

New Zealand Building Code Handbook Third Edition

Prepared by the Department of Building and Housing

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People using this document should check for amendments on a regular basis. The Department of Building and Housing may amend any part of any document at any time. Up-to-date versions of documents are available from www.dbh.govt.nz

Preface

1.0 INTRODUCTION

1.1 This preface provides an introduction to building controls in New Zealand. This section shows the relationship between the New Zealand Building Code (the Building Code) and various other Provisions that ensure buildings in New Zealand are safe and healthy to use.

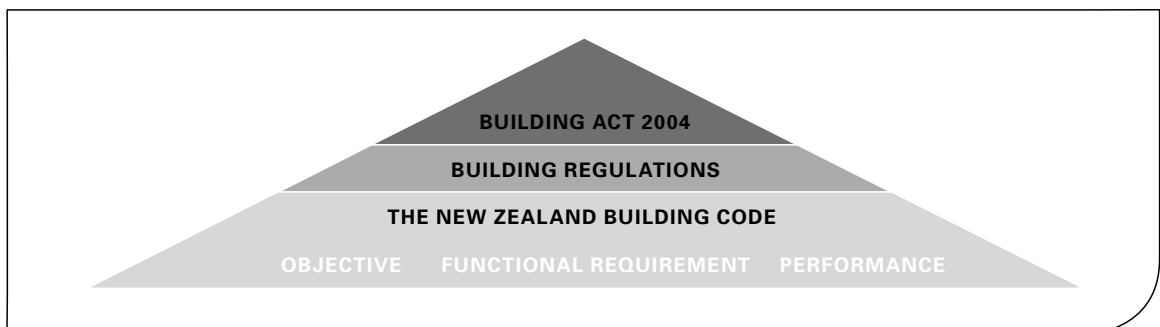
1.2 The preface provides a convenient user reference. However, legal interpretation must be based on the actual wording of the Building Act 2004 (the Building Act), and amendments and respective Building Regulations.

2.0 BUILDING CONTROL FRAMEWORK

The regulation and performance of buildings sits under the following three-part framework.

- The **Building Act**, which contains the provisions for regulating building work.
- The various **Building Regulations**, which contain prescribed forms, list specified systems, define 'change the use' and 'moderate earthquake', and set out the rate of levy and fees for determinations.
- The **Building Code**, contained in Schedule 1 of the Building Regulations 1992, which sets performance standards all new building work must meet, and covers aspects such as stability, fire safety, access, moisture, safety of users, services and facilities, and energy efficiency.

The pyramid below illustrates the legislation that forms the building control framework governed by the Building Act.



2.1 The Building Act 2004

The Building Act provides the mandatory framework for the building control system to be followed when undertaking building work in New Zealand. It applies to all:

- buildings including Crown buildings, except those which may be exempt for reasons of national security
- components in a building, including plumbing, electrical and mechanical installations.

The Building Act should be read taking into account the changes under the Building Amendment Act 2005 and any subsequent amendments (copies are on www.legislation.govt.nz).

2.1.1 Purpose

The Building Act aims to improve control of and encourage better practices in building design and construction to provide greater assurance to consumers.

This means:

- more clarity on the standards we expect buildings to meet
- more guidance on how these standards can be met
- more certainty that capable people are undertaking building design, construction and inspection
- more scrutiny in the building consent and inspection process
- better protection for homeowners through the introduction of mandatory warranties.

The purpose of the Building Act is:

- to provide for regulation of building work
- to ensure that people can use buildings safely without endangering their health
- to ensure people can escape a building in case of fire
- to ensure buildings have attributes that contribute appropriately to the health, physical independence and wellbeing of the people who use them

- to ensure buildings are designed, constructed and able to be used in ways that promote sustainable development.

2.1.2 Principles

The Building Act does not contain an equivalent to section 47 of the Building Act 1991 (the former Act), which contained guidance on how a territorial authority should exercise its powers.

Under section 4 of the Building Act (section 6 under the former Act), principles to be applied in performing functions or duties, or exercising powers under the Building Act, now have greater importance. Section 4 should be taken into account when performing functions, duties or exercising powers relating to the granting of waivers or modifications of the Building Code, and the adoption and review of policies on dangerous, earthquake-prone or insanitary buildings.

The Building Act re-states many of the principles outlined in the former Act, and makes explicit some of the implied principles of that legislation (for example, that innovation is important). However, some significant new concepts have been introduced, including a particular focus on the household unit, as well as considering the whole-of-life costs of building work.

The following is a summary of the Building Act principles.

- Household units have an important role in the lives of the people who use them, and are accorded a special focus.
- The Building Code as it relates to household units is important, and household units need to comply with the Building Code.
- Maintenance requirements of household units need to be reasonable, and owners of household units need to be aware of the maintenance requirements of their household units.
- Harmful effects on human health resulting from the use of building methods, products, design or building work need to be prevented or minimised.

- Buildings need to be durable.
- Special traditional and cultural aspects of the intended use of a building need to be recognised.
- The whole-of-life costs of a building need to be considered.
- Standards are important in achieving compliance with the Building Code for building design and construction.
- Innovation in methods of building design and construction is important.
- People who undertake a rescue operation or firefighting in a building need to be able to expect a reasonable level of protection from injury or illness while doing so.
- The extent and effects of the spread of fire need to be limited to protect other household units and other property.
- Other property needs to be protected from physical damage resulting from the construction, use and demolition of a building.
- People with disabilities need to be able to enter and carry out normal activities and processes in a building.
- Buildings of significant cultural, historical or heritage value need to be preserved.
- Energy use in buildings needs to be efficient.
- The use of renewable sources of energy needs to be encouraged.
- Material use in buildings needs to be efficient and sustainable.
- Water use in buildings needs to be efficient and promote water conservation.
- Waste generated during the construction process needs to be reduced.

2.1.3 Application

The Building Act applies to:

- building construction, alteration, demolition or removal
- maintenance of a building's specified systems, such as lifts and fire protection installations.

The Building Act does not cover:

- planning and resource management
- occupational safety and health.

2.1.4 Structure

The Building Act has five parts.

Part 1: Contains the purpose and principles of the Building Act, together with an overview, commencement dates for various Provisions and definitions. These sections provide an important reference when reading and interpreting the Building Act.

Part 2 (and Schedules 1 and 2): Outlines matters relating to the Building Code and building control (such as building consents), including requirements of building work, requirements for the use of buildings, Provisions for certain categories of buildings and Provisions for the safety of dams.

Part 3: Sets out the functions, duties and powers of the Chief Executive of the Department of Building and Housing (the Department), territorial authorities, regional authorities and building consent authorities. It also deals with the accreditation and registration of building consent authorities, accreditation of dam owners, and product certification.

Part 4 (and Schedule 3): Covers matters relating to the licensing and disciplining of building practitioners.

Part 5 (and Schedule 4): Describes miscellaneous matters, including offences and criminal proceedings, implied terms of contracts, regulation-making powers, amendments to other enactments and the repeal of the former Act, and the transitional Provisions from the former Act to the Building Act.

2.2 Building Regulations

Building Regulations are made under and in accordance with the Building Act.

A number of regulations have been made under the Building Act. Currently (as at May 2007) there are seven sets of regulations.

1. Building Regulations 1992, made under the former Act and which include the Building Code. These regulations have been amended by the Building (Forms) Regulations 2004 so that only certain parts remain in force. Parts still in force are: Schedule 1 (Building Code), Regulation 3, Forms 16 & 17 (and Regulation 4 and Schedule 2 where they relate to these forms).

2. Building (Forms) Regulations 2004, as amended by the Building (Forms) Amendment Regulations 2005, which prescribes forms to be used under the Building Act.

3. Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005, as amended by the Building (Specified Systems, Change the Use, and Earthquake-Prone Buildings) Amendment Regulations 2005. These regulations outline and define the following terms.

- Specified systems – the building systems that must be listed on compliance schedules and are subject to specific inspection and maintenance procedures. Schedule 1 provides the list of specified systems.
- Change the use – to determine when a change in a building's use will require upgrading to meet certain requirements of the Building Act. Schedule 2 determines the use of all or parts of buildings.
- Moderate earthquake – to define a moderate earthquake in relation to a building.

4. Building (Fee for Determinations) Regulations 2005

5. Building Levy Order 2005

6. Building (Accreditation of Building Consent Authorities) Regulations 2006

7. Building (Consent Authority Accreditation Fees) Regulations 2007

Note: these regulations can be found at www.legislation.govt.nz

2.3 The New Zealand Building Code

The Building Code is contained in Schedule 1 of the Building Regulations 1992. The Building Code contains compulsory rules for all new building work.

2.3.1 Content

The Building Code sets out performance criteria that building work must meet. It covers aspects such as structural stability, fire safety, access, moisture control, durability, services and facilities, and energy efficiency.

The Building Code does not prescribe how work should be done, but states how completed building work and its parts must perform.

An advantage of a performance-based Building Code is flexibility. It contains no prescriptive requirements stipulating that certain products or designs must be used. This flexibility allows developments and innovation in building design, technology and systems.

The Building Code is currently under review. Any changes to the current Building Code, and its supporting Compliance Documents, will take place from 2008 onwards. This Building Code Handbook will be updated once the review is complete.

2.3.2 Structure

The Building Code consists of two preliminary clauses and 35 technical clauses. Each technical clause has three levels that describe the requirements for the clause and is listed below.

1. **Objective** Social objectives the building must achieve.
2. **Functional requirement** Functions the building must perform to meet the Objective.
3. **Performance** The performance criteria the building must achieve. By meeting the performance criteria, the Objective and Functional requirement can be achieved.

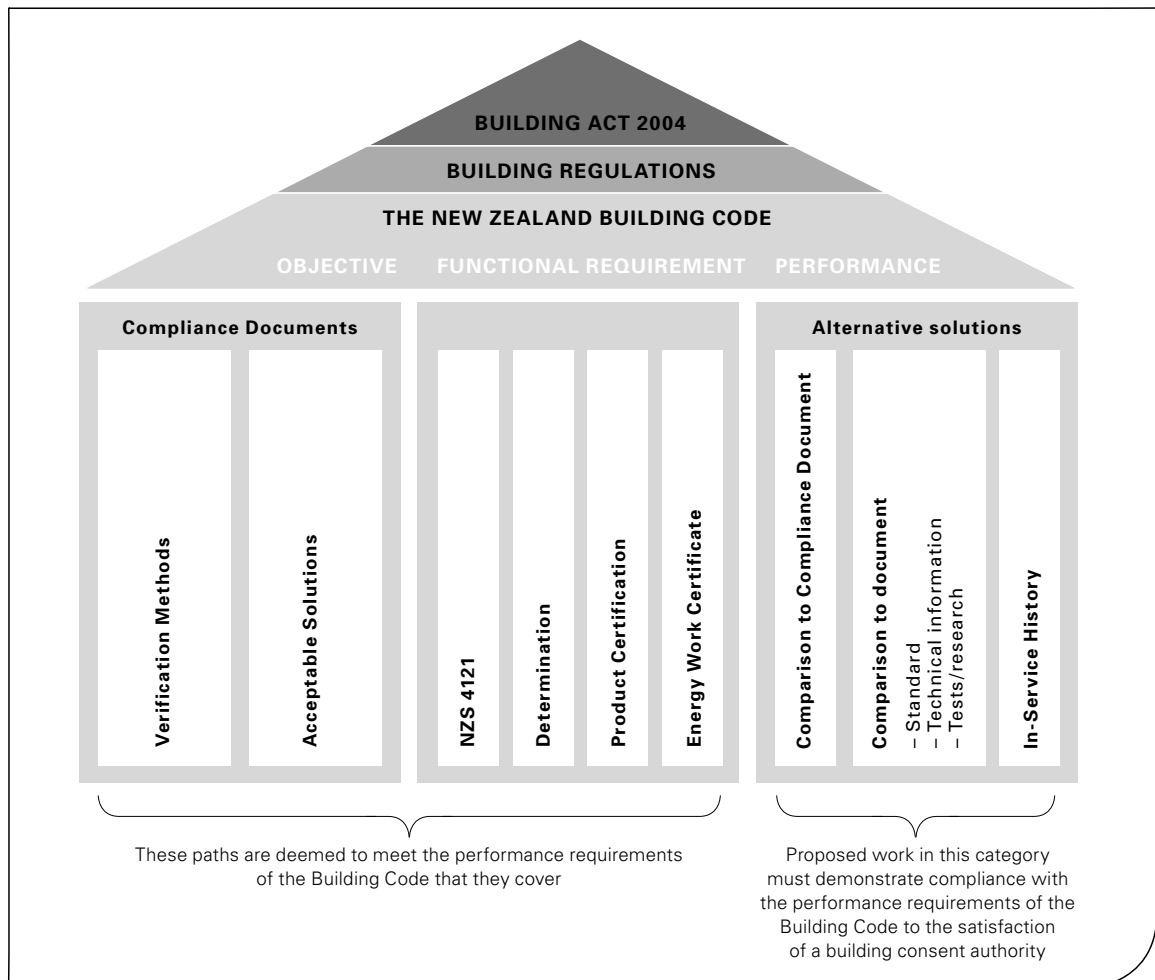
3.0 COMPLIANCE PATHS

Compliance with the Building Code can be demonstrated using various pathways. Understanding the New Zealand building control framework will help a building consent applicant decide which path is most suitable when designing and constructing building work.

The diagram below illustrates the hierarchy of New Zealand building controls, including the various compliance paths.

The top three tiers of the pyramid (the Building Act and Building Regulations) show mandatory building legislation that must be followed, as explained in the previous section.

The rest of the diagram shows various paths that may be used to demonstrate compliance with the Building Code. Compliance with the Building Code must be demonstrated using one or more of the paths. The applicant can choose which path(s) to follow.



With the exception of **alternative solutions**, the paths illustrated on the previous page must be accepted by the building consent authority as meeting the performance requirements of the Building Code. These pathways are discussed below.

3.1 Compliance Documents

Compliance Documents provide details for construction that, if followed, result in compliance with the Building Code. They are published by the Department. (Note: Compliance Documents were previously known as Approved Documents, and were published by the former Building Industry Authority.)

A design that complies with Compliance Documents must be accepted by a building consent authority as complying with the Building Code.

There is one Compliance Document for each of the 35 technical clauses in the Building Code. Each Compliance Document contains at least a Verification Method or an Acceptable Solution, and usually has both. However, some Compliance Documents have more than one Verification Method or Acceptable Solution. For example, the Compliance Document for Clause B1 of the Building Code has two Verification Methods and three Acceptable Solutions.

Verification Methods and Acceptable Solutions are usually referred to by their Building Code clauses and unique identification numbers. Some examples are listed below.

- The Acceptable Solution for Clause E2 **External Moisture** is known as **E2/AS1**.
- The Acceptable Solution for Clause G4 **Ventilation** is known as **G4/AS1**.
- The Acceptable Solution for Clause G1 **Personal Hygiene** is known as **G1/AS1**.

3.1.1 Verification Methods

Verification Methods are tests or calculation methods that prescribe one way to comply with the Building Code. Verification Methods can include:

- calculation methods: using recognised analytical methods and mathematical models
- laboratory tests: using tests (sometimes to destruction) on prototype components and systems
- tests-in-situ: which may involve examination of plans and verification by test, where compliance with specified numbers, dimensions or locations is required (non-destructive tests, such as pipe pressure tests, are also included).

3.1.2 Acceptable Solutions

These are simple step-by-step instructions that show one way to comply with the Building Code.

3.2 Product certification

The Building Act contains Provisions for a voluntary product certification scheme that will enable product manufacturers to have their products certified as meeting nominated Performance requirements of the Building Code.

Building products or methods that are used in accordance with a product certificate as provided by section 269 of the Building Act must be accepted as complying with the Building Code.

3.3 Energy work certificate

Energy work is defined as gasfitting work or prescribed electrical work. An energy work certificate certifies that energy work complies with either the Electricity Act 1992 or the Gas Act 1992.

An energy work certificate must be accepted as establishing compliance with the relevant Performance requirements of the Building Code.

3.4 New Zealand Standard NZS 4121

Section 119 of the Building Act specifies that NZS 4121, the code of practice for design for access and use of buildings by persons with disabilities (and any modification of that Standard), is to be taken as a Compliance Document.

3.5 Determinations

A determination is a binding decision made by the Department. It provides a way of solving disputes or answering questions relating to the Building Code and territorial authority/building consent authority/regional authority decisions under the Building Act.

A range of matters can be determined, including:

- whether a building or building work complies with the Building Code
- a building consent authority's decision on a building consent, a notice to fix, a code compliance certificate (CCC) or a compliance schedule
- a territorial authority's decision to issue a building consent subject to a waiver or modification
- a territorial authority's decision on a certificate of acceptance, a compliance schedule, a notice to fix, or a certificate for public use
- a regional authority's or territorial authority's exercise or failure to exercise its powers under the Building Act.

3.6 Alternative solutions

An alternative solution is a building solution that differs, in part or wholly, from the solutions offered by the Compliance Documents (an Acceptable Solution or Verification Method), but achieves compliance with the performance requirements of the Building Code to the satisfaction of the building consent authority.

There may be a number of reasons for the use of an alternative solution.

- There may not be a Compliance Document for the proposed construction, for example, if no Compliance Document is available for on-site effluent disposal.
- The building work may incorporate unusual design features that fall outside the scope of a Compliance Document.

Whatever the reason for using an alternative solution, the Building Code, being performance-based, allows for innovation and applicants have the freedom to propose an innovative solution. Refer to 2.3 'The New Zealand Building Code'.

3.7 Producer statements

A producer statement is a 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. It is a statement that certain work will be, or has been, carried out in accordance with certain technical specifications.

Producer statements were introduced by the former Act and are no longer expressly referred to in the Building Act. A building consent authority may, at their discretion, accept and consider a producer statement as part of the plans or specifications for a building consent. This will assist the building consent authority in deciding whether it is satisfied on reasonable grounds the provisions of the Building Code will be met if the building work is completed in accordance with the plans and specifications. A building consent authority should have a formal procedure or policy in place for the use and consideration of producer statements, especially if a producer statement(s) will be required to prove building work complies with a building consent.

4.0 THE PARTIES AND THEIR RESPONSIBILITIES

Five principal parties are responsible for ensuring that buildings are safe and sanitary in line with the Building Act.

4.1 The Department of Building and Housing (the Department)

The Department has a range of statutory responsibilities for building and housing, and administers New Zealand's building legislation. The Department's building control functions include:

- advising the Minister for Building and Construction on matters relating to building control
- administering and reviewing the Building Code
- producing and maintaining Compliance Documents that specify prescriptive methods as a means of complying with the Building Code
- providing information, guidance, and advice on building controls to all sectors of the building industry and consumers
- implementing, administering and monitoring a system of regulatory controls for a vibrant sector with skilled building professionals
- making determinations, or technical rulings, on matters of interpretation, doubt or dispute.

4.2 Territorial authorities

Territorial authorities are responsible for enforcing the Building Act, Regulations and the Building Code in their areas of jurisdiction.

They are responsible for:

- gaining accreditation as a building consent authority
- registering as a building consent authority
- performing the functions of a building consent authority

- issuing project information memoranda
- granting waivers or modifications of the Building Code (not including waivers or modifications relating to access and facilities for people with disabilities)
- issuing certificates of acceptance
- issuing certificates for public use
- determining the extent to which buildings must comply with the Building Code if they are altered, or their use is changed or where there is a specified intended life change
- enforcing the provisions relating to annual building warrants of fitness
- issuing certain notices provided for under the Building Act
- keeping records
- ensuring dangerous, insanitary and earthquake prone buildings are identified and appropriate action taken to remove any danger or insanitary condition
- amending compliance schedules
- carrying out other functions and duties specified in the Building Act.

4.3 Building consent authorities

Building consent authorities are responsible for:

- issuing building consents
- inspecting building work for which they granted a building consent
- issuing notices to fix
- issuing code compliance certificates
- issuing compliance schedules and amending them where the specified systems are affected by building work
- carrying out other functions and duties specified in the Building Act.

4.4 Regional authorities

Regional authorities are responsible for:

- performing the functions of a building consent authority to the extent that those functions relate to dams
- considering and approving dam classifications
- considering and approving dam safety assurance programmes
- administering the Building Act, relating to dam classifications, dam safety assurance programmes and dam compliance certificates
- enforcing provisions of the Building Code and the Building Act and regulations that relate to dams
- adopting a policy on dangerous dams.

4.5 Building owners

Building owners are responsible for:

- detailing work proposals on plans and specifications, including proposals for the inspection and routine maintenance of the specified systems for the purposes of the compliance schedule (if applicable)
- applying for building consents (and amendments to building consents) and project information memoranda
- constructing buildings in accordance with the 'approved plans and specifications'
- organising inspections at given stages as building work progresses
- collecting energy work certificates
- applying for a code compliance certificate as soon as any work carried out under a building consent granted to them is completed
- maintaining buildings in a safe and sanitary manner

- ensuring any specified systems in their building are performing and will continue to perform to the performance standards
- supplying the annual building warrant of fitness, if applicable
- notifying the territorial authority if a change of use, extension of life, or subdivision is proposed
- paying any fees as required by the Building Act.

4.6 Licensed building practitioners (LBPs)

Building designers and constructors are the owner's agents, so their role is not covered in the legislation. However, the Building Act does provide for a system of licensing building practitioners to improve control of and encourage better practices in building design and construction.

Licensed building practitioners are responsible for:

- carrying out or supervising restricted building work (from 30 November 2009)
- notifying building consent authorities of breaches of building consents (from 30 November 2009)
- issuing Form 12A certificates certifying the inspection, maintenance and reporting procedures stated in the compliance schedule have been fully complied with for the previous 12 months
- recommending the compliance schedule be amended to ensure the stated specified systems are performing, and will continue to perform, to the applicable performance standards.

Note: The LBP's role in regards to compliance schedules will continue to be carried out by independent qualified persons (IQPs) until November 2009. At the time of publication, licence classes for compliance schedule work are under development.

4.7 Past building control parties

4.7.1 The Building Industry Authority

The Building Industry Authority (the Authority) was a Crown entity, established under the former Act as the sole regulatory authority for building controls in New Zealand. The introduction of the Building Act 2004 has seen the dissolution of the Authority and transfer of its responsibilities to the Department.

4.7.2 Building certifier

A building certifier was a person approved by the Authority under the former Act to issue building certificates with respect to specific provisions of the Building Code. A building certifier may have been employed by a building owner as an alternative to using the territorial authority for checking technical proposals and performing inspections. Building certifiers are not provided for under the Building Act except for certain transitional arrangements.

5.0 BUILDING COMPLIANCE PROVISIONS

5.1 Project information memoranda (sections 31 to 39)

A project information memorandum (PIM) provides information known to the territorial authority/regional authority about land, and requirements of the Building Act and other Acts that might be relevant to proposed building work. A PIM is specific to the site and project.

A PIM is a legal document and may have a notice attached to it requiring the owner to obtain other approvals or consents required by other legislation, such as the Resource Management Act 1991, prior to any work commencing on the project. For example, a PIM might include the fact that the height of a building may contravene a rule in the District Plan, meaning that before work commences, a separate resource consent is required from the territorial authority planning unit.

An application for a building consent is deemed to include an application for a PIM, unless one has been previously issued for the project and this is supplied with the building consent application. In most cases, PIMs and building consents are applied for in a single application. They will be processed as separate applications, but may be issued separately or jointly.

If the application for a PIM affects a registered historic place, historic area, wahi tapu, or wahi tapu area, and a PIM has not been issued for the building work to which the application applies, then the territorial authority must notify the New Zealand Historic Places Trust within five days after receiving the application.

If the territorial authority considers a development contribution under the Local Government Act 2002 is payable by the owner, it may attach a notice (Form 3) that advises the applicant that a code compliance certificate will not be issued until the development contribution is paid.

5.2 Building consents (sections 40 to 52)

A building consent is the formal approval, under section 49 of the Building Act, permitting an applicant to undertake building work in accordance with the plans and specifications approved by the building consent authority. Building work is the construction, alteration, demolition or removal of a building and includes sitework.

A person cannot carry out building work except in accordance with a building consent. There are some exemptions (see sections 41 and 43 and Schedule 1 of the Building Act), but section 17 still requires building work to be carried out in accordance with the Building Code, even if no building consent is required.

5.2.1 Alterations (Section 112)

Where proposed building work involves an alteration to an existing building, the consent must not be granted unless the building consent authority is satisfied that all new building work complies with the Building Code and:

- the altered building will comply as nearly as is reasonably practicable with the Building Code provisions for means of escape from fire and access and facilities for people with disabilities, and
- the altered building will continue to comply with the other provisions of the Building Code to at least the same extent as before the alteration.

However, a territorial authority may allow the alteration of an existing building without complying with provisions of the Building Code specified by the territorial authority, if the territorial authority is satisfied that:

- if the building were required to comply with the relevant provisions of the Building Code, the alterations would not take place, and
- the alteration will result in improvements to attributes of the building that relate to means of escape from fire or access and facilities for persons with disabilities, and
- the improvements mentioned above outweigh any detriment that is likely to arise as a result of the building not complying with the relevant provisions of the Building Code.

5.2.2 Change of use (sections 114 and 115)

Uses of buildings are defined in Schedule 2 of the Building (Specified Systems, Change the Use, and Earthquake-Prone Buildings) Regulations 2005.

A change of use arises when two criteria are met. The first criterion is that a building's use must change from one use in Schedule 2 to a different use in Schedule 2. The second criterion is the result of that change (first criterion) means the requirements for compliance with the Building Code for the new use are additional to, or more onerous than, the requirements for the old use.

See Regulations 5 and 6 of the Building (Specified Systems, Change the Use, and Earthquake-Prone Buildings) Regulations 2005.

An owner of a building must give written notice to the territorial authority/regional authority if they propose to change the use of a building.

Where the owner proposes to change the use of a building to one or more household units, where household units did not exist before, they must obtain written notice from the territorial authority. This must state that the territorial authority is satisfied, on reasonable grounds, that the building, in its new use, will comply as nearly as is reasonably practicable, with the Building Code in all respects (usually through the issue of a building consent).

For any other change of use proposal, the owner must get written notice from the territorial authority/regional authority, stating that the authority is satisfied, on reasonable grounds, that the building, in its new use, will comply, as nearly as is reasonably practicable, with every provision of the Building Code that relates to either or both of the following matters:

- means of escape from fire, protection of other property, sanitary facilities, structural performance, and fire-rating performance
- access and facilities for people with disabilities (if this is a requirement under section 118 of the Building Act).

The territorial authority/regional authority must also be satisfied that the building will continue to comply with the other provisions of the Building Code to at least the same extent as before the change of use.

5.2.3 Extension of life (sections 114 and 116)

Where a building with a specified intended life is issued with a building consent that is subject to the condition that the building be altered before the end of its life, an 'extension of life' can be obtained.

An owner of a building must give written notice to the territorial authority/regional authority if it proposes to extend the life of a building.

The territorial authority/regional authority can only give its consent to the extension of life if it is satisfied that:

- the building has been altered in accordance with the original condition
- the alteration complies with section 112 of the Building Act (Alterations).

5.2.4 Subdivision (sections 114 and 116A)

An owner of a building must give written notice to the territorial authority if it proposes to subdivide land in a manner that affects a building.

The territorial authority can only issue a certificate under section 224(f) (relating to cross lease, company lease, and unit titles) of the Resource Management Act 1991 for the purpose of giving effect to a subdivision affecting a building or part of a building, if it is satisfied that the building will comply as nearly as reasonably practicable with every provision of the Building Code that relates to one or more of the following.

- Means of escape from fire
- Access and facilities for people with disabilities
- Protection of other property

The building must also continue to comply with other provisions of the Building Code to at least the same extent as it did before the application for subdivision was made.

5.2.5 Access for persons with disabilities (sections 117 to 120 and Schedule 2)

Any building (including parts of a building such as a driveway) that is open to the public, whether or not they are charged for entry, must have reasonable and adequate provision for access, parking and sanitary facilities for people with disabilities who may be expected to work or visit that building and carry out normal activities and processes in that building.

The most recent version of NZS 4121 Code of Practice for Design for Access and Use of Buildings by Persons with Disabilities is to be taken as a Compliance Document.

5.3 Code compliance certificate (sections 91 to 95)

A code compliance certificate (CCC) is a formal statement, issued under section 95 of the Building Act, which states that building work carried out under a building consent application complies with that building consent. A CCC provides assurance to the owner and subsequent property owners that the approved plans and specifications have been followed.

A CCC is not issued until all building work has been completed as per the plans and specifications submitted with the building consent application.

A CCC must be applied for after all building work carried out under a building consent granted to the owner is completed.

An application for a CCC where the building work was carried out under a consent granted under the former Act must be considered and determined as if the Building Act had not been passed. However, section 43(2) of the former Act must be read as if a CCC may only be issued if the territorial authority is satisfied that the building work complies with the Building Code that applied at the time the building consent was granted.

5.4 Certificates of acceptance (sections 96 to 99)

Certificates of acceptance were introduced by the Building Act. The certificate confirms that, to the extent an inspection was able to be carried out, the building work complies with the Building Code. A certificate of acceptance therefore has some similarities to a CCC in that it will provide some verification for a building owner, or future building owner, that all or part of the work is compliant.

A certificate of acceptance can be obtained in situations where:

- work has been done without a building consent when one should have been obtained
- a building consent authority or building certifier is unable or refuses to issue a CCC
- verification is required of urgent building work carried out under section 42 of the Building Act.

A certificate of acceptance can also be used in limited circumstances in relation to section 363B.

A certificate of acceptance is based on verification with the Building Code that was in place **at the time of application**. It is not based on what was in place at the time a building consent was granted, or should have been applied for, or when the work was actually carried out.

5.5 Notices to fix (sections 163 to 168)

A notice to fix is a statutory notice requiring a person to remedy a breach of the Building Act or Regulations under the Act. A notice to fix can be issued for all breaches of the Building Act, including non-complying building work, and for an incorrect building warrant of fitness or a compliance schedule that is not being properly complied with. A notice to fix can state that all or any building work must cease immediately.

A building consent authority, regional authority or a territorial authority must issue a notice to fix for any contravention of the Building Act and Building Regulations under section 164 of the Building Act. When a notice to fix has been issued by a building consent authority that is not a territorial authority or a regional authority, the matter is then handed to the territorial authority or regional authority to decide whether the notice has been complied with.

Some examples of where notices could be issued include:

- carrying out building work other than in accordance with a building consent
- displaying an incorrect building warrant of fitness
- changing the use of a building without notifying the territorial authority or regional authority.

5.6 Compliance schedules (sections 100 to 107)

A compliance schedule lists specified systems within a building. The compliance schedule for a building must identify which specified systems are present, the performance standards for those systems, and how those systems will be inspected and maintained to ensure they continue to function.

For more information on compliance schedules, see the Compliance Schedule Handbook.

5.7 Building warrants of fitness (sections 108 to 111)

A building warrant of fitness (BWof) is a statement supplied by a building owner, to the territorial authority confirming that the systems specified in the compliance schedule for their building have been maintained and checked in accordance with the compliance schedule for the previous 12 months, and will continue to perform as required. For more information on building warrants of fitness, see the Compliance Schedule Handbook.

5.8 Certificates for public use (section 363A)

A certificate for public use is a new safety provision under the Building Act. It is a tool that can be used to certify that premises or parts of premises affected by building work are safe to be used by the public. Certificates for public use can only be used where a building consent has been granted for the building work but no CCC has yet been issued. Certificates for public use do not relieve the owner of a building from the obligation to apply for a CCC after all the building work has been carried out.

5.9 Building certificate

A building certificate was a formal confirmation by a building certifier that specific aspects of a building would or do comply with the Building Code. A territorial authority was obliged to accept such a certificate. Building certificates were allowed for under the former Act, but are only included under the new Building Act as transitional allowances to phase them out.

Contents

	Page		Page
A General Provisions	19	G Services and Facilities	63
A1 Classified uses	19	G1 Personal hygiene	63
A2 Interpretation	21	G2 Laundering	65
B Stability	23	G3 Food preparation and prevention of contamination	66
B1 Structure	23	G4 Ventilation	69
B2 Durability	26	G5 Interior environment	71
C Fire Safety	29	G6 Airborne and impact sound	73
C1 Outbreak of fire	29	G7 Natural light	74
C2 Means of escape	30	G8 Artificial light	75
C3 Spread of fire	32	G9 Electricity	76
C4 Structural stability during fire	35	G10 Piped services	78
D Access	37	G11 Gas as an energy source	80
D1 Access routes	37	G12 Water supplies	82
D2 Mechanical installations for access	42	G13 Foul water	84
E Moisture	45	G14 Industrial liquid waste	86
E1 Surface water	45	G15 Solid waste	88
E2 External moisture	47	H Energy Efficiency	90
E3 Internal moisture	48	H1 Energy efficiency	90
F Safety of Users	51		
F1 Hazardous agents on site	51		
F2 Hazardous building materials	52		
F3 Hazardous substances and processes	53		
F4 Safety from falling	55		
F5 Construction and demolition hazards	57		
F6 Lighting for emergency	59		
F7 Warning systems	60		
F8 Signs	61		

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:

- a) **Unrestrained;** where the *principal users* are free to come and go. Examples: a hospital, an old people's home or a health camp.
- b) **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 where 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 Compliance Documents, are included in the section on definitions in this Handbook.

B Stability

B1 Structure

16

Building Regulations 1992

1992/150

FIRST SCHEDULE—continued

Clause B1—STRUCTURE

Provisions

Limits on application

OBJECTIVE

B1.1 The objective of this provision is to:

- (a) Safeguard people from injury caused by structural failure,
- (b) Safeguard people from loss of *amenity* caused by structural behaviour, and
- (c) Protect *other property* from physical damage caused by structural failure.

FUNCTIONAL REQUIREMENT

B1.2 *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.

PERFORMANCE

B1.3.1 *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.

B1.3.2 *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.

B1.3.3 Account shall be taken of all physical conditions likely to affect the stability of *buildings, building elements and sitework*, including:

- (a) Self-weight,
- (b) Imposed gravity loads arising from use,
- (c) Temperature,

1992/150

Building Regulations 1992

17

FIRST SCHEDULE—*continued*

Provisions	Limits on application
(d) Earth pressure,	
(e) Water and other liquids,	
(f) Earthquake,	
(g) Snow,	
(h) Wind,	
(i) <i>Fire</i> ,	
(j) Impact,	
(k) Explosion,	
(l) Reversing or fluctuating effects,	
(m) Differential movement,	
(n) Vegetation,	
(o) Adverse effects due to insufficient separation from other <i>buildings</i> ,	
(p) Influence of equipment, services, non-structural elements and contents,	
(q) Time dependent effects including creep and shrinkage, and	
(r) Removal of support.	
B1.3.4 Due allowance shall be made for:	
(a) The consequences of failure,	
(b) The intended use of the <i>building</i> ,	
(c) Effects of uncertainties resulting from <i>construction</i> activities, or the sequence in which <i>construction</i> activities occur,	
(d) Variation in the properties of materials and the characteristics of the site, and	
(e) Accuracy limitations inherent in the methods used to predict the stability of <i>buildings</i> .	
B1.3.5 The demolition of <i>buildings</i> shall be carried out in a way that avoids the likelihood of premature collapse.	
B1.3.6 <i>Sitework</i> , where necessary, shall be carried out to:	

18

Building Regulations 1992

1992/150

FIRST SCHEDULE—*continued*

Provisions	Limits on application
<ul style="list-style-type: none"> (a) Provide stability for <i>construction</i> on the site, and (b) Avoid the likelihood of damage to <i>other property</i>. <p>B1.3.7 Any <i>sitework</i> and associated supports shall take account of the effects of:</p> <ul style="list-style-type: none"> (a) Changes in ground water level, (b) Water, weather and vegetation, and (c) Ground loss and slumping. 	

B2 Durability**FIRST SCHEDULE—continued****Clause B2—DURABILITY****Provisions****Limits on application****OBJECTIVE**

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*

Provisions

Limits on application

- (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

1992/150

Building Regulations 1992

21

FIRST SCHEDULE—continued

Clause C1—OUTBREAK OF FIRE

Provisions

OBJECTIVE

C1.1 The objective of this provision is to safeguard people from injury or illness caused by *fire*.

FUNCTIONAL REQUIREMENT

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*.

PERFORMANCE

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.

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.

Limits on application

C2 Means of Escape**FIRST SCHEDULE—continued****Clause C2—MEANS OF ESCAPE****Provisions****Limits on application****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***Provisions**

- (b) Free of obstruction in the direction of escape,
- (c) Of length appropriate to the mobility of the people using them,
- (d) Resistant to the spread of *fire* as required by Clause C3 “Spread of Fire”,
- (e) Easy to find as required by Clause F8 “Signs”,
- (f) Provided with *adequate* illumination as required by Clause F6 “Lighting for Emergency”, and
- (g) Easy and safe to use as required by Clause D1.3.3 “Access Routes”.

Limits on application

Performance C2.3.3(b) must not prevent a door that forms part of an *escape route* from being locked if the person who locks it is satisfied that no-one is in that part of the *building* served by the *escape route* and that no one is likely to enter that part of the *building*, except in an emergency, without unlocking that door.

C3 Spread of Fire**FIRST SCHEDULE—continued****Clause C3—SPREAD OF FIRE****Provisions****Limits on application****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*.

Requirement C3.2(d) applies only to *buildings* where significant quantities of *hazardous substances* are stored and processed.

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,

FIRST SCHEDULE—*continued***Provisions**

- (c) The *fire hazard*, and
- (d) The active *fire safety systems* installed in the *building*.

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,

Limits on application

Performance C3.3.2(b) does not apply to *Detached Dwellings* or within *household units* of *Multi-unit Dwellings*.

Performance C3.3.4 shall not apply to *Detached Dwellings*.

FIRST SCHEDULE—*continued***Provisions**

- (c) 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
- (d) At high risk due to the *fire load* and *fire hazard* within the *building*.

C3.3.7 Air conditioning and mechanical ventilation systems shall be constructed to avoid circulation of smoke and *fire* between *firecells*.

C3.3.8 Where an automatic smoke control system is installed, it shall be constructed to:

- (a) Avoid the spread of *fire* and smoke between *firecells*, and
- (b) Protect *escape routes* from smoke until the occupants have reached a *safe place*.

C3.3.9 The *fire safety systems* installed shall facilitate the specific needs of fire service personnel to:

- (a) Carry out rescue operations, and
- (b) Control the spread of *fire*.

C3.3.10 Environmental protection systems shall ensure a low probability of *hazardous substances* being released to:

- (a) Soils, vegetation or natural waters,
- (b) The atmosphere, and
- (c) *Sewers* or public *drains*.

Limits on application

Performance C3.3.10 applies only to *buildings* where significant quantities of *hazardous substances* are stored or processed.

C4 Structural Stability During Fire

1992/150

Building Regulations 1992

27

FIRST SCHEDULE—*continued*

Clause C4—STRUCTURAL STABILITY DURING FIRE

Provisions	Limits on application
OBJECTIVE	
C4.1 The objective of this provision is to:	
<ul style="list-style-type: none"> (a) Safeguard people from injury due to loss of structural stability during <i>fire</i>, and (b) Protect <i>household units and other property</i> from damage due to structural instability caused by <i>fire</i>. 	
FUNCTIONAL REQUIREMENT	
C4.2 <i>Buildings</i> shall be constructed to maintain structural stability during <i>fire</i> to:	
<ul style="list-style-type: none"> (a) Allow people <i>adequate</i> time to evacuate safely, (b) Allow fire service personnel <i>adequate</i> time to undertake rescue and firefighting operations, and (c) Avoid collapse and consequential damage to adjacent <i>household units or other property</i>. 	
PERFORMANCE	
C4.3.1 Structural elements of <i>buildings</i> shall have <i>fire</i> resistance appropriate to the function of the elements, the <i>fire load</i> , the <i>fire intensity</i> , the <i>fire hazard</i> , the height of the <i>buildings</i> and the <i>fire</i> control facilities external to and within them.	
C4.3.2 Structural elements shall have a <i>fire</i> resistance of no less than that of any element to which they provide support within the same <i>firecell</i> .	
C4.3.3 Collapse of elements having lesser <i>fire</i> resistance shall not cause the consequential collapse of elements required to have a higher <i>fire</i> resistance.	

D Access

D1 Access Routes

28

Building Regulations 1992

1992/150

FIRST SCHEDULE—continued

Clause D1—ACCESS ROUTES

Provisions

OBJECTIVE

D1.1 The objective of this provision is:

- (a) Safeguard people from injury during movement into, within and out of *buildings*,
- (b) Safeguard people from injury resulting from the movement of vehicles into, within and out of *buildings*, and
- (c) Ensure that *people with disabilities* are able to enter and carry out normal activities and functions within *buildings*.

FUNCTIONAL REQUIREMENT

D1.21 *Buildings* shall be provided with reasonable and adequate access to enable safe and easy movement of people.

D1.22 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.

PERFORMANCE

D1.3.1 *Access routes* shall enable people to:

- (a) Safely and easily approach the main entrance of *buildings* from the apron or *construction edge* of a *building*,
- (b) Enter *buildings*,
- (c) Move into spaces within *buildings* by such means as corridors, doors, stairs, ramps and lifts,
- (d) Manoeuvre and park cars, and
- (e) Manoeuvre and park delivery vehicles required to use the loading space.

Limits on application

Objective D1.1(c) shall apply only to those *buildings* to which Section 47A of the Act applies.

Requirement D1.2.1 shall not apply to *Ancillary buildings* or *Outbuildings*.

Note

NOTE:

Section 47A is in the Building Act 1991. The equivalent section in the Building Act 2004 is section 118.

1992/150

Building Regulations 1992

29

FIRST SCHEDULE—continued

Provisions	Limits on application
<p>D1.3.2 At least one <i>access route</i> shall have features to enable <i>people with disabilities</i> to:</p> <ul style="list-style-type: none"> (a) Approach the <i>building</i> from the street boundary or, where required to be provided, the <i>building</i> car park, (b) Have access to the internal space served by the principal access, and (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 “Personal Hygiene”. <p>D1.3.3 Access routes shall:</p> <ul style="list-style-type: none"> (a) Have <i>adequate</i> activity space, (b) Be free from dangerous obstructions and from any projections likely to cause an obstruction, (c) Have a safe cross fall, and safe slope in the direction of travel, (d) Have <i>adequate</i> slip-resistant walking surfaces under all conditions of normal use, (e) Include stairs to allow access to upper floors irrespective of whether an escalator or lift has been provided, (f) Have stair treads, and ladder treads or rungs which: <ul style="list-style-type: none"> (i) provide <i>adequate</i> footing, and (ii) have uniform rise within each flight and for consecutive flights, (g) Have stair treads with a leading edge that can be easily seen, 	<p>Performance D1.3.2 shall not apply to <i>Housing, Outbuildings, Ancillary buildings</i>, and to <i>Industrial buildings</i> where no more than 10 people are employed.</p>

30

Building Regulations 1992

1992/150

FIRST SCHEDULE—continued

Provisions	Limits on application
<p>(h) Have stair treads which prevent children falling through or becoming held fast between treads, where open risers are used,</p> <p>(i) Not contain isolated steps,</p> <p>(j) Have smooth, reachable and graspable <i>handrails</i> to provide support and to assist with movement along a stair or ladder,</p> <p>(k) Have <i>handrails</i> of adequate strength and rigidity as required by Clause B1 “Structure”,</p> <p>(l) Have landings of appropriate dimensions and at appropriate intervals along a stair or ramp to prevent undue fatigue,</p> <p>(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</p> <p>(n) Have any automatically controlled doors <i>constructed</i> to avoid the risk of people becoming caught or being struck by moving parts.</p> <p>D1.3.4 An <i>accessible route</i>, in addition to the requirement of Clause D1.3.3, shall:</p> <p>(a) Be easy to find, as required by Clause F8 “Signs”,</p> <p>(b) Have <i>adequate</i> activity space to enable a person in a wheelchair to negotiate the route while permitting an ambulant person to pass,</p>	<p>Performance D1.3.3 (h) shall not apply within <i>Industrial buildings</i>, <i>Outbuildings</i> and <i>Ancillary buildings</i>.</p> <p>Performance D1.3.3 (i) shall not apply with <i>Detached Dwellings</i> or within <i>household units</i> of <i>Multi-unit Dwellings</i>, or to <i>Outbuildings</i> and <i>Ancillary buildings</i>.</p> <p>Performance D1.3.3 (j) shall not apply to isolated steps.</p>

1992/150

Building Regulations 1992

31

FIRST SCHEDULE—*continued*

Provisions	Limits on application
<p>(c) Include a lift complying with Clause D2 “Mechanical Installations for Access” to upper floors where:</p> <p>(i) <i>buildings</i> are four or more storeys high,</p> <p>(ii) <i>buildings</i> are three storeys high and have a total design occupancy of 50 or more persons on the two upper floors,</p> <p>(iii) <i>buildings</i> are two storeys high and have a total design occupancy of 40 or more persons on the upper floor, or</p> <p>(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,</p> <p>(d) Contain no thresholds or upstands forming a barrier to an unaided wheelchair user,</p> <p>(e) Have means to prevent the wheel of a wheelchair dropping over the side of the <i>accessible route</i>,</p> <p>(f) Have doors and related hardware which are easily used,</p> <p>(g) Not include spiral stairs, or stairs having open risers,</p> <p>(h) Have stair treads with leading edge which is rounded, and</p>	

32

Building Regulations 1992

1992/150

FIRST SCHEDULE—*continued*

Provisions	Limits on application
<p>(i) Have <i>handrails</i> on both sides of the <i>accessible route</i> when the slope of the route exceeds 1 in 20. The <i>handrails</i> shall be continuous along both sides of the stair, ramp and landing except where the <i>handrail</i> is interrupted by a doorway.</p> <p>D1.3.5 Vehicle spaces and circulation routes shall have:</p> <p>(a) Dimensions appropriate to the <i>intended use</i>,</p> <p>(b) Appropriate crossfall, and slope in the direction of travel,</p> <p>(c) <i>Adequate</i> queuing and circulation space, and</p> <p>(d) <i>Adequate</i> sight distances.</p> <p>D1.3.6 Vehicle spaces for use by <i>people with disabilities</i>, shall, in addition to the requirements of Clause D1.3.5, be:</p> <p>(a) Provided in sufficient numbers,</p> <p>(b) Located to avoid conflict between vehicles and people using or moving to or from the space, and</p> <p>(c) Easy to find as required by Clause F8 Signs.</p>	

D2 Mechanical Installations for Access**FIRST SCHEDULE—continued****Clause D2—MECHANICAL INSTALLATIONS FOR ACCESS**

Provisions	Limits on application
<p>OBJECTIVE</p> <p>D2.1 The objective of this provision is to:</p> <ul style="list-style-type: none"> (a) Safeguard people from injury and loss of amenity while using mechanical installations for movement into, within and out of <i>buildings</i>, (b) Safeguard maintenance personnel from injury while servicing mechanical installations for access, and (c) Ensure that <i>people with disabilities</i> are able to carry out normal activities and processes within <i>buildings</i>. <p>FUNCTIONAL REQUIREMENT</p> <p>D2.2 Mechanical installations for access into, within and out of <i>buildings</i> shall provide for the safe and easy movement of people, and for the safety of maintenance personnel.</p> <p>PERFORMANCE</p> <p>D2.3.1 Mechanical installations for access shall:</p> <ul style="list-style-type: none"> (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, 	<p>Objective D2.1(c) shall apply only to those <i>buildings</i> to which Section 47A of the Act applies.</p>

Note

NOTE:

Section 47A is in the Building Act 1991. The equivalent section in the Building Act 2004 is section 118.

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*

Provisions	Limits on application
<ul style="list-style-type: none"> (a) Are secure from unauthorised entry and contain only equipment associated with the installation, (b) Are appropriately sized and suitably guarded to provide <i>adequate</i> safe working areas for maintenance personnel, (c) Are provided with <i>adequate</i> power and lighting for maintenance, and (d) Have an environment that ensures the safe operation of the equipment under all likely conditions of use. <p>D2.3.5 Mechanical installations on <i>accessible routes</i> shall:</p> <ul style="list-style-type: none"> (a) Where the passenger conveyor is manually controlled, provide: <ul style="list-style-type: none"> (i) controls which are easily identifiable and easy to use, (ii) <i>adequate</i> notification that the passenger conveyor has registered a summoning call, and (iii) <i>adequate</i> 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 <i>adequate</i> means of informing occupants of their location, (c) Where appropriate, have doors which: <ul style="list-style-type: none"> (i) are power operated, (ii) are readily distinguishable from their surroundings, and (iii) where automatic, remain open sufficiently long to enable <i>people with disabilities</i> to pass through, and (d) Have <i>handrails</i> within the passenger conveyor. 	

E Moisture

E1 Surface Water

FIRST SCHEDULE—*continued*

Clause E1—SURFACE WATER

Provisions

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,

Limits on application

Performance E1.3.2 shall apply only to *Housing*, *Communal Residential* and *Communal Non-residential buildings*.

FIRST SCHEDULE—continued

Provisions	Limits on application
(d) Provide reasonable access for maintenance and clearing blockages,	
(e) Avoid the likelihood of damage to any <i>outfall</i> , in a manner acceptable to the <i>network utility operator</i> , and	
(f) Avoid the likelihood of damage from superimposed loads or normal ground movements.	

E2 External Moisture

38

Building Regulations 1992

1992/150

FIRST SCHEDULE—*continued*

Clause E2—EXTERNAL MOISTURE

Provisions

Limits on application

OBJECTIVE

E2.1 The objective of this provision is to safeguard people from illness or injury which could result from external moisture entering the *building*.

FUNCTIONAL REQUIREMENT

E2.2 *Buildings* shall be constructed to provide *adequate* resistance to penetration by, and the accumulation of, moisture from the outside.

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.

PERFORMANCE

E2.3.1 Roofs shall shed precipitated moisture. In locations subject to snowfalls, roofs shall also shed melted snow.

E2.3.2 Roofs and exterior walls shall prevent the penetration of water that could cause undue dampness, or damage to *building elements*.

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*.

E2.3.4 *Building elements* susceptible to damage shall be protected from the adverse effects of moisture entering the space below suspended floors.

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*.

E2.3.6 Excess moisture present at the completion of *construction*, shall be capable of being dissipated without permanent damage to *building elements*.

E3 Internal Moisture**FIRST SCHEDULE—continued****Clause E3—INTERNAL MOISTURE****Provisions****Limits on application****OBJECTIVE**

E3.1 The objective of this provision is to—

- (a) Safeguard people against illness, injury, or loss of *amenity* that could result from the accumulation of internal moisture; and
- (b) Protect *household units* and *other property* from damage caused by free water from another *household unit* in the same *building*.

FUNCTIONAL REQUIREMENT

E3.2 *Buildings* must be constructed to avoid the likelihood of—

- (a) Fungal growth or the accumulation of *contaminants* on linings and other *building elements*; and
- (b) Free water overflow penetrating to an adjoining *household unit*; and
- (c) Damage to *building elements* being caused by the presence of moisture.

PERFORMANCE

E3.3.1 An *adequate* combination of *thermal resistance*, ventilation, and space temperature must be provided to all *habitable spaces*, bathrooms, laundries, and other spaces where moisture may be generated or may accumulate.

E3.3.2 Freewater from accidental overflow from *sanitary fixtures* or *sanitary appliances* must be disposed of in a way that avoids loss of *amenity* or damage to *household units* or *other property*.

E3.3.3 Floor surfaces of any space containing *sanitary fixtures* or *sanitary appliances* must be *impervious* and easily cleaned.

Performance E3.3.1 does not apply to *Communal Non-residential, Commercial, Industrial, Outbuildings* or *Ancillary buildings*.

FIRST SCHEDULE—*continued***Provisions**

E3.3.4 Wall surfaces adjacent to *sanitary fixtures* or *sanitary appliances* must be *impervious* and easily cleaned.

E3.3.5 Surfaces of *building elements* likely to be splashed or become contaminated in the course of the *intended use* of the *building*, must be *impervious* and easily cleaned.

E3.3.6 Surfaces of *building elements* likely to be splashed must be constructed in a way that prevents water splash from penetrating behind linings or into *concealed spaces*.

Limits on application

F Safety of Users

F1 Hazardous Agents on Site

1992/150

Building Regulations 1992

41

FIRST SCHEDULE—*continued*

Clause F1—HAZARDOUS AGENTS ON SITE

Provisions

Limits on application

OBJECTIVE

F1.1 The objective of this provision is to safeguard people from injury or illness caused by *hazardous agents* or *contaminants* on a site.

FUNCTIONAL REQUIREMENT

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.

PERFORMANCE

F1.3.1 Sites shall be assessed to determine the presence and potential threat of any *hazardous agents* or *contaminants*.

F1.3.2 The likely effect of any *hazardous agent* or *contaminant* on people shall be determined taking account of:

- (a) The *intended use* of the *building*,
- (b) The nature, potency or toxicity of the *hazardous agent* or *contaminant*, and
- (c) The protection afforded by the *building envelope* and *building systems*.

F2 Hazardous Building Materials

42

Building Regulations 1992

1992/150

FIRST SCHEDULE—continued**Clause F2—HAZARDOUS BUILDING MATERIALS**

Provisions	Limits on application
OBJECTIVE F2.1 The objective of this provision is to safeguard people from injury and illness caused by exposure to <i>hazardous building materials</i> .	
FUNCTIONAL REQUIREMENT F2.2 <i>Building materials</i> which are potentially <i>hazardous</i> , 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 <i>construction of buildings</i> , 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 <i>Housing</i>

F3 Hazardous Substances and Processes

1992/150

Building Regulations 1992

43

FIRST SCHEDULE—*continued*

Clause F3—HAZARDOUS SUBSTANCES AND PROCESSES

Provisions

Limits on application

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,

44

Building Regulations 1992

1992/150

FIRST SCHEDULE—*continued*

Provisions	Limits on application
(f) Impervious, easily cleaned surface finishes on <i>building elements</i> likely to be splashed or become contaminated in the course of the <i>intended use</i> of the <i>building</i> , and	
(g) Signs as required by Clause F8 “Signs”.	

F4 Safety from Falling

FIRST SCHEDULE—*continued*

Clause F4—SAFETY FROM FALLING

Provisions

Limits on application

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

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.

FIRST SCHEDULE—*continued***Provisions**

- (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.
- (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.

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.

Limits on application

Performance F4.3.4 (f) shall not apply to any pool exempted under section 5 of the Fencing of Swimming Pools Act 1987.

F5 Construction and Demolition Hazards

FIRST SCHEDULE—*continued*

Clause F5—CONSTRUCTION AND DEMOLITION HAZARDS

Provisions

Limits on application

OBJECTIVE

F5.1 The objective of this provision is to safeguard people from injury, and *other property* from damage, caused by *construction* or demolition site hazards.

FUNCTIONAL REQUIREMENT

F5.2 *Construction* and demolition work on *buildings* shall be performed in a manner that avoids the likelihood of:

- (a) Objects falling onto people on or off the site,
- (b) Objects falling on property off the site,
- (c) Other hazards arising on the site affecting people off the site and *other property*, and
- (d) Unauthorised entry of children to hazards on the site.

PERFORMANCE

F5.3.1 Suitable *construction* methods shall be used to avoid the likelihood of tools or materials falling onto places where people might be present.

F5.3.2 Where *construction* or demolition work presents a hazard in places to which the public has access, barriers shall be provided and shall:

- (a) Be of appropriate height and *construction* to prevent site hazards from harming traffic or passersby,
- (b) Be difficult to climb,
- (c) Have no openings other than those approved by the *territorial authority* for access and viewing,
- (d) Have no gates or doors which project beyond the site when opened,

FIRST SCHEDULE—*continued***Provisions**

- (e) Contain no projection that would be a hazard to traffic or people, and
- (f) Be clearly marked where the barrier itself may otherwise present a hazard to traffic or passersby.

F5.3.3 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.

F5.3.4 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.

Limits on application

F6 Lighting for Emergency

FIRST SCHEDULE—*continued*

Clause F6—LIGHTING FOR EMERGENCY

Provisions

OBJECTIVE

F6.1 The objective of this provision is to safeguard people from injury due to inadequate lighting being available during an emergency.

FUNCTIONAL REQUIREMENT

F6.2 *Buildings* shall be provided with *adequate* lighting within all *escape routes* in an emergency.

PERFORMANCE

F6.3.1 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.

F6.3.2 Signs to indicate *escape routes* shall be provided as required by Clause F8 “Signs”.

Limits on application

Requirement F6.2 shall not apply to *Detached Dwellings*, *household units* within *Multi-unit Dwellings*, *Outbuildings* or *Ancillary buildings*.

Performance F6.3.1 shall not apply to spaces infrequently inhabited such as plant rooms, storage areas and service tunnels.

F7 Warning Systems**FIRST SCHEDULE—continued****Clause F7—WARNING SYSTEMS****Provisions****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

F7.3.1 A means of warning must alert people to the emergency in *adequate* time for them to reach a *safe place*.

F7.3.2 Appropriate means of detection and warning for fire must be provided within each *household unit*.

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.

Limits on application

Performance F7.3 does not apply to *Outbuildings* or *Ancillary buildings*.

F8 Signs

FIRST SCHEDULE—continued

Clause F8—SIGNS

Provisions

OBJECTIVE

F8.1 The objective of this provision is to:

- (a) Safeguard people from injury or illness resulting from inadequate identification of *escape routes*, or of hazards within or about the *building*,
- (b) Safeguard people from loss of *amenity* due to inadequate direction, and
- (c) Ensure that *people with disabilities* are able to carry out normal activities and processes within *buildings*.

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, and
- (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

Limits on application

Objective F8.1 (c) shall apply only to those *buildings* to which Section 47A of the Act applies.

Requirement F8.2 shall not apply to *Detached Dwellings*, or within *household units* of *Multi-unit Dwellings*.

Note

NOTE:

Section 47A is in the Building Act 1991. The equivalent section in the Building Act 2004 is section 118.

FIRST SCHEDULE—*continued*

Provisions	Limits on application
<p>(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”.</p> <p>F8.3.4 Signs shall be provided in sufficient locations to identify <i>accessible routes</i> and facilities provided for <i>people with disabilities</i>.</p>	

G Services and Facilities

G1 Personal Hygiene

1992/150

Building Regulations 1992

53

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

G1.21 *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 47A of the Act applies.

Note

NOTE:

Section 47A is in the Building Act 1991. The equivalent section in the Building Act 2004 is section 118.

54

Building Regulations 1992

1992/150

FIRST SCHEDULE—*continued*

Provisions	Limits on application
(g) Discharge to a plumbing and drainage system as required by Clause G13 “Foul Water” when water-borne disposal is used, and	
(h) Provide a healthy safe disposal system when non-water-borne disposal is used.	
G1.3.3 Facilities for personal hygiene shall be provided in convenient locations.	
G1.3.4 Personal hygiene facilities provided for <i>people with disabilities</i> shall be <i>accessible</i> .	Performance G1.3.4 shall not apply to <i>Housing, Outbuildings, Ancillary buildings</i> , and to <i>Industrial buildings</i> where no more than 10 people are employed.

G2 Laundering

1992/150

Building Regulations 1992

55

FIRST SCHEDULE—continued

Clause G2—LAUNDERING

Provisions

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*.

Limits on application

Objective G2.1(b) shall apply only to those *buildings* to which Section 47A of the 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.

Note

NOTE:

Section 47A is in the Building Act 1991. The equivalent section in the Building Act 2004 is section 118.

G3 Food Preparation and Prevention of Contamination

FIRST SCHEDULE—continued

Clause G3—FOOD PREPARATION AND PREVENTION OF CONTAMINATION**Provisions****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 or 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.

Note

NOTE:

Section 47A is in the Building Act 1991. The equivalent section in the Building Act 2004 is section 118.

FIRST SCHEDULE—*continued***Provisions**

- (b) Means for food rinsing, utensil washing and waste water disposal.
- (c) Means for cooking food, and
- (d) Space and a surface for food preparation.

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*.

Limits on application

Performance G3.3.1 (c) shall apply to *Housing*, work camps, old people's homes and early childhood centres.

Performance G3.3.1 (d) shall apply to *Housing*, work camps, old people's homes and early childhood centres.

Performance G3.3.2 (b) 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 G3.3.2 (c) shall not apply to *Housing*.

Performance G3.3.5 shall apply only to camping grounds and *accessible* accommodation units in *Communal Residential buildings*.

FIRST SCHEDULE–*continued*

Provisions

G3.3.6 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.

Limits on application

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.

G4 Ventilation

FIRST SCHEDULE—*continued*

Clause G4—VENTILATION

Provisions

Limits on application

OBJECTIVE

G4.1 The objective of this provision is to safeguard people from illness or loss of *amenity* due to lack of fresh air.

FUNCTIONAL REQUIREMENT

G4.2 Spaces within *buildings* shall be provided with *adequate* ventilation consistent with their maximum occupancy and their *intended use*.

PERFORMANCE

G4.3.1 Spaces within *buildings* shall have means of ventilation with *outdoor air* that will provide an *adequate* number of air changes to maintain air purity.

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.

G4.3.3 *Buildings* shall have a means of collecting or otherwise removing the following products from the spaces in which they are generated:

- (a) Cooking fumes and odours,
- (b) Moisture from laundering, utensil washing, bathing and showering,
- (c) Odours from sanitary and waste storage spaces,
- (d) Gaseous by-products and excessive moisture from commercial or industrial processes,
- (e) Poisonous fumes and gases,
- (f) Flammable fumes and gases,
- (g) Airborne particles,
- (h) Bacteria, viruses or other pathogens, or
- (i) Products of combustion.

FIRST SCHEDULE– <i>continued</i>	
Provisions	Limits on application
G4.3.4 Contaminated air shall be disposed of in a way which avoids creating a nuisance or hazard to people and <i>other property</i> .	
G4.3.5 The quantities of air supplied for ventilation shall meet the additional demands of any fixed <i>combustion appliances</i> .	

G5 Interior Environment

FIRST SCHEDULE—continued

Clause G5—INTERIOR ENVIRONMENT

Provisions	Limits on application
<p>OBJECTIVE</p> <p>G5.1 The objective of this provision is to:</p> <ul style="list-style-type: none"> (a) Safeguard people from illness caused by low air temperature, (b) Safeguard people from injury or loss of <i>amenity</i> caused by inadequate activity space, (c) Safeguard people from injury caused by unsafe installations, and (d) Ensure that <i>people with disabilities</i> are able to carry out normal activities and processes within <i>buildings</i>. <p>FUNCTIONAL REQUIREMENT</p> <p>G5.2.1 <i>Buildings</i> shall be constructed to provide:</p> <ul style="list-style-type: none"> (a) An <i>adequate</i>, controlled interior temperature, (b) <i>Adequate</i> activity space for the <i>intended use</i>, and (c) <i>Accessible</i> spaces and facilities. <p>G5.2.2 Heating appliances in <i>buildings</i> shall be installed in a way that reduces the likelihood of injury.</p> <p>PERFORMANCE</p> <p>G5.3.1 <i>Habitable spaces</i>, bathrooms and recreation rooms shall have the provision for maintaining the internal temperature at no less than 16°C measured at 750 mm above floor level, while the space is <i>adequately</i> ventilated.</p>	<p>Objective G5.1 (d) shall apply to those <i>buildings</i> to which Section 47A of the Act applies.</p> <p>Requirement G5.2.1 (a) shall apply only to <i>habitable spaces</i>, bathrooms and recreation rooms in old people's homes and early childhood centres.</p> <p>Requirement G5.2.1 (b) shall apply only to <i>old people's homes</i>.</p> <p>Requirement G5.2.1 (c) shall apply only to <i>Communal Residential, Communal Non-residential, and Commercial buildings</i>.</p> <p>Performance G5.3.1 shall apply only to old people's homes and early childhood centres.</p>

Note

NOTE:

Section 47A is in the Building Act 1991. The equivalent section in the Building Act 2004 is section 118.

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

1992/150

Building Regulations 1992

63

FIRST SCHEDULE—continued**Clause G6—AIRBORNE AND IMPACT SOUND****Provisions****Limits on application****OBJECTIVE**

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.

FUNCTIONAL REQUIREMENT

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.

PERFORMANCE

G6.3.1 The *Sound Transmission Class* of walls, floors and ceilings, shall be no less than 55.

G6.3.2 The *Impact Insulation Class* of floors shall be no less than 55.

G7 Natural Light

64

Building Regulations 1992

1992/150

FIRST SCHEDULE—*continued*

Clause G7—NATURAL LIGHT

Provisions	Limits on application
OBJECTIVE	
G7.1 The objective of this provision is to safeguard people from illness or loss of <i>amenity</i> due to isolation from natural light and the outside environment.	
FUNCTIONAL REQUIREMENT	
G7.2 <i>Habitable spaces</i> shall provide <i>adequate</i> openings for natural light and for a visual awareness of the outside environment.	Requirement G7.2 shall apply only to <i>Housing</i> , old people's homes and early childhood centres.
PERFORMANCE	
G7.3.1 Natural light shall provide an <i>illuminance</i> of no less than 30 lux at floor level for 75% of the <i>standard year</i> .	
G7.3.2 Openings to give awareness of the outside shall be transparent and provided in suitable locations.	

G8 Artificial Light

1992/150

Building Regulations 1992

65

FIRST SCHEDULE—continued

Clause G8—ARTIFICIAL LIGHT

Provisions

Limits on application

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.

PERFORMANCE

G8.3 *Illuminance* at floor level shall be no less than 20 lux.

Requirement G8.2 shall apply to:

- (a) All *exitways* in *Multi-unit Dwellings, Group Dwellings and Communal Residential, Communal Non-residential, Commercial and Industrial buildings*,
- (b) All *access routes* except those in *Outbuildings and Ancillary buildings*, and
- (c) All common spaces within *Multi-unit Dwellings, Group Dwellings, and Communal Residential and Communal Non-residential buildings*.

Performance G8.3 shall not apply in emergencies, for which *Illuminance* requirements are given in Clause F6 “Lighting for Emergency”.

G9 Electricity

66

Building Regulations 1992

1992/150

FIRST SCHEDULE—continued

Clause G9—ELECTRICITY

Provisions

Limits on application

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*.

Objective G9.1(b) shall apply only to those *buildings* to which Section 47A of the Act applies.

Note

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,

NOTE:

Section 47A is in the Building Act 1991. The equivalent section in the Building Act 2004 is section 118.

1992/150

Building Regulations 1992

67

FIRST SCHEDULE—continued

Provisions	Limits on application
<p>(e) Protect <i>building elements</i> from risk of ignition, impairment of their physical or mechanical properties, or function, due to temperature increases resulting from heat transfer or electric arc,</p> <p>(f) Operate safely in its intended environment, and</p> <p>(g) Safeguard against ignition of the surrounding atmosphere where it is potentially flammable or explosive.</p> <p>G9.3.2 An <i>electrical installation</i> supplying an <i>essential service</i> shall:</p> <p>(a) Maintain the supply for a time appropriate to that service, and</p> <p>(b) Be capable of being isolated from the supply system, independently of the remainder of the installation.</p> <p>G9.3.3 An <i>electrical installation</i> connected to an <i>electrical supply system</i>, shall contain safeguards which protect the safety features of the external supply.</p> <p>G9.3.4 In <i>buildings</i> intended for use by <i>people with disabilities</i>, light switches and plug socket outlets shall be <i>accessible</i> and usable.</p>	<p>Performance G9.3.4 shall not apply to <i>Housing</i>, <i>Outbuildings</i>, <i>Ancillary buildings</i>, and to <i>Industrial buildings</i> where no more than 10 people are employed.</p>

G10 Piped Services

68

Building Regulations 1992

1992/150

FIRST SCHEDULE—*continued*

Clause G10—PIPED SERVICES

Provisions	Limits on application
OBJECTIVE	
G10.1 The objective of this provision is to safeguard people from injury or illness caused by extreme temperatures or <i>hazardous substances</i> associated with <i>building services</i> .	
FUNCTIONAL REQUIREMENT	
G10.2 In <i>buildings</i> provided with potentially <i>hazardous</i> services containing hot, cold, flammable, corrosive or toxic fluids, the installations shall be constructed to provide <i>adequate</i> safety for people.	
PERFORMANCE	
G10.3.1 Piping systems shall be constructed to avoid the likelihood of:	
<ul style="list-style-type: none"> (a) Significant leakage or damage during normal or reasonably foreseeable abnormal conditions, (b) Detrimental contamination of the contents by other substances, (c) Adverse interaction between services, or between piping and electrical systems, and (d) People having contact with pipes which could cause them harm. 	
G10.3.2 Provision shall be made for the ready removal of moisture or condensate in gas pipes.	
G10.3.3 Pipes shall be protected against corrosion in the environment of their use.	
G10.3.4 Piping systems shall be identified with markings if the contents are not readily apparent from the location or associated equipment.	

1992/150

Building Regulations 1992

69

FIRST SCHEDULE—continued**Provisions**

G10.3.5 Enclosed spaces shall be constructed to avoid the likelihood of accumulating vented or leaking gas.

G10.3.6 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.

Limits on application

G11 Gas as an Energy Source

70

Building Regulations 1992

1992/150

FIRST SCHEDULE—continued**Clause G11—GAS AS AN ENERGY SOURCE****Provisions****Limits on application****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

71

FIRST SCHEDULE—*continued*

Provisions	Limits on application
<p>G11.3.5 Where gas is supplied from an external source, the supply system within <i>buildings</i> shall be constructed to avoid the likelihood of:</p> <ul style="list-style-type: none">(a) Contamination of the external supply from other gas sources within the <i>building</i>,(b) Adverse effects on the pressure of the external supply, and(c) The external supply pipe acting as an earthing conductor. <p>G11.3.6 The location and installation of meters and service risers shall meet the requirements of the <i>network utility operator</i>.</p>	

G12 Water Supplies

Schedule

Building Amendment Regulations 2001

Schedule
New clause G12 substituted in First Schedule of
principal regulations

Clause G12–Water Supplies**Provisions****Limits on application****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*.

Objective G12.1(d) shall apply only to those *buildings* to which Section 47A of the Act applies.

Note

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.

NOTE:

Section 47A is in the Building Act 1991. The equivalent section in the Building Act 2004 is section 118.

Building Amendment Regulations 2001

Schedule

Provisions

Limits on application

Performance—continued

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.

G12.3.10 Water supply taps must be *accessible* and usable for *people with disabilities*.

Performance G12.3.10 applies only to those *buildings* to which Section 47A of the Act applies.

Note

Clerk of the Executive Council.

NOTE:

Section 47A is in the Building Act 1991. The equivalent section in the Building Act 2004 is section 118.

G13 Foul Water

1992/150

Building Regulations 1992

75

FIRST SCHEDULE—*continued*

Clause G13—FOUL WATER

Provisions

Limits on application

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,

76

Building Regulations 1992

1992/150

FIRST SCHEDULE—*continued*

Provisions	Limits on application
<ul style="list-style-type: none"> (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 <i>sewer</i>, and (f) Be constructed to avoid the likelihood of damage from superimposed loads or normal ground movement. <p>G13.3.3 Where a <i>sewer</i> connection is available, the drainage system shall be connected to the <i>sewer</i>, and the connection shall be made in a manner that avoids damage to the <i>sewer</i> and is to the approval of the <i>network utility operator</i>.</p> <p>G13.3.4 Where no <i>sewer</i> is available, an <i>adequate</i> on-site disposal system shall be provided for <i>foul water</i> in the same manner as detailed in clause G14 “Industrial Liquid Waste”.</p>	

G14 Industrial Liquid Waste**FIRST SCHEDULE—continued****Clause G14—INDUSTRIAL LIQUID WASTE****Provisions****Limits on application****OBJECTIVE**

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.

FUNCTIONAL REQUIREMENT

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.

PERFORMANCE

G14.3.1 Industrial liquid waste shall be conveyed to storage containers and within disposal systems in a way which will:

- (a) Transfer wastes from *buildings* safely and hygienically,
- (b) Avoid the likelihood of blockage and leakage,
- (c) Avoid the likelihood of foul air and gases entering *buildings*, and
- (d) Provides reasonable access for clearing of blockages.

G14.3.2 Facilities for the storage, treatment, and disposal of industrial liquid waste shall be constructed:

- (a) With *adequate* capacity for the volume of waste and the frequency of disposal,
- (b) With *adequate* vehicle access for collection if required,
- (c) To avoid the likelihood of contamination of any potable water supplies in compliance with Clause G12 “Water Supplies”,

FIRST SCHEDULE—continued

Provisions	Limits on application
(d) To avoid the likelihood of contamination of soils, ground water and waterways except as permitted under the Resource Management Act 1991.	
(e) From materials which are impervious both to the waste for which disposal is required, and to water,	
(f) To avoid the likelihood of foul air and gases accumulating within or entering into <i>buildings</i> ,	
(g) To avoid the likelihood of unauthorised access by people, and	
(h) To permit easy cleaning and maintenance.	

G15 Solid Waste

FIRST SCHEDULE—continued

Clause G15—SOLID WASTE

Provisions

Limits on application

OBJECTIVE

G15.1 The objective of this provision is to safeguard people from injury or illness caused by infection or contamination from solid waste.

FUNCTIONAL REQUIREMENT

G15.2 *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*.

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.

PERFORMANCE

G15.3.1 Where provision is made within *buildings* for the collection and temporary holding of solid waste, the spaces provided shall be:

- (a) Of sufficient size for the volume of waste and frequency of disposal,
- (b) Provided with reasonable access for the depositing and collection of the waste,
- (c) Capable of maintaining sanitary conditions having regard to the types of waste and storage containers, and
- (d) Capable of maintaining the appropriate temperature for the type of waste stored.

G15.3.2 Where a rubbish chute is provided, it shall be located and constructed to:

- (a) Convey the solid waste to an appropriate storage container,
- (b) Avoid the likelihood of blockage or leakage,
- (c) Permit easy cleaning and maintenance,

FIRST SCHEDULE—*continued*

Provisions

Limits on application

- (d) Avoid the likelihood of foul air or gases accumulating or entering the *building*,
- (e) Avoid the likelihood of the spread of *fire* beyond the refuse chute,
- (f) Have openings that allow waste to be safely deposited in the chute, and
- (g) Restrict access by children, animals and vermin.

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”.

H Energy Efficiency

H1 Energy Efficiency Provisions

r 4

Building Amendment Regulations 2000

2000/119

5 Clause H1 of code (energy efficiency provisions) replaced

The First Schedule of the principal regulations is amended by revoking clause H1, and substituting the following clause:

Clause H1—Energy efficiency provisions

Provisions

Limits on application

Objective

H1.1 The objective of this provision is to facilitate efficient use of energy.

Objective H1.1 applies only when the energy is sourced from a *network utility operator* or a depletable energy resource.

Functional requirement

H1.2 Buildings must be constructed to achieve an *adequate* degree of energy efficiency when that energy is used for—

- (a) modifying temperature or humidity, or both; or
- (b) providing hot water to *sanitary fixtures* or *sanitary appliances*, or both; or
- (c) providing artificial lighting

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.

Requirement H1.2(c) applies only to *commercial buildings* and *communal non-residential buildings* whose floor area is greater than 300 m².

Performance

H1.3.1 The *building* envelope enclosing spaces where the temperature or humidity (or both) are modified must be constructed to—

- (a) provide *adequate thermal resistance*; and
- (b) limit uncontrollable airflow.

H1.3.2 Buildings must be constructed to ensure that the *building performance index* does not exceed:

- (a) 0.13 kWh in a *warm location*; and
- (b) 0.12 kWh in a *cool location*.

Performance H1.3.2 applies only to *housing*.

2000/119

Building Amendment Regulations 2000

r 5

Provisions

Limits on application

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.

Performance H1.3.4(b) applies only where individual storage vessels are 700 litres or less in capacity.

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.

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.

Publications Referenced in Handbook and Compliance Documents

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.

Compliance Documents in which the particular references are quoted are identified by the relevant 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 Compliance Document for Clause B1 Structure.

Where references are quoted in the Compliance Schedule Handbook, these are identified by the letters HB and the relevant section. For example: HB/SS 3 indicates that the reference occurs in the content guide for SS 3 in the Compliance Schedule Handbook.

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

Contents	Page
Standards New Zealand	11
Standards Australia	21
British Standards Institution	19
New Zealand Publications (other than Standards)	26
Australian Publications (other than Standards)	29
Australia/New Zealand Publications (other than Standards)	29
British Publications (other than Standards)	29
International Publications	30
US Publications	31

Standards New Zealand	Where quoted
NZS/BS 21: 1985 Specification for pipe threads for tubes and fittings where pressure-tight joints are made on the threads (metric dimensions)	G10/AS1, G14/VM1
NZS/BS 143, and BS 1256: 1993 Specification for malleable cast iron and cast copper alloy threaded pipe fittings <i>Amend: 1, 2, 3</i>	G10/AS1, G14/VM1
NZS 202: 1966 Specification for steel pipes and joints for hydraulic purposes	G14/VM1
NZS 380: 1968 Specification for flameproof electric lighting fittings	F6/AS1

		Where quoted
NZS/BS 476:-	Fire tests on building materials and structures	C/AS1
Part 20: 1987	Method for determination of the fire resistance of elements of construction (general principles) <i>Amend: 6487</i>	C/AS1
Part 21: 1987	Methods for determination of the fire resistance of loadbearing elements of construction	C/AS1
Part 22: 1987	Methods for determination of the fire resistance of non-loadbearing elements of construction	C/AS1
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	E1/AS1
AS/NZS 1221: 1997	Fire hose reels	C/AS1
AS/NZS 1260: 1999	PVC pipes and fittings for drain, waste and vent applications	G13/AS1/AS2
NZS/BS 1387: 1985 (1990)	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	G10/AS1, G12/AS1, G14/VM1
AS/NZS 1477: 1999	PVC pipes and fittings for pressure applications	G12/AS1
AS/NZS 1530:-	Methods for fire tests on building materials, components and structures	
Part 3: 1999	Simultaneous determination of ignitability, flame propagation, heat release and smoke release	C/AS1
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	E1/AS1, G10/AS1, G14/VM1
Section 3.2: 1989	Specification for cast iron flanges	G10/AS1
AS/NZS 1646: 2000	Elastomeric seals for waterworks purposes	G13/AS2
NZS/AS 1650: 1989	Hot-dipped galvanised coatings on ferrous articles	B1/AS2/AS3
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)	D1/AS1
AS/NZS 1664:-	Aluminium structures	
Part 1: 1997	Limit state design <i>Amend: 1</i>	B1/VM1
Part 2: 1997	Allowable stress design <i>Amend: 1</i>	B1/VM1

	Where quoted
AS/NZS 1668:- The use of ventilation and air conditioning in buildings	
Part 1: 1998 Fire and smoke control in multi-compartment buildings	C/AS1, F7/AS1
Part 2: 1991 Mechanical ventilation for acceptable indoor-air quality	G4/AS1
AS/NZS 1730: 1996 Washbasins	G1/AS1
NZS/BS 1740:- Specification for wrought steel pipe fittings (screwed BS 21 – R series thread)	
Part 1: 1971 (1990) Metric units <i>Amend: 1, 2, 3</i>	G10/AS1, G14/VM1
AS/NZS 1748: Mechanically strong graded timber	B1/VM1
NZS 1900: Model building bylaw	
Ch 11: 1985 Special structures	
Division 11.2 Farm buildings <i>Amend: 1</i>	B1/VM1
AS/NZS 1905:- Components for the protection of openings in fire-resistant walls	
Part 1: 1997 Fire-resistant doorsets	C/AS1, HB/SS 15
AS/NZS 2023: 1995 Baths for ablutionary purposes	G1/AS1
NZS/AS 2033: 1980 Installation of polyethylene pipe systems	E1/AS1, G14/VM1
AS/NZS 2243:1 2005 Safety in laboratories – Planning and operational aspects	HB/SS 11
AS/NZS 2243:8 2006 Safety in laboratories – Fume cupboards	HB/SS 11
AS/NZS 2269: 2004 Plywood – Structural	E2/AS1
AS/NZS 2280: 1999 Ductile iron pressure pipes and fittings	G13/AS2
AS/NZS 2293:- Emergency evacuation lighting for buildings	
Part 1: 1995 System design, installation and operation	F6/AS1
Part 2: 1995 Inspection and maintenance	F6/AS1, HB/SS 4
Part 3: 1995 Emergency luminaires and exit signs	F6/AS1
NZS/BS 2494: 1990 Specification for elastomeric seals for joints in pipework and pipelines	E1/AS1, G13/AS1/AS2, G14/VM1
AS/NZS 2642:- Polybutylene pipe systems	
Part 1: 1994 Polybutylene (PB) pipe extrusion compounds	G12/AS1
Part 2: 1994 Polybutylene (PB) pipe for hot and cold water applications	G12/AS1
Part 3: 1994 Mechanical jointing fittings for use with polybutylene (PB) pipes for hot and cold water applications <i>Amend: 1</i>	G12/AS1

NZS/BS 2654: 1989	Specification for manufacture of vertical steel welded non-refrigerated storage tanks with butt-welded shells for the petroleum industry	Where quoted G14/VM1
AS/NZS 2728: 1997	Prefinished/prepainted sheet metal products for interior/exterior building applications – Performance requirements	E2/AS1
AS/NZS 2845:- Part 1: 1998	Water supply Materials, design and performance requirements	G12/AS1
AS/NZS 2904: 1995	Damp-proof courses and flashings	E2/AS1
AS/NZS 2908: Part 2: 2000	Cellulose-cement products Flat sheet	E2/AS1
AS/NZS 2918: 2001	Domestic solid fuel burning appliances – installation	C/AS1
NZS/BS 2971: 1991	Specification for Class II arc welding of carbon steel pipework for carrying fluids	G10/AS1, G14/VM1
NZS 3101:- Part 1: 1995	Concrete structures standard The design of concrete structures <i>Amend: 1, 2, 3</i>	B2/AS1 B1/VM1
NZS 3106: 1986	Code of practice for concrete structures for the storage of liquids <i>Amend: 1, 2</i>	G14/VM1
NZS 3107: 1978	Specification for precast concrete drainage and pressure pipes	B1/VM1
NZS 3109: 1997	Specification for concrete construction <i>Amend: 2</i>	B1/VM1, E1/AS1, G13/AS2, G14/VM1
NZS 3112:- Part 2: 1986	Methods of test for concrete Tests relating to the determination of strength of concrete <i>Amend: 1</i>	B1/AS3
NZS 3114: 1987	Specification for concrete surface finishes <i>Amend: 1</i>	D1/AS1, G15/AS1
NZS 3116: 1991	Interlocking concrete block paving	D1/AS1
NZS 3124: 1987	Specification for concrete construction for minor works	E1/AS1
NZS 3302: 1983	Specification for ceramic pipes, fittings and joints	E1/AS1, G14/VM1
NZS 3331: 1972	Specification for quality of vitreous china sanitary appliances	G1/AS1
NZS 3402: 1989	Steel bars for the reinforcement of concrete	B1/AS3
NZS 3404:- Part 1: 1997	Steel structures standard Steel structures standard	B1/VM1
NZS 3421: 1975	Specification for hard drawn mild steel wire for concrete reinforcement	B1/AS3

		Where quoted
NZS 3422: 1975	Specification for welded fabric of drawn steel wire for concrete reinforcement	B1/AS3
NZS 3441: 1978	Specification for hot-dipped zinc-coated steel coil and cut lengths <i>Amend: 1, 2</i> (See also NZS/AS 1397: 1993)	B1/AS2/AS3, E1/AS1
AS/NZS 3500:-	National plumbing and drainage code	
Part 1: 2003	Water services <i>Amend: 1</i>	G12/VM1/AS1
Part 2: 2003	Sanitary plumbing and drainage <i>Amend: 1</i>	G13/AS1/VM2/AS2/ AS3
Part 4: 2003	Heated water services <i>Amend: 1</i>	G12/VM1/AS1
NZS 3501: 1976	Specification for copper tubes for water, gas, and sanitation <i>Amend: 1, 2 and 3</i>	G10/AS1, G13/AS1/AS2 G12/AS1
NZS 3502: 1976	Specification for copper and copper alloy tubes for general engineering purposes	G10/AS1
NZS 3601: 1973	Metric dimensions for timber <i>Amend: 1, 2</i>	B1/AS2
NZS/BS 3601: 1987 (1993)	Specification for carbon steel pipes and tubes with specified room temperature properties for pressure purposes <i>Amend: 1, 2</i>	G10/AS1, G14/VM1
NZS 3602:-		E2/AS1
Part 1: 1995	Timber and wood-based products for use in building	B2/AS1
Part 1: 2003	Timber and wood-based products for use in building	B2/AS1
NZS 3603: 1993	Timber structures standard <i>Amend: 1, 2</i>	B1/VM1/VM4
NZS 3604: 1999	Timber framed buildings <i>Amend: 1</i>	B1/AS1/AS2/AS3, B2/AS1, E1/AS1, E2/VM1/AS1, G13/AS2
NZS 3605: 1992	Specification for timber piles and poles for use in building	B1/VM4
NZS 3617: 1979	Specification for profiles of weatherboards, fascia boards, and flooring	E2/AS1
NZS 3631: 1988	New Zealand timber grading rules	B1/AS2
NZMP 3640: 1992	Specification of the minimum requirements of the NZ Timber Preservation Council Inc. <i>Amend: 1</i>	B1/AS2/VM4
AS/NZS 3661:-	Slip resistance of pedestrian surfaces	
Part 1: 1993	Requirements	D1/VM1/AS1
Part 2: 1994	Guide to the reduction of slip hazards	D1/AS1

AS/NZS 3622: 2004 Verification of timber properties	Where quoted
AS/NZS 3666:- Air-handling and water systems of buildings – Microbial Control	B1/VM1
Part 1: 2002 Design, installation and commissioning	HB/SS 9
Part 2: 2002 Operation and maintenance	G4/AS1, HB/SS 9
Part 3: 2000 Performance-based maintenance of cooling water systems	G4/AS1, HB/SS 9
NZS/AS 3725: 1989 Loads on buried concrete pipes	B1/VM1
AS/NZS 3837: 1998 Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter	C/AS1
AS/NZS 3896: 1998 Waters – Examination for legionellae including Legionella pneumophila <i>Amend: 1</i>	HB/SS 9
AS/NZS 4020: 2002 Testing of products for use in contact with drinking water	E2/AS1
NZS 4121: 2001 Design for access and mobility – Buildings and associated facilities	D1/AS1, G1/AS1, G5/AS1
AS/NZS 4130: 1997 Polyethylene (PE) pipe for pressure applications	G12/AS1, G13/AS2
AS/NZS 4200: Pliable building membranes and underlays Part 1: 1994 – Materials	E2/AS1
AS/NZS 4201: Pliable building membranes and underlays – Methods of test	E2/AS1
Part 3: 1994 Pliable building membranes and underlays: Methods of test: Shrinkage	
Part 4: 1994 Resistance to water penetration	
Part 6: 1994 Surface water absorbency	
NZS 4203: 1984 Code of practice for general structural design and design loadings for buildings <i>Amend: 1</i>	B1/VM1, G10/AS1
NZS 4203: 1992 Code of practice for general structural design and design loadings for buildings <i>Corrigendum: 1</i>	B1/VM1/VM4, C/AS1, E2/VM1/AS1
NZS 4206: 1992 Concrete interlocking roofing tiles	E2/AS1
NZS 4210: 1989 Code of practice for masonry construction: materials and workmanship <i>Amend: 1, 2</i>	B1/AS3
NZS 4211: 1985 Specification for performance of windows <i>Amend: 1, 2, 3</i>	B1/VM1, E2/VM1/AS1
NZS 4214: 1977 Methods of determining the total thermal resistance of parts of buildings	E3/AS1, G5/AS1, H1/VM1/AS1

		Where quoted
NZS 4217:-	Pressed metal tile roofs	
Part 1: 1980	Specification for roofing tiles and their accessories	E2/AS1
Part 2: 1980	Code of practice for preparation of the structure and the laying and fixing of metal roofing tiles	E2/AS1
NZS 4218: 1996	Energy efficiency – housing and small building envelope	H1/VM1/AS1
NZS 4219: 1983	Specification for seismic resistance of engineering systems in buildings <i>Amend: 1, 2</i>	B1/VM1, G10/AS1, G14/VM1
NZS 4223:-	Code of practice for glazing in buildings	
Part 1: 1985	The selection and installation of glass in buildings <i>Amend: 1, 2</i>	B1/AS1
Part 2: 1985	The selection and installation of manufactured sealed insulating glass units <i>Amend: 1, 2</i>	B1/AS1
Part 3: 1999	Human impact safety requirements	B1/AS1, F2/AS1
NZS 4229: 1999	Concrete masonry buildings not requiring specific engineering design <i>Amend: 1</i>	B1/AS1/AS3, E1/AS1, G13/AS2
NZS 4230:-	Code of practice for the design of masonry structures	
Part 1: 1990	Structures <i>Amend: 1, 2</i>	B1/VM1
Part 2: 1990	Commentary <i>Amend: 1, 2</i>	B1/VM1
NZS 4231: 1985	Specification for self-luminous exit signs <i>Amend: A</i>	F8/AS1
NZS 4232:-	Performance criteria for fire resisting enclosures	HB/SS 15
Part 2: 1988	Fire resisting glazing systems	C/AS1
NZS HB 4236: 2002	Masonry veneer wall cladding	E2/AS1
NZS 4239: 1993	Automatic sliding door assemblies <i>Amend: A</i>	HB/SS 3
NZS 4243: 1996	Energy efficiency – large buildings	H1/VM1/AS1
NZS 4251:-	Solid plastering	
Part 1: 1998	Cement plaster for walls, ceilings and soffits	B1/AS1, B2/AS1, E2/AS1
AS/NZS 4256:	Plastic roof and wall cladding materials	E2/AS1
Part 2: 1994	Unplasticized polyvinyl chloride (uPVC) building sheets	
AS/NZS 4284: 1995	Testing of building facades	E2/VM1

	Where quoted
NZS 4297: 1998 Engineering design for earth buildings	B1/VM1, B2/AS1
NZS 4299: 1998 Earth buildings not requiring specific design <i>Amend: 1</i>	B1/AS1, B2/AS1
NZS 4303: 1990 Ventilation for acceptable indoor air quality	G4/AS1
NZS 4304: 1990 Health care waste management	G15/AS1
NZS 4305: 1996 Energy efficiency – domestic type hot water systems	H1/AS1
NZS 4332: 1997 Non-domestic passenger and goods lifts	D2/AS1, F6/AS1, HB/SS 8
AS/NZS 4401(Int): 1999 High density polyethylene (PE-HD) pipes and fittings for soil and waste discharge (low and high temperature) systems inside buildings	G13/AS1
NZS 4402:- Methods of testing soils for civil engineering purposes	B1/VM1
Part 2:- Soil classification tests	
Test 2.2: 1986 Determination of the liquid limit	B1/Defs
Test 2.6: 1986 Determination of the linear shrinkage	B1/Defs
Part 4:- Soil compaction tests	
Test 4.2.3: 1988 Related densities	B1/VM4
NZS 4431: 1989 Code of practice for earth fill for residential development <i>Amend: 1</i>	B1/VM1
NZS 4442: 1988 Welded steel pipes and fittings for water, sewage and medium pressure gas	E1/AS1, G13/AS2, G14/VM1
NZS 4452: 1986 Code of practice for the construction of underground pipe sewers and drains <i>Amend: 1</i>	G14/VM1
NZS 4503: 1993 The distribution, installation and maintenance of hand operated fire fighting equipment for use in buildings	B1/AS1, E1/AS1
NZS/BS 4504:- Circular flanges for pipes, valves and fittings (PN designated)	C/AS1
Part 3:- Steel, cast iron and copper alloy flanges	
Section 3.2: 1989 Specification for cast iron flanges	G10/AS1, G14/VM1
NZS 4510: 1998 Fire hydrant systems for buildings	C/AS1, HB/SS 6
NZS 4512: 2003 Fire alarm systems in buildings	C/AS1, HB/SS 2, HB/SS 15, F7/AS1
NZS 4515: 2003 Fire sprinkler systems for residential occupancies	C/AS1, HB/SS 1, F7/AS1
AS/NZS 4534: 1998 Zinc and zinc/aluminium-alloy coatings on steel wire	E2/AS1

	Where quoted
NZS 4541: 2003 Automatic fire sprinkler systems	C/AS1, F7/AS1
AS/NZS 4600: 1996 Cold-formed steel structures	HB/SS 1
NZS 4602: 1988 Low pressure copper thermal storage electric water heaters <i>Amend: 1</i>	B1/VM1
NZS 4603: 1985 Installation of low pressure thermal storage electric water heaters with copper cylinders (open vented systems) <i>Amend: 1</i>	G12/AS1
NZS 4606:- Storage water heaters Part 1: 1989 General requirements <i>Amend: 1, 2, 3</i>	G12/AS1
Part 2: 1989 Specific requirements for water heaters with single shells <i>Amend: A</i>	G12/AS1
Part 3: 1992 Specific requirements for water heaters with composite shells <i>Amend: A</i>	G12/AS1
NZS 4607: 1989 Installation of thermal storage electric water heaters: valve vented systems	G12/AS1
NZS 4608: 1992 Control valves for hot water systems	G12/AS1
NZS 4613: 1986 Domestic solar water heaters	G12/AS1
NZS 4617: 1989 Tempering (3-port mixing) valves	G12/AS1
AS/NZS 4680: 1999 Hot-dip galvanized (zinc) coatings on fabricated ferrous articles	E2/AS1
AS/NZS 4858: 2004 Wet area membranes	E2/AS1
NZS/BS 5252: 1976 Framework for colour co-ordination for building purposes <i>Amend: 1</i>	F8/AS1
NZS 5261: 1996 The installation of gas burning appliances and equipment	G4/AS1
NZS 5261: 2003 Gas installation <i>Amend: 1</i>	C/AS1, G10/VM1/AS1, G11/AS1
NZS 5433: 1988 Code of practice for transportation of hazardous substances on land	F3/AS1
NZS/BS 5500: 1991 Specification for unfired fusion welded pressure vessels	G14/VM1

		Where quoted
NZS/BS 5556: 1978	Specification for general requirements for dimensions and pressure ratings for pipe of thermoplastics materials (metric series)	G14/VM1
NZS 5807:-	Code of practice for industrial identification by colour, wording or other coding	
Part 2: 1980	Identification of contents of piping, conduit and ducts <i>Amend: 1, 2</i>	G10/AS1 G12/AS1
NZS 6104: 1981	Specification for emergency electricity supply in buildings	C/AS1, F6/AS1 HB/SS 4, SS 14
NZS 6214: 1988	Thermostats and thermal cutouts for domestic thermal storage electric water heaters (alternating current only)	G12/AS1
NZS 6335: 1993	Safety of household and similar electrical appliances. Particular requirements for instantaneous water heaters <i>Amend: 1, 2</i>	G12/AS1
NZS 6401: 1973	Specification for PVC-insulated cables for electric power and lighting	G12/AS1
NZS 6703: 1984	Code of practice for interior lighting design	F6/VM1, G7/AS1/VM1, G8/VM1
NZS 6742: 1971	Code of practice for emergency lighting in buildings	F6/AS1, F8/AS1, HB/SS 4
NZS/BS 6920:-	Suitability of non-metallic products for use in contact with water intended for human consumption with regard to their effect on the quality of the water	
Part 1: 1990	Specification	G12/AS1
Part 2: 1990	Methods of tests	G12/AS1
Part 3: 1990	High temperature tests	G12/AS1
NZS 7401: 1985	Specification for solid fuel burning domestic appliances <i>Amend: 1</i>	B1/AS3
NZS 7421: 1990	Specification for installation of solid fuel burning domestic appliances	B1/AS3
NZS 7601: 1978	Specification for polyethylene pipe (Type 3) for cold water services	G12/AS1, G14/VM1
NZS 7602: 1977	Specification for polyethylene pipe (Type 5) for cold water services <i>Amend: 1</i>	G14/VM1 G12/AS1

		Where quoted
NZS 7604: 1981	Specification for high density polyethylene drain and sewer pipe and fittings	E1/AS1, G14/VM1
NZS 7609:-	Acrylonitrile butadiene styrene (ABS) pipes and fittings for pressure applications	
Part 1: 1990	Pipes <i>Amend: A</i>	E1/AS1, G14/VM1
Part 2: 1990	Solvent cement fittings <i>Amend: A</i>	E1/AS1, G14/VM1
NZS 7610: 1991	Blue polyethylene pipes up to nominal size 63 for below ground use for potable water <i>Amend: 1, 2, A</i>	G14/VM1 G12/AS1
NZS 7641: 1978	Specification for unplasticized PVC waste and ventilating pipe, fittings and accessories 32 mm, 40 mm and 50 mm	G14/VM1
NZS 7642: 1971	Specification for unplasticized PVC soil and ventilating pipe, fittings and accessories <i>Amend: A, 1, 1A, 2, 2A</i>	E1/AS1, G14/VM1
NZS 7643: 1979	Code of practice for the installation of unplasticized PVC pipe systems <i>Amend: 1</i>	B1/AS1, E1/AS1, G12/AS1, G13/AS1/AS2/AS3, G14/VM1
NZS 7646: 1978	Specification for polyethylene pipes and fittings for gas reticulation	G10/AS1
NZS 7648: 1987	Unplasticized PVC pipe and fittings for pressure applications	G14/VM1
NZS 7649: 1988	Unplasticized PVC sewer and drain pipe and fittings	E1/AS1, G14/VM1
NZS 7652: 1976	Specification for plastics waste traps	G14/VM1

Standards Australia

		Where quoted
AS D26: 1972	Tube fittings with Dryseal American standard taper pipe and unified threads for automotive and industrial use	G10/AS1
AS 1088.4: 1987	Hearing aids – magnetic field strength in audio-frequency induction loops for hearing aid purposes	HB/SS 12
AS 1159: 1988	Polyethylene pipes for pressure applications	G14/VM1
AS 1167:- Part 1: 1993	Welding and brazing – Filler metals Filler metal for brazing and braze welding	G10/AS1
AS 1214: 1983	Hot-dip galvanised coatings on threaded fasteners (ISO metric coarse thread series)	B1/AS2
AS 1229: 1989	Laundry troughs	G2/AS1
AS 1254: 1991	Unplasticised PVC (uPVC) pipes and fittings for storm and surface water applications	E1/AS1
AS 1273: 1991	Unplasticized PVC (uPVC) downpipe and fittings for rainwater	E1/AS1
AS 1308: 1987	Electric water heaters – Thermostats and thermal cut-outs <i>Amend: 1</i>	G12/AS1
AS 1357:- Part 1: 1993 Part 2: 1998	Water valves for use with unvented water heaters Protection valves <i>Amend: 1</i> Control valves	G12/AS1 G12/AS1
AS 1366:- Part 1: 1992	Rigid cellular plastics sheets for thermal insulation Rigid cellular polyurethane (RC/PUR) <i>Amend: 1</i>	C/AS1
Part 2: 1992	Rigid cellular polyisocyanurate (RC/PIR)	C/AS1
Part 3: 1992	Rigid cellular polystyrene – moulded (RC/PS-M) <i>Amend: 1</i>	C/AS1, E2/AS1
Part 4: 1989	Rigid cellular polystyrene – extruded (RC/PS-E)	C/AS1, E2/AS1
AS 1397: 2001	Steel sheet and strip – Hot-dip zinc-coated or aluminium/zinc-coated	E2/AS1
AS 1432: 1990	Copper tubes for plumbing, gasfitting and drainage applications	G10/AS1
AS 1449: 1994	Wrought alloy steels – Stainless and heat-resisting steel plate, sheet and strip <i>Amend: 1</i>	G1/AS1
AS 1460:- Part 1: 1989 Part 2: 1989	Fittings for use with polyethylene pipes Mechanical jointing fittings Electrofusion fittings	G12/AS1, G14/VM1 G12/AS1, G14/VM1

