



**DESIGNER'S GUIDE TO
BUILDING ISSUES FOR CONSIDERATION
IN COMMERCIAL APPLICATIONS**



Your guide to submitting a hassle-free application to make alterations to a commercial building or a new building.

Includes information about:

- the Building Act 2004 and what it means for you.

For further information please contact:

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Purpose of this guide

This guide has been produced to assist those who are proposing to submit a Building Consent Application for alterations to a commercial building or a new building altogether. In most instances professionals in their respected fields are engaged to consult with building owners and/or tenants, prepare documentation and submit the proposed works to the local council. They will engage the consultants and prepare the necessary specifications, reports and drawings for building consent.

It is recommended that building owners engage the appropriate professionals in their fields to be well advised and ensure the required information is provided for consent. This can save the client time and money during the building consent process.

Council must be satisfied on reasonable grounds that any proposed alterations or new building work meets the requirements of the New Zealand Building Act 2004, the NZ Building Code and relevant New Zealand Standards.

This guide is to assist building owners, tenants, designers and engineers with various sections of the Building Act and NZ Building Code that need consideration. Some of these sections are a general reminder, while some will require more attention than others.

It is the responsibility of the building owner or their nominated designer to establish compliance with the NZ Building Act and Building Code.

The Building Act 2004

Consideration of relevant clauses of the Building Act 2004, is required for any commercial work requiring a Building Consent.

Section 40 'Buildings not to be constructed, altered, demolished, or removed without consent'. Please contact the Council if you are unsure whether this applies to your proposed works.

The main sections of the Building Act in which Council must be satisfied on reasonable grounds is *Section 112, 'Alterations to an Existing Building'* and *Section 115, 'Change of Use'*.

Example: Storage facilities for fertilisers, super phosphates etc, may require separation and to be kept dry depending on the quantity and chemical reactivity of the product.

Common concerns are the storage of gas bottles on commercial sites frequented by the public, ie bars and restaurants. These have to remain clear of escape routes for fire and comply with the Hazardous Substances and New Organisms Act 1996 (HSNO). Once gas storage exceeds 100kg on a site, a HSNO Location Certificate and Gas Fitters Certificate are required for all installations.

Health

A building consent containing food premises, ie, cafes, restaurants, bars etc will require approval under the Food Hygiene Regulations 1974 and the Sale of Liquor Act 1989. This will be reviewed at building consent stage.

The use and occupant load of the building will be required to assess the safety and facilities in the building.

Most of the previous sections discussed will apply for the consent review and the environmental health officer(s) will require specifications, plans and elevations detailing the following:

- Surface finishes
- Ventilation
- Wash hand facilities
- Food storage facilities
- Cooking and cleaning facilities, sinks, dishwasher
- Grease trap and backflow devices
- Menu specifying type food being prepared and served in the premises.

A Health Licence for the premises will be required before the public is permitted to use the premise

If the building is new work it is required to comply with all relevant sections of the New Zealand Building Code (acceptable solutions) or be designed and reviewed by a design professional, ie, chartered professional engineer, fire engineer as an alternative solution.

This may be subject to further review if Council is not satisfied with the design and calculations.

Helpful sections of the Building Act 2004

Section 8 – ‘Meaning of Building’, *definition and description*

Section 112 – ‘Alterations to Existing Buildings’

- (1) A building consent authority must not grant a building consent for the alteration of an existing building, or part of an existing building, unless the building consent authority is satisfied that, after the alteration, the building will—
 - (a) comply, as nearly as is reasonably practicable and to the same extent as if it were a new building, with the provisions of the building code that relate to— 2004 No 72 Building Act 2004 Part 2 s 113
 - (i) means of escape from fire; