MALDIVES NATIONAL BUILDING CODE

HANDBOOK

1st EDITION - AUGUST 2008

Ministry of Construction and Public Infrastructure
Republic of Maldives

Maldives National

Building Code Handbook

1st Edition - August 2008

Construction Industry Development Section (CIDS)
Ministry of Construction and Public Infrastructure

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Our thanks to all those who contributed, whether through their comments, feedbacks, edits, or suggestions.

As there is always room for improvement, the Ministry of Construction and Public Infrastructure welcomes comments on this book, and will consider all that are received. Your comments will continue the development of this book leading to its ultimate acceptance.

As always it has been a great joint effort.

Mohamed Mauroof Jameel
Minister of Construction and Public Infrastructure

Contents

Introduction

The Construction industry of the Maldives has been undergoing rapid development over the past few years, and this rapid development has underscored the importance of having a regulatory frame work to regulate its works and to ensure public safety.

The Government of Maldives recognized the importance of ensuring the safety of the built environment and mandated the Ministry of Construction and Public Infrastructure to produce the Maldives National Building Code.

The Building Code will ideally be empowered from a set of building regulations which itself will be bound by a building act. However, in the absence of a comprehensive building act, but recognizing the importance of having a building code, the Ministry is publishing this National Building Code as a recommended best practices document.

The Maldives National Building Code 2008 is a performance based code which is aimed to provide flexibility in design with the possibility for regular change to the compliance documents and standards it refers to, depending on development in the construction industry. The advantage of a performance based Building Code is the *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 purpose is to create the enabling environment to achieve a safe and usable building design rather than aiming for the best building design.

In formulating the Maldives building code, extensive reference were made to other national building codes such as the UK building regulations and the New Zealand building code . The aspects of these documents, best fit to the local situation are replicated to fit the Maldivian context in the national building code. This process was finalized in consultation with numerous Maldivian technical persons and relevant authorities.

The draft code had been published in the Ministry's website for over 6 months to try and gather public comments and was distributed to all government agencies of concern for comments.

Purpose

The purpose of the building code is to set performance standards for buildings to ensure that:

a) People who use buildings can do so safely and without endangering their health; and

b) Buildings have attributes that contribute appropriately to the health, physical independence, and wellbeing of the people who use them; and

c) People who use a building can safely evacuate from the building as and when necessary; and

d) Buildings are designed, constructed, to enable it to be used in ways that promote sustainable development.

An overview of the Code

The Maldives building code does not consist of sets of "prescriptive" technical specifications but instead consist only of sets of "performance requirements" that each building has to meet. This is aimed at not limiting the vast possibility of creative designs and construction methodology which over time may be employed by the professionals in the sector.

Hence the code is a "performance-based code" which means the code does not prescribe how work should be done, but states how completed building work and its parts must perform.

The code consists of two general clauses outlining classified building uses and interpretations and 35 technical clauses which cover aspects such as structural stability and durability, fire safety, access, moisture control, safety of users, services and facilities and energy efficiency.

Each technical clause in this Building Code has three levels that describes the requirements for the clause and is listed below.

a) **Objective**: Social objectives the building must achieve.

b) **Functional requirement**: Functions the building must perform to meet the Objectives.

c) **Performance**: The performance criteria the building must achieve. By meeting the performance criteria, the objective and Functional requirement can be achieved.

Compliance Documents

Compliance documents provide details for construction that, if followed, result in compliance with the Building Code. There will be one Compliance Document for each of the technical clauses in the Building Code, and these compliance documents will be produced separately, by

the relevant authorities, which will become an integral part of the National Building Code.

Each Compliance Document contains at least an Acceptable Solution (AS) or a Verification Method (VM) and sometimes both.

Acceptable Solutions (AS) – are step-by-step building methods which are followed to achieve compliance.

Verification Methods (VM) - calculations or test that proves compliance.

Compliance to the Code

Compliance Documents provide one means of complying with the clauses of the Building Code. Buildings built to the method (Acceptable Solution or Verification Method) described in a Compliance Document are automatically deemed to comply with the Code.

The Compliance Documents are important because they are published and endorsed by the relevant regulating agency. Designs based on them shall be accepted by building consent authorities as demonstrating compliance with the Building Code.

Other alternative ways of building can be used, provided these can be demonstrated to the satisfaction of the regulating agency as meeting the required performance standards stipulated in the Building Code. These other methods are Alternative Solutions and need to be approved by the regulating agencies before a building consent can be issued based on the Alternative Solution.

Building Control Framework

The building control framework shows the relationship between the Building Code and various other provisions that ensure buildings in Maldives are safe and healthy to use. The regulation and performance of buildings will sit under the following three-part framework.

a) The **Building Act**, Once passed, should contain the provisions for regulating building works. This Building Act must provide the mandatory framework for the building control system to be followed when undertaking building works. Building Act should aim to improve control of and encourage better practices in building design and construction to provide greater assurance to consumers. At present there is no such Act available.
b) The **Building Regulations** are made under and in accordance with the Building Act. Already there are some regulations made by various agencies, but there is no Act binding these regulations.

c) The **Building Code,** at present, contains recommended best practices for all new building works, at the absence of a building act as referred above. It covers aspects such as *structural stability, fire safety, access, moisture control, durability, services and facilities*, and *energy efficiency*.