		Where quoted
AS 1530:-	Methods for fire tests on building materials, components and structures	
Part 1: 1994	Combustibility test for materials	C/AS1, F3/Defs
Part 2: 1993	Test for flammability of materials	C/AS1
Part 4: 1997	Fire-resistance tests of elements of building construction	C/AS1
AS 1566: 1997	Cooper and copper alloys – Rolled flat products	E2/AS1
AS 1579: 1993	Arc welded steel pipes and fittings for water and waste water	G13/AS2
AS 1589: 1994	Copper and copper alloy waste fittings	G13/AS1
AS 1668:-	The use of mechanical ventilation and air-conditioning in buildings	G4/AS1
Part 2: 2002	Ventilation design for indoor-air containment control	G4/AS1
AS 1670:-	Fire detection, warning, control and intercom systems – System design, installation and commissioning	
Part 6: 1997	Smoke alarms	F7/AS1
AS 1691: 1985	Domestic oil-fired appliances – installation	C/AS1
AS 1727: 1975	Tank containers (international sizes)	G14/VM1
AS/NZS 1734: 1997	Aluminium and aluminium alloys – Flat sheet, coiled sheet and plate	E2/AS1
AS 1741: 1991	Vitrified clay pipes and fittings with flexible joints – Sewerage quality	E1/AS1
AS 1768: 1991	Lightning protection (incorporating Amdt 1)	F3/AS1
AS 1804: 1976	Soft lead sheet and strip	E2/AS1
AS 1851: 2005	Maintenance of fire protection equipment	HB/SS 1, SS 2, SS 5, SS 9, SS 13, SS 15
AS 2032: 1997	Installation of uPVC pipe systems	G13/AS2/AS3
AS 2049: 2002	Roof tiles	E2/AS1
AS 2050: 2002	Installation of roof tiles	E2/VM1
AS 2159: 1995	Rules for the design and installation of piling <i>Amend: 1</i>	B1/VM4
AS 2220:-	Emergency warning and intercommunication systems in buildings	
Part 1: 1989	Equipment design and manufacture	C/AS1
Part 2: 1989	System design, installation and commissioning	C/AS1
AS 2280: 1991	Ductile iron pressure pipes and fittings	E1/AS1
AS 2712: 1993	Solar water heaters – Design and construction	G12/AS1
AS 2845:-	Water supply – Mechanical backflow prevention devices	
Part 3: 1993	Field testing and maintenance	G12/AS1, HB/SS 7

		Where quoted
AS 2887: 1993	Plastic waste fittings	G13/AS1
AS 2890:-	Off-street parking	
Part 1: 1993	Car parking facilities	D1/AS1
Part 2: 1989	Commercial vehicle facilities	D1/AS1
AS 3147: 1992	Approval and test specification – Electric cables – Thermoplastic insulated for working voltages up to and including 0.6/1kV <i>Amend: 1, 2, 3</i>	G12/AS1
AS 3518:-	Acrylonitrile butadiene styrene (ABS) pipes and fittings for pressure applications	
Part 1: 1988	Pipes	G13/AS2
Part 2: 1988	Solvent cement fittings	G13/AS2
AS 3566	Self-drilling screws for the building and construction industries	E2/AS1
Part 2: 2002	Corrosion resistance	
AS 3571: 1989	Glass filament reinforced thermosetting plastics (GRP) pipes: Polyester based: Water supply, sewerage and drainage applications	G13/AS2
AS 3588: 1989	Shower bases and shower modules	G1/AS1
AS 3688: 1994	Water supply – Copper and copper alloy compression and capillary fittings and threaded end connectors	G10/AS1
AS 3706:-	Geotextiles – Methods of test	
Part 1: 1990	General requirements, sampling, conditioning, basic physical properties and statistical analysis	E1/VM1
AS 3730	Guide to the properties of paints for buildings	E2/AS1
AS 3786: 1993	Smoke alarms <i>Amends: 1, 2, 3</i>	F7/AS1
AS 4020: 2005	Testing of products for use in contact with drinking water	G12/AS1
AS 4046	Methods of testing roof tiles	
Part 9: 2002	Determination of dynamic weather resistance	
AS 4072:-	Components for the protection of openings in fire-resistant separating elements	C/AS1
Part 1: 1992	Service penetrations and control joints	C/AS1
AS 4085: 1992	Automatic sliding door assemblies	HB/SS 3
AS 4178: 1994	Electromagnetic door holders	HB/SS 3
AS 4139: 1993	Fibre reinforced concrete pipes and fittings	G13/AS2
AS 4276:-		
Part 3.1: 1995	Water plate microbiology – Pour plate method using plate count agar	HB/SS 9
AS 4290: 2000	Design and installation of revolving doors	HB/SS 3

British Standards Institution		Where quoted
BS 10: 1962	Specification for flanges and bolting for pipes, valves and fittings	G10/AS1
BSDD 175: 1988	Code of practice for the identification of potentially contaminated land and its investigation	F1/VM1
BS 437: 1978	Specification for cast iron spigot and socket drain pipes and fittings <i>Amend: 5877</i>	G13/AS2
BS 585:- Part 1: 1989	Wood stairs Specification for stairs with closed risers for domestic use, including straight and winder flights and quarter or half landings	D1/AS1
BS EN 988: 1997	Zinc and zinc alloys. Specification for rolled flat products for building	E2/AS1
BS 1470: 1987	Specification for wrought aluminium and aluminium alloys for general engineering purposes: plate, sheet and strip <i>Amend: 6032</i>	E1/AS1
BS 1600: 1992	Specification for dimensions of steel pipe for the petroleum industry	G14/VM1
BS 1640:- Part 3: 1968	Specification for steel butt-welding pipe fittings for the petroleum industry Wrought carbon and ferritic alloy steel fittings. Metric units <i>Amend: 905</i>	G10/AS1, G14/VM1
Part 4: 1968	Wrought and cast austenitic chromium-nickel steel fittings. Metric units	G10/AS1, G14/VM1
BS 1723:- Part 1: 1986	Brazing Specification for brazing	G10/AS1
BS 1845: 1984	Specification for filler metals for brazing	G10/AS1
BS 1965:- Part 1: 1963	Specification for butt-welding pipe fittings for pressure purposes Carbon steel <i>Amend: 5474, 4169</i>	G14/VM1
BS 2594: 1975	Specification for carbon steel welded horizontal cylindrical storage tanks	G14/VM1
BS 2598:- Part 1: 1980	Glass plant, pipeline and fittings Specification for properties of borosilicate glass 3.3	G14/VM1
Part 2: 1980	Specification for testing, handling and use	G14/VM1
Part 3: 1980	Specification for pipeline and fittings of nominal bore 15 to 150 mm: compatibility and interchangeability	G14/VM1
Part 4: 1980	Specification for glass plant components	G14/VM1

		Where quoted
BS 2640: 1982	Specification for Class II oxy-acetylene welding of carbon steel pipework for carrying fluids	G10/AS1, G14/VM1
BS 2870: 1980	Specification for rolled copper and copper alloys: sheet, strip and foil	E1/AS1
BS 3799: 1974 (1994)	Specification for steel pipe fittings, screwed and socket-welding for the petroleum industry	G10/AS1, G14/VM1
BS 4741: 1971	Specification for vertical cylindrical welded steel storage tanks for low-temperature service: single wall tanks for temperatures down to -50°C	G14/VM1
BS 4790: 1996	Method for determination of the effects of a small source of ignition on textile floor coverings (hot metal nut method)	C/AS1
BS 4991: 1974	Specification for propylene copolymer pressure pipe	G14/VM1
BS 4994: 1987	Specification for design and construction of vessels and tanks in reinforced plastics	G14/VM1
BS 5287: 1996	Specification for assessment and labelling of textile floor coverings tested to BS 4790	C/AS1
BS 5378:-	Safety signs and colours	
Part 1: 1980	Specification for colour and design	F8/AS1
BS 5395:-	Stairs, ladders and walkways	
Part 2: 1984	Code of practice for the design of helical and spiral stairs	D1/AS1
BS 5446:-	Components of automatic fire alarm systems for residential premises	
Part 1: 1990	Specification for self-contained smoke alarms and point-type smoke detectors <i>Amends: 6863, 7648, 9628</i>	F7/AS1
BS 5572: 1978	Code of practice for sanitary pipework	G13/VM1
BS 6037:-	Code of practice for the Planning, design, installation and use of permanently installed access equipment	
Part 1: 2003	Suspended access equipment	HB/SS 10
Part 2: 2004	Travelling ladders and gantries	HB/SS 10
BS 6283:-	Safety devices for use with hot water systems	
Part 1: 1991	Specification for expansion valves for pressures up to and including 10 bar	G12/AS1
Part 3: 1991	Specification for combined temperature and pressure relief valves for pressures up to and including 10 bar	G12/AS1
Part 4: 1991	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	G12/AS1

		Where quoted
BS 6374:-	Lining of equipment with polymeric materials for the process industries	
Part 1: 1985	Specification for lining with sheet thermoplastics	G14/VM1
Part 2: 1984	Specification for lining with non-sheet applied thermoplastics	G14/VM1
Part 3: 1984	Specification for lining with stoved thermosetting resins	G14/VM1
Part 4: 1984	Specification for lining with cold curing thermosetting resins	G14/VM1
Part 5: 1985	Specification for lining with rubbers	G14/VM1
BS 6464: 1984	Specification for reinforced plastics pipes, fittings and joints for process plants	G14/VM1
BS 6538: 1987	Air permeance of paper and board	E2/AS1
Part 3: 1987	Method for determination of air permeance using the Garley apparatus	
BS 6561: 1985	Specification for zinc alloy sheet and strip for building	E1/AS1
BS 6925: 1988	Specification for mastic asphalt for building and civil engineering (limestone aggregate)	E2/AS1
BS 7159: 1989	Code of practice for design and construction of glass-reinforced plastics (GRP) piping systems for individual plants or sites	G14/VM1
BS 8004: 1986	Code of practice for foundations	B1/VM4

New Zealand Publications

Building Research Association of New Zealand

BRANZ Bulletin 330: 1995 Thin flooring materials – 2. Preparation and laying. Appendix 1	E2/AS1
BRANZ Bulletin 411: 2001 Recommended timber cladding profiles	E2/AS1
BRANZ EM 4: 2005 Evaluation method for jointing systems for flush finished fibre cement sheet	E2/AS1
BRANZ EM 5: 2005 Evaluation method for adhesives and seam tapes for butyl and EPDM rubber membranes	E2/AS1
BRANZ House Insulation Guide: 1995	E3/AS1, H1/VM1/AS
BRANZ Paper C1: 1978 A construction guide to home insulation (second edition)	E3/AS1
BRANZ Technical paper P36: 1983 Food processing floors, a guide to design, materials and construction. W.R. Sharman	G3/AS1
ALF Manual: 1990 Annual loss factor design manual. An aid to thermal design of buildings. M.R. Bassett, R.C. Bishop and I.S. van der Werff	H1/VM1/Defs

Government Departments and Agencies

Department of Labour

Workplace exposure standards and biological indices for New Zealand: 1992	F1/VM1, G4/VM1
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Ministry of Agriculture and Fisheries

MQ 1: 1988 Qual approvals manual	G3/AS1
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Ministry of Economic Development

NZCEP 34: 2001 Electrical safety distances	G9/VM1
NZCEP 36: 1993 Harmonic levels	G9/VM1
NZCEP 51: 2004 Homeowner/occupier's electrical wiring work in domestic installations	G9/AS1
NZCEP 54: 2001 Installation of recessed luminaires and auxiliary equipment	C/AS1, G9/AS1

Where quoted

Ministry of Transport

Power Lift Rules: 1989

Rules for power lifts not exceeding 750 watts (one horsepower): 1985

New Zealand Forest Research Institute

Measurement of moisture content of assembled timber framing: 1993

New Zealand Meteorological Service

Average degree-day tables – selected NZ stations. (Miscellaneous publication 159, 1978)

COMMENT:

This publication is no longer available, but the relevant information is summarised in the Degree-days data sheets of the BRANZ ALF Manual.

Transit NZ

Bridge manual: Design and evaluation: 1994

Amend: 1

New Zealand Legislation

Fencing of Swimming Pools Act 1987

Fire Safety and Evacuation of Buildings Regulations 1992

Gas Regulations 1993

Hazardous Substances and New Organisms Act 1996

Hazardous Substances (Classification) Regulations 2001

Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001

Hazardous Substances (Dangerous Goods and Scheduled Toxic Substances) Transfer Notice 2004

Hazardous Substances (Emergency Management) Regulations 2001

Health & Safety in Employment Act 1992

Resource Management Act 1991

New Zealand Geomechanics Society

Guidelines for the field descriptions of soils and rocks in engineering use. Nov 1988

New Zealand Concrete Masonry Manual: 1999 Cement and Concrete Association of New Zealand

New Zealand Metal Roof and Wall Cladding Code of Practice: 2003
New Zealand Metal Roofing Manufacturers Inc

Where quoted

D2/AS2, HB/SS 8

D2/AS2, HB/SS 8

E2/AS1

H1/Defs

B1/VM1

F4/AS1

C/AS1

G12/AS1

F3/VM1

F3/VM1

F3/VM1

F3/VM1

F3/VM1

HB/SS 9

E1/VM1

B1/VM1

E2/AS1

E2/AS1

Australian Publications**Building Control Commission, State of Victoria, Australia**

Smoke management in large spaces in buildings: 1998
Milke and Klote

Where quoted**C/AS1****Australia/NZ Publications****Australian and New Zealand Environment and Conservation Council**

Guidelines for assessment and management of contaminated sites: 1992

F1/VM1**British Publications****Building Research Establishment (UK)**

BRE Defect action sheet DAS 131: May 1989

External walls: Combustible external plastics insulation:
Horizontal fire barriers

C/AS1

BRE Report 135: 1988

Fire performance of external thermal insulation for walls in
multi-storey buildings. Rogowski B.F., Ramaprasad R., Southern J.R.

C/AS1

BRE Report 186: 1990

Design principles for smoke ventilation in enclosed shopping centres.
Morgan and Gardner

C/AS1

BRE Report 258: 1992

Design approaches for smoke control in atrium buildings.
Hansell and Morgan

C/AS1**Chartered Institution of Building Services Engineers, London**

CIBSE Code Series A: 1996

Air distribution systems

G4/VM1

International Publications

EIFS Industry Members Association

EIMA 101.91: 1992 Standard Guide for resin of resin coated glass fibre mesh in exterior insulation and finish systems (EIFS), Class PB.

The European Committee for Standardisation

EN 81:- Safety rules for the construction and installation of lifts

Part 1: 1998 Electric lifts

Part 2: 1998 Hydraulic lifts

EN 115: 1983 Safety rules for the construction of escalators and passenger conveyors

EN 12380: 1999 Air admittance valves for drainage systems – Requirements and test methods

Eurocode DD ENV 1991-2-2: 1996

Eurocode 1: Basis of design actions on structures

Part 2.2: Actions on structures exposed to fire

International Standards Organisation, Geneva

ICBO Evaluation Services Inc AC148: Acceptance criteria for flashing materials

ISO 140/VII: 1978 Field measurements of impact sound insulation of floors

ISO 834: 1975 Fire resistance tests – elements of building construction

ISO 3008: 1976 Fire resistance tests – door and shutter assemblies

ISO 3009: 1976 Fire resistance tests – glazed elements

ISO 9223: 1992 Corrosion of metals and alloys; corrosivity of atmospheres; classification

ISO 11600: 2002 Building Construction – Jointing products
Classification and requirements for sealants

ISO/TS 15510: 2003 Stainless steels – chemical composition

Underwriters Laboratories Inc

UL 217: 1997 Single and multiple station smoke alarms

Underwriters' Laboratories of Canada

CAN/ULC S531: 1995 Smoke alarms

Where quoted

E2/AS1

D2/AS1, HB/SS 8

D2/AS1, HB/SS 8

D2/AS3, HB/SS 8

G13/AS1

C/AS1

E2/AS1

G6/VM1

C/AS1

C/AS1

C/AS1

E2/AS1

E2/AS1

E2/AS1

F7/AS1

F7/AS1

World Health Organisation/Food and Agriculture Organisation

Environmental Health Criteria 70

“Environment health criteria” for various chemicals

Where quoted

F1/VM1

Evaluation of certain food additives and
contaminants, Technical report series 776
Geneva: 1989

F1/VM1

IARC Monographs on the evaluation of carcinogenic
risks to humans for individual chemicals, groups
of chemicals, or processes. Published by the
International Agency for Research on Cancer

F1/VM1

Principles for the safety assessment of food
additives and contaminants in food,
Geneva: 1987

F1/VM1

	Where quoted
United States of America Publications	
American Iron and Steel Institute	
Fire-safe structural steel – a design guide: 1983	C/AS1
American National Standards Institute and American Society of Mechanical Engineers	
ANSI/ASME B16.1: 1989 Cast iron pipe flanges and flanged fittings, Class 25, 125, 250 and 800	G10/AS1
ANSI/ASME B16.3: 1985 Malleable-iron threaded fittings, Classes 150 and 300	G10/AS1, G14/VM1
ANSI/ASME B16.5: 1988 Pipe flanges and flanged fittings, steel-nickel alloy and other special alloys	G10/AS1, G14/VM1
ANSI/ASME B16.9: 1990 Factory-made wrought steel butt-welding fittings	G10/AS1, G14/VM1
ANSI/ASME B31.3: 1990 Chemical plant and petroleum refinery piping	G14/VM1
ANSI B2.1: 1968 Screwing and socketing	G14/VM1
ANSI B16.11: 1980 Forged steel fittings, socket-welding and threaded ASME Boiler and pressure vessel code-VIII pressure vessels	G10/AS1, G14/VM1 G14/VM1
American Petroleum Institute	
API SPEC 5L: 1991 Specification for line pipe	G10/AS1, G14/VM1
API STD 620: 1990 Design and construction of large, welded, low-pressure storage tanks	G14/VM1
API STD 650: 1988 Welded steel tanks for oil storage	G14/VM1
API STD 1104: 1988 Welding of pipelines and related facilities	G10/AS1, G14/VM1
American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)	
Design of smoke management systems. Klotz and Milke 1992	C/AS1
American Society of Sanitary Engineers	
ASSE 1050: 1991 Performance requirements for air admittance valves for plumbing DWV systems stack type devices	G13/AS1
ASSE 1051: 1992 Performance requirements for air admittance valves for plumbing drainage systems	G13/AS1
American Society for Testing and Materials	
ASTM A 53 – 90a Specification for pipe, steel, black and hot-dipped, zinc-coated welded and seamless	G10/AS1, G14/VM1

	Where quoted
ASTM A 106 – 91a Specification for seamless carbon steel pipe for high temperature service	G10/AS1
ASTM C 236: 1987 Standard test method for steady state thermal performance of building assemblies by means of a guarded hot box	E3/AS1
ASTM D 1143: 1981 Test method for piles under static axial compressive load	B1/VM4
ASTM C 1330: 2002 Standard Specification for Cylindrical Sealant Backing for use with Cold Liquid Applied Sealants	E2/AS1
ASTM C 1549: 2002 Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer	E2/AS1
ASTM D 1667: 1997 Standard Test Specification for Flexible Cellular Materials – Vinyl Chloride Polymers and Copolymers (Closed-cell foam)	E2/AS1
ASTM D 2240: 2003 Standard Test method for Rubber Property	E2/AS1
ASTM D 6134: 1997 Standard Specification for Vulcanised Rubber Sheets Used in Waterproofing Systems	
ASTM E 96: 1992 Standard test methods for water vapour transmission of materials	E2/AS1
ASTM E 336: 1990 Method for measurement of airborne sound insulation in buildings	G6/VM1
ASTM E 413: 1987 Classification for rating sound insulation	G6/VM1
ASTM E 492: 1990 Test method for laboratory measurement of impact sound transmission through floor-ceiling assemblies using a tapping machine	G6/VM1
ASTM E 903: 1996 Standard Test Method for Solar Absorbance, Reflectance, and Transmittance of Materials Using Integrating Spheres	E2/AS1
ASTM E 989: 1989 Classification for determination of impact insulation class (IIC)	G6/VM1
ASTM E 2098: 2000 Standard Test Method for Determining Tensile Breaking Strength of Glass Fibre Reinforcing Mesh for Use in Class PB Exterior Insulation and Finish Systems (EIFS), after Exposure to a Sodium Hydroxide Solution	E2/AS1
ASTM E 2134: 2001 Standard Test Method for Evaluation the Tensile-Adhesion Performance of an Exterior Insulation and Finish System (EIFS)	E2/AS1

	Where quoted
ASTM G 154: 2000 Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials	E2/AS1
ASTM G 155: 2000 Standard Practice for Operating Xenon Arc Light Apparatus for UV Exposure of Nonmetallic Materials	E2/AS1
International Conference of Building Officials, America	
Uniform Building Code Standard 4.1: 1997 Proscenium fire safety curtains	C/AS1
Uniform Building Code Standard 26-2: 1997 Test method for the evaluation of thermal barriers	C/AS1
National Fire Protection Association of America	
NFPA 92B: 1995 Guide for smoke management systems in malls, atria and large areas	C/AS1, F6/AS1
NFPA 285: 1998 Standard method of test for the evaluation of flammability characteristics of exterior non load bearing wall assemblies containing components using the intermediate scale, multi-storey test apparatus	C/AS1
United States Environmental Protection Agency (EPA)	
USEPA SW 846: 1986 Test methods for evaluating solid waste	F1/VM1
EPA/540/1 – 89/002: 1989 Risk assessment guidance for Superfund, Vol 1. Human health evaluation manual (Part A) Interim final. Prepared by USEPA Office of Emergency and Remedial Response	F1/VM1
Federal Specification Standard TT-S-00230C: Elastomeric type, cold applied single component for caulking, sealing, and glazing in buildings, building areas (plazas, decks, pavements, and other structures)	E2/AS1
Cross-connection Control Manual: 1989	HB/SS 7
United States Public Health Service	
Toxicological profiles on individual chemicals. Prepared by the Agency for Toxicological Substances and Disease Registry, in collaboration with the US Environmental Protection Agency	F1/VM1
Miscellaneous Publication	
Casarett and Doull's Toxicology. The basic science of poisons. 4th ed. Macmillan. New York 1991. Klassen CD, Amdur MO, Doull J (Eds)	F1/VM1

Definitions

Many of the definitions in this section come from the Building Act 2004, regulations, including the Building Code, and Compliance Documents. Although every effort has been made to ensure definitions are accurate at the time of publication, it is possible that definitions may become out of date as changes occur to the legislation and Compliance Documents. In the event there is any discrepancy between the definitions in this section and the definitions in the legislation or Compliance Documents, the definitions in the legislation and Compliance Documents will prevail.

Note that some legislation and Compliance Documents may contain different definitions for the terms listed below. When using particular legislation or a Compliance Document, reference should be made to the definitions provided in that document.

Source Key:

BA04	Building Act 2004
BR1	Building Regulations 1992
BR2	Building (Specified Systems, Change the Use, and Earthquake-prone Buildings) Regulations 2005
Code	New Zealand Building Code
EA	Electricity Act 1992
FSA	Fire Service Act 1975
HB	Handbook
HSNOA	Hazardous Substances and New Organisms Act 1996
LGA	Local Government Act 1974 or 2002
PGDA	Plumbers, Gasfitters, and Drainlayers Act 1976
RA	Railway Act 2005
RMA	Resource Management Act 1991
CD-(Code clause)	Compliance Document for given Code clause (eg, CD-G13)
DG	Building Consent Authority Development Guide

Definition	Source
A	
Abutment The part of the valley side against which the <i>dam</i> is constructed.	DG
Acceptable risk The level of risk the public is prepared to accept without further management. The risk is the combination of the probability and the consequence of a specified hazardous event.	DG
Acceptable Solution means a solution that must be accepted as complying with the <i>Building Code</i> .	BA04
Access chamber A chamber with working space at <i>drain</i> level through which the <i>drain</i> passes either as an open channel or as a pipe incorporating an <i>inspection point</i> .	CD-E1, CD-G13
Access point A place where access may be made to a <i>drain</i> or <i>discharge pipe</i> for inspection, cleaning or maintenance; and may include a <i>cleaning eye</i> , <i>inspection point</i> , <i>rodding point</i> , <i>inspection chamber</i> or <i>access chamber</i> .	CD-G13
Access route A continuous route that permits people and goods to move between the apron or <i>construction</i> edge of the <i>building</i> to spaces within a <i>building</i> , and between spaces within a <i>building</i> .	Code

Definition	Source
Accessible Having features to permit use by <i>people with disabilities</i> .	Code
Accessible route An <i>access route</i> usable by <i>people with disabilities</i> . It shall be a continuous route that can be negotiated unaided by a wheelchair user. The route shall extend from street <i>boundary</i> or car parking area to those spaces within the <i>building</i> required to be <i>accessible</i> to enable <i>people with disabilities</i> to carry out normal activities and processes within the <i>building</i> .	Code
Accessible stairway A <i>stairway</i> having features for use by a <i>person with a disability</i> . <i>Buildings</i> required to be <i>accessible</i> shall have at least one <i>accessible stairway</i> leading off an <i>accessible route</i> whether or not a lift is provided.	CD-C
Accreditation certificate means a certificate that was issued by the Building Industry Authority under the Building Act 1991.	HB
COMMENT: <i>Accreditation certificates</i> have become product certificates under the <i>Building Act 2004</i> and are subject to the product certification scheme under the <i>Building Act 2004</i> .	
Active conductor Any conductor in which the electrical potential differs from that of a neutral conductor or earth.	CD-F8
Adequate means <i>Adequate</i> to achieve the objectives of the <i>Building Code</i> .	Code
Adjacent building A nearby <i>building</i> , including an adjoining <i>building</i> , whether or not erected on <i>other property</i> .	Code
Air gap The vertical distance through air between the lowest point of the water supply outlet and the <i>flood level rim</i> of the equipment or the <i>fixture</i> into which the outlet discharges.	CD-G12
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.	CD-G13
Air seal A continuous seal fitted between a window or door reveal and the surrounding wall <i>framing</i> to prevent the flow of air into the interior of the <i>building</i> .	CD-E2
Allotment has the meaning given to it by section 10 of the <i>Building Act 2004</i> . Section 10 states: “(1) In this Act, unless the context otherwise requires, allotment means a parcel of land— (a) that is a continuous area of land; and (b) whose boundaries are shown on a survey plan, whether or not as a subdivision— (i) approved by way of a subdivision consent granted under the Resource Management Act 1991; or (ii) allowed or granted under any other Act; and (c) that is— (i) subject to the Land Transfer Act 1952 and comprised in 1 certificate of title or for which 1 certificate of title could be issued under that Act; or	BA04

Definition	Source
<p>(ii) not subject to that Act and was acquired by its owner under 1 instrument of conveyance</p> <p>(2) For the purposes of subsection (1), an allotment is taken—</p> <p>(a) to be a continuous area of land even if part of it is physically separated from any other part by a road or in any other manner, unless the division of the allotment into those parts has been allowed by a subdivision consent granted under the Resource Management Act 1991 or a subdivision approval under any former enactment relating to the subdivision of land:</p> <p>(b) to include the balance of any land from which any allotment is being or has been subdivided."</p>	
Alter in relation to a <i>building</i> , includes to rebuild, re-erect, repair, enlarge and extend the <i>building</i> .	BA04
Alternative solution means a solution that is compliant with the <i>Building Code</i> but is not part of the <i>Compliance Document</i> .	HB
Amenity means an attribute of a <i>building</i> which contributes to the health, physical independence, and well being of the <i>building's</i> users but which is not associated with disease or a specific illness.	Code
Anti-ponding board A board laid under the lowest row of concrete and clay roof tiles and supports the <i>roof underlay</i> . The board is sloped to ensure moisture under the tiles is directed to the exterior of the roof.	CD-E2
Appliance hearth A layer of <i>non-combustible</i> material under or near an appliance. It may be either part of the <i>building</i> structure or an overlay on a <i>combustible</i> floor.	CD-C
Appurtenant structure , in relation to a <i>dam</i> , means a structure that is integral to the proper functioning of the <i>dam</i> .	BA04
Apron flashing A near flat or sloping <i>flashing</i> with a vertical upstand, used at junctions between roofs and walls.	CD-E2
Asbestos as defined by the Health and Safety in Employment (Asbestos) Regulations 1983 means:	CD-F2
(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.	

COMMENT:

Asbestos now has the meaning given to it by Regulation 2 of the Health and Safety in Employment (Asbestos) Regulations 1998. This meaning is:

- (a) Amosite, chrysotile, crocidolite, fibrous actinolite, fibrous anthophyllite, or fibrous tremolite; or
- (b) A mixture containing a mineral specified in paragraph (a); or
- (c) A material that is composed wholly or partly of a mineral specified in paragraph (a); or
- (d) A material or article that is contaminated by a mineral specified in paragraph (a):

Definition**Source**

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.

CD-G4

Authority means the Building Industry Authority that was established under the Building Act 1991.

HB**COMMENT:**

The Authority was dissolved under the *Building Act 2004* and its functions and powers transferred to the Department of Building and Housing.

B

Backflow A flowing back or reversal of the normal direction of the flow caused by *back-pressure* and includes *back-siphonage*.

CD-C

Backflow prevention device A device that prevents *backflow*.

CD-C, CD-G12

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

CD-G12

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

CD-G12

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

CD-B1, CD-B2

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

CD-B2, CD-F4

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

CD-C**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.

Base metal thickness (BMT) The thickness of the bare or base metal before any subsequent coating, such as galvanizing.

CD-E2

Bird's beak A double fold applied to the edge of a horizontal metal *flashing* to stiffen the edge and to assist in deflecting moisture away from the *cladding system* below. Refer also *Kick-out* and *Drip edge*.

CD-E2**COMMENT:**

A *bird's beak* is used at the bottom of a *capping* to deflect water away from the *enclosed balustrade cladding*.

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.

CD-C

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

CD-B1

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

CD-G13

Definition	Source
Branch vent pipe A <i>vent pipe</i> that serves two or more <i>fixture vent pipes</i> .	CD-G13
Building has the meaning given to it by sections 8 and 9 of the <i>Building Act 2004</i> .	BA04

Section 8 states:

“8 Building: what it means and includes:

- (1) In this Act, unless the context otherwise requires, building—
 - (a) means a temporary or permanent movable or immovable structure (including a structure intended for occupation by people, animals, machinery, or chattels); and
 - (b) includes—
 - (i) a mechanical, electrical, or other system; and
 - (ii) a fence as defined in section 2 of the Fencing of Swimming Pools Act 1987; and
 - (iii) a vehicle or motor vehicle (including a vehicle or motor vehicle as defined in section 2(1) of the Land Transport Act 1998) that is immovable and is occupied by people on a permanent or long term basis; and
 - (iv) a mast pole or a telecommunication aerial that is on, or forms part of, a building and that is more than 7 m in height above the point of its attachment or base support (except a dish aerial that is less than 2 m wide); and
 - (c) includes any 2 or more buildings that, on completion of building work, are intended to be managed as one building with a common use and a common set of ownership arrangements; and
 - (d) includes the non-moving parts of a cable car attached to or servicing a building; and
 - (e) after 30 March 2008, includes the moving parts of a cable car attached to or servicing a building
- (2) Subsection (1)(b)(i) only applies if—
 - (a) the mechanical, electrical, or other system is attached to the structure referred to in subsection (1)(a); and
 - (b) the system—
 - (i) is required by the Building Code; or
 - (ii) if installed, is required to comply with the Building Code.
- (3) Subsection (1)(c) only applies in relation to—
 - (a) subpart 2 of Part 2; and
 - (b) a building consent; and
 - (c) a code compliance certificate; and
 - (d) a compliance schedule.
- (4) This section is subject to section 9.”

Definition**Source**

Section 9 states:

“9 Building: what it does not include

In this Act, **building** does not include—

- (a) a NUO system, or part of a NUO system, that—
 - (i) is external to the building; and
 - (ii) is connected to, or is intended to be connected to, the building to provide for the successful functioning of the NUO system in accordance with the system’s intended design and purpose; and
 - (iii) is not a mast pole or a telecommunication aerial that is on, or forms part of, a building; or
- (b) cranes (including any cranes as defined in regulations made under the Health and Safety in Employment Act 1992); or
- (c) any of the following, whether or not incorporated within another structure:
 - (i) ski tows;
 - (ii) other similar stand-alone machinery systems; or
- (d) any description of vessel, boat, ferry, or craft used in navigation—
 - (i) whether or not it has a means of propulsion; and
 - (ii) regardless of what that means of propulsion is; or
- (e) 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) any offshore installation (as defined in section 222 of the Maritime Transport Act 1994) to be used for petroleum mining; or
- (g) containers as defined in section 2(1) of the Hazardous Substances and New Organisms Act 1996; or
- (h) magazines as defined in section 222 of the Hazardous Substances and New Organisms Act 1996; or
- (i) scaffolding used in the course of the construction process; or
- (j) falsework.”

Building Act 2004 (the Building Act) means the principal legislation dealing with building controls in New Zealand.

HB

COMMENT:

The *Building Act* applies to the construction, alteration, and demolition of new and existing buildings throughout New Zealand.

Building certifier means a *person* approved as a *building certifier* by the *Authority* under the *former Act*.

HB

COMMENT:

Building certifiers are not provided for under the *Building Act 2004*. There are no longer any *building certifiers*.

