</strong></td>
<td></td>
</tr>
<tr>
<td><strong>H1.2</strong> Buildings must be constructed to achieve an adequate degree of energy efficiency when that energy is used for—</td>
<td></td>
</tr>
<tr>
<td>(a) modifying temperature or humidity, or both; or</td>
<td>Requirement H1.2(a) does not apply to assembly service buildings, industrial buildings, outbuildings, or ancillary buildings, or to plant and equipment provided to modify temperature, humidity, or both.</td>
</tr>
<tr>
<td>(b) providing hot water to sanitary fixtures or sanitary appliances, or both; or</td>
<td>Requirement H1.2(c) applies only to commercial buildings and communal non-residential buildings whose floor area is greater than 300 m².</td>
</tr>
<tr>
<td>(c) providing artificial lighting</td>
<td></td>
</tr>
<tr>
<td><strong>Performance</strong></td>
<td></td>
</tr>
<tr>
<td><strong>H1.3.1</strong> The building envelope enclosing spaces where the temperature or humidity (or both) are modified must be constructed to—</td>
<td></td>
</tr>
<tr>
<td>(a) provide adequate thermal resistance; and</td>
<td>Performance H1.3.2 applies only to housing.</td>
</tr>
<tr>
<td>(b) limit uncontrollable airflow.</td>
<td></td>
</tr>
<tr>
<td><strong>H1.3.2</strong> Buildings must be constructed to ensure that the building performance index does not exceed:</td>
<td></td>
</tr>
<tr>
<td>(a) 0.13 kWh in a warm location; and</td>
<td></td>
</tr>
<tr>
<td>(b) 0.12 kWh in a cool location.</td>
<td></td>
</tr>
</tbody>
</table>
2000/119 Building Amendment Regulations 2000

Provisions

H1.3.3 Account must be taken of physical conditions likely to affect energy performance of buildings, including—
(a) the thermal mass of building elements; and
(b) the building orientation and shape; and
(c) the airtightness of the building envelope; and
(d) the heat gains from services, processes and occupants; and
(e) the local climate; and
(f) heat gains from solar radiation.

H1.3.4 Systems for the heating, storage, or distribution of hot water to sanitary fixtures or sanitary appliances must, having regard to the energy source used,—
(a) limit the energy lost in the heating process; and
(b) be constructed to limit heat losses from storage vessels, and from distribution systems connected to storage vessels.

H1.3.5 Artificial lighting fixtures must—
(a) be located and sized to limit energy use, consistent with the intended use of space; and
(b) be fitted with a means to enable light intensities to be reduced, consistent with reduced activity in the space.

Limits on application

Performance H1.3.4(b) applies only where individual storage vessels are 700 litres or less in capacity.

Performance H1.3.5 does not apply to lighting provided solely to meet the requirements of clause F6.

Marie Shroff,
Clerk of the Executive Council.