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

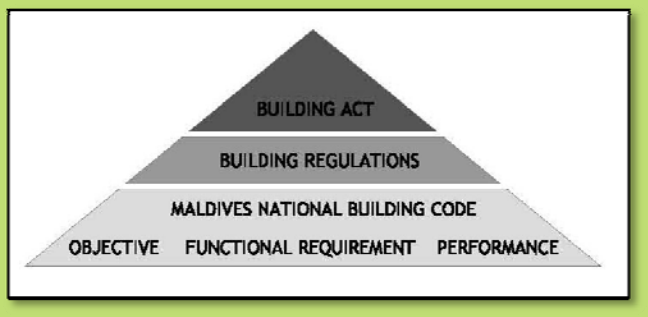

Figure 1: Building control framework

Parties and their Responsibilities

The government authorities responsible to set standards for the Building Code are listed below. The Compliance documents to the clauses of the building code, standards and documents referenced in the compliance documents shall be published by the authorities regulating the general aspects of the clauses.

COMPONENTS OF BUILDING CODE		AUTHORITY RESPONSIBLE TO SET STANDARDS
STABILITY		
B1	Structure	MCPI
B2	Durability	MCPI
FIRE SAFETY		
C1	Means of escape	MNDF
C2	Spread of fire	MNDF
C3	Structural stability during fire	MNDF
C4	Access and facilities for the fire service	MNDF
ACCESS		
D1	Access routes	MCPI
D2	Mechanical installation for access	MCPI
MOISTURE		
E1	Surface water	MWSA
E2	External moisture	MCPI
E3	Internal moisture	MCPI

SAFETY OF USERS		
F1	Hazardous agents on site	MEEW (Environment Section)
F2	Hazardous building materials	MEEW (Environment Section)
F3	Hazardous substances and processes	MEEW (Environment Section)
F4	Safety from falling	MCPI
F5	Construction and demolition hazards	MCPI
F6	Lighting for emergencies	MNDF
F7	Warning systems	MNDF
F8	Signs	MCPI
SERVICE AND FACILITIES		
G1	Personal hygiene	DPH
G2	Laundering	DPH
G3	Food preparation and prevention of contamination	MFDA
G4	Ventilation	MCPI
G5	Interior environment	MCPI
G6	Airborne and impact sound	MCPI
G7	Natural light	MCPI
G8	Artificial light	MEA
G9	Electricity	MEA
G10	Piped services	MCPI
G11	Gas as an energy source	MCPI
G12	Water supplies	MWSA
G13	Foul water	MWSA
G14	Industrial liquid waste	MWSA
G15	Solid waste	MEEW (Environment Research Center)
ENERGY EFFICENCIES		
H1	Energy Efficiency	MEA

Table 1: List of government authorities

List of acronyms:

MCPI - *Ministry of Construction and Public Infrastructure*
MFDA - *Maldives Food and Drug Authority*
MEEW - *Ministry of Environment Energy and Water*
MWSA - *Maldives Water and Sanitation Authority*
MNDF - *Maldives National Defence Force*
DPH - *Department of Public Health*
MEA - *Maldives Energy Authority*

A | General Provisions

A General Provisions

A1 Classified uses

EXPLANATION

For the purposes of this building code buildings are classified according to type, under seven categories.

A building with a given classified use may have one or more intended uses.

1.0 HOUSING

Applies to buildings or use where there is self care and service (internal management). There are three types.

1.0.1 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.

1.0.2 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.

1.0.3 Group Dwelling

Applies to a building or use where groups of people live as one large extended family. Examples: within communal housing centers.

2.0 COMMUNAL RESIDENTIAL

Applies to buildings or use where assistance or care is extended to the principal users. There are two types.

2.0.1 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, holiday resort, hotel, motel, nurse's home.

2.0.2 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.

3.0 COMMUNAL NON-RESIDENTIAL

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:

3.0.1 Assembly Service

Applies to a building or use where limited care and service is provided. Examples: a mosque, cinema, clubroom, hall, museum, public swimming pool, stadium or theatre.

3.0.2 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.

4.0 COMMERCIAL

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, hair-dresser, 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.

5.0 INDUSTRIAL

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.

6.0 OUTBUILDINGS

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.

7.0 ANCILLARY

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

In this building code unless the context otherwise requires, words shall have the meanings given under this Clause.

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

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

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

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

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

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

Allotment the term ''*allotment*'' means any parcel of land that is a continuous area of land and whose boundaries are defined by local authority deed, a continuous area of land held by deed only, or a continuous area of land in which the deed has been transferred by any other government authority for development purposes to the developer.

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

Building has the meaning ascribed to it as follows: meaning of *building*—

(1) Unless the context otherwise requires, the term ''*building*'' means any temporary or permanent movable or immovable structure (including any structure intended for occupation by people, animals, machinery, or chattels); and includes any mechanical, electrical, or other systems, and any utility systems, attached to and forming part of the structure whose proper operation is necessary for compliance with the *building code*; but does not include:
   (a) Systems owned or operated by a network utility operator for the purpose of reticulation of other property; or
   (b) Cranes not attached to any other structure; or
   (c) Ships
   (d) Vehicles and motor vehicles, whether movable or immovable, which are used exclusively for permanent or long-term residential purposes; or

(e) Containers
(f) Scaffolding used in the course of the *construction* process; or
(g) Falsework used in the course of the *construction* process.

(2) For the purposes of a *building consent,* a *code compliance certificate,* and a compliance schedule the term *building* also includes—
(a) any part of a *building*; and
(b) any 2 or more *buildings* which, on completion of any *building work*, are intended to be managed as 1 *building* with a common use and a common set of ownership arrangements.