Definition	Source
Building Code means the regulations made under section 400 of the <i>Building Act 2004</i> .	BA04
COMMENT: No regulations have yet been made under section 400 of the <i>Building Act 2004</i> . However, the <i>Building Code</i> is currently the First Schedule of the Building Regulations 1992, which continue in force under regulation 8(2) of the Building Forms (Regulations) 2004.	
Building consent means a consent to carry out <i>building work</i> granted by a <i>building consent authority</i> under section 49 of the <i>Building Act 2004</i> .	BA04
Building consent accreditation body means the person referred to in section 248(2) of the <i>Building Act 2004</i> .	BA04
Building consent authority (BCA) means a <i>person</i> whose name is entered in the register referred to in section 273(1)(a) of the <i>Building Act 2004</i> .	BA04
Building element Any structural and non-structural component and assembly incorporated into or associated with a <i>building</i> . Included are <i>fixtures</i> , services, <i>drains</i> , permanent mechanical installations for access, glazing, partitions, ceilings and temporary supports.	Code
Building height The vertical distance between the floor level of the lowest <i>final exit</i> from the <i>building</i> ; and the highest occupied floor level containing or supporting any <i>purpose group</i> other than IE, IA or ID, or penthouses used to enclose <i>stairways</i> , liftshafts or machinery rooms located on or within the roof.	Code
Building levy means a levy payable under section 53 of the <i>Building Act 2004</i> .	BA04
Building method or product has the meaning given to it by section 20 of the <i>Building Act 2004</i> . Section 20(2)(c) states: “(c) building methods, methods of construction, building design, or building materials (building methods or products) that have a current product certificate issued under section 269.”	BA04
Building performance index (BPI) in relation to a <i>building</i> , means the energy from a <i>network utility operator</i> or a depletable resource (measured in kilowatt-hours per square metre of floor area and per <i>degree-day</i> , 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 <i>building</i> 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 <i>building</i> . (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 m ² 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).	Code

Definition	Source
<p>Building work—</p> <p>(a) means work—</p> <ul style="list-style-type: none"> (i) for, or in connection with, the <i>construction, alteration</i>, demolition, or removal of a <i>building</i>; and (ii) on an <i>allotment</i> that is likely to affect the extent to which an existing <i>building</i> on that <i>allotment</i> complies with the <i>Building Code</i>; and <p>(b) includes <i>sitework</i>; and</p> <p>(c) includes design work (relating to <i>building work</i>) that is design work of a kind declared by the Governor-General by Order in Council to be restricted <i>building work</i> for the purposes of this Act; and</p> <p>(d) in Part 4, and the definition in this section of “supervise”, also includes design work (relating to building work) of a kind declared by the Governor-General by Order in Council to be <i>building work</i> for the purposes of Part 4]</p>	BA04
<p>Building warrant of fitness (BWof) means the warrant of fitness an <i>owner</i> of a <i>building</i> must supply to a <i>territorial authority</i> under section 108 of the <i>Building Act 2004</i>.</p>	HB
<p>Building wrap A building paper, synthetic wrap or sheathing used as part of the wall <i>cladding system</i> to assist the control of moisture by ensuring moisture which occasionally penetrates the wall <i>cladding</i> is directed back to the exterior of the <i>building</i>.</p>	CD-E2
<p>Butt flashing A preformed wall <i>flashing</i>, used to flash windows and corners on horizontal profiled metal wall <i>cladding</i>. A <i>butt flashing</i> is shaped to underflash the <i>cladding</i>, with the <i>cladding</i> butting against the exposed box portion of the <i>flashing</i>.</p>	CD-E2
C	
<p>Cable car—</p> <p>(a) means a vehicle—</p> <ul style="list-style-type: none"> (i) that carries people or goods on or along an inclined plane or a suspended cable; and (ii) that operates wholly or partly outside of a <i>building</i>; <p>And</p> <ul style="list-style-type: none"> (iii) the traction for which is supplied by a cable or any other means; but <p>(b) does not include a lift that carries people or goods between the floors of a <i>building</i>.</p>	BA04

Definition	Source
Cantilevered deck A <i>deck</i> where no support is provided at the outer extremities of the <i>deck</i> .	CD-E2
COMMENT: <i>Cantilevered decks</i> are often constructed by extending <i>framing</i> members through the <i>cladding</i> beyond the <i>building</i> face. <i>Cantilevered decks</i> are sometimes known as balconies.	
Capping A <i>flashing</i> formed to cover the top of an <i>enclosed balustrade</i> or <i>parapet</i> . Also known as a coping.	CD-E2
Cavity barrier A <i>construction</i> provided to close openings within a <i>concealed space</i> against the passage of <i>fire</i> , or to restrict the spread of <i>fire</i> within such spaces.	CD-C
Cavity batten A vertical packing member used to create a <i>drained cavity</i> as part of a <i>cladding system</i> .	CD-E2
Cavity spacer A short block used to provide intermittent support for fixings or pipe penetrations through a <i>drained cavity</i> , while not interrupting drainage within the cavity. A <i>cavity spacer</i> is required to be set to a slight fall (5° minimum from horizontal) to allow drainage of any moisture from the top.	CD-E2
Cavity wall A term used to describe a wall that incorporates a <i>drained cavity</i> .	CD-E2
Certificate of acceptance means a certificate issued under section 96 of the <i>Building Act 2004</i> .	BA04
Certificate for public use means a certificate issued under section 363A of the <i>Building Act 2004</i> .	HB
Change the use for the purposes of sections 114 and 115 of the <i>Building Act 2004</i> , change the use, in relation to a <i>building</i> , means to change the use (determined in accordance with regulation 6) of all or a part of the <i>building</i> from one use (the old use) to another (the new use) and with the result that the requirements for compliance with the <i>Building Code</i> in relation to the new use are additional to, or more onerous than, the requirements for compliance with the <i>Building Code</i> in relation to the old use.	BR2
Check valve (or non-return valve) A valve that permits flow in one direction but prevents a return flow and is part of a <i>backflow prevention device</i> .	CD-G12
Chimney A <i>non-combustible</i> structure which encloses one or more <i>flues</i> , <i>fireplaces</i> or other heating appliances.	CD-B1, CD-C, CD-G4
Chimney back The <i>non-combustible</i> wall forming the back of a <i>fireplace</i> .	CD-B1, CD-C
Chimney base That part of a <i>chimney</i> which houses the <i>fireplace</i> .	CD-B1
Chimney breast The front <i>fireplace</i> wall <i>construction</i> above the <i>fireplace</i> opening.	CD-C
Chimney jambs The side walls of a <i>fireplace</i> .	CD-B1, CD-C
Cladding The exterior weather-resistant surface of a <i>building</i> .	CD-E2
COMMENT: Includes any supporting substrate and, if applicable, surface treatment.	

Definition	Source
Cladding system The weatherproof enclosure of a <i>building</i> , including <i>building wraps</i> , <i>claddings</i> and their fixings, windows, doors and all penetrations, <i>flashings</i> , seals, joints and junctions. Where required by E2/AS1, the <i>cladding system</i> shall include a <i>drained cavity</i> .	CD-E2
Classified use means a <i>classified use</i> listed in clause A1 of the <i>Building Code</i> .	BR1
Cleaning eye A small <i>diameter access point</i> usually formed as part of a fitting or trap.	CD-G13
Code compliance certificate means a certificate issued by a <i>building consent authority</i> under section 95 of the <i>Building Act 2004</i> .	BA04
Combined waste pipe A <i>discharge pipe</i> which serves two or more <i>waste pipes</i> .	CD-G13
Combustible See <i>non-combustible</i> .	CD-B1, CD-C
Combustion appliance A slow combustion stove, a free standing metal cone fireplace, a cast iron pot belly stove, an oil burning space heater, or a vented gas burning heater.	Code
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 <i>service ramp</i> or <i>accessible ramp</i> .	CD-D1
Common stairway A <i>stairway</i> which is used, or intended to be used, by the public whether as of right or not, and is not a <i>private stairway</i> , <i>service stairway</i> or <i>accessible stairway</i> .	CD-D1
Compliance document has the meaning given to it by section 22 of the Building Act 2004. Section 22 states: “22. Compliance document for use in establishing compliance with Building Code— (1) The chief executive may, by notice in the Gazette, issue a document for use in establishing compliance with the Building Code (a Compliance Document). (2) A person who complies with a Compliance Document must, for the purposes of this Act, be treated as having complied with the provisions of the Building Code to which the document relates. (3) Subsection (2) is subject to any regulations referred to in section 20”.	BA04
Compliance schedule means a <i>compliance schedule</i> required under section 100 of the <i>Building Act 2004</i> .	BA04
Compliance schedule statement means a statement issued by a <i>territorial</i> or <i>regional authority</i> referred to in section 105(e) of the Building Act 2004.	HB

Definition	Source
Concealed space Any part of the space within a <i>building</i> that cannot be seen from an <i>occupied space</i> .	Code
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 <i>firecell</i> and the like, but not a <i>protected shaft</i> .	
Constant pressure means subjected to the sustained force of fluid forming the reservoir. When there is no water in a reservoir, there is no pressure. When a reservoir is partially filled, there is a constant pressure – in terms of it being a pressure sustained in time.	DG
Construct in relation to a <i>building</i> , includes to design, build, erect, prefabricate, and relocate the <i>building</i> .	BA04
Contaminant includes any substance (including gases, odorous compounds, 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.	RMA
(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.	
Controlled area That area where the use of radioactive material or an irradiating apparatus may, in the opinion of the <i>licensee</i> , present a hazard to <i>persons</i> within that area.	CD-F8
Control joint A joint designed to prevent damage by accommodating movement. See also <i>Expansion joint</i> .	CD-E2
Cool location means a location in New Zealand where the <i>degree-day total</i> is 920 or more.	Code
Cross connection Any actual or potential connection between a <i>potable water</i> supply and a source of contamination.	CD-G12

D

Dam	BA04
(a) means an artificial barrier, and its appurtenant structures, that—	
(i) is constructed to hold back water or other fluid under constant pressure so as to form a reservoir; and	
(ii) is used for the storage, control, or diversion of water or other fluid; and	
(iii) retains 3 or more metres depth, and holds 20,000 or more cubic metres volume, of water or other fluid; and	

Definition**Source**

(b) includes—

- (i) a flood control *dam*; and
- (ii) a natural feature that has been significantly modified to function as a *dam*; and
- (iii) a canal; but

(c) does not include a stopbank designed to control floodwaters.

COMMENT:

20,000 cubic metres is equivalent to six Olympic size swimming pools.
Note: An Olympic swimming pool size is 50 m long x 25 m wide x 2 m deep.

Dam safety assurance programme means a *dam safety assurance programme* prepared by an owner of a *dam* under section 140 of the *Building Act 2004*. **BA04**

COMMENT:

In order for *dams* to maintain their integrity ongoing monitoring, maintenance and repair is essential. For those *dams* classified as medium or high potential impact, *dam* owners have to prepare and submit a safety assurance programme to the *regional authority* on an annual basis.

Dam compliance certificate A certificate issued by the owner of a *dam* annually stating that all procedures in the *dam safety assurance programme* have been fully complied with during the previous 12 months. **DG**

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. **CD-E2**

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.) **CD-B2, CD-E2**

Dangerous goods Any materials included in the UN classification, classes 2-5. **CD-F8**

COMMENT:

See *Hazardous substance*.

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). **CD-F8**

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

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*.

Deck An open platform projecting from an exterior wall of a *building* and supported by *framing*. A *deck* may be over enclosed internal spaces, or may be open underneath. **CD-E2**

Refer also *Enclosed deck*.

Also known as a balcony.

Definition	Source
Degree-day in relation to any location on any day, –	Code
(a) If a base temperature of 15°C 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 15°C 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 <i>degree-days</i> 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).	Code
Department means the Department of Building and Housing.	HB
Determination means a determination made by the Chief Executive under subpart 1 of Part 3 of the <i>Building Act 2004</i> .	BA04
Developed length The total length along the centre line of a pipe including fittings and bends.	CD-G13
Diameter (or bore) The nominal internal <i>diameter</i> .	CD-G12, CD-G13
Direct fixed A term used to describe a wall <i>cladding</i> attached directly to the wall <i>framing</i> , without the use of a <i>drained cavity</i> .	CD-E2
Discharge pipe Any pipe that is intended to convey discharge from <i>sanitary fixtures</i> or <i>sanitary appliances</i> .	CD-G13
Discharge stack A <i>discharge pipe</i> that has one or more <i>discharge pipe</i> connections, and which is vented at one end via a <i>discharge stack vent</i> .	CD-G13
Discharge stack vent A <i>vent pipe</i> connected to the top of the <i>discharge stack</i> .	CD-G13
Discharge unit The unit of measure for the discharge (hydraulic load) in the <i>plumbing system</i> , and is based on the rate, duration and frequency of discharge from a <i>sanitary fixture</i> or <i>sanitary appliance</i> .	CD-G13
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.	CD-C, CD-F8
Dormer or dormer window A framed structure that projects from a sloping roof, and has a window at its outer end.	CD-E2
Drain A pipe normally laid below ground level including fittings and equipment and intended to convey <i>foul water</i> or <i>surface water</i> to an <i>outfall</i> .	Code

Definition	Source
Drained cavity A cavity space, immediately behind a wall <i>cladding</i> , that has vents at the base of the wall. Also known as a drained and vented cavity and referred to in E2/AS1 as a cavity. A <i>drained cavity</i> assists drying by allowing water which occasionally penetrates the wall <i>cladding system</i> to drain to the exterior of the <i>building</i> , and any remaining moisture to dry by evaporation. Where E2/AS1 requires a nominal 20 mm <i>drained cavity</i> , the depth shall be between limits of 18 mm and 25 mm. For definition of masonry veneer cavity refer to SNZ HB 4236.	CD-E2
Drain vent pipe Any pipe which is intended to permit the movement of air into and out of the <i>drain</i> and <i>sewer</i> .	CD-G13
Draught diverter A device, without moving parts, fitted in the <i>flue</i> of an appliance for isolating the combustion system from the effects of pressure changes in the secondary <i>flue</i> .	CD-G4, CD-C
Drip edge Fold(s) applied to the edge of a horizontal metal <i>flashing</i> to deflect moisture away from the <i>cladding system</i> below. Refer also <i>Bird's beak</i> and <i>Kick-out</i> .	CD-E2
Durable Resistant to wear and decay.	CD-B2
Dwang A short horizontal member fixed between vertical <i>framing</i> timbers. Also known as nogging.	CD-E2
E	
Early childhood centre A facility used for the education or care of children under the age of six, and required to be licensed under the Education (Early Childhood Centres) Regulations 1998.	CD-C
Eaves That part of the roof <i>construction</i> , including <i>cladding</i> , fascia and gutter, that extends beyond the exterior face of the wall.	CD-E2
EIFS (Exterior Insulation and Finish System) A polystyrene sheet-based <i>cladding system</i> that uses mesh reinforced polymer-modified cement-based or polymer-based plaster base coats and a protective top coating.	CD-E2
Electrical fixed appliance An electrical appliance which is fixed-wired to the <i>electrical installation</i> , or intended to remain permanently attached and form part of the <i>building</i> .	Code
Electrical installation Any <i>electrical fixed appliances</i> and components used in the reticulation of electricity, which are intended to remain permanently attached to and form part of the <i>building</i> .	Code
Electrical supply system The source of electricity external to the <i>electrical installation</i> .	Code
Electrolytic corrosion Galvanic corrosion commonly resulting from the contact of two dissimilar metals when an electrolyte such as water is present.	CD-E2
Enclosed balustrade A timber-framed barrier with <i>cladding</i> across all exposed faces.	CD-E2

Definition	Source
Enclosed deck A <i>deck</i> , whether over an interior or exterior space, that has an impermeable upper surface and is closed on the underside. May also be known as a balcony.	CD-E2
Energy work means— (a) gasfitting; or (b) prescribed electrical work	BA04
Energy work certificate means a certificate of the kind referred to in section 19(1)(e) of the <i>Building Act 2004</i> .	BA04
Envelope complexity The categorisation of the complexity of the total <i>building</i> envelope into one of four classes, depending on the particular features of the <i>building</i> as specified in E2/AS1.	CD-E2
EPDM (Ethylene Propylene Diene Monomer) A thermosetting synthetic rubber used as a resilient part of a sealing washer, or as a roof <i>membrane</i> .	CD-E2
Escape height The height between the floor level in the <i>firecell</i> being considered and the floor level of the required <i>final exit</i> which is the greatest vertical distance above or below that <i>firecell</i> .	CD-C, CD-F3 CD-F6
COMMENT: 1. It is necessary only to use the greatest height to the exits required for the <i>firecell</i> being considered, even though the <i>building</i> may have other <i>final exits</i> at lower or higher levels. 2. Where the <i>firecell</i> contains <i>intermediate floors</i> , or upper floors within <i>household units</i> the <i>escape height</i> shall be measured from the floor having the greatest vertical separation from the <i>final exit</i> .	
Escape route A continuous unobstructed route from any <i>occupied space</i> in a <i>building</i> to a <i>final exit</i> to enable occupants to reach a <i>safe place</i> , and shall comprise one or more of the following: <i>open paths</i> , <i>protected paths</i> and <i>safe paths</i> .	Code
COMMENT: Doors are not obstructions in an <i>escape route</i> provided they comply with C/AS1 Part 3 and D1/AS1.	
Essential service In the context of an <i>electrical installation</i> means emergency lighting, firemen's lifts, alarms, water pumps, sprinklers, detectors, ventilation systems and public address systems necessary for the safety of people in <i>buildings</i> .	Code
Estimated value in relation to <i>building work</i> , means the estimated 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 the <i>building work</i> .	BA04
Evacuation time The time taken by the occupants of the <i>building</i> to evacuate the <i>building</i> to a <i>final exit</i> .	Code
Exitway All parts of an <i>escape route</i> protected by <i>fire</i> or <i>smoke separations</i> , or by distance when exposed to open air, and terminating at a <i>final exit</i> .	Code
Expansion joint A joint designed to prevent damage by accommodating movement. See also <i>Control joint</i> .	CD-E2

Definition**Source**

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, but which may also contain *unprotected areas*.

Code**COMMENT:**

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

F

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.

CD-B1

Falsework, in relation to *building work* or the maintenance of a *building*,—

BA04

(a) means any temporary structure or framework used to support materials, equipment, or an assembly; and

(b) includes steel tubes, adjustable steel props, proprietary frames, or other means used to support a permanent structure until it becomes self-supporting; but

(c) does not include scaffolding or cranes used for support.

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

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*.

Finished ground level (FGL) The level of the ground after all backfilling, landscaping and surface paving has been completed.

CD-E2

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

Code

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.

Code**COMMENT:**

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

Definition	Source
<p>Firecell rating (F) The <i>fire resistance rating (FRR)</i> intended to prevent <i>fire</i> spread to another <i>firecell</i>, for sufficient time to provide for safe evacuation of occupants and protection of adjacent <i>housing units</i> and sleeping areas in the <i>building</i> of <i>fire</i> origin and fire fighters engaged in fire fighting and rescue operations.</p> <p>COMMENT:</p> <ol style="list-style-type: none"> The purpose of the <i>firecell rating</i> is to prevent premature collapse of elements of structure in order to protect: <ol style="list-style-type: none"> The occupants, some of whom may have to remain in the <i>building</i> for some time while evacuation proceeds, particularly if the <i>building</i> is a large one. Adjacent <i>household units</i> and sleeping areas in the <i>building</i> of <i>fire</i> origin. Fire fighters engaged on rescue and fire fighting operations (although this is limited because property protection in the <i>building</i> of origin is not a matter covered by the New Zealand Building Code except as required by b) above). The use of the <i>F rating</i> to determine the <i>FRR</i> of a <i>primary</i> or <i>secondary element</i> is discussed in C/AS1 Part 5. 	CD-C
<p>Fire damper A device with a specified <i>FRR</i> complete with fixings and operating mechanism for automatically closing off an airway where it passes through a <i>fire separation</i>.</p> <p>COMMENT:</p> <p>An airway may be a duct, plenum, ceiling space, roof space or similar <i>construction</i> used for the passage of ventilating air.</p>	CD-C
<p>Fire door A <i>doorset</i>, single or multi-leaf, having a specific <i>fire resistance rating</i>, and in certain situations a smoke control capability, and forming part of a <i>fire separation</i>. The door, in the event of <i>fire</i>, if not already closed, will close automatically and be self latching.</p> <p>COMMENT:</p> <p>Requirements for fire doors are given in C/AS1 Paragraphs 6.19.1 and 6.19.8 and Appendix C, Paragraph C 8.1.</p>	CD-C
<p>Fire hazard means the danger of potential harm and degree of exposure arising from—</p> <ol style="list-style-type: none"> the start and spread of <i>fire</i>; and the smoke and gases that are generated by the start and spread of <i>fire</i>. 	BA04
<p>Fire hazard category (FHC) The number (graded 1 to 4 in order of increasing severity), used to classify <i>purpose groups</i> or activities having a similar <i>fire hazard</i>, and where fully developed <i>fires</i> are likely to have similar impact on the structural stability of the <i>building</i>.</p> <p>COMMENT:</p> <p><i>Fire hazard categories</i> are identified in C/AS1 Table 2.1.</p>	CD-C
<p>Fire intensity The rate release of calorific energy in watts, determined either theoretically or empirically, as applicable.</p>	Code

Definition**Source**

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.)

Code

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*.

CD-C**COMMENT:**

The total *fire load* is converted to *fire load energy* terms in megajoules (MJ) for calculation of the *FLED* (MJ/m²).

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.

CD-C, CD-B1

Fire resistance rating (FRR) The term used to describe the minimum *fire* resistance required 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.

CD-C**COMMENT:**

1. Examples of *FRRs* are:

- (a) 30/30/15 indicating *stability* 30 minutes, *integrity* 30 minutes, *insulation* 15 minutes.
- (b) 30/-/- indicating *stability* 30 minutes, but no time requirement for *integrity* or *insulation*.
- (c) -/15/15 indicating no time requirement for *stability*, but 15 minutes for *integrity* and *insulation*.
- (d) 60/30/x indicating *stability* of 60 minutes, *integrity* of 30 minutes, and a requirement for *insulation* from C/AS1 Paragraph 5.6.4.

2. C/AS1 Part 5 gives more information on *FRRs*.

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*.

Code**COMMENT:**

A *fire resisting closure* is intended to include *fire doors*, *fire windows* or access panels. In this context the opening may be used to permit passage of people or goods, or to transmit light, but does not include an opening to permit the passage of *building services*.

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.

CD-C

Definition

Source

COMMENT:

1. The requirement for *fire resisting glazing* will not be met by ordinary window glass, or safety glasses, but rather by wired glass, or by special *fire* resisting glass shown by test to perform adequately. The nature and design of the frames also have an effect on the performance of *fire resisting glazing*.
2. Openable glazing is required by NZS 4232 Part 2 to be fitted with an automatic device which, in the event of *fire*, will close and latch the window sash.

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.

CD-C, CD-F7

COMMENT:

This definition has the same meaning and wording as the definition of "fire safety systems" in the Building Regulations.

Fire safety systems 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.

Code

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

Code

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*.

CD-C

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*.

CD-C

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*.

Code

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*.

CD-G13

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

CD-G13

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.

CD-C

COMMENT:

1. The principal use of *flame barriers* is to delay ignition of *foamed plastics* materials.
2. Refer to Appendix C Paragraph C10.1 of C/AS1 for details of the test requirements for *flame barriers*.

Definition	Source
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.	CD-G11
Flammability index (FI) That index number for flammability, which is determined according to the <i>standard test</i> method for flammability of thin flexible materials.	CD-C
Flashing A component, formed from a rigid or flexible <i>waterproof</i> material, that drains or deflects water back outside the <i>cladding system</i> .	CD-E2
Flexible flashing tape A flexible self-adhesive <i>waterproof</i> tape. Usually used as an accessory for <i>building wraps</i> , to seal corners and intersections.	CD-E2
Flood level rim The top edge at which water can overflow from equipment or a <i>fixture</i> .	CD-G12
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.	CD-E3, CD-G13
Floor waste pipe A pipe that receives the discharge from a <i>floor waste</i> and that discharges outside the <i>building</i> or to the <i>foul water</i> drainage or sanitary <i>plumbing system</i> .	CD-G13
Flue The passage through which the products of combustion are conveyed to the outside	CD-B1, CD-B2, CD-C, CD-G4, CD-G11
Flue liner Pipes or linings of <i>fire</i> clay, metal or <i>fire</i> brick, surrounding <i>flues</i> .	CD-C
Flue system A series of interconnecting <i>flue</i> pipe casings which form a safe passage (<i>flue</i>) for conveying products of combustion from within an appliance to the outside of a <i>building</i> or structure.	CD-C
Flush-finished The description of a <i>cladding</i> and joints system which relies on a protective coating applied to the face of the <i>cladding</i> to prevent the penetration of water.	CD-E2
Foamed plastics <i>Combustible</i> foamed plastic polymeric materials of low density (typically less than 100 kg/m ³) 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 <i>foamed plastics</i> are latex foams, polyethylene foams, polyvinyl chloride foams, expanded or extruded polystyrene foams, phenolic foams, ureaformaldehyde foams, polyurethane foams and polychloroprene foams.	CD-C

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 *building consent authority*.

Definition	Source
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.	CD-G4
Former Act means the Building Act 1991.	BA04
Foul water The discharge from any <i>sanitary fixture</i> or <i>sanitary appliance</i> .	Code
Foul water drainage system <i>Drains</i> , joints and fittings normally laid underground and used specifically for the conveyance of water from the <i>plumbing system</i> to an <i>outfall</i> .	Code
Framing Timber members to which <i>lining</i> , <i>cladding</i> , flooring, or decking is attached; or which are depended upon for supporting the structure, or for resisting forces applied to it.	CD-E2
Free outlet (push through) In the context of <i>storage water heaters</i> means a <i>water heater</i> with a tap on the cold water inlet so designed that the hot water is discharged through an open outlet.	CD-G12
Functional requirements in relation to a <i>building</i> , means those functions which a <i>building</i> is to perform for the purposes of the <i>Building Act 2004</i> .	BA04

G

Gantry A structure covering a public way providing protection from both the side and overhead.	CD-F5
Gasfitting has the meaning given to it by section 2 of the Plumbers, Gasfitters, and Drainlayers Act 1976.	BA04/PGDA

Section 2 states:

- “(a) The work of fixing or unfixing pipes (including flue and ventilation pipes) beyond the outlet of any gas measurement system supplying a consumer or gas refueller with gas (or, where there is no such gas measurement system, beyond the custody transfer point of the place at which gas is supplied to a consumer or gas refueller);
- (b) The work of fixing or unfixing pipes (including flue and ventilation pipes) that convey gas from any gas storage container in the possession or control of a consumer or gas refueller, and—
- (i) In the case of liquefied petroleum gas, that are downstream of the first regulator beyond that container; or
- (ii) In the case of any other gas or where there is no such regulator (in the case of liquefied petroleum gas), that are downstream of the outlet valve of the container:
- (c) The work of fixing or unfixing the whole or part of the control system of any gas appliance—
- but does not include—
- (d) Work on any gas storage container, including its fixing or unfixing; or
- (e) Work on any gas transmission system or distribution system; or
- (f) Work on any pipes or fittings supplied with liquefied petroleum gas from any gas storage container or containers that contains, or together contain, less than 15 kilograms net weight of liquefied petroleum gas; or
- (g) Work in any circumstances where the exclusions in section 3(2) of the Gas Act 1992 apply.]”

Definition

Source

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

CD-B1

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:

CD-B1

- (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 foreseeably 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.

COMMENT:

Soils (excepting those described in (a), (b) and (c) above) tested with a dynamic cone penetrometer in accordance with NZS 4402 Test 6.5.2, shall be acceptable as *good ground* for *building* foundations if penetration resistance is no less than:

- (a) 3 blows per 75 mm at depths no greater than the footing width.
- (b) 2 blows per 75 mm at depths greater than the footing width.

Depths shall be measured from the underside of the proposed footing.

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

CD-G13,
CD-G14

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.

CD-C

COMMENT:

1. Examples of *group sleeping area firecells* are dormitories, hospital wards, *wharehau*, 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*.

CD-G13

Definition	Source
H	
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.	Code
Handrail A rail to provide support to, or assist with the movement of a <i>person</i> .	Code
Hazardous Creating an unreasonable risk to people of bodily injury or deterioration of health.	Code
Hazardous substance Has the meaning given to it by section 2 of the Fire Service Act 1975 and section 2 of the Hazardous Substances and New Organisms Act 1996	Code/FSA/ HSNOA
Section 2 of the Fire Service Act 1975 states:	
<p>"Hazardous substance" means</p> <p>(a) Any hazardous substance as defined in section 2 of the Hazardous Substances and New Organisms Act 1996; and</p> <p>(b) Any infectious or radioactive substance that may impair human, animal, or plant" health:</p>	
Section 2 of the Hazardous Substances and New Organisms Act 1996 states:	
<p>"Hazardous substance" means, unless expressly provided otherwise by regulations, any substance—</p> <p>(a) With one or more of the following intrinsic properties:</p> <p>(i) Explosiveness:</p> <p>(ii) Flammability:</p> <p>(iii) A capacity to oxidise</p> <p>(iv) Corrosiveness:</p> <p>(v) Toxicity (including chronic toxicity</p> <p>(vi) Ecotoxicity, with or without bioaccumulation; or</p> <p>(b) Which on contact with air or water (other than air or water where the temperature or pressure has been artificially increased or decreased) generates a substance with any one or more of the properties specified in paragraph (a) of this definition."</p>	
Hearth The insulating floor under the <i>fire</i> and in front and at the sides of the <i>fireplace</i> .	CD-B1, CD-C
Hem A flat fold, not completely closed, applied to the edge of a metal <i>flashing</i> .	CD-E2
Hidden gutter A gutter located within the boundaries of the roof <i>framing</i> . <i>Hidden gutters</i> may also be known as secret gutters or internal gutters. See also <i>Valley gutters</i> .	CD-E2

COMMENT:

Hidden gutters are distinct from gutters or spouting that are externally located beyond the bounds of the roof and wall *framing*.

Definition	Source
Hoarding A structure alongside a public way providing side protection but no overhead protection.	CD-F5
Hold-open device A device which holds a <i>smoke control door</i> or <i>fire door</i> open during normal use, but is released by deactivating the device by an automatic <i>fire</i> detection system, allowing the door to close automatically under the action of a self-closing device.	CD-C, CD-F7, CD-F8
Hook An open fold applied to the edge of a metal <i>flashing</i> .	CD-E2
COMMENT: A <i>hook</i> is distinct from a <i>hem</i> , as it is open at an acute angle rather than flattened.	
Household unit	BA04
(a) means a <i>building</i> or group of <i>buildings</i> , or part of a <i>building</i> or group of <i>buildings</i> , that is—	
(i) used, or intended to be used, only or mainly for residential purposes; and	
(ii) occupied, or intended to be occupied, exclusively as the home or residence of not more than 1 household; but	
(b) does not include a hostel, boarding house, or other specialised accommodation.	
HVAC An abbreviation for heating, ventilating and airconditioning.	CD-C, CD-F7
I	
Illuminance The luminous flux falling onto a unit area of surface.	Code
Impact insulation class (IIC) A single number rating derived from measured values of normalized impact sound pressure levels in accordance with Method ASTM E 492, Annex A1, Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine. It provides an estimate of the impact sound insulating performance of a floor-ceiling assembly.	Code
Impervious That which does not allow the passage of moisture.	Code
Independent qualified person (IQP) means a <i>person</i> accepted by a <i>territorial authority</i> in accordance with section 438 of the <i>Building Act 2004</i> as being qualified to carry out the inspection, maintenance, and reporting procedures required for a <i>specified system</i> stated in a <i>compliance schedule</i> .	HB
Inspection chamber A chamber with working space at ground level through which the <i>drain</i> passes either as an open channel or as a pipe incorporating an <i>inspection point</i> .	CD-E1, CD-G13
Inspection point A removable cap at <i>drain</i> level through which access may be made for cleaning and inspecting the drainage system.	CD-E1, CD-G13
Insulating material A material that has a thermal conductivity of less than 0.07 W/mK.	CD-C, CD-E3

Definition	Source
<p>Insulation In the context of <i>fire</i> protection, the time in minutes for which a prototype specimen of a <i>fire separation</i>, when subjected to the <i>standard test</i> for <i>fire</i> resistance, has limited the transmission of heat through the specimen.</p> <p>Integrity In the context of <i>fire</i> protection, the time in minutes for which a prototype specimen of a <i>fire separation</i>, when subjected to the <i>standard test</i> for <i>fire</i> resistance, has prevented the passage of flame or hot gases.</p> <p>COMMENT: The precise meaning of <i>integrity</i> depends on the type of <i>building elements</i> being treated and how it is defined in the <i>standard test</i> being used.</p>	<p>Code</p> <p>Code</p>
<p>Intended use in relation to a <i>building</i>,—</p> <p>(a) includes any or all of the following:</p> <ul style="list-style-type: none"> (i) any reasonably foreseeable occasional use that is not incompatible with the <i>intended use</i>: (ii) normal maintenance: (iii) activities undertaken in response to <i>fire</i> or any other reasonably foreseeable emergency; but <p>(b) does not include any other maintenance and repairs or rebuilding.</p>	<p>BA04</p>
<p>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.</p>	<p>CD-G14</p>
<p>Intermediate floor Any upper floor within a <i>firecell</i> and which is not <i>fire</i> separated from the floor below. Upper floors within <i>household units</i> need not meet the specific <i>fire</i> safety requirements which apply to <i>intermediate floors</i> in all other situations.</p> <p>COMMENT: 1. An <i>intermediate floor</i> may be open to the <i>firecell</i> or enclosed with non-<i>fire</i> rated construction. If enclosed with <i>fire</i> rated walls another <i>firecell</i> is created. 2. <i>Household units</i> occur only in <i>purpose groups</i> SR and SH. Life safety provisions are governed by the limitations in permitted <i>open path</i> lengths.</p>	<p>CD-C</p>
<p>K</p> <p>Kerb ramp means a short ramp either cutting through a kerb or built up to the kerb.</p> <p>Kick-out A single fold applied to the edge of a horizontal metal <i>flashing</i> to deflect moisture away from the <i>cladding system</i> below. Refer also <i>Bird's beak</i>.</p> <p>COMMENT: A <i>kick-out</i> is used at the bottom of a <i>capping</i> or other <i>flashing</i> to deflect water away from the <i>cladding</i> below.</p>	<p>CD-D1</p> <p>CD-E2</p>

Definition	Source
L	
Licensee A <i>person</i> holding a licence issued under the Radiation Protection Act 1965 and for the time being in force.	CD-F8
Licensed building practitioner means a building practitioner whose name is, for the time being, entered in the register established and maintained under section 298(1) of the <i>Building Act 2004</i> .	BA04
Limited area atrium A single <i>firecell</i> in which individual <i>occupied spaces</i> at different levels open onto a common enclosed space. Limitations are placed on the number of <i>intermediate floors</i> (no more than two levels), individual floor areas and permitted <i>occupant load</i> , depending on the provisions for smoke detection, smoke control and the <i>means of escape from fire</i> .	CD-C
COMMENT: Typical <i>limited area atrium buildings</i> are small shopping malls, and motel complexes with a central atrium feature open to a number of floors.	
Lining The rigid sheet covering for a wall, ceiling or other interior surface.	CD-E2
Lock-out The safety shut down condition of the control system such that re-start cannot be accomplished without manual resetting.	CD-C, CD-G11
M	
Main private stairway A <i>private stairway</i> intended to provide access to and between frequently used spaces such as living areas, kitchens and garages, and includes all exterior <i>private stairways</i> .	CD-D1
Masonry tiles Clay or concrete tile roof <i>cladding</i> .	CD-E2
Masonry veneer Clay or concrete block veneer <i>cladding</i> .	CD-E2
Means of escape from fire , in relation to a <i>building</i> that has a floor area,— (a) means continuous unobstructed routes of travel from any part of the floor area of that <i>building</i> to a place of safety, and (b) includes all active and passive protection features required to warn people of <i>fire</i> and to assist in protecting people from the effects of <i>fire</i> in the course of their escape from the <i>fire</i> .	BA04
Membrane A non-metallic material, usually synthetic, used as a fully supported roof <i>cladding</i> , <i>deck</i> surface or, in conjunction with other <i>claddings</i> , as gutters or <i>flashings</i> .	CD-E2
Minister means the Minister of the Crown who, under the authority of a warrant or with the authority of the Prime Minister, is responsible for the administration of the <i>Building Act 2004</i> .	BA04
Minor private stairway A <i>private stairway</i> not on a main thoroughfare, and intended to provide infrequent access to a single room which is not a living area or kitchen.	CD-D1

Definition	Source
Multi-unit dwelling Applies to a <i>building</i> or use which contains more than one separate household or family.	CD-C
COMMENT: For fire safety purposes each <i>household unit</i> is a separate <i>firecell</i> .	
N	
Natural draught The flow produced by the tendency of warmed gases to rise.	CD-G4
Natural hazard has the meaning given to it by section 71 of the Building Act 2004.	BA04
Section 71(3) states:	
“(3) In this section and sections 72 to 74, natural hazard means any of the following: <ul style="list-style-type: none"> (a) erosion (including coastal erosion, bank erosion, and sheet erosion): (b) falling debris (including soil, rock, snow, and ice): (c) subsidence: (d) inundation (including flooding, overland flow, storm surge, tidal effects, and ponding): (e) slippage.” 	
Network utility operator means a person who—	BA04
(a) undertakes or proposes to undertake the distribution or transmission by pipeline of natural or manufactured gas, petroleum, or geothermal energy; or	
(b) operates or proposes to operate a network for the purpose of— <ul style="list-style-type: none"> (i) telecommunication as defined in section 5 of the Telecommunications Act 2001; or (ii) radiocommunications as defined in section 2(1) of the Radiocommunications Act 1989; or 	
(c) is an electricity operator or electricity distributor as defined in section 2 of the Electricity Act 1992 for the purpose of line function services as defined in that section; or	
(d) undertakes or proposes to undertake the distribution of water for supply (including irrigation); or	
(e) undertakes or proposes to undertake a drainage or sewerage system	
Nominal pile width The least width of a pile in side view and is equal to the diameter in round piles.	CD-B1
Non-combustible Materials shall be classified as <i>non-combustible</i> or <i>combustible</i> when tested to: AS 1530 – Part 1.	CD-B1, CD-C
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.	CD-G12
Nosing The rounded projecting edge of a stair tread.	CD-D1, CD-F4

Definition**Source**

Notice to fix has the meaning given to it by section 164(2) of the *Building Act 2004*.

BA04

Section 164(2) states:

- “(2) A responsible authority must issue to the specified person concerned a notice (a notice to fix) requiring the person—
- (a) to remedy the contravention of, or to comply with, this Act or the regulations; or
 - (b) to correct the warrant of fitness; or
 - (c) to properly comply with the inspection, maintenance, or reporting procedures stated in the compliance schedule.”

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.

CD-C**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.

NUO system means a system owned or controlled by a *network utility operator*.

BA04**O**

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

CD-C, CD-F6, CD-F7

- (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*.

Code

Open path That part of an *escape route* (including *dead ends*) not protected by *fire* or *smoke separations*, and which terminates at a *final exit* or *exitway*.

Code

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.

CD-C

Open vented storage water heater A *water heater* incorporating a *vent pipe* which is permanently open to the atmosphere.

CD-G12

Other property—

BA04

- (a) means any land or *buildings*, or part of any land or *buildings*, that are—
 - (i) not held under the same *allotment*; or
 - (ii) not held under the same ownership; and
- (b) includes a road

Definition	Source
Outdoor air Air as typically comprising by volume: <ul style="list-style-type: none"> (i) oxygen 20.94% (ii) carbon dioxide 0.03% (iii) nitrogen and other inert gases 79.03%. 	Code
Outfall That part of the disposal system receiving <i>surface water</i> or <i>foul water</i> from the drainage system. For <i>foul water</i> , the <i>outfall</i> may include a <i>sewer</i> or a septic tank. For <i>surface water</i> , the <i>outfall</i> may include a natural water course, kerb and channel, or soakage system.	Code
Over-pressure protection Devices preventing the pressure in piping or appliances from exceeding a predetermined value.	CD-G11
Owner , in relation to land and any <i>buildings</i> on the land,— <ul style="list-style-type: none"> (a) means the <i>person</i> who— <ul style="list-style-type: none"> (i) is entitled to the rack rent from the land; or (ii) would be so entitled if the land were let to a tenant at a rack rent; and (b) includes— <ul style="list-style-type: none"> (i) the <i>owner</i> of the fee simple of the land; and (ii) any <i>person</i> 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 and who is bound by the agreement because the agreement is still in force. 	BA04
P	
Parallel flashing A roof <i>flashing</i> that runs along the roof slope, parallel to the roof <i>cladding</i> profile. Also known as a longitudinal <i>flashing</i> .	CD-E2
Parapet A timber-framed wall that extends above the level of the roof <i>cladding</i> .	CD-E2
Penetration A pipe, cable or duct passing through an opening in a <i>fire separation</i> .	CD-C
Penstocks are conduits to control the flow of water in water supply, hydroelectric power and sewerage systems. Penstocks are normally equipped with a gate system and surge tank.	DG
People with disabilities People whose ability to use <i>buildings</i> is affected by mental, physical, hearing or sight impairment.	Code
Performance criteria in relation to a <i>building</i> , means those qualitative or quantitative criteria that the <i>building</i> is required to satisfy in performing its <i>functional requirement</i> .	BA04
Person includes the Crown, a corporation sole, and also a body of <i>persons</i> , whether corporate or unincorporated.	BA04

Definition

Source

Person with a disability means a *person* who has an impairment or a combination of impairments that limits the extent to which the *person* can engage in the activities, pursuits, and processes of everyday life, including, without limitation, any of the following:

BA04

(a) a physical, sensory, neurological, or intellectual impairment:

(b) a mental illness.

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

CD-G14

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

CD-F4
(Sep 07)**Plans and specifications—**

BA04

(a) means the drawings, specifications, and other documents according to which a *building* is proposed to be *constructed*, *altered*, demolished, or removed; and

(b) includes the proposed procedures for inspection during the *construction*, *alteration*, demolition, or removal of a *building*; and

(c) in the case of the *construction* or *alteration* of a *building*, also includes—

(i) the *intended* use of the *building*; and

(ii) the *specified systems* that the applicant for *building consent* considers will be required to be included in a *compliance schedule* required under section 100; and

(iii) the proposed procedures for inspection and routine maintenance for the purposes of the *compliance schedule* for those *specified 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*.

Code

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

CD-G12

Potential impact classification is related to the consequence (effects) of the *dam* failing, if it should release its stored contents. Consequences include loss of life, socio-economic, financial and environmental.

DG

Prescribed electrical work has the meaning given to it by section 2(1) of the Electricity Act 1992.

BA04, EA

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.

CD-B2, CD-C

COMMENT:

Suspended floors in multi-storey *buildings* are *primary elements*.

Definition	Source
Principal user A member of the primary group for which a <i>building</i> was constructed, and therefore explicitly excludes <i>persons</i> or groups of <i>persons</i> providing care or control of that <i>principal user</i> group.	Code
Privacy The situation of being withdrawn from view.	CD-G1
Private stairway A <i>stairway</i> used, or intended to be used, by the occupants of a single <i>household unit</i> .	CD-D1
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.	CD-G1
Producer statements are formal statements supplied by or on behalf of <ul style="list-style-type: none"> (i) an applicant for a <i>building consent</i>, or (ii) by or on behalf of a <i>person</i> who has carried out <i>building work</i>. that can be accepted by a <i>building consent authority</i> as verification that certain work will be or has been carried out in accordance with nominated performance requirements of the <i>Building Code</i> .	HB
COMMENT: Although no longer expressly referred to in the <i>Building Act 2004</i> , these could be accepted and considered as part of the plans or specifications.	
Product certificate means a certificate issued under section 269 of the <i>Building Act 2004</i> that a <i>building consent authority</i> must accept as establishing compliance with the <i>Building Code</i> .	HB
Product certification accreditation body means the <i>person</i> referred to in section 261(2) of the <i>Building Act 2004</i> .	BA04
Property includes land, <i>buildings</i> , and goods; but does not include incorporeal forms of <i>property</i> .	BA04
Protected path That portion of an <i>exitway</i> within a <i>firecell</i> which is protected from the effects of smoke by <i>smoke separations</i> .	Code
Protected shaft A space, other than a <i>safe path</i> , enclosed by <i>fire separations</i> or <i>external walls</i> used to house <i>building services</i> , lifts, or conveyors which pass from one <i>firecell</i> to another.	CD-C
Purlin A horizontal member laid to span across <i>rafters</i> or trusses, and to which the roof <i>cladding</i> is attached.	CD-E2
Purpose group The classification of spaces within a <i>building</i> according to the activity for which the spaces are used.	Code

Definition

Source

R

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

CD-E3, CD-G5,
CD-H1

Rafter A *framing* timber, normally parallel to the slope of the roof, providing support for sarking, *purlins* or roof *cladding*.

CD-E2

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

CD-C, RA

The definition of 'Railway line' in the Transport Services Licensing Act 1989 has been repealed by the Railways Act 2005. Section 4 of the Railways Act 2005 now contains the definition for "railway line".

Section 4 states

"railway line" —

- (a) means a single rail or set of rails, having a gauge of 550 mm or greater between them, laid for the purposes of transporting people or goods by rail; and
- (b) includes—
 - (i) sleepers, associated formation and ballast, tunnels, and bridges; and
 - (ii) in relation to a single rail or set of rails that are laid on a road for the purposes of 1 or more light rail vehicles,—
 - (A) any area between the rails; and
 - (B) the area that extends 500 mm outside the extremity of any light rail vehicle being used on that single rail or set of rails; and
 - (iii) a set of rails, having a gauge of less than 550 mm between them, that is designated as a railway line in regulations made under section 59(l); and
 - (iv) except as provided in subparagraph (ii), any area within 5 m of a single rail or within 5 m of a line drawn midway between a set of rails; but
- (c) excludes—
 - (i) a railway line that is part of a railway used as an amusement device as defined in section 21A(1) of the Machinery Act 1950;
 - (ii) a railway line excluded by regulations made under section 59(m);
 - (iii) a railway line that exclusively serves private cable cars".

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

CD-G7, CD-G8

Regional authority means—

BA04

(a) a *regional council*; or

(b) a *unitary authority*

Definition	Source
Regional council has the meaning given to it by section 5(1) of the Local Government Act 2002.	BA04
Registrar has the meaning given to it by section 282 of the <i>Building Act 2004</i> .	BA04
Regulations means regulations in force under the <i>Building Act 2004</i> .	BA04
Regulator A device which automatically regulates the pressure or volume of gas passing through it to a predetermined level.	CD-G10, CD-G11
Relevant boundary means the <i>boundary</i> of an <i>allotment</i> which is <i>other property</i> in relation to the <i>building</i> concerned and from which is measured the separation between the <i>building</i> and that <i>other property</i> . For the <i>external wall</i> of any <i>building</i> , the <i>relevant boundary</i> shall be the nearest of the following <i>boundaries</i> : (a) A <i>boundary</i> of a freehold <i>allotment</i> , except that where the <i>other property</i> is a road, railway line or public <i>open space</i> the <i>relevant boundary</i> is the <i>boundary</i> on the far side of that <i>other property</i> . (b) A <i>boundary</i> of a cross-lease or of a company lease or licence, except that where the <i>other property</i> is <i>open space</i> to which the lessee or licensee of the <i>building</i> concerned has an exclusive right of access and occupation or to which two or more occupiers have rights of access and occupation the <i>relevant boundary</i> is the <i>boundary</i> on the far side of that <i>other property</i> . (c) A <i>boundary</i> shown on a unit plan excluding a <i>boundary</i> between a principal unit and its accessory unit, except that where the <i>other property</i> is <i>open space</i> which is common property, the <i>relevant boundary</i> is the <i>boundary</i> on the far side of that <i>other property</i> .	CD-C
COMMENT: 1. Where an easement, such as a right of way, occurs within an <i>allotment</i> , the <i>relevant boundary</i> shall remain the same as if the easement did not exist. 2. <i>Boundaries</i> within a cross-lease or company lease or licence are shown on a survey plan. In some cases the <i>boundary</i> is the <i>external wall</i> or roof of a <i>building</i> . 3. The unit title <i>boundaries</i> of principal units, accessory units, and common property are shown in the unit plan. A <i>boundary</i> is frequently an internal or <i>external wall</i> , an upper floor, or the roof of a <i>building</i> . 4. A wall along a <i>boundary</i> between two <i>allotments</i> is called a "party wall" when the <i>owners</i> of the <i>allotments</i> 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 <i>other property</i> in relation to each other, but the wall itself is part of each property. The <i>fire</i> protection consequence of that legal concept is that such a wall can be regarded as a <i>fire separation</i> providing protection against horizontal <i>fire</i> spread in each direction. In other words, that wall may provide the appropriate <i>FRR</i> instead of each property having its own wall of that <i>FRR</i> .	
Relief vent A <i>vent pipe</i> which is connected to a <i>discharge stack</i> below the lowest branch connection and which connects at its upper end to the <i>discharge stack vent</i> or terminates as an open vent.	CD-G13

Definition	Source
Reservoir Body of water impounded by one or more <i>dams</i> or dikes, inclusive of its shores and banks and of any facility or installation necessary for its operation.	DG
Reservoir capacity Total or gross storage capacity of the <i>reservoir</i> at full supply level.	DG
Risk matrix A table that allows the calculation of a <i>risk score</i> by the allocation and summing of scores for a range of design and location factors applying to a specific <i>building</i> design.	CD-E2
Risk score An aggregated numerical score for a proposed <i>building</i> as defined by E2/AS1. The <i>risk score</i> is determined by completion of the <i>risk matrix</i> .	CD-E2
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.	CD-C/LGA
Rodding point A removable cap at ground level through which access may be made for cleaning and inspecting the drainage system.	CD-E1, CD-G13
Roof underlay An absorbent permeable building paper that absorbs or collects condensation or water that may penetrate the roof <i>cladding</i> or metal wall <i>cladding</i> .	CD-E2
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.	CD-G4
S	
Saddle flashing A <i>flashing</i> used to weatherproof the junction between a horizontal and vertical surface.	CD-E2
Safe path That part of an <i>exitway</i> which is protected from the effects of <i>fire</i> by <i>fire separations</i> , <i>external walls</i> , or by distance when exposed to open air.	Code
Safe place A place of safety in the vicinity of a <i>building</i> , from which people may safely disperse after escaping the effects of a <i>fire</i> . It may be a place such as a street, <i>open space</i> , public space or an <i>adjacent building</i> .	Code
Safety colour (green, red or yellow) A colour of specified properties to which a safety meaning is attributed.	CD-F8
Safety glass means a glass so treated or combined with other materials as to reduce the likelihood of injury to <i>persons</i> when it is cracked or broken.	CD-F2
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.	CD-G10
Safety sign A particular type of sign which comprises a geometric form and a <i>safety colour</i> , together with a <i>safety symbol</i> or text (that is, words, letters, numbers or a combination of these) and gives a particular safety message.	CD-F8
Safety symbol means a graphic symbol used in a <i>safety sign</i> .	CD-F8

Definition	Source
Sanitary appliance An appliance which is intended to be used for <i>sanitation</i> , but which is not a <i>sanitary fixture</i> . Included are machines for washing dishes and clothes.	Code
Sanitary fixture Any <i>fixture</i> which is intended to be used for <i>sanitation</i> .	Code
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.	Code
Scaffolding used in the course of the <i>construction</i> process, means any structure, framework, swinging stage, suspended <i>scaffolding</i> , or boatswain's chair, that is of a temporary nature and that is used or intended to be used for: the support or protection of workers engaged in, or in connection with <i>construction</i> work for the purpose of carrying out that work, or the support of materials used in connection with the work; and includes any plank, coupling, fastening, fitting, or device used in connection with the <i>construction</i> , erection, or use of <i>scaffolding</i> .	BA04
Scupper An opening in a <i>parapet</i> or <i>enclosed balustrade</i> to allow water to drain into a rainwater head.	CD-E2
Secondary element A <i>building element</i> not providing load bearing capacity to the structure and if affected by <i>fire</i> , instability or collapse of the <i>building</i> structure will not occur.	CD-B2, CD-C
Secondary flow path The path over which <i>surface water</i> will follow if the drainage system becomes overloaded or inoperative.	CD-E1
Secondary private stairway A <i>private stairway</i> other than a <i>main</i> or <i>minor private stairway</i> , intended to provide access to another floor containing only bedrooms, bathroom or similar accommodation.	CD-D1
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.	CD-D1
Service stairway means a <i>stairway</i> 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.	CD-D1
Sewer A <i>drain</i> that is under the control of, or maintained by, a <i>network utility operator</i> .	Code
Sitework means work on a <i>building</i> site, including earthworks, preparatory to, or associated with the <i>construction</i> , <i>alteration</i> , demolition, or removal of a <i>building</i> .	BA04
Smokecell A space within a <i>building</i> which is enclosed by an envelope of <i>smoke separations</i> , or <i>external walls</i> , roofs, and floors.	CD-C

Definition

Source

Smoke control door A *doorset* with closefitting 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.

CD-C

COMMENT:

1. A *smoke control door* may be held closed by use of a door closer. The door need not be latched.
2. Requirements for *smoke control doors* are given in C/AS1 Paragraph 6.19.1 and 6.19.8, and Appendix C Paragraph C8.1.

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.

CD-C

Smoke separation Any vertical, horizontal or inclined *building element* with *known smoke-stopping* or *smoke-leakage characteristics*.

Code

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.

CD-G2

Soft edge A compatible soft edging seamed onto *flashings* to provide closure to profiled *cladding*.

CD-E2

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.

CD-G1, CD-G13

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.

Code

Specific design Design and detailing of a proposed *building* or parts of a *building*, demonstrating compliance with the *Building Code*, that shall be provided to the *building consent authority* for assessment and approval as part of the *building consent* process. *Buildings*, or parts of *buildings*, requiring *specific design* are beyond the scope of E2/AS1.

CD-E2

Specified intended life has the meaning given to it by section 113(3) of the Building Act 2004.

BA04

Section 113(3) states:

“(3) In subsection (2), **specified intended life**, in relation to a building, 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.”

Definition	Source
Specified system— (a) means a system or feature that— (i) is contained in a <i>building</i> ; and (ii) contributes to the proper functioning of the <i>building</i> (for example, an automatic sprinkler system); And (iii) is declared by the Governor-General, by Order in Council, to be a <i>specified system</i> for the purposes of this Act; and (b) includes a cable car.	BA04
Spread of flame index (SFI) That index number for spread of flame which is determined according to the <i>standard test</i> method for measuring the properties of lining materials.	CD-C
Spillway Weir, channel, conduit, tunnel, gate or other structure designed to permit discharges from the reservoir.	DG
Stability In the context of <i>fire</i> protection, the time in minutes for which a prototype specimen of a <i>primary element</i> , when subject to the <i>standard test</i> for <i>fire</i> resistance, has continued to carry its <i>fire</i> design load without failure.	Code
COMMENT: The <i>fire</i> design load should be as specified in the limit state loadings code NZS 4203.	
Stairway A series of steps or stairs with or without landings, including all necessary <i>handrails</i> and giving access between two different levels.	CD-C, CD-D1
Stanchion A connecting device, fixed into the structure of a <i>building</i> , that provides support for <i>handrails</i> , aerials and similar structures.	CD-E2
Standards means specifications for <i>building</i> materials, methods, processes or practices that provide a basis for determining consistent and acceptable minimum levels of quality, performance, safety and reliability.	HB
COMMENT: Standards are developed by organisations that are recognised by the Government. In New Zealand, standards are developed by a trading arm of the Standards Council, a crown entity operating under the Standards Act 1988. In Australia, standards are developed by Standards Australia, which is recognised through a memorandum of understanding with the Commonwealth Government.	
Standard test A test method which is recognised as being appropriate for the <i>fire</i> protection properties being assessed.	CD-C
COMMENT: A list of <i>standard test</i> methods is given in Appendix C of C/AS1.	
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.	Code
Statutory authority means an authority or organisation that has the statutory power to classify or register land or <i>buildings</i> for any purpose.	BA04

Definition

Source

Stopend A turn-up at the upper edge of profiled metal *cladding*, or at the end of gutters and some types of *flashings*.

CD-E2

COMMENT:

A *stopend* assists the control of moisture by ensuring any moisture reaching the edge of the roofing is deflected from further entry.

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

CD-G12

Storey That portion of a *building* included between the upper surface of any floor and the upper surface of the floor immediately above, except the top *storey* shall be that portion of a *building* included between the upper surface of the topmost floor and the ceiling or roof above.

CD-E2

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

CD-B1

COMMENT:

NZS 4203: 1992 uses the terms ideal strength in place of ultimate strength, and dependable strength in place of design strength.

Structural fire endurance rating (S) The *fire resistance rating (FRR)* intended to prevent *fire* spread or structural collapse for the complete burnout of the *firecell*.

CD-C

Stucco A wall *cladding system* formed from reinforced solid plaster over a rigid or non-rigid backing.

CD-E2

Stud A vertical *framing* timber.

CD-E2

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.

CD-C, CD-F7

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.

CD-E1

Supervise, in relation to *building work*, means provide control or direction and oversight of the *building work* to an extent that is sufficient to ensure that the *building work*—

BA04

(a) is performed competently; and

(b) complies with the *building consent* under which it is carried out.

Definition	Source
Surface finish The combination of a surface coating and substrate material on surfaces of <i>building elements</i> exposed to view. It can be an applied decorative coating or the uncoated <i>building element</i> itself. For interior surfaces the requirements are evaluated in terms of <i>SFI</i> and <i>SDI</i> . For exterior surfaces the requirements are evaluated in terms of rate of heat release as determined by Appendix C, Paragraph C9.1.	CD-C
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 <i>drain</i> , stream, river, lake or sea.	Code
T	
Tailing dam <i>Dam</i> constructed to retain tailings or other waste materials from mining or industrial operations.	DG
Tailpipe A device placed at the low point of a gas piping system to collect condensate, and from which the condensate may be removed.	CD-G10
Territorial authority (TA) means a city council or district council named in Part 2 of Schedule 2 of the Local Government Act 2002; and— (a) in relation to land within the district of a <i>territorial authority</i> , or a <i>building</i> on or proposed to be built on any such land, means that <i>territorial authority</i> ; and (b) in relation to any part of a coastal marine area (within the meaning of the Resource Management Act 1991) that is not within the district of a <i>territorial authority</i> , or a <i>building</i> on or proposed to be built on any such part, means the <i>territorial authority</i> whose district is adjacent to that part.	BA04
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.	CD-C, CD-F4 (Sep 07)
Thermal resistance The resistance to heat flow of a given component of a <i>building element</i> . It is equal to the air temperature difference (°C) needed to produce unit heat flux (W/m ²) through unit area (m ²) under steady conditions. The units are °Cm ² /W.	Code
Threshold A sill to an external door, or the floor under an internal door.	CD-D1
Total thermal resistance The overall air-to-air <i>thermal resistance</i> across all components of a <i>building element</i> such as a wall, roof or floor. (This includes the surface resistances which may vary with environmental changes eg, temperature and humidity, but for most purposes can be regarded as having standard values as given in NZS 4214.)	CD-E3, CD-G5
Town gas A manufactured gas.	CD-G11

Definition	Source
Toxic environment An environment that contains <i>contaminants</i> that can contaminate the water supply in concentrations greater than those included in the New Zealand Drinking Water Standard 1995.	CD-G12
Trade means any trade, business, industry, profession, occupation, activity of commerce, or undertaking relating to— (a) the supply or acquisition of goods or services; or (b) the acquisition of <i>household units</i> or any interest in land.	BA04
Transverse flashing A roof <i>flashing</i> that runs across the roof slope, at right angles to the roof <i>cladding</i> profile.	CD-E2
Trap A chamber which is installed in the <i>drain</i> and incorporates features to intercept and retain floatable debris.	CD-E1
Trapezoidal A type of profiled metal <i>cladding</i> with symmetrical or asymmetrical crests, with troughs between the crests.	CD-E2
Travel distance The length of the <i>escape route</i> as a whole or the individual lengths of its parts, namely: (a) <i>Open paths</i> (b) <i>Protected paths</i> and (c) <i>Safe paths</i> .	Code
Trough profile A type of profiled metal <i>cladding</i> comprising vertical ribs with flat, or lightly profiled pans between the ribs. Also known as ribbed, secret fixed or tray profile.	CD-E2
U	
Unisex facilities Facilities available for use by either sex.	CD-G1
COMMENT: <i>Unisex facilities</i> may also be described as both gender facilities.	
Unitary authority has the meaning given to it by section 5(1) of the Local Government Act 2002. Section 5(1) states: “ unitary authority ” means a territorial authority that has the responsibilities, duties, and powers of a regional council conferred on it under— (a) the provisions of any Act; or (b) an Order in Council giving effect to a reorganisation scheme”	BA04/LGA
Unprotected area in relation to an <i>external wall</i> of a <i>building</i> means: (a) Any part of the <i>external wall</i> which has less than the required <i>FRR</i> . For example, a non <i>fire</i> rated window, door or other opening or sheet metal. (b) Any part of the <i>external wall</i> which has <i>combustible</i> material more than 1.0mm thick attached to or applied to its external face, whether for <i>cladding</i> or any other purpose.	Code

Definition	Source
V	
Valley gutter A gutter running down the valley formed by the intersection of two pitched roof surfaces.	CD-E2
Valve vented storage water heater (unvented storage water heater) A <i>storage water heater</i> in which the required venting to the atmosphere is controlled by a valve.	CD-G12
Vapour barrier Sheet material or coating having a low water-vapour transmission, and used to minimise water-vapour penetration in <i>buildings</i> . (<i>Vapour barriers</i> are sometimes referred to as <i>damp-proof membranes</i> .)	CD-B2
Vent line A pipe or tube which conveys gas to a safe place outside the <i>building</i> from a gas pressure <i>regulator</i> relief valve.	CD-G10
Vent pipe A pipe for the purpose of protecting <i>water seals</i> that at its upper end is either open to the atmosphere or fitted with an <i>air admittance</i> valve and that at its lower end is connected to a <i>discharge pipe</i> .	CD-G13
Verification Method means a method by which compliance with the <i>Building Code</i> may be verified.	BA04
W	
Warm location means a location in New Zealand where the <i>degree-day total</i> is less than 920.	Code
Waste pipe A <i>discharge pipe</i> that conveys the discharge from <i>waste water fixtures</i> to a <i>gully trap</i> .	CD-G13
Waste water fixture A <i>sanitary fixture</i> or <i>sanitary appliance</i> used to receive wastes, and which is not a <i>soil fixture</i> .	CD-G13
Water heater A device for heating water.	CD-B2, CD-G12
Water main A water supply pipe that is under the control, or maintained by a <i>network utility operator</i> .	Code
Waterproof and waterproofing The complete and total resistance of a <i>building element</i> to the ingress of any moisture.	CD-E2
Water seal The depth of water that can be retained in a <i>water trap</i> .	CD-G2, CD-G13
Water supply system Pipes, fittings and tanks used or intended to be used for the storage and reticulation of water from a <i>water main</i> or other water source to <i>sanitary fixtures</i> , <i>sanitary appliances</i> and fittings within a <i>building</i> .	Code
Water tank (vessel) A covered fixed container for storing hot or cold water.	CD-G12
Water trap A fitting designed to retain a depth of water that prevents foul air and gases escaping from the <i>plumbing system</i> or <i>foul water drainage system</i> and entering a <i>building</i> .	CD-G2, CD-G13

Definition**Source**

Weathertightness and weathertight Terms used to describe the resistance of a *building* to the weather. *Weathertightness* is a state where water is prevented from entering and accumulating behind the *cladding* in amounts that can cause undue dampness or damage to the *building elements*.

CD-E2**COMMENT:**

The term *weathertightness* is not necessarily the same as *waterproof*. However, a *weathertight building*, even under severe weather conditions, is expected to limit moisture ingress to inconsequential amounts, insufficient to cause undue dampness inside *buildings* and damage to *building elements*. Moisture that may occasionally enter is able to harmlessly escape or evaporate.

Wetwall The exterior *cladding* on a wall with a *drained cavity*.

CD-E2

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

CD-C, CD-H1

Wind zone Categorisation of wind force experienced on a particular site as determined in NZS 3604, Section 5.

CD-E2**COMMENT:**

Maximum ultimate limit state speeds are:

Low *wind zone* = wind speed of 32 m/s

Medium *wind zone* = wind speed of 37 m/s

High *wind zone* = wind speed of 44 m/s

Very high *wind zone* = wind speed of 50 m/s.

Specific design is required for wind speeds greater than 50 m/s.

Working day means any day except—

BA04

- (a) Saturday, Sunday, Good Friday, Easter Monday, Anzac Day, the Sovereign's Birthday, Labour Day, and Waitangi Day; and
- (b) the day observed in the appropriate area as the anniversary of the province of which the area forms a part; and
- (c) a day in the period beginning on 20 December in any year and ending with the close of 10 January in the following year.