(3) For the purposes of subsection (2) of this section, where any utility system or any part of any utility system—
(a) is external to the *building*; and
(b) is also connected to or is intended to be connected to—
(i) A network under the control of a *network utility operator*; or
(ii) Some other facility which is able to provide for the successful functioning of the utility system in accordance with its intended design— that utility system or that part of the utility system shall be deemed to be part of a *building*.

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

Building certifier means a person approved as a *building certifier* by the *local authority*

Building code means the *building code* herein.

Building consent means a consent to carry out *building work* granted by a *local authority* and includes all conditions to which the consent is subject.

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

Building height The vertical distance between the ground level and the highest floor finished level or the highest level to the top of the roof beam other than enclose stairways, lift shafts, machine rooms, parapet walls and railings not more than 1.2m height.

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

Code compliance certificate means a certificate to that effect issued by a local authority or a *building certifier*.

Combustion appliance A slow combustion stove, a free standing metal cone fireplace or a cast iron pot belly stove.

Concealed space Any part of the space within a *building* that cannot be seen from an *occupied space*.

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

Contaminant means any substance, whether gaseous, liquid, or solid that —

(a) Is foreign to or alters the balance of the natural constituents of the environment into which it is introduced; and

(b) Is or may be injurious to, or will or may adversely affect, the environment or the health or the safety of persons or property:

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

Electrical fixed appliance An electrical appliance which is fixed-wired to the *electrical installation*, or intended to remain permanently attached and form part of the *building*.

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

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

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

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

Evacuation time The time taken by the occupants of the *building* to evacuate the *building* to a *final exit*.

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

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

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

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

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

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

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

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

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

Fire resisting closure A *fire* rated device or assembly for closing an opening through a *fire separation*.

Fire safety system 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.

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

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

Foul water The discharge from any *sanitary fixtures* or *sanitary appliances*.

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

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.

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

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

Hazardous substance is any substance that has one or more of the following properties:
(a) explosiveness; (b) flammability; (c) ability to oxidize; (d) human toxicity; (e) corrosiveness;
(f) ecotoxicity or (g) capacity, on contact with air or water, to develop one or more of the above properties.

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

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

Impact insulation class (IIC) A single number rating derived from measured values of normalised sound pressure impact levels in accordance with Method ASTM E492, 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.

Impervious That which does not allow the passage of moisture.

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

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

Intended use of a *building* includes—

(a) Any reasonably foreseeable occasional other use that is not incompatible with the *intended use*; and
(b) Normal maintenance; and
(c) Activities taken in response to *fire* or any other reasonably foreseeable emergency—but does not include any other maintenance and repairs or rebuilding.

Local authority means the government body responsible for the relevant task

Network utility operator means a person who—

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

(b) Is an electricity operator or electrical supply authority; or
(c) Undertakes the piped distribution of potable water for supply; or
(d) Is the operator of a sewerage system or a stormwater drainage system.

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

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

Other property means any land or *buildings* or parts thereof which are—
(a) Not held under the same *allotment*; or
(b) Not held under the same ownership unless specific local authority approval is not taken for joint development— and includes any road.
(c) Not part of the plot which construction is to be undertaken

Outdoor air Air as typically comprising by volume. (i) oxygen 20.94% (ii) carbon dioxide 0.03%
(iii) nitrogen and other inert gases 79.03%

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

People with disabilities People whose ability to use *buildings* is affected by mental, physical, hearing or sight impairment.

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.

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

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

Public housing Housing provided by government.

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

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

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

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

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

Sanitation The term used to describe the activities of washing and/or excretion carried out in a manner or condition such that the effect on health is minimised, with regard to dirt and infection.

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

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

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

Sound transmission class (STC) A single number rating derived from measured values of transmission loss in accordance with classification ASTM E413, Determination of Sound Transmission Class. It provides an estimate of the performance of a partition in certain common sound insulation situations.

Specified intended life in relation to a *building*, means the period of time, for which the *building* is proposed to be used for its *intended use.*

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

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

Travel distance The length of the *escape route* as a whole or the individual lengths of its parts, namely: (a) *open paths*; (b) *protected paths*; and (c) *safe paths*.

Unprotected area In relation to an *external wall* of a *building* means:

(a) Any part of the *external wall* which has less than the required *FRR*. For example, a non *fire* rated window, door or other opening, or sheet metal.

(b) Any part of the *external wall* which has combustible material more than 1.0 mm thick attached or applied to its external face, whether for cladding or any other purpose.

Water main A water supply pipe that is under the control of, or maintained by a *network utility operator*.

Water supply system Pipes, fittings and tanks used or intended tube used for the storage and reticulation of water from a *water main* or other water source, to *sanitary fixtures*, *sanitary appliances* and fittings with a *building*.

B | Stability

B1 Structure

B2 Durability

B Stability

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,
(d) Earth pressure,
(e) Water and other liquids,
(f) Wind,
(g) *Fire*,
(h) Impact,
(i) Explosion,
(j) Reversing or fluctuating effects,
(k) Differential movement,
(l) Vegetation,
(m) Adverse effects due to insufficient separation from other *buildings*,
(n) Influence of equipment, services, non-structural elements and contents,
(o) Time dependent effects including creep and shrinkage, and
(p) Removal of support.

B1.3.4 Due allowance shall be made for:
(a) The consequences of failure,
(b) The intended use of the *building*,
(c) Effects of uncertainties resulting from *construction* activities, or the sequence in which *construction* 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 *buildings*.