Index

(Revised by Amendment 6)

This is a complete index for the New Zealand Building Code and Compliance 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, 5.1.3, Figure 27

see also Accessible routes, Activity space, Doors, Escape routes, Handrails, Height clearances, Level access routes, Mechanical Installations for Access, a Person with a disability, 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** 11.0.3

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

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

see also a Person with a disability

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 fuel appliances **G4/AS1** 3.0
- 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 (Comment)
- 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 (Comment), 1.8, 4.6;
- adequate lighting **NZBC/G8.2**
- energy consumption **H1/AS1** 6.0
- minimum illuminance **NZBC/G8.3; D1/AS1** 4.6.1, Table 8, **G8/AS1** 1.0.1, Table 1
- wattage required **D1/AS1** 4.6.1, Table 8; **G8/AS1** 1.0.1, Table 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
- Barges..... **E2/AS1** 4.6.1.5, 9.6.8.2, 9.6.9.4, Figures 92 and 97
see also Gutters, barges and fascias
- 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, Figures 1-4
- fences..... **F5/AS1** 1.1, 1.1.2
around water hazards **F5/AS1** 1.2
- for specific hazards **F5/AS1** 1.0.2
- 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
- parapet and rail barriers..... **F4/AS1** 1.2.3, Figure 5
- safety enclosures for ladders..... **D1/AS1** 5.1.2, Figures 21 and 22
- scaffolding **F4/AS1** 1.2.6
- stair barriers **F4/AS1** Figure 4
- 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** 12.0
- drainage..... **E2/AS1** 12.3
requirements **E2/AS1** 12.3.1
- damp-proof membrane **E2/AS1** 12.2
- DPM materials..... **E2/AS1** 12.2.2
- DPM requirements **E2/AS1** 12.2.1
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** Table 2; **G13/AS1** 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 (Comment)
- solid construction..... **H1/AS1** 2.1.1 (Comment)
- thermal envelope **H1/VM1** 1.0, **H1/AS1** 2.0
- thermal resistance (R-value)..... **H1/VM1** 1.4, **H1/AS1** 2.1.1 (Comment), 2.2.1, 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 elements **C/AS1 5.1.1, 5.3.1, 5.3.2 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 a), 7.10.3, 7.10.4, C7.1.1**
- requiring noise control **G6/AS1 1.0.2, Figure 1**
- secondary elements **C/AS1 5.1.1, 5.3.1, 5.3.2 b), 5.6.1 a), 5.7.1, 5.7.8, 7.1.2 b), 7.10.3, C7.1.1**
- unrated primary **C/AS1 5.9.4, Figure 5.2**
- Building height **C/AS1 5.7.6 c), 7.11.3 a), 7.11.4**
- 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
- 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 (Comment)**
- commercial **H1/AS1 1.0.1, 6.1.1**
- communal non-residential **H1/AS1 1.0.3**
- assembly care **H1/AS1 1.0.1, 6.1.1**
- assembly service **H1/AS1 1.0.1, 6.1.1**
- communal residential **H1/AS1 1.0.1**
- 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**
- 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 1.0.1, 2.1**
- detached dwellings **H1/VM1 1.1 (Comment)**
- group dwellings **H1/VM1 1.1.1 (Comment)**
- multi-unit dwellings **H1/VM1 1.1.1, 1.2 (Comment), H1/AS1 2.1.1**
- wharehenui **H1/VM1 1.1.1 (Comment)**
- 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 (Comment)**
- remaining occupied during fire **C/AS1 5.6.9**
- 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)**

Buildings (continued)

siteworks	
<i>see</i> 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)
wharehenui.....	C/AS1 3.3.2 h), 3.4.2 e), 6.7.9, H1/VM1 1.1.1 (Comment)

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 a), 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** Figure 3
- Centres for people with disabilities
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, Figures 1-4; **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, Figure 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, 1.1.3 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 thickness **B1/AS3** 1.2, 1.2.1
chimney width **B1/AS3** 1.1.3
concrete chimneys **B1/AS3** 1.1.1, 1.1.3 a) c), 1.2.1 b) c), 1.6.2 a) b),
1.7.1, 1.7.13, 1.8.2, 1.8.5 b), Figures 4 and 5, Table 1
concrete masonry **B1/AS3** 1.8.4
floor brackets **B1/AS3** 1.7.1, 1.7.3 to 1.7.5, 1.9.4 b) c), Figure 6
foundations **B1/AS3** 1.1.2, 1.1.3 a), 1.3, 1.3.1,
1.3.2, 1.3.3, 1.7.4, 1.7.5, 1.8.4, Figure 1
foundation slabs **B1/AS3** 1.1.2, 1.3.2, 1.7.4, 1.7.5
gathers **B1/AS3** 1.6.1, 1.6.2, 1.7.5
hearths **B1/AS3** 1.4, 2.2, 2.2.1, 2.2.2, 2.2.3
hearth slabs **B1/AS3** 2.2, 2.2.1, 2.2.2, 2.2.3
packers **B1/AS3** 1.7.2, 1.7.6 c)
precast pumice concrete chimneys **B1/AS3** 1.1.1 b), 1.1.3 a) c),
1.2.1 c), 1.6.2 b), 1.7.1, 1.7.13, 1.8.3,
1.8.5 c), Figures 5 and 7, Table 1
compressive strength **B1/AS3** 1.8.3 c)
construction of **B1/AS3** 1.8.3
restraint **B1/AS3** 1.7, 1.7.1, 1.7.13, Figures 6 and 7
roof brackets **B1/AS3** 1.7.1, 1.7.3, 1.7.4, Figure 6
roof ties **B1/AS3** 1.7.5
structural diaphragms **B1/AS3** 1.9.5
wall ties **B1/AS3** 1.7.5, 1.7.7, 1.7.8
closely spaced wall ties **B1/AS3** 1.7.5, 1.9.4 c)

- Churches
see Communal non-residential buildings
- Cinemas **NZBC/G5.3.5**
see also Communal non-residential buildings
- Cladding finish colours **E2/AS1 2.4**
- 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 a), 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 1.0.1, 6.1**
assembly service **NZBC/A1 4.0.2, H1.2 (a); H1/AS1 1.0.1, 6.1**
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 1.0.1
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**
see also Design, concrete
- Condensation
see **Internal Moisture**

- Construction moisture **E2/AS1** 11.0
 - maximum acceptable moisture contents **E2/AS1** 11.2
 - measuring moisture content **E2/AS1** 11.3
 - concrete floors **E2/AS1** 11.3.2
 - timber **E2/AS1** 11.3.1
 - moisture in materials **E2/AS1** 11.1
- Construction site barriers **F4/AS1** 1.2.6
- 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; F5/AS1** 1.0.2
 - 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**

Day care institution

see Early childhood centres, Communal non-residential buildings

Dead ends

see Escape routesDecks and pergolas..... **E2/AS1** 7.0, 9.1.3.6*see also* Membrane roofs and decks*see also* Enclosed Balustradesattachment to building structure **E2/AS1** 7.2pergolas **E2/AS1** 7.2.2, Figure 15slatted timber decks to walls **E2/AS1** 7.2.1, Figure 15cantilevered decks..... **E2/AS1** 7.2.1.1, Figure 16level thresholds **E2/AS1** 7.3, Figures 17A and 17Benclosed decks..... **E2/AS1** 7.3.1, Figure 17Aground floor level access **E2/AS1** 7.3.2, Figure 17Bconcrete slab **E2/AS1** Paragraph 7.3.2.1, Figure 17Btimber floor..... **E2/AS1** Paragraph 7.3.2.2, Figure 17Bremovable surfaces..... **E2/AS1** 7.3.1, Figure 16timber option..... **E2/AS1** 7.3.1.2thresholds for decks..... **E2/AS1** 7.1, Figure 14enclosed decks..... **E2/AS1** 7.1.2slatted decks **E2/AS1** 7.1.1, Figures 15 and 16

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** 7.0concrete..... **B1/VM1** 3.0

drains

see Drains

foundations

see Foundationsloadings **B1/VM1** 1.1, 2.0earthquake..... **B1/AS3** 1.9, Table 2limit state..... **B1/VM1** 1.1.2, 7.1 b)non-limit state **B1/VM1** 1.1.3site effects (local) or faults..... **B1/VM1** 1.1.4masonry..... **B1/VM1** 4.0, **B1/AS1** 2.0, **B1/AS3** 1.3.3siteworks **B1/VM1** 10.0steel..... **B1/VM1** 5.0strength reduction factor **B1/VM4** 2.0.1, 3.5.1, 4.7, Tables 1 and 4timber **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 a Person with a disability
- 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 **G13/AS1** Figures 5, 6 and 8
- Discharge stacks **G13/AS1** 4.2.2 a), 4.5.1 b), 4.7,
5.3.1, 5.6, Figures 7 to 9, Tables 3, 4 and 6
- see also Discharge pipes, Pipes
- discharge stack vents **G13/AS1** 4.7.1 b), 5.2.1 b), 5.3.1, 5.6.1, 5.6.3 b),
Figures 7 and 8, Table 6, **G13/AS2** 4.1.5, Figure 5
- Discharge units **G13/AS1** Table 2, **G13/AS2** Table 2
- Dishwashing machine **G13/AS1** 3.3.2 a) e), Table 2
- Domestic buildings
see Housing
- Doors
see also Windows and doors
- NZBC/D1.3.4 (f), D1.3.1 (c), D1.3.3 (n), D1.3.4 (f), D2.3.5 (c),
F5.3.2 (d); C/AS1** 3.9.1, 3.11.6, 6.19.4; **D1/AS1** 7.0,
Figure 27;
- acceptable obstructions **C/AS1** 3.3.6
- accessible doors **D1/AS1** 7.0.3 to 7.0.5
- accessible escape routes **C/AS1** 3.3.7
- automatic sliding doors **C/AS1** 3.17.7
- closers and latching **C/AS1** 3.17.1
- degree and width of opening **C/AS1** 3.17.4, 3.17.5
- delayed action unlocking devices **C/AS1** 3.17.11
- direction of opening **C/AS1** 3.17.3, 3.17.4
- door swings **C/AS1** 3.4.5 b), 3.13.2, 3.17.5 d) e)
- fire doors **C/AS1** 3.3.1 b), 3.6.1 c), 3.11.9, 3.17.9, 3.17.13, 6.19.2 a),
C8.1, Figures 3.29 to 3.31, Table 6.1;
- frameless glass doors **D1/AS1** 7.0.7
- glazing **C/AS1** 5.8.10, 5.8.11; **D1/AS1** 7.0.4, Figure 28
- handles **D1/AS1** 7.0.5
- hold-open devices **C/AS1** 3.17.1 b), 3.17.9, **F7/AS1** 1.3.6, 1.5.2
- lift landing doors **C/AS1** 6.16.5 b), 6.19.13, Table 6.1
- lobby doors **D1/AS1** 7.0.1
- locking devices **C/AS1** 3.17.2, 3.18.6
- markings **C/AS1** 6.19.6, 6.19.7
- panic bolts **C/AS1** 3.17.14
- revolving doors, automatic doors and
access control systems **C/AS1** 3.17.7, 3.17.8,
Figure 3.26; **D1/AS1** 7.0.6, Figure 29
- signs **C/AS1** 3.20.1
- smoke control doors **C/AS1** 3.17.9, 3.17.12, 6.9.11, 6.19.2 b), C8.1,
Figures 3.27, 3.28 and 6.1, Table 6.1

Doors (continued)

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
Downlights.....	C/AS1 9.4
Downpipes.....	E1/AS1 3.4.2 a) 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
Drainage system.....	G13/AS1 5.1.2, 5.5.2, 5.7.3, 5.7.4 b), 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 d), 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 b), 3.7.4, 3.7.5, Figure 12
inspection chambers.....	E1/AS1 3.7.1, 3.7.2 b), 3.7.4, 3.7.5, Figure 11
inspection points.....	E1/AS1 3.7.1, 3.7.2 b)
rodding points.....	E1/AS1 3.7.1, 3.7.2 a), Figure 10
alignment.....	E1/AS1 3.3, 3.7.3 a), Figures 4 and 5
<i>see also</i> 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;
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	
<i>see</i> 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
junctions.....	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	
<i>see</i> 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, 4.1.11 E1/AS1 1.0.1 d)
downstream drainage	E1/VM1 4.3
headwater depth	E1/VM1 4.1.4, 4.1.5, 4.1.8, 4.1.9, Figures 5 to 7, 10 and 11

Drains (continued)

- 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; 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**
- 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)**
- EIFS **E2/AS1 9.9**
 coating..... **E2/AS1 9.9.6**
 decorative mouldings **E2/AS1 9.9.6.4**
 finish coats **E2/AS1 9.9.6.3**
 reinforcing..... **E2/AS1 9.9.6.1**
 reinforcing base coat..... **E2/AS1 9.9.6.2**
 EIFS/floor slab junction..... **E2/AS1 9.9.7, Figure 125**
 general..... **E2/AS1 9.9.2**
 installation **E2/AS1 9.9.4, Table 23**
 fixing blocks..... **E2/AS1 9.9.4.4**
 fixings **E2/AS1 9.9.4.1, Table 24**
 joints..... **E2/AS1 9.9.4.2**
 movement control joints **E2/AS1 9.9.4.3, Figure 124**
 insulation **E2/AS1 9.9.5**
 battens..... **E2/AS1 9.9.5.1**
 limitations..... **E2/AS1 9.9.1**
 materials..... **E2/AS1 9.9.3**
 fibreglass reinforcing mesh..... **E2/AS1 9.9.3.2**
 polystyrene sheet..... **E2/AS1 9.9.3.1**
 parapets and enclosed balustrades **E2/AS1 9.9.10**
 EIFS topped enclosed balustrades **E2/AS1 9.9.10.2, Figure 129**
 metal cappings **E2/AS1 9.9.10.1, Figures 12, 13 and 130**
 pipes and service penetrations..... **E2/AS1 9.9.8, Figure 126**
 windows and doors..... **E2/AS1 9.9.9, Figures 127 and 128**
- 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**
 a person with a disability..... **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**

- Enclosed balustrades..... **E2/AS1** 7.4, 9.3.9, 9.4.8, 9.5.5, 9.6.9.8, 9.7.8, 9.8.7, 9.9.10, Figures 101 and 102
- balustrade-to-deck floor junction..... **E2/AS1** 7.4.3, Figures 18 and 62
- balustrade-to-wall junctions..... **E2/AS1** 7.4.2, Figures 11-13
- deck drainage..... **E2/AS1** 7.4.1
- EIFS-topped..... **E2/AS1** 9.9.10.2, Figure 129
- flush-finished topped balustrades..... **E2/AS1** 9.7.8.1, Figure 117
- metal cappings..... **E2/AS1** 7.4.4, Table 7, Figure 5
- balustrades for housing..... **E2/AS1** 7.4.4.1, Figures 11-13
- balustrades – other than housing..... **E2/AS1** 7.4.4.2, Figures 11-13
- stanchions..... **E2/AS1** 7.4.5, Figure 19
- stucco topped balustrades..... **E2/AS1** 9.3.9.1, Figure 117
- 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;
- building performance index (BPI)..... **NZBC/H1.3.2; H1/VM1** 1.2
- heat gain..... **NZBC/H1.3.3 (d) (f); H1/AS1** 4.0
- 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 Comment, **H1/AS1** 2.1.1 Comment
- solar heat gain..... **H1/AS1** 4.0
- Entrances
- principal..... **D1/AS1** 1.1.1
- 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), 7.10.3 Comment 7.9.10, 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, Figures 3.1 to 3.5, Tables 3.1 and 3.2; **D1/AS1** 1.1.5; **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, 6.9.1, 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

Escape routes; exitways (continued)

- 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 a)
- special cases **C/AS1** 3.9
 - aisles **C/AS1** 3.9.4 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** 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, 3.7.1 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

Escape routes (continued)

signs	C/AS1 3.20
single escape routes	C/AS1 3.15
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), F8/AS1 3.1.1, 3.2.3
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	
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
scope	E2/VM1 1.2, AS1 1.0
construction excluded	E2/AS1 1.2
acoustics	E2/AS1 1.2.3
commercial and industrial roofing	E2/VM1 3.0
outbuildings	E2/AS1 1.2.1
skillion roofs	E2/VM1 3.0
spread of flame	E2/AS1 1.2.2
construction included	E2/AS1 1.1
provisions for snow	E2/AS1 1.3
qualifications	E2/AS1 1.5
specific design	E2/AS1 1.4
windows and doors	E2/AS1 9.1.10.1
snow	NZBC/E2.3.1
suspended floors	NZBC/E2.3.4
Verification Method	E2/VM1 1.0, 2.0, 3.0, Appendix 1
alternative test options	E2/VM1 1.5
commercial and industrial roofing	E2/VM1 3.0
general	E2/VM1 1.1
pitched roofing systems	E2/VM1 2.0
scope	E2/VM1 1.2
skillion roofs	E2/VM1 3.0
test procedure	E2/VM1 1.4

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, 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, 7.9.13, 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, 7.10.4, Figure 7.9, Tables 7.3 and 7.4
surface finishes	C/AS1 7.1.2 c), 7.11.2 to 7.11.3
wing walls	C/AS1 7.3.3 d), 7.3.9, 7.7, 7.10.4, 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

Fascias
see Gutters, barges and fascias

FHC
see Fire hazard category

FI
see Flammability index

Fibre cement sheet..... **E2/AS1** 9.3.6.2, 9.7
 corners **E2/AS1** 9.7.5
 flush-finished systems **E2/AS1** 9.7.5.2, Figures 111-113
 (internal and external corners)
 non-flush-finished **E2/AS1** 9.7.5.1, Figures 109, 111-112
 (internal and external corners)
 decorative attachments **E2/AS1** 9.7.9
 finishes **E2/AS1** 9.7.10
 flush-finished cladding **E2/AS1** 9.7.10.2
 non-flush-finished cladding..... **E2/AS1** 9.7.10.1
 installation **E2/AS1** 9.7.3, Table 23
 fixings **E2/AS1** 9.7.3.1, Table 24
 joints **E2/AS1** 9.7.4
 control joints..... **E2/AS1** 9.7.4.1, Table 19
 flush-finished..... **E2/AS1** 9.7.4.3, Figure 110
 non-flush-finished **E2/AS1** 9.7.4.2, Figures 103-108
 limitations **E2/AS1** 9.7.1
 flush-finished joint systems **E2/AS1** 9.7.1.1
 material..... **E2/AS1** 9.7.2
 parapets and enclosed balustrades **E2/AS1** 9.7.8
 flush-finished topped balustrades..... **E2/AS1** 9.7.8.1, Figure 117
 soffit details..... **E2/AS1** 9.7.6, Figure 114
 windows and doors..... **E2/AS1** 9.7.7
 windows – direct fixed **E2/AS1** 9.7.7.1, Figure 115
 windows – on cavity..... **E2/AS1** 9.7.7.2, Figure 116
 Fibre cement weatherboards **E2/AS1** 9.5
 installation **E2/AS1** 9.5.3, Table 23
 external corners..... **E2/AS1** 9.5.3.3, Figures 88 and 89
 fixings **E2/AS1** 9.5.3.1, Table 24
 internal corners..... **E2/AS1** 9.5.3.4, Figure 89
 laps and joints..... **E2/AS1** 9.5.3.2, Figure 87
 limitations **E2/AS1** 9.5.1
 material performance..... **E2/AS1** 9.5.2
 parapets and enclosed balustrades **E2/AS1** 9.5.5
 protective coating..... **E2/AS1** 9.5.6
 windows and doors..... **E2/AS1** 9.5.4
 windows – direct fixed **E2/AS1** 9.5.4.1, Figure 90
 windows – on cavity..... **E2/AS1** 9.5.4.2, Figure 91

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), 7.10.5 a),
Figures 3.19, 3.20, 1 and 7.10 Note 3,
Tables 2.1, 5.1, 7.1 to 7.4
- category 4 buildings **C/AS1** 2.2.10, 5.6.11 to 5.6.13, 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
- 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), 3.16.6, 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, 6.8.1, 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, 6.17.2, 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, 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** 5.6.7, 5.6.8
- 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, 5.4, 5.5.1, 5.6.5, 5.6.9 a), 6.15.1, 6.16.2,
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), 4.3.2, 5.6.4 d), 5.7.3, 6.10.3, 6.14, 6.15, 7.8.6
- insulation rating **C/AS1** 5.1.1 c), 5.6.4 to 5.6.6,
5.8.10, 6.19.13, 7.8.1 a), Table 6.1 Notes
- integrity rating **C/AS1** 5.1.1 b), 5.6.6, 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** 5.6.6
- roofs **C/AS1** 7.8.1, 7.9.3, 7.9.8 b), Figures 7.1 and 7.11
- small buildings **C/AS1** 7.10.5
- stability rating **C/AS1** 5.1.1 a), 5.6.6, 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, 5.3.2, 5.4, 5.5.2, 5.5.3,
5.6.5, 5.6.9 a), 5.6.11, 6.10.5, 7.2.1,
7.4.3, 7.8.1 a), 7.8.5, 7.8.6, 7.10.2,
7.10.5, 7.10.8, 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), 6.16.4 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, 5.6.8, 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** 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 hose reels (Type 14) **C/AS1** 8.2.2, A2.1
- fire hydrant systems (Type 18) **C/AS1** 8.2.1, 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, 5.6.13, 6.3.2 a) d), 6.6.8, 6.16.7, 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, 5.6.6, 5.6.7 b), 5.6.8, 5.8.7, 5.8.8, 6.3.1, 6.5.1, 6.7.2, 6.9.6 d), 6.9.11, 6.10.5, 6.13.1, 6.20.5, 6.20.10, 6.20.15 a), 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 **F7/AS1** 1.2.8, 1.3.2, 1.3.4
 - with smoke detectors **F7/AS1** 1.2.9
- fire systems centre (Type 20) **C/AS1** 8.2.3, 8.2.4, A2.1
- heat detectors (Type 3) **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 **F7/AS1** 1.3.6, 1.5.2
- manual (Type 2) **C/AS1** 4.5.3, 4.5.9, 4.5.10 b), A2.1
- mechanical smoke extract **F7/AS1** 1.3.8, 1.5.2
- mechanical smoke extract (Type 11) **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, Table 6.6
- modified smoke/heat detection (Type 5) **C/AS1** 3.5.4, A2.1
- natural smoke venting **F7/AS1** 1.3.8, 1.5.2
- natural smoke venting (Type 10) **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, Table 6.5
- pressurisation of safe paths (Type 13) **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, B1.1.1, Table 6.1 Note 2; **F7/AS1** 1.3.7, 1.5.2
- refuge areas (Type 19) **C/AS1** 3.13, A2.1, Figure 3.17

Fire safety precautions (FSP) (continued)

- smoke control in air-handling systems (Type 9) **C/AS1** 6.23.2, A2.1; **F7/AS1** 1.5.2, 1.5.3
- smoke detectors **F7/AS1** 1.1.6, 1.2.4, 1.2.9, 1.3, 1.4.1, 1.5.3
- smoke detectors (Type 4) **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) **C/AS1** 3.16.3 d), 8.2.6, A2.1
- Fire separations **C/AS1** 1.3.5 b), 3.11.9, 4.1.1 a), 5.1.1, 5.3.1, 5.3.2 d) e), 5.6.3, 5.6.4 a), 5.6.5 c), 5.6.7, 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, 6.14.1, 6.14.4, 6.15.1 a), 6.17, 6.18.4, 6.18.7 to 6.18.10, 7.2.1, 7.2.2, Table 6.1
- junctions **C/AS1** 6.12.4 to 6.12.7, 6.12.9, 6.18.4, Figure 6.4
- protected shafts **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, 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), 6.16.3, 6.16.4 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** 5.6.9, 5.6.10
- 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** 5.6.7, 5.6.8
- construction **C/AS1** 6.12
- fire hazard category 4 **C/AS1** 2.2.10, 5.6.11 to 5.6.13
- 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** 6.6.3, 6.6.4, 6.6.7, 6.7.2 to 6.7.5
- intermediate floors **C/AS1** 4.5.16 to 4.5.18, 6.14.1 a), 6.14.3, 6.21.3 to 6.21.6, Figure 6.6, Tables 6.5 and 6.6

Firecells (continued)

- limited area atriums **C/AS1** 6.22, Figure 6.14, Tables 6.4 to 6.6
- 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, 6.9.6, 6.14.3, A2.1.1 Type 5
- top floor firecells **C/AS1** 4.5.14
- Fireplace **C/AS1** 9.1 to 9.3, Figures 9.1 and 9.3, Table 9.1
- Fire Safety **C/AS1**, **C/VM1**
- Fixings **E2/AS1** 4.4, 8.1.4, 8.2.4, 8.3.7, 8.4.8, 8.4.8.1, 8.4.9, 8.4.9.1, 9.4.3.1, 9.4.4.3, 9.4.5.2, 9.5.3.1, 9.6.6, 9.7.3.1, 9.8.3.1, 9.9.4.1, Tables 14, 15, 20-22, 24, Figures 39 and 40
- Fixtures
 - sanitary fixtures
see **Personal Hygiene**
- Flame barriers **C/AS1** 3.14.6 b) c), 6.18.5 c), 6.20.12 a), 6.20.13, 6.20.14 b), C10.1, Table 6.3
- Flammability index (FI) **C/AS1** C3.1, Table 6.2
- Flammable liquids
see **Hazardous Substances and Processes**, Class 3 flammable liquids
- Flammable solids
see **Hazardous Substances and Processes**, Class 4 flammable solids
- Flashings **E2/AS1** 4.0, 8.2.4, 8.2.6, 8.3.8, 8.4.11, 8.4.11.1, 8.4.12, 9.6.7, Tables 20-22, Figures 5 and 6
 - apron flashings **E2/AS1** 5.1, 8.4.12 b), Figures 7 and 43
 - durability requirements **E2/AS1** 4.2.1
 - fixings **E2/AS1** 4.4
 - head flashings **E2/AS1** 9.1.10.4, Table 7
 - jamb flashings **E2/AS1** 9.1.10.6, Table 7
 - materials **E2/AS1** 4.1, 4.2, 4.2.2, 4.2.3, 4.2.4, 4.3, 9.8.5
 - aluminium **E2/AS1** 4.3.2
 - aluminium-zinc coated steel **E2/AS1** 4.3.4
 - bituminous **E2/AS1** 4.3.10
 - butyl rubber **E2/AS1** 4.3.9
 - copper **E2/AS1** 4.3.6
 - EPDM **E2/AS1** 4.3.9
 - flexible flashing tape **E2/AS1** 4.3.11
 - galvanised steel **E2/AS1** 4.3.3
 - lead sheet **E2/AS1** 4.3.7
 - stainless steel **E2/AS1** 4.3.5
 - uPVC **E2/AS1** 4.3.1
 - zinc sheet **E2/AS1** 4.3.8
 - overlaps and upstands **E2/AS1** 4.6
 - overlap with roof claddings **E2/AS1** 4.6.1
 - apron flashing cover over metal roofing **E2/AS1** 4.6.1.1
 - barges **E2/AS1** 4.6.1.5
 - change in metal roof pitches **E2/AS1** 4.6.1.3
 - inter-storey junctions **E2/AS1** 4.6.1.7
 - parallel flashing **E2/AS1** 4.6.1.1
 - ridges and hips **E2/AS1** 4.6.1.2
 - roof- or deck-to-wall junctions **E2/AS1** 4.6.1.4
 - transverse flashing **E2/AS1** 4.6.1.1
 - window heads **E2/AS1** 4.6.1.6
 - requirements **E2/AS1** 4.5
 - edge treatments **E2/AS1** 4.5.1, Figure 5
 - metal flashing joins **E2/AS1** 4.5.2, Figure 6

- Flats
see Housing, multi-unit dwelling
- FLED
see Fire load energy density
- Flooding
flood risk assessment **E1/VM1** 3.2.2
history of **E1/AS1** 1.0.1
protection from **E1/VM1** 3.2.2
- Floors **NZBC/B2.3.1 (a), D1.3.3 (e), D1.3.4 (c), E2.3.3, E2.3.4, G6.3.1, G6.3.2;**
B1/AS2 2.1.1; **E2/AS1** 10.0; **F7/AS1** 1.1.2; **G3/AS1** 2.2.3, 2.2.4, 2.3.3,
 2.3.4, 2.3.5, 2.3.6
 basement floors **C/AS1** 3.3.2 i), 3.15.2, 6.14.4, Figure 3.19
 concealed spaces **C/AS1** 6.18.4, 6.18.5 a), 6.18.10
 concrete slab-on-ground **E2/AS1** 10.3
 acceptable materials **E2/AS1** 10.3.4
 damp-proof membranes (DPM) **E2/AS1** 10.3.3, Figure 132
 finished floor levels **E2/AS1** 10.3.5, Table 18, Figure 132
 floor levels **E2/AS1** 10.3.2, Figure 132
 general **E2/AS1** 10.3.1, Figure 132
 protection from timber **E2/AS1** 10.3.6
 fire resistance ratings **C/AS1** 3.14.6 c), 4.1.1 a), 4.3.2, 4.5.7, 5.3.1, 5.6.4 d),
 5.6.8, 5.7.3, 6.10.3, 6.12.2, 6.14.2 to 6.14.4, 6.15.1
 floor projections **C/AS1** 7.8.6, 7.9.13
 flooring materials **C/AS1** 6.20.8, 6.20.14
 intermediate floors **C/AS1** 3.3.2 f), 3.4.6, 3.9.13, 4.5.16 to 4.5.18,
 5.6.4 d), 5.6.5 b), 6.10.3, 6.14.1 a), 6.14.3, 6.21.3, 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 **C/AS1** 4.5.17, 6.21.4 a), 6.21.5, 6.21.6
 lower floors **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 **C/AS1** 4.5.1 to 4.5.6, 5.6.11
 other floors in a building **C/AS1** 4.5.8 to 4.5.11
 same purpose group on different floors **C/AS1** 4.5.13
 sloping floors and ceilings **C/AS1** 3.4.8 a)
 subfloor spaces **C/AS1** 6.15.1, 6.18.5 a), Figure 6.7
 top floor firecells **C/AS1** 4.5.14
 upper floors **C/AS1** 3.15.3 b), 3.16.3 a), 4.5.11, 5.7.6 b), 6.7.7,
 6.8.2, 6.8.6, 7.5.7, Figure 3.5
 wooden floors **C/AS1** 6.12.6, 6.20.14
 floor/ceiling assemblies **G6/AS1** 1.0.3, Figure 3
 floor/wall junctions **G6/AS1** 1.0.3, Figure 5
 minimum floor level **E1/AS1** 2.0, Figures 1 and 2
 moisture **NZBC/E2.3.4**
 slip resistant **NZBC/D1.3.3 (d); G15/AS1** 3.0.2
 suspended timber floors **E2/AS1** 10.2
 airflow **E2/AS1** 10.2.6
 general **E2/AS1** 10.2.1
 openings **E2/AS1** 10.2.5
 protection of timber **E2/AS1** 10.2.2
 separation **E2/AS1** 10.2.3, Figure 131
 subfloor ventilation **E2/AS1** 10.2.4
 vapour barriers in subfloor space **E2/AS1** 10.2.7
 installation **E2/AS1** 10.2.7.2
 minimum ventilation with vapour barrier **E2/AS1** 10.2.7.1
- Floor outlets **G13/AS1** 3.4
- Floor wastes **E3/AS1** 2.0.1, 2.2, Figure 4

Flues.....	NZBC/G11.3.3; G4/AS1 2.3, 2.4; G11/AS1 5.0
fire damper.....	G11/AS1 5.3
gas burning appliances.....	C/AS1 9.2
locations on dwellings.....	G4/AS1 2.4
materials.....	G11/AS1 5.1
oil fired appliances.....	C/AS1 9.3
safety devices.....	G11/AS1 5.2
solid fuel appliances.....	C/AS1 9.1
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
<i>see also</i> 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
<i>see also</i> 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
<i>see also</i> 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, 4.2.2, 4.6.1
notation.....	B1/VM4 4.1.1, 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

Foundations (continued)

- single piles
 - base resistance **B1/VM4** 4.1.3, Figures 3 and 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,
 - 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
- FSP
 - see* Fire safety precautions

G

Garages

see OutbuildingsGas **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** 8.0over pressure protection **G11/AS1** 3.0safe 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** 9.2seismic restraint **C/AS1** 9.2.2

Gases

see **Hazardous Substances and Processes**, Class 2 gasesGas fuel appliances **G4/AS1** 2.0, 3.0

Gas reticulation

another Acceptable Solution **G10/AS1** 5.0cleaning **G10/AS1** 1.1tailpipes **G10/AS1** 1.1.3concealed piping **G10/AS1** 1.4in concrete **G10/AS1** 1.4.1in enclosed spaces **G10/AS1** 1.4.2underground **G10/AS1** 1.4.3, Table 3construction **G10/AS1** 1.0corrosion control **G10/AS1** 3.0design **G10/AS1** 1.0.1 a)installation **G10/AS1** 1.2bends 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 2isolating valves **G10/AS1** 2.0materials **G10/AS1** 1.0.1 b), Table 1pipework in ducts **G10/AS1** 1.5unventilated ducts **G10/AS1** 1.5.4ventilated ducts **G10/AS1** 1.5.3vent lines **G10/AS1** 4.0, Tables 4 and 5welded joints **G10/AS1** 1.3Geology **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, 5.8.8dimensions **C/AS1** 5.8.3 to 5.8.5fire 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 7.1human impact safety **F2/AS1** 1.1in external walls **C/AS1** 5.8.2 a)in fire doors **C/AS1** 5.8.10in fire separations **C/AS1** 5.8.1, 5.8.2in safe paths **C/AS1** 5.8.1 c), 5.8.3 to 5.8.8, Figure 5.1in smoke control doors **C/AS1** 5.8.10, 5.8.11in smoke separations and protected paths **C/AS1** 5.8.9modifications 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
- Gutters, barges, and fascias..... **E2/AS1** 5.2, 8.1.6, 8.3.9, 8.4.14, 8.5.10, Figures 20 and 64
 internal gutters..... **E2/AS1** 8.1.6.1, 8.1.6.3, 8.4.16, 8.4.16.3, Figure 52
 parallel hidden gutters..... **E2/AS1** 8.1.6.1, 8.4.16.1, Figure 50
 valley gutters..... **E2/AS1** 8.1.6.1, 8.1.6.2, 8.4.16, 8.4.16.2, Table 8, Figure 51

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 c, 2.1.2, 2.2.1 g), 2.2.2, 2.3.2, 2.5.1, 2.6.2, 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 c), 2.2.1, 2.3.2, 2.5.1, 2.5.5, Table 2
- network utility operators..... **F1/VM1** 2.1.1 f)
- remedial work..... **F1/VM1** 2.6, Table 3
- risk assessment **F1/VM1** 1.0.2 c), 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**
 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
- Hearths..... **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,
7.10.6, 7.10.7, 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
wharehenui **H1/VM1** 1.1.1
- HVAC systems **F7/AS1** 1.5.3

I

- Identification of non-potable water supply **G12/AS1** 4.2.1
see also **Water supplies**
- Illuminance **G7/VM1** 1.0; **G8/VM1** 1.0, **G8/AS1** 1.0
 - measurement **G8/VM1** 1.0.1
 - minimum **G8/AS1** 1.0.3
- Impact insulation class (IIC)..... **G6/VM1** 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
 - pipng 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), **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
 - types..... **G14/VM1** 1.2, Table 1
 - unauthorised access **NZBC/G14.3.2** (g); **G14/VM1** 1.9
 - vehicle access **NZBC/G14.3.2** (b)
- 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**
- containment **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**
- watersplash **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 K L**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

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, 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 a)