B1.3.5 The demolition of *buildings* shall be carried out in a way that avoids the likelihood of premature collapse.

B1.3.6 *Sitework*, where necessary, shall be carried out to:

(a) Provide stability for *construction* on the site, and
(b) Avoid the likelihood of damage to *other property*.

B1.3.7 Any *sitework* and associated supports shall take account of the effects of:
(a) Changes in ground water level,
(b)Water, weather and vegetation, and
(c) Ground loss and slumping.

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 From the time a code compliance certificate or a permit to use is issued, *building elements* shall with only normal maintenance continue to satisfy the performances of this code for the lesser of; the *specified intended life* of the *building*, if any, or:

For the structure, including *building elements* such as floors and walls which provide structural stability: the life of the *building* being not less than 50 years.

C | Fire Safety

C1 Means of escape

C2 Spread of fire

C3 Structural stability during fire

C4 Access & facilities for the fire services

C Fire Safety

C1 Means of escape

Provisions	Limits on application
OBJECTIVE	
C1.1 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 operation	
FUNCTIONAL REQUIREMENT	
C1.2 *Buildings* shall be provided with *escape routes* which: (a) Give people *adequate* time to reach a *safe place* without being overcome by the effects of *fire*, and (b) Give *fire* service personal *adequate* time to undertake rescue operation	
PERFORMANCE	
C1.3.1 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*.	
C1.3.2 The number of *exitways* or *final exit* 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 the *fire safety system* installed in the *building*.	

C1.3.3 *Escape routes* shall be:

(a) Of *adequate* size for the number of occupants,

(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 C2 "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".

C2 Spread of fire

Provisions	Limits on application
OBJECTIVE	
C2.1 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* and *other property* from the effects of *fire.* (d) Safeguard the environment from adverse effects of *fire.*	
FUNCTIONAL REQUIREMENT	
C2.2 *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* and *other property* are protected from damage, and (d) Significant quantities of *hazardous substances* are not released to the environment during *fire.*	Requirement C2.2(d) applies only to *buildings* where significant quantities of *hazardous substances* are stored or processed.
PERFORMANCE	
C2.3.1 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 (c) The *fire hazard*, and (d) The active *fire safety systems* installed in the *building.*	

C2.3.2 *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.*

C2.3.3 *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.*

C2.3.4 *Concealed spaces* and cavities within *buildings* shall be sealed and subdivided where necessary to inhibit the unseen spread of *fire* and smoke.

Performance C2.3.4 shall not apply to *Detached Dwellings*.

C2.3.5 *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* and *other property*.

C2.3.6 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,
(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.*

C2.3.7 Air conditioning and mechanical ventilation systems shall be constructed to avoid circulation of smoke and *fire* between *firecells*.

C2.3.8 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.*

C2.3.9 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.*

C2.3.10 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.*

Performance C2.3.10 applies only to *buildings* where significant quantities of *hazardous substances* are stored or processed.

C3 Structural stability during a fire

Provisions | **Limits on application**

OBJECTIVE

C3.1 The objective of this provision is to:

(a) Safeguard people from injury due to loss of structural stability during fire, and

(b) Protect *household units* and *other properties* from damage due to structural instability caused by *fire*.

FUNCTIONAL REQUIREMENT

C3.2 *Buildings* shall be constructed to maintain structural stability during *fire* to:

(a) Allow people *adequate* time to evacuate safely

(b) Allow fire service personnel adequate time to undertake rescue and firefighting operations.

(c) Avoid collapse and consequential damage to adjacent *household units* or *other property*.

PERFORMANCE

C3.3.1 Structural elements of the *building* shall *have fire resistance* appropriate to the function of the elements, the *fire load*, the *fire intensity*, the *fire hazard*, the height of the *building*, and the *fire* control facilities external to and within them.

C3.3.2 Structural elements shall have a *fire resistance* of no less than that of any element to which they provide support within the same *fire cell*.

C3.3.3 Collapse of elements having a lesser *fire resistance* shall not cause the consequential collapse of elements required to have higher *fire resistance*.

C4 Access & facilities for the fire services

Provisions

Limits on application

OBJECTIVE

C4.1 The objective of this provision is to:

(a) Provide reasonable facilities to assist *fire* fighters in the protection of life, and

(b) Enable *fire* appliances to gain access to the building.

FUNCTIONAL REQUIREMENT

C4.2.1 *Buildings* shall be designed and constructed so as to provide reasonable facilities to assist *fire* fighters in the protection of life.

C4.2.2 Reasonable provision shall be made within the site of the *building* to enable *fire* appliances to gain access to the *building*.

PERFORMANCE

C4.3.1 There should be sufficient means of external access to enable for *fire* appliances to be brought near to the *building* for effective use.

C4.3.2 There should be sufficient means of access into, and within, the *building* for fire-fighting personnel to effect rescue and fight *fire*.

C4.3.3 The *building* should be provided with sufficient internal *fire* mains and other facilities to assist fire-fighters in their tasks.

C4.3.4 The building shall be provided with *adequate* means for venting heat and smoke from a *fire* in a basement.

D | Access

D1 Access routes

D2 Mechanical installation of access

D Access

D1 Access routes

Provisions	Limits on application
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*.	Objective D1.1(c) shall apply only to those *buildings* which serve the public, *buildings* designated for Disabled Persons' use and to *buildings* where accessibility is required by any other Act
FUNCTIONAL REQUIREMENT	
D1.2.1 *Buildings* shall be provided with reasonable and adequate access to enable safe and easy movement of people.	Requirement D1.2.1 shall not apply to *Ancillary buildings* or *Outbuildings.*
D1.2.2 Where a *building* is provided with loading or parking spaces, they shall be constructed to permit safe and easy unloading and movement of vehicles, and to avoid conflict between vehicles and pedestrians.	
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,

D1.3.2 At least one *access route* shall have features to enable *people with disabilities* to:

(a) Approach the *building* from the street boundary or, where required to be provided, the *building* 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’’.

Performance D1.3.2 shall not apply to *Housing, Outbuildings, Ancillary buildings, and to Industrial buildings* where no more than 10 people are employed.

D1.3.3 Access routes shall:

(a) Have *adequate* 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 *adequate* 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:

(i) provide *adequate* 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,

(h) Have stair treads which prevent children falling through or becoming held fast between treads, where open risers are used,

Performance D1.3.3(h) shall not apply within *Industrial buildings, Outbuildings and Ancillary buildings.*

(i) Have smooth, reachable and graspable *handrails* to provide support and to assist with movement along a stair or ladder.
(j) Have *handrails* to *adequate* strength and rigidity as required by Clause B1 “Structure”.
(k) Have landing of appropriate dimensions and at appropriate intervals along a stair or ramp to prevent undue fatigue,
(l) 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
(m) Have any automatically controlled doors *constructed* to avoid the risk of people becoming caught or being struck by moving parts.

D1.3.4 An *accessible route*, in addition to the requirement of clause D1.3.3. shall

(a) Contain no thresholds or upstand forming a barrier to an unaided wheelchair user
(b) Have means to prevent the wheel of a wheelchair dropping over the side of the *accessible route*.
(c) Have doors and related hardware which are easily used.

Performance D1.3.3(i) shall not apply to isolated steps.

D2 Mechanical installations for access

Provisions

OBJECTIVE

D2.1 The objective of this provision is to:

(a) Safeguard people from injury and loss of amenity while using mechanical installations for movement into, within and out of *buildings*,

(b) Safeguard maintenance personnel from injury while servicing mechanical installations for access, and

(c) Ensure that *people with disabilities* are able to carry out normal activities and processes within *buildings.*

FUNCTIONAL REQUIREMENT

D2.2 Mechanical installations for access into, within and out of *buildings* shall provide for the safe and easy movement of people, and for the safety of maintenance personnel.

PERFORMANCE

D2.3.1 Mechanical installations for access shall:

(a) Move people safely, and stop and hold as required for the normal use of the installation, for all loads up to and including 25% in excess of the rated load,

(b) Not produce excessive acceleration or deceleration,

(c) Be constructed to avoid the likelihood of people falling, tripping, becoming caught, being able to touch or be struck by moving parts, sharp edges or projections, under both normal and reasonably foreseeable abnormal conditions of use,

Limits on application

Objective D2.1 (c) shall apply only to those *buildings* which serve the public, *buildings* designated for Disabled Persons' use and to *buildings* where accessibility is required by any other Act.

(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.

D2.3.4 Potentially dangerous equipment shall be located in spaces which:
(a) Are secure from unauthorised entry and contain only equipment associated with the installation,
(b) Are appropriately sized and suitably guarded to provide *adequate* safe working areas for maintenance personnel,
(c) Are provided with *adequate* power and lighting for maintenance, and
(d) Have an environment that ensures the safe operation of the equipment under all likely conditions of use.

D2.3.5 Mechanical installations on *accessible routes* shall:

(a) Where the passenger conveyor is manually controlled, provide:
  (i) Controls which are easily identifiable and easy to use,
  (ii) *Adequate* notification that the passenger conveyor has registered a summoning call, and
  (iii) *Adequate* notification that the passenger conveyor has arrived, and of its future direction of travel,

(b) Where the passenger conveyor is fully enclosed and serves more than two levels, provide an *adequate* means of informing occupants of their location,

(c) Where appropriate, have doors which:
  (i) Are power operated,
  (ii) Are readily distinguishable from their surroundings, and
  (iii) Where automatic, remain open sufficiently long to enable *people with disabilities* to pass through.

E | Moisture

E1 Surface water

E2 External moisture

E3 Internal moisture

E Moisture

E1 Surface water

Provisions	Limits on application
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 *Surface water*, resulting from a storm 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 a storm having a 2% probability of occurring annually, shall not enter *buildings.*	Performance E1.3.2 shall apply only to *Housing, Communal Residential* and *Communal Non-residential 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,
(d) Provide reasonable access for maintenance and clearing blockages,
(e) Avoid the likelihood of damage to any *outfall*, in a manner acceptable to the *network utility operator*, and
(f) Avoid the likelihood of damage from superimposed loads or normal ground movements.

E2 External moisture

Provisions

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.*

FUNCTIONALREQUIREMENT

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

PERFORMANCE

E2.3.1 Roofs shall shed precipitated moisture.

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 *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.*

E2.3.5 Excess moisture present at the completion of *construction*, shall be capable of being dissipated without permanent damage to *building elements.*

Limits on application

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.