- Laundrying** **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 3.2.2, Figure 3; G2/AS1 1.0.1 a), 1.0.2, 1.1.1; G13/AS1 3.3.2, 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**
- Legionella bacteria **G12/AS1 6.14.3, HB CS 9**
- 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, 6.16.4 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), 6.16.4 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 of access routes **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**
- 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**
- Loadings
 see Design, loadings
- Loads
 see **Structure**, loads
- 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), E2/AS1 2.5, 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);**
 normal..... **B2/AS1 2.1**
 regular maintenance..... **E2/AS1 2.5.1**
 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, 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 f), Figure 10**
- Marae
 see Housing, group dwellings
- Masonry
 see Design, masonry
 masonry buildings **B1/AS3 1.1.1**
- Masonry tiles **E2/AS1 8.2**
 anti-ponding boards **E2/AS1 8.2.5**
 details and flashings..... **E2/AS1 8.2.6, Figures 23-28**
 flashings and fixings..... **E2/AS1 8.2.4, Tables 20-22**
 general..... **E2/AS1 8.2.2**
 installation **E2/AS1 8.2.3, Tables 10 and 23**
 materials..... **E2/AS1 8.2.1**
 tile profiles..... **E2/AS1 8.2.1.1**
 penetrations **E2/AS1 8.2.7, Figures 29-31**
- Masonry veneer **E2/AS1 9.1.3.2, 9.2, Table 18**
 bottom of masonry veneer **E2/AS1 9.2.7**
 concrete bricks..... **E2/AS1 9.2.5, Figure 73**
 control joints..... **E2/AS1 9.2.4**
 clay bricks **E2/AS1 9.2.4.1, Figure 73**
 general..... **E2/AS1 9.2.2**
 installation **E2/AS1 9.2.3, Table 23**
 limitations **E2/AS1 9.2.1**
 secondary cladding **E2/AS1 9.2.8**
 windows and doors..... **E2/AS1 9.2.6**
- 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..... D2**
 control system..... **NZBC/D2.3.1 (e)**
 emergency conditions..... **NZBC/D2.3.3**
 escalators **NZBC/D1.3.3 (e)**
 lifts..... **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
- Membrane cappings** **E2/AS1 6.5**
- Metal cappings** **E2/AS1 6.4, 7.4.4, 9.9.10.1, Figure 9**
- Membrane roofs and decks** **E2/AS1 8.5**
- control joints **E2/AS1 8.5.7**
 - general **E2/AS1 8.5.2**
 - gutters **E2/AS1 8.5.10, Figure 64**
 - installation **E2/AS1 8.5.5**
 - butyl and EPDM **E2/AS1 8.5.5.2**
 - plywood **E2/AS1 8.5.5.1**
 - junctions **E2/AS1 8.5.7, Figures 57, 58 and 61-63**
 - with walls **E2/AS1 8.5.8.1, Figure 62**
 - limitations **E2/AS1 8.5.1, Figure 17A**
 - penetrations **E2/AS1 8.5.9, Figures 59 and 60**
 - handrails **E2/AS1 8.5.9.1**
 - plywood substrates **E2/AS1 8.5.3**
 - butyl and EPDM **E2/AS1 8.5.4**
 - roof and deck drainage **E2/AS1 8.5.6, Figures 56, 57 and 62-64**
- 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
- Occupants **NZBC/D2.3.5 (b), G1.3.3 (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, 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) 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 a)
- Odours
 see **Foul Water, Industrial Liquid Waste, Solid Waste**
- Offices
 see Commercial buildings
- 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
- Opening windows..... **F4/AS1 2.0**
- Other property **C/AS1 4.3.2, 5.3.2 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)**
- 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 **E2/AS1** 6.0, 9.3.9, 9.4.8, 9.5.5, 9.7.8, 9.8.7, 9.9.10, 9.6.9.8
C/AS1 6.12.7 b), 7.1.2 e), 7.8.1 b), 7.8.2, 7.9.2 b), Figure 7.1
- capping materials **E2/AS1** 6.3
- general **E2/AS1** 6.2
- limitations **E2/AS1** 6.1
- integral surface cappings **E2/AS1** 6.6
- membrane cappings **E2/AS1** 6.5
- metal cappings **E2/AS1** 6.4, Figure 9
- parapet-to-wall junctions **E2/AS1** 6.4.1, Figures 11-13
- Pedestrians
see **Access Routes**
- Penetrations **C/AS1** 3.12.3 e), 6.12.4, 6.12.9 d), 6.16.4 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**
- Pergolas
see Decks and Pergolas
- 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
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	
<i>see also</i> 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
sizing	G11/AS1 1.0
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
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
<i>see also</i> Communal non-residential	
Plumbing systems	
<i>see</i> Foul Water	
Plywood sheet	E2/AS1 9.8
corners	E2/AS1 9.8.4
external	E2/AS1 9.8.4.1, Figure 122
Internal	E2/AS1 9.8.4.2, Figure 123
finishes	E2/AS1 9.8.9
flashing material	E2/AS1 9.8.5, Tables 20-22
installation	E2/AS1 9.8.3, Table 23
fixings	E2/AS1 9.8.3.1, Table 24
joints	E2/AS1 9.8.3.2, Figures 118-121
limitations	E2/AS1 9.8.1
materials	E2/AS1 9.8.2, Figures 118 and 119
parapets and enclosed balustrades	E2/AS1 9.8.7
soffit details	E2/AS1 9.8.6, Figure 114
windows and doors	E2/AS1 9.8.8
windows: direct fixed	E2/AS1 9.8.8.1, Figure 115
windows: with cavity	E2/AS1 9.8.8.2, Figure 116
Pools	
<i>see</i> Swimming pools	
Positive and negative pressure	G4/AS1 1.3.3
Potable water supply	
<i>see</i> Water Supplies	

Pressed metal tiles	E2/AS1 8.3
barges.....	E2/AS1 8.3.9, Figure 8
fascias	E2/AS1 8.3.9, Figure 8
fixings.....	E2/AS1 8.3.7
flashings	E2/AS1 8.3.8, Table 7, Figures 34-37
gutters	E2/AS1 8.3.9, Figure 8
installation	E2/AS1 8.3.2
limitations.....	E2/AS1 8.3.1, Figure 37
metal substrate	E2/AS1 8.3.4
aluminium	E2/AS1 8.3.4.3
choice of metal.....	E2/AS1 8.3.4.1, Table 20
steel	E2/AS1 8.3.4.2
roof penetrations.....	E2/AS1 8.3.10, Figures 53 and 55
roof pitch	E2/AS1 8.3.5, Figure 32
tiles.....	E2/AS1 8.3.3
underlay.....	E2/AS1 8.3.6, Table 23
Pressure limiting valves	G12/AS1 5.3.2, 6.2.1 c), Figure 8, Table 6
Pressure reducing valves.....	G12/AS1 5.3.2, 6.2.1 b), Figures 7 and 9, Table 6
Pressure regulators.....	G11/AS1 2.1
Pressure relief valves.....	G12/AS1 6.4.1, 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	
Profiled metal roof claddings	E2/AS1 8.4
allowance for expansion	E2/AS1 8.4.10, Table 16, Figure 39
fixings: corrugated and trapezoidal profiles.....	E2/AS1 8.4.8, Figure 39
requirements	E2/AS1 8.4.8.1, Tables 14 and 15
fixings: trough profile	E2/AS1 8.4.9, Figure 40
requirements	E2/AS1 8.4.9.1
flashing details	E2/AS1 8.4.12, Figures 43-48
flashing requirements	E2/AS1 8.4.11, Tables 21 and 22, Figures 41 and 42
fixing flashings.....	E2/AS1 8.4.11.1, Table 21, Figure 6
general.....	E2/AS1 8.4.2
internal gutters	E2/AS1 8.4.16, 8.4.16.3, Figure 52
limitations	E2/AS1 8.4.1
materials.....	E2/AS1 8.4.3
aluminium	E2/AS1 8.4.3.3
choice of metal.....	E2/AS1 8.4.3.1, Table 20
steel	E2/AS1 8.4.3.2
parallel hidden gutters.....	E2/AS1 8.4.16, 8.4.16.1, Figure 50
profile closure.....	E2/AS1 8.4.15
profiles.....	E2/AS1 8.4.4, Figure 38
roof penetrations.....	E2/AS1 8.4.17, Table 17, Figures 21 and 53-55
roof pitch	E2/AS1 8.4.5
stopends.....	E2/AS1 8.4.13, Figure 49
structure	E2/AS1 8.4.6, Tables 11, 12 and 13
turn-downs at gutters	E2/AS1 8.4.14
underlay.....	E2/AS1 8.4.7, Table 23
valley gutters	E2/AS1 8.4.16, 8.4.16.2, Table 8, Figure 51

- Profiled metal wall claddings **E2/AS1** 9.6, Table 3
 (horizontal and vertical)
 fixings **E2/AS1** 9.6.6, Table 20, Figure 39
 flashings **E2/AS1** 9.6.7, Figures 5 and 6, Table 21
 general **E2/AS1** 9.6.2
 horizontal profiled metal on cavity **E2/AS1** 9.6.9
 barges **E2/AS1** 9.6.9.4, Figure 97
 bottom of cladding **E2/AS1** 9.6.9.5, Figure 98
 cavity battens **E2/AS1** 9.6.9.2, Table 23
 corners **E2/AS1** 9.6.9.3, Figure 96
 installation **E2/AS1** 9.6.9.1, Table 23
 parapets and balustrades **E2/AS1** 9.6.9.8, Figures 101 and 102
 penetrations **E2/AS1** 9.6.9.6, Figures 53 and 69
 windows **E2/AS1** 9.6.9.7, Figures 99 and 100
 limitations **E2/AS1** 9.6.1, Figure 38
 maintenance **E2/AS1** 9.6.4
 materials **E2/AS1** 9.6.3
 aluminium **E2/AS1** 9.6.3.3
 choice of metal **E2/AS1** 9.6.3.1, Table 20
 steel **E2/AS1** 9.6.3.2
 profiles **E2/AS1** 9.6.5, Figure 38
 vertical profile – direct fixed **E2/AS1** 9.6.8
 barges **E2/AS1** 9.6.8.2, Figure 92
 bottom of cladding **E2/AS1** 9.6.8.3, Figure 93
 corners **E2/AS1** 9.6.8.4, Figure 94
 installation **E2/AS1** 9.6.8.1, Table 23
 penetrations **E2/AS1** 9.6.8.5, Figures 53 and 69
 windows **E2/AS1** 9.6.8.6, Figures 95 and 100
- 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 d) 3.6.4 d), 3.7.1, Table 2
 double check valves **G12/AS1** 3.6.2 b), 3.7.2, Table 2
 pressure vacuum breakers **G12/AS1** 3.6.2 c), 3.6.4 c), 3.7.1, Table 2
 reduced pressure zone devices **G12/AS1** 3.6.2 a), 3.6.4 a), 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, 5.8.4, 7.5.10, 7.8.5, 7.9.6, 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** 5.6.7, 5.6.8, 5.6.11
 fire hazard category 4 **C/AS1** 2.2.10, 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, 5.3.2 a), 5.7.9, 6.1.2 b), 7.7.1, 7.8.10 a), 7.9.1, 7.9.16, 7.10.5 c), A1.2.1 Type 16, Tables 4.1 and 7.4

Purpose groups (continued)

- 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)
- CO **C/AS1** 3.9.3 b), 3.15.1 b), 3.16.5 to 3.16.7, 4.3.3, 6.5, A2.1.1 Type 16, Tables 2.1, 3.1, 3.3, 6.2 and 6.3
- CS **C/AS1** 2.2.3, 2.2.6, 2.2.7, 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, 3.18.1, 6.3.1, 6.20.7, 6.20.17, 6.20.20, 6.22.1, A2.1.1 Type 16, Figure 3.20, Tables 2.1, 3.1 to 3.3, 6.2 and 6.3; **F7/AS1** 1.3.5 b)
- IA **C/AS1** 3.5.2 a), 3.5.3 a), 3.5.4 a), 3.5.6 b), 3.10.2, 3.15.1 b), 3.15.3, 3.15.4, 4.3.3, 6.10, 6.22.1, A2.1.1 Type 16, Figure 3.20, Tables 2.1, 3.1 to 3.3 and 6.3
- ID **C/AS1** 3.5.2 a), 3.5.3 a), 3.5.4 a), 3.5.6 b), 3.15.1 b), 3.15.3, 4.3.3, 6.11, A2.1.1 Type 16, Tables 2.1, 3.1 to 3.3 and 6.3
- IE **C/AS1** 4.3.3, 6.9, 6.20.20, 7.3.1 a), 7.3.14, 7.5.3 Step 1, 7.9.6 a), 7.9.10 a), Tables 2.1 and 6.2
- SA **C/AS1** 2.2.3, 2.2.9, 2.3.6, 3.5.2 b), 3.5.3 b), 3.5.4 b), 3.9.12 f), 3.9.14, 3.11.6, 3.15.1 c), 3.15.5 to 3.15.7, 3.16.9, 3.17.9 b) d), 3.18.1, 4.5.11, 5.7.6 b), 5.8.2 c), 6.7, 6.9.6, 6.14.3, 6.16.5, 6.18.7, 6.20.20, 6.22.1, 7.1.1 b), 7.3.1 a), 7.3.14, 7.5.3 Step 1, 7.5.7, 7.5.9, 7.5.10, 7.9.6 a), 7.9.10 a), A2.1.1 Type 4, Type 5, Type 7, Figures 3.21 and 7.7, Tables 2.1, 3.1 to 3.3, 6.1 to 6.3 and 7.5; **F7/AS1** 1.1.2 b), 1.2.5, 1.3.5 a) b), 2.1.2 d)
- SC **C/AS1** 2.3.6, 3.9.12 f), 3.9.14, 3.11.6, 3.16.8, 3.17.4, 3.17.9 b) d), 4.5.11, 5.7.6 b), 5.8.2 c), 6.6, 6.9.6, 6.11.3, 6.20.8 b), 6.20.20, 7.1.1 b), 7.3.1 a), 7.3.14, 7.5.3 Step 1, 7.9.6 a), 7.9.10 a), 7.11.1, 8.1.2, Tables 2.1, 3.1 to 3.3, 6.1 to 6.3 and 7.5; **F7/AS1** 1.3.5 a) b), 2.1.2 e), 2.2.3
- SD **C/AS1** 2.3.6, 3.9.12 f), 3.9.14, 3.11.6, 3.16.8, 3.17.4, 3.17.9 b) d), 4.5.11, 5.7.6 b), 5.8.2 c), 6.6, 6.9.6, 6.11.3, 6.20.8 b), 6.20.20, 7.1.1 b), 7.3.1 a), 7.3.14, 7.5.3 Step 1, 7.9.6 a), 7.9.10 a), 7.11.1, 8.1.2, Tables 2.1, 3.1 to 3.3, 6.1 to 6.3 and 7.5; **F7/AS1** 1.3.5 a) b), 2.1.2 e), 2.2.3
- SH **C/AS1** 1.3.3, 1.3.4, 2.2.8, 2.2.9 b), 3.5.2 b) to 3.5.4 b), 3.15.1, 3.20.1, 4.3.3, 5.9.4 c), 6.8, 6.14.3, 6.14.4, 6.20.1, 7.1.1 b), 7.3.1 a), 7.3.14, 7.5.3 Step 1, 7.5.7, 7.5.9, 7.5.10, 7.8.5, 7.9.19, 7.10.6, 7.10.8, 7.11.4, Figure 7.7, Tables 2.1, 3.3, 6.2 and 6.3
- SR **C/AS1** 1.3.5, 2.2.9 a), 3.5.2 b), 3.5.3 b), 3.5.4 b), 3.11.6, 3.15.1 c), 3.15.5 to 3.15.7, 3.16.9, 3.17.9 b) d), 3.18.1, 3.20.1, 4.5.11, 5.7.6 b), 5.8.2 c), 6.8, 6.9.6, 6.14.3, 6.14.4, 6.16.5, 6.18.7, 6.20.1, 6.20.20, 6.22.1, 7.1.1 b), 7.3.1 a), 7.3.14, 7.5.3 Step 1, 7.5.7, 7.5.9, 7.5.10, 7.8.5, 7.9.6 a), 7.9.10 c), 7.9.19, 7.10.6 to 7.10.8, A2.1.1 Type 4, Type 5, Type 7, Figures 3.21 and 7.7, Tables 2.1, 3.1 to 3.3, 6.1 to 6.3 and 7.5; **F7/AS1** 1.1.2 b), 1.2.5, 1.3.5 a) b)
- WF **C/AS1** 3.5.2 a), 3.15.1 b), 5.8.4, Tables 2.1, 3.1 to 3.3, 6.2 and 6.3
- WH **C/AS1** 3.5.2 a), 3.5.3 a), 3.5.4 a), 3.5.6 c), 3.15.1 b), 5.8.4, Tables 2.1, 3.1 to 3.3, 6.2 and 6.3
- WL **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, 3.18.1, 6.22.1, Figure 3.20, Tables 2.1, 3.1 to 3.3, 6.2 and 6.3
- WM **C/AS1** 3.5.2 a) to 3.5.4 a), 3.5.6 c), 3.15.1 b), 3.15.3, 3.15.4, 6.11.1, Figure 3.20, Tables 2.1, 3.1 to 3.3, 6.2 and 6.3

Q R

Q

Qualifications **E2/AS1** 1.5, 8.2.2, 8.4.2, 8.5.2, 9.2.2, 9.3.4.1, 9.6.2, 9.9.2

R

Radioactive substances

see **Hazardous Substances and Processes**, Class 7

Ramps **C/AS1** 3.1.4, 3.9.2, **D1/AS1** 1.3.1, 1.3.2, 3.0
 accessible ramps..... **D1/AS1** 3.1.3, 6.0.3 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, 5.3.2 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, 7.10.5, 7.10.6, 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

Retaining walls **F4/AS1** 1.2.5

Retirement villages

see Communal residential

Rodding points

see Maintenance access to drains

Roof claddings **E2/AS1** 3.2, 8.0
 general..... **E2/AS1** 8.1
 fixings **E2/AS1** 8.1.4, Table 20
 gutters **E2/AS1** 8.1.6, Figure 20
 hidden gutters **E2/AS1** 8.1.6.1
 internal gutters **E2/AS1** 8.1.6.1, 8.1.6.3
 valley gutters **E2/AS1** 8.1.6.1, 8.1.6.2, Table 8
 limitations **E2/AS1** 8.1.2
 maintenance **E2/AS1** 8.1.3
 projecting eaves **E2/AS1** 8.1.3.1

Roof claddings (continued)

- roof penetrations **E2/AS1** 8.1.7, Tables 9 and 17, Figures 21 and 22
- underlays **E2/AS1** 8.1.5, Table 23
 - underlay support **E2/AS1** 8.1.5.1
- weathertightness **E2/AS1** 8.1.1
- Roof/wall junctions **E2/AS1** 5.0
 - apron flashings **E2/AS1** 5.1, Table 7, Figure 7
 - barges **E2/AS1** 5.2, Figure 8
 - fascias **E2/AS1** 5.2, Figure 8
 - gutters **E2/AS1** 5.2, Figure 8
- Roofs **C/AS1** 3.14.3, 3.14.4, 3.14.6 a), 3.16.7, 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, 7.9.1 to 7.9.9, Figures 7.1 and 7.11;
 - car parking and storage **C/AS1** 7.8.2, 7.9.16, 7.9.17
 - eaves and projections (fire safety) **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, 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)
 - open sided buildings **C/AS1** 7.8.8, 7.8.9, 7.8.10, Figure 7.10
 - roof spaces **C/AS1** 6.12.8, 6.18.5 b) c), 6.18.7, 6.18.8, 6.18.10
- 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** 2.2, **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 ratingsSafe paths **F7/AS1** 1.3.1, 1.3.4; **F8/AS1** 3.2.3 b)
see also Escape routesSafe 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* Barriersaccidental 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** 1.2.2pressure 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 2Sanitary fixtures..... **NZBC/E3.3.2 to E3.3.4, G1.3.1, G1.3.2, 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 pansacceptable standards **G1/AS1** 2.6

access

pans **G1/AS1** 4.2.7people with disabilities..... **G1/AS1** 1.2.2, 4.1basins **G1/AS1** 3.3, Figure 9, Table 1bidets..... **G1/AS1** 2.4communal sanitary fixtures **G1/AS1** 3.4construction and installation **G1/AS1** 2.0locations **G1/AS1** 3.0, 4.2.1non-flushing sanitary fixtures **G1/AS1** 5.0privies **G1/AS1** 5.0.2number of fixtures required **G1/AS1** 1.0, Figure 1, Tables 1 to 4safe water temperatures..... **G12/AS1** 6.14.1, 6.14.2sanitary towel disposal **G1/AS1** 1.1.5 b), 1.2, 1.2.2showers..... **G1/AS1** 2.5, 4.2.3, 4.2.4, Figures 5 and 8, Table 2soil fixtures..... **G1/AS1** 3.1.1, 3.2.1, 3.2.2, 3.3.1*see also* WC pansspace dimensions **G1/AS1** 3.1, 4.2.2, 6.2.1, Figures 4 to 9

toilets

see WC panstypes of fixtures required..... **G1/AS1** 1.0, Tables 1 and 2

Sanitary fixtures (continued)

- 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
- Seats on decks **F4/AS1** 1.2.4, Figure 6
- Security **NZBC/G14.3.2 (g); 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**
- 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, 3.3, Figures 4 and 5; **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), **D1/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) b), 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

Signs; escape routes (continued)

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 6.4.1
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
class 5.....	F8/AS1 6.1.4
class 7.....	F8/AS1 6.1.4
colour.....	F8/AS1 6.1.4 a
radiation 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
lifts.....	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
caution	F8/AS1 2.2.2, 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 3.2.2, Figure 3; 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
- 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, 6.16.5, 6.16.6
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, **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)**
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**
- 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..... **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 **C/AS1** 3.3.5, 3.4.7 a) b)
external stairways **C/AS1** 3.14.6 c), 3.14.7, 3.15.4, 3.15.7, Figures 3.22 and 3.23
stairways **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..... **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 **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 **D1/AS1** 4.1.8, 4.2.1, Figure 11, Tables 6 to 8
curved stairs **D1/AS1** 4.1.3, 4.4, Figure 17
landings **D1/AS1** 4.3, 4.3.1, 4.3.6 c), 4.6.2 c), Figures 14 and 25
direction changes **D1/AS1** Figure 16
length **D1/AS1** 4.3.4, 4.3.6 c)
maximum rise **D1/AS1** 4.3.2, Table 7
obstructions **D1/AS1** 4.3.5, Figure 15
width **D1/AS1** 4.3.3
lighting **D1/AS1** 4.6, 4.6.2, Table 8
pitch **D1/AS1** 4.1, Figure 11, Table 6
pitch lines **D1/AS1** 4.1.3, 4.4.1, 4.4.2, 4.5.1, 4.5.2
private stairs **D1/AS1** 4.6.2, Figure 11, Tables 6 and 8
main **D1/AS1** Figure 11, Table 6
minor **D1/AS1** 4.5.1, Figure 11, Table 6
risers **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 **D1/AS1** 4.5.1, Figure 11, Table 6
service stairs **D1/AS1** 4.5.1, Figure 11, Tables 6 and 8
slip resistance **D1/AS1** 4.1.4 c), Table 2
spiral stairs **D1/AS1** 4.1.3, 4.4.1
treads **D1/AS1** 4.1, 4.1.2 to 4.1.7, 4.5.1, 4.6, Figures 11 to 13, Table 6
tapered treads **D1/AS1** 4.4, Figure 17
visibility **D1/AS1** 4.3.6, 4.6, Table 8; **G8/AS1** 1.0.3
width **D1/AS1** 4.2, 4.2.1, 4.4.1, 4.5.2, 4.5.3, 6.0.1
winders **D1/AS1** 4.5, Figure 18
- Standard test
see Test methods
- Steel
see Design, steel

- Storage water heaters **NZBC/H1.3.4; G12/AS1** 6.2, 6.3.1, 6.6.3, 6.6.5, 6.7.2, 6.6.4, 6.8 to 6.11, Table 5; **H1/AS1** 5.0
- see also* Water heaters
- drain pipes **G12/AS1** 6.11.3 c)
- 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** 6.2.3
- 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**

Structure (continued)

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/B1.3.6, B1.3.7
stability	NZBC/B1.3.6, B2.3.1; D1/AS1 1.6
tanks	G12/AS1 5.2.7, Figure 4
seismic restraint	G14/VM1 2.3.2
temporary support	NZBC/B1.3.5
vibrations	NZBC/B1.2
Stucco	B1/AS1 5.0, E2/AS1 9.3
bottom of stucco	E2/AS1 9.3.8, Figure 75
decorative attachments	E2/AS1 9.3.10
finishes	E2/AS1 9.3.7
installation	E2/AS1 9.3.4
general	E2/AS1 9.3.4.1
movement control joints	E2/AS1 9.3.4.2
limitations	E2/AS1 9.3.1
non-rigid plaster backings	E2/AS1 9.3.5
installation of building wrap	E2/AS1 9.3.5.1, Table 23
support	E2/AS1 9.3.5.2
rigid plaster backings	E2/AS1 9.3.6
fibre cement sheet backing	E2/AS1 9.3.6.2
plywood backing	E2/AS1 9.3.6.1
parapets and enclosed balustrades	E2/AS1 9.3.9
stucco-topped enclosed balustrades	E2/AS1 9.3.9.1, Figure 117
structure	AS1 9.3.2
stucco cladding system	E2/AS1 9.3.3, Table 23, Figure 74
windows and doors	E2/AS1 9.3.11, Figure 76
Subsidence	B1/VM4 A1.2.1 (a)
Suites	
<i>see</i> 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)
exceptions	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
wharehenui	C/AS1 3.3.2 h), 3.4.2 e), Table 2.2
Surface Water	E1
<i>see also</i> 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
Swimming pools	
<i>see</i> Safety from Falling	

T

Tanks

- industrial liquid waste **G14/VM1** 1.4.1 c), 1.4.3, 3.0, Figure 3, Table 3
- 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
- flammability of floor coverings **C/AS1** C2.1
- flammability of membrane structures **C/AS1** C4.1
- flammability 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** 6.3.1, 6.5.1Thresholds..... **D1/AS1** 1.3.2Timber **B2/AS1** 3.2

see also Design, timber, Timber weatherboards

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

Timber barriers (continued)

- joists **B1/AS2** 2.1.1, 2.3.8
 - blocking **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)
- Timber weatherboards **E2/AS1** 9.4
 - finishes **E2/AS1** 9.4.9
 - fixings **E2/AS1** 9.4.3.1, Table 24
 - horizontal weatherboards **E2/AS1** 9.4.1.3, 9.4.4
 - external corners **E2/AS1** 9.4.4.4, Figures 77 and 78
 - fixings **E2/AS1** 9.4.4.3, Table 24
 - horizontal laps **E2/AS1** 9.4.4.1
 - internal corners **E2/AS1** 9.4.4.5, Figure 79
 - joints **E2/AS1** 9.4.4.2
 - installation **E2/AS1** 9.4.3, Table 23
 - limitations **E2/AS1** 9.4.1
 - horizontal weatherboards **E2/AS1** 9.4.1.3, Table 3
 - vertical weatherboards **E2/AS1** 9.4.1.2, Table 3
 - weatherboard profiles **E2/AS1** 9.4.1.1
 - materials **E2/AS1** 9.4.2, Table 23
 - parapets and enclosed balustrades **E2/AS1** 9.4.8
 - vertical weatherboards **E2/AS1** 9.4.5
 - corners (external and internal) **E2/AS1** 9.4.5.3, Table 7, Figure 80
 - fixings **E2/AS1** 9.4.5.2, Table 24
 - laps **E2/AS1** 9.4.5.1
 - windows in cavity walls **E2/AS1** 9.4.7, Figures 85 and 86
 - windows in direct fixed weatherboards **E2/AS1** 9.4.6, Figures 81-84
- 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

uPVC pipe **G13/AS3** 1.0

Urinals **E3/AS1** 3.3, 3.3.6; **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, 10.2.1
- 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, **G13/AS1** Table 6
- fixture vent pipes **G13/AS1** 5.2, Figures 5 to 8, 10 and 11, Tables 5 and 6
- gradient **G13/AS1** 5.4
- height **G12/AS1** 6.8.2 d)
- installation **G12/AS1** 6.9.1; **G13/AS1** 5.5 to 5.7, Figures 5 to 8, 10 and 11
- 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; **E3/AS1** 1.0.1, 1.2;
- 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 **NZBC/G4.3.1**
- oil fired appliances **C/AS1** 9.3.2
- outdoor air supply **NZBC/G4.3.1; G4/AS1** 1.3.1 a) d)
- 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
- Vermin-proofing **E2/AS1** 9.1.8.3
- Vibrations
- see **Structure**

W

- Walls..... **NZBC/B2.3.1 (a), C3.3.1, C3.3.5, E2.3.2, E2.3.3, E3.3.4, E3.3.5, G6.3.1; C/AS1** 5.3.1, 5.7.2, 6.10.6, 6.12.1, 6.12.6, 6.16.2, 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;
- cavities and concealed spaces **C/AS1** 6.18.4, Figures 6.11 and 6.12
- 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
- internal/external wall junctions..... **G6/AS1** 1.0.3, Figure 4
- 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
- wall assemblies..... **G6/AS1** 1.0.3, Figure 2
- Wall/Roof junctions
see Roof/wall junctions
- Wall claddings **E2/AS1** 3.3
- air seals..... **E2/AS1** 9.1.6, Figure 81
- barriers to airflow **E2/AS1** 9.1.4, Table 23
- bottom of cladding **E2/AS1** 9.1.3, Table 18, Figure 65
- balconies, decks and roofs **E2/AS1** 9.1.3.6
- bottom of other wall claddings **E2/AS1** 9.1.3.3, Table 18
- concrete slabs **E2/AS1** 9.1.3.1, Figure 132
- ground level timber framing **E2/AS1** 9.1.3.5, Table 18
- masonry veneer clearances **E2/AS1** 9.1.3.2, Table 18
- openings to garages..... **E2/AS1** 9.1.3.4, Table 18, Figure 65
- building wrap..... **E2/AS1** 9.1.7, Table 23, Figure 71
- building wrap to wall openings **E2/AS1** 9.1.5, Figure 72
- drained cavities **E2/AS1** 9.1.8
- cavity battens **E2/AS1** 9.1.8.4
- limitations **E2/AS1** 9.1.8.1
- requirements **E2/AS1** 9.1.8.2, Table 23, Figures 66 and 67
- vermin-proofing **E2/AS1** 9.1.8.3, Figure 66
- wall framing behind cavities..... **E2/AS1** 9.1.8.5
- general..... **E2/AS1** 9.1
- limitations..... **E2/AS1** 9.1.1, Table 3
- maintenance..... **E2/AS1** 9.1.2
- penetrations **E2/AS1** 9.1.9
- inter-storey junctions..... **E2/AS1** 9.1.9.4, Figure 70
- other cavity penetrations **E2/AS1** 9.1.9.2
- penetrations through cavities..... **E2/AS1** 9.1.9.1
- pipes and service penetrations **E2/AS1** 9.1.9.3, Figures 68 and 69
- windows and doors..... **E2/AS1** 9.1.10
- closed cell foam tape **E2/AS1** 9.1.10.7
- head flashings **E2/AS1** 9.1.10.4, Table 7, Figure 71
- jamb flashings **E2/AS1** 9.1.10.6, Table 7
- scope **E2/AS1** 9.1.10.1
- treatment of opening..... **E2/AS1** 9.1.10.2, Figure 72
- window heads **E2/AS1** 9.1.10.3, Figure 71
- window sills..... **E2/AS1** 9.1.10.5, Table 7
- 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,
 solar water heaters **G12/AS1** 6.1.1, 6.15, Table 5
 storage water heaters
 see Storage water heaters
 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 2; **G13/AS1** 1.0.3, 3.2.1, Figure 1, Table 1,
 G13/AS2 3.3.1 d)
- 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 Supplies** **G12**
 access for maintenance **NZBC/G12.3.6 (d)**
 backflow prevention devices **NZBC/G12.3.6 (e)**
 cold **G3/AS1** 1.1.4
 drinking water **NZBC/G12.2**
 energy efficiency **NZBC/H1.2, H1.3.4; H1/AS1** 5.0
 hot **G3/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), G14.3.2 (c);**
 G12/AS1 3.0; **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 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 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
Weatherboards	
see Timber weatherboards and fibre cement weatherboards	
Weathertightness	E2/VM1 1.0, E2/AS1 2.1, 8.1.1
Weathertightness risk factors	E2/AS1 3.0
establishing the risk	E2/AS1 3.1, Figure 1
building envelope risk matrix	Table 2
examples	E2/AS1 3.4, 3.4.1, 3.4.2, 3.4.3, Tables 4-6, Figures 2-4
definitions of risk	E2/AS1 3.1.1, Table 1
risk score	E2/AS1 3.1.2, Table 2
roof claddings	E2/AS1 3.2
wall claddings	E2/AS1 3.3, Table 3
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 and doors.....**B1/VM1** 12.0; **C/AS1** 3.1.4, 6.20.4 c); **E2/AS1** 9.1.10, 9.2.6, 9.3.11, 9.5.4, 9.6.9.7, 9.7.7, 9.8.8, 9.9.9, Figure 76; **E3/AS1** 1.3.1; **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**
- closed cell foam tape **E2/AS1** 9.1.10.7
- fire windows
 see Glazing
- glazing..... **B1/AS1** 7.0
- head flashings **E2/AS1** 9.1.10.4, Table 7, Figure 71
- jamb flashings **E2/AS1** 9.1.10.6, Table 7
- scope..... **E2/AS1** 9.1.10.1
- treatment of opening **E2/AS1** 9.1.10.2, Figure 72
- used for escape..... **C/AS1** 3.3.6 d), 3.18, 6.20.6 b), Figure 3.32
- vertical profiled metal..... **E2/AS1** 9.6.8.6, Figures 95 and 100
- window heads **E2/AS1** 9.1.10.3, Figure 71
- windows – cavity..... **E2/AS1** 9.4.7, 9.5.4.2, 9.7.7.2, 9.8.8.2, 9.9.9, Figures 85, 86, 91, 116 and 128
- windows – direct fixed..... **E2/AS1** 9.4.6, 9.5.4.1, 9.7.7.1, 9.8.8.1, 9.9.9, Figures 81-84, 90, 115 and 127
- window sills..... **E2/AS1** 9.1.10.5, Table 7
- 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