E3 Internal moisture

Provisions	Limits on application
OBJECTIVE	
E3.1 The objective of this provision is to: (a) Safeguard people against illness or injury which could result from accumulation of internal moisture, and (b) Protect *household units* and *other properties* from damage caused by free water from another occupancy in the same *building.*	
FUNCTIONAL REQUIREMENT	
E3.2 *Buildings* shall be constructed to avoid the likelihood of: (a) Fungal growth or the accumulation of *contaminants* on linings and other *building elements*, (b) Free water overflow penetrating to an adjoining *household unit*, and (c) Damage to *building elements* being caused by presence of moisture.	
PERFORMANCE	
E3.3.1 *Adequate* ventilation shall be provided to all *habitable spaces*, bathrooms, laundries, and other spaces where moisture may be generated.	Performance E3.3.1 shall not apply to *Communal Non-residential, Commercial, Industrial, Out-buildings* or *Ancillary buildings.*
E3.3.2 Accidental overflow from *sanitary fixtures* or laundering facilities shall be constrained from penetrating to another occupancy in the same *building.*	
E3.3.3 Floor surfaces of any space containing *sanitary fixtures* or laundering facilities shall be *impervious* and easily cleaned.	

E3.3.4 Wall surfaces adjacent to *sanitary fixtures* or laundering facilities shall 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*, shall be impervious and easily cleaned.

E3.3.6 Water splash shall be prevented from penetrating behind linings or to concealed spaces.

F | Safety of Users

F1 Hazardous agents on site

F2 Hazardous building materials

F3 Hazardous substances and processes

F4 Safety from falling

F5 Construction and demolition hazards

F6 Lighting for emergency

F7 Warning systems

F8 Signs

F Safety of Users

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 If a site is deemed a contaminated site by the local authority that site 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

Provisions	Limits on application
OBJECTIVE	
F2.1 The objective of this provision is to safeguard people from injury and illness caused by exposure to *hazardous building* materials.	
FUNCTIONAL REQUIREMENT	
F2.2 *Building* materials which are potentially *hazardous*, shall be used in ways that avoid undue risk to people.	
PERFORMANCE	
F2.3.1 The quantities of gas, liquid, radiation or solid particles emitted by materials used in the *construction* of *buildings*, shall not give rise to harmful concentrations at the surface of the material where the material is exposed, or in the atmosphere of any space.	
F2.3.2 Transparent panels capable of being mistaken for an unimpeded path of travel shall be marked to make them visible.	Performance F2.3.2 does not apply to *Housing.*
F2.3.3 Glass or other brittle materials with which people are likely to come into contact shall: (a) If break 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.	

F3 Hazardous substances and processes

Provisions

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,

Limits on application

(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,

(f) Impervious, easily cleaned surface finishes on *building elements* likely to be splashed or become contaminated in the course of the *intended use* of the *building*, and

(g) Signs as required by Clause F8 ‘‘Signs’’.

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.	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 meters.
F4.3.2 Roofs with permanent access shall have barriers provided.	
F4.3.3 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.	

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 opening other than those approved by the *local authority* for access and viewing,

(d) Have no gates or doors which project beyond the approved worksite when opened,
(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.

F6 Lighting for emergency

Provisions	Limits on application
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.	Requirement F6.2 shall not apply to *Detached Dwellings, household units* within *Multi-unit Dwellings, Outbuildings* or *Ancilliary buildings.*
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.*	Performance F6.3.1 shall not apply to spaces infrequently inhabited such as plant rooms, storage areas and service tunnels, and for *Housing.*
F6.3.2 Signs to indicate *escape routes* shall be provided as required by Clause F8 ‘‘Signs’’.	

F7 Warning system

Provisions	Limits on application

OBJECTIVE

F7.1 The objective of this provision is to safeguard people from injury or illness due to lack of awareness of an emergency.

FUNCTIONALREQUIREMENT

F7.2 *Buildings* shall be provided with appropriate means of warning people to escape to a *safe place* in an emergency.

PERFORMANCE

F7.3 A warning system shall consist of a combined *fire* detection and warning system that will alert people in *adequate* time for them to reach a *safe place.*

F7.4 The provision of a warning system shall be appropriate to and dependent on:
(a) The buildings indented use
(b) The buildings floor area
(c) The buildings height

F8 Signs

Provisions	Limits on application
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.*	Objective F8.1(c) shall apply only to those *buildings* which serve the public, *buildings* designated for Disabled Persons' use and to *buildings* where accessibility is required by any other Act.
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.*	Requirement F8.2 shall not apply to *Housing* except for *Public Housing.*
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	

(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”.

F8.3.4 Signs shall be provided in sufficient locations to identify *accessible routes* and facilities provided for *people with disabilities.*

G | Services & Facilities

G Services & Facilities

G1 Personal hygiene

Provisions	Limits on application
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.*	Objective G1.1 (c) shall apply only to those *buildings* which serve the public, *buildings* designated for Disabled Persons' use and to *buildings* where accessibility is required by any other Act.
FUNCTIONAL REQUIREMENT	
G1.2 *Buildings* shall be provided with appropriate spaces and facilities for personal hygiene.	
PERFORMANCE	
G1.3.1 *Sanitary fixtures* shall be provided in sufficient number and be appropriate for the people who are intended to use them.	
G1.3.2 *Sanitary fixtures* shall be located, constructed and installed to: (a) Facilitate *sanitation*, (b) Avoid risk of food and water 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,
(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 in *adequate* numbers.

G1.3.4 Personal hygiene facilities provided for *people with disabilities* shall be *accessible.*

Performance G1.3.4 shall not apply to Housing, Outbuildings, Ancillary buildings, and to *Industrial buildings* where no more than 10 people are employed.

G2 Laundering

Provisions	Limits on application
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.*	Objective G2.1(b) shall apply only to those *buildings* which serve the public, *buildings* designated for Disabled Persons use and to *buildings* where accessibility is required by any other Act.
FUNCTIONAL REQUIREMENT	
G2.2 *Buildings* shall be provided with *adequate* space and facilities for laundering.	Requirement G2.2 shall apply only to *Housing.*
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 and facilities shall be provided within each accommodation unit or may be grouped elsewhere in a convenient location.	

G3 Food preparation & prevention of contamination

Provisions	Limits on application
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.*	Objective G3.1(c) shall apply only to those *buildings* which serve the public, *buildings* designated for Disabled Persons' use and to *buildings* where accessibility is required by any other Act.
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.*	Requirement G3.2.1 shall apply to *Housing*, and where appropriate shall also apply to *Commercial* and *Industrial buildings* whose *intended uses* include the manufacture, preparation, packaging or storage of food.
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 and facilities for food storage, as required by the relevant authority, (b) Means for food rinsing, utensil washing and waste water disposal,	Performance G3.3.1 (a) and (b) shall apply to *Housing* and *Commercial* or *Industrial buildings* whose *intended uses* include the handling of food.

(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:
All *building elements* constructed with materials which are free from *hazardous substances* which could cause contamination to the *building* contents.

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*.

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.

Performance G3.3.6 shall apply to *Commercial* or *Industrial buildings* whose *intended uses* include the handling of food, the medical treatment of humans or animals, the slaughter of animals or the reception of dead bodies.

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.

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) Steam 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.

G4.3.4 Contaminated air shall be disposed of in a way which avoids creating a nuisance or hazard to people and *other property*.

G4.3.5 The quantities of air supplied for ventilation shall meet the additional demands of any fixed *combustion appliances.*

G5 Interior environment

Provisions	Limits on application
OBJECTIVE	
G5.1 The objective of this provision is to: (a) Safeguard people from illness caused by excessive air temperature, (b) Safeguard people from injury or loss of *amenity* caused by inadequate activity space, (c) Ensure that *people with disabilities* are able to carry out normal activities and processes within *buildings.*	Objective G5.1(c) shall apply only to those *buildings* which serve the public, *buildings* designated for Disabled Persons' use and to *buildings* where accessibility is required by any other Act.
FUNCTIONAL REQUIREMENT	
G5.2.1 *Buildings* shall be constructed to provide: (a) An *adequate,* controlled interior temperature, (b) *Adequate* activity space for the *intended use,* and (c) *Accessible* spaces and facilities.	Requirement G5.2.1 (c) shall apply only to *Communal Residential, Communal Non-residential,* and *Commercial buildings.*
PERFORMANCE	
G5.3.1 *Habitable spaces,* bathrooms and recreation rooms shall have provision for maintaining the internal temperature at no higher than acceptable for habitation.	
G5.3.2 *Habitable spaces* shall have sufficient space for activity, furniture, and sanitation.	

G6 Airborne & 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 Dwelling houses, flats and rooms for the residential purposes shall be designed and constructed in such a way that, they provide *adequate* resistance to sound from other parts of the same building and from adjacent *buildings*.	
G6.3.2 Dwelling houses, flats and rooms for the residential purposes shall be designed and constructed in such a way that: (a) Internal walls between a bedroom containing a water closet, and other rooms; and (b) Internal floors provide *adequate* resistance to sound.	Performance G6.3.2 shall not apply to: (i) an internal wall which contains a door; (ii) an internal wall which separates' an en suite toilet from the associate bedrooms; (iii) existing walls and floors in a building which is subjected for a material change of use.

G7 Natural light

Provisions	Limits on application
OBJECTIVE	
G7.1 The objective of this provision is to safeguard people from illness or loss of *amenity* due to isolation from natural light and the outside environment.	
FUNCTIONAL REQUIREMENT	
G7.2 *Habitable spaces* shall provide *adequate* openings for natural light.	Requirement G7.2 shall apply only to *Housing*.
PERFORMANCE	
G7.3 Natural light shall provide *adequate* illuminance for all *habitable spaces.*	

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 and activity.	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	
G8.3.1 *Illuminance* at floor level shall be no less than 20 lux.	Performance G8.3.1 shall not apply in emergencies, for which *Illuminance* requirements are given in Clause F6 ‘‘Lighting for Emergency’’.
G8.3.2 *Illuminance* at activity level shall not be less than that required to carry out intended activity without loss of *amenity*.	

G9 Electricity

Provisions

Limits on application

OBJECTIVE

G9.1 The objective of this provision is to ensure that:
In *buildings* supplied with electricity, the *electrical installation* has safeguards against outbreak of *fire* and personal injury.

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,

(e) Protect *building elements* from risk of ignition, impairment of their physical or mechanical properties, or function, due to temperature increases resulting from heat transfer or electric arc,

(f) Operate safely in its intended environment, and
(g) Safeguard against ignition of the surrounding atmosphere where it is potentially flammable or explosive.

G9.3.2 An *electrical installation* supplying an *essential service* shall:
(a) Maintain the supply for a time appropriate to that service, and
(b) Be capable of being isolated from the supply system, independently of the remainder of the installation.

G9.3.3 An *electrical installation* connected to an *electrical supply system* shall contain safeguards which protect the safety features of the external supply.

G9.3.4 In *buildings* intended for use by *people with disabilities*, light switches and plug socket outlets shall be *accessible* and usable.

Performance G9.3.4 shall not apply to Housing, *Outbuildings*, *Ancillary buildings*, and to *Industrial buildings* where no more than 10 people are employed.

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 *hazardous substances* associated with *building* services.

FUNCTIONAL REQUIREMENT

G10.2 In *buildings* provided with potentially *hazardous* services containing hot, cold, flammable, corrosive or toxic fluids, the installations shall be constructed to provide *adequate* safety for people.

PERFORMANCE

G10.3.1 Piping systems shall be constructed to avoid the likelihood of:

(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.

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.

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.

G11.3.5 Where gas is supplied from an external source, the supply system within *buildings* shall be constructed to avoid the likelihood of:

(a) Contamination of the external supply from other gas sources within the *building*,

(b) Adverse effects on the pressure of the external supply, and

(c) The external supply pipe acting as an earthing conductor.

G11.3.6 The location and installation of meters and service risers shall meet the requirements of the *network utility operator*.

G12 Water supplies

Provisions	Limits on application
OBJECTIVE	
G12.1 The objective of this provision is to: (a) Safeguard people from illness caused by infection from contaminated water or food, (b) Safeguard people from injury due to the explosion of a pressure vessel or from contact with excessively hot water, (c) Ensure that people with disabilities are able to carry out normal activities and functions within *buildings*.	Objective G12.1(c) shall apply only to those *buildings* which serve the public, *buildings* designated for Disabled Persons' use and to *buildings* where accessibility is required by any other Act.
FUNCTIONAL REQUIREMENT	
G12.2 *Buildings*, provided with drinking water outlets, *sanitary fixtures* or *sanitary appliances*, shall have a safe and *adequate* piped water supply.	
PERFORMANCE	
G12.3.1 Piped water supplies intended for human consumption, food preparation, utensil washing or oral hygiene shall be potable.	
G12.3.2 Piped water supply and outlets provided with non-potablewater shall be clearly identified.	
G12.3.3 *Sanitary fixtures* and *sanitary appliances* shall be provided with hot water when intended to be used for: (a) Utensil washing, and (b) Personal washing, showering or bathing.	

G12.3.4 Where hot water is provided to *sanitary fixtures* and *sanitary appliances*, used for personal hygiene, it shall be delivered at a temperature which avoids the likelihood of scalding.

G12.3.5 *Water supply systems* shall be installed in a manner which:

(a) Avoids the likelihood of potable water contamination within both the system and the *water main*,

(b) Provides water to *sanitary fixtures* and *sanitary appliances* at flow rates which are *adequate* for the correct functioning of those *fixtures* and appliances under normal conditions,

(c) Avoids the likelihood of leakage,

(d) Allows reasonable access for maintenance of mechanical components, and

(e) Allows the system and any backflow prevention devices to be isolated for testing and maintenance.

G12.3.6 Vessels used for producing or storing hot water shall be provided with safety devices which:

(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.

G12.3.7 Storage water heaters shall be capable of being controlled to produce, at the outlet of the storage water heater, an *adequate* daily water temperature to prevent the growth of legionalla bacteria.

G12.3.8 Water supply taps shall be *accessible* and usable for *people with disabilities*.

Performance G12.3.8 shall not apply to *Housing*, *Outbuildings*, *Ancillary buildings*, and to *Industrial buildings* where no more than 10 people are employed.

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,

(c) Be supported, jointed and protected in a way that will avoid the likelihood of penetration of roots or the entry of ground water,
(d) Be provided with reasonable access for maintenance and clearing blockages,
(e) Be ventilated to avoid the likelihood of foul air and gases accumulating in the drainage system and *sewer*, and
(f) Be constructed to avoid the likelihood of damage from superimposed loads or normal ground movement.

G13.3.3 Where a *sewer* connection is available, the drainage system shall be connected to the *sewer*, and the connection shall be made in a manner that avoids damage to the *sewer* and is to the approval of the *network utility operator*.

G13.3.4 Where no *sewer* is available, an *adequate* on-site disposal system shall be provided for *foul water* in the same manner as detailed in clause G14 ‘‘Industrial Liquid Waste’’.

G14 Industrial liquid waste

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) Provide 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’’,

(d) To avoid the likelihood of contamination of soils, ground water and waterways,
(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 *buildings*,
(g) To avoid the likelihood of unauthorized access by people, and
(h) To permit easy cleaning and maintenance.

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,	

(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 safety 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

H Energy Efficiency

H1 Energy efficiency

Provisions	Limits on application
OBJECTIVE	
H1.1 The objective of this provision is to facilitate efficient use of energy.	
FUNCTIONAL REQUIREMENT	
H1.2 *Buildings*, throughout their lives, shall have provision for ensuring efficient energy use in controlling indoor temperature when that energy is sourced from a public electricity supply, or any other depletable energy resource.	
PERFORMANCE	
H1.3 Where any space within a *building* is intended to have a controlled temperature, *construction* of *building elements* affecting energy use shall take account of: (a) Thermal resistance to heat loss through the *building* envelope, (b) Heat gains (including solar radiation) through the *building* envelope, (c) Air tightness, (d) Control systems for cooling and ventilating.	Performance H1.3 shall not apply to *Housing*, *Outbuildings*, *Ancillary buildings*, or *buildings* with a floor area of less than 50 m^2.

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Ministry of Construction and Public Infrastructure
Republic of Maldives

Telephone: +(960) 3323234, Fax: +(960) 3328300
Email: cids@construction.gov.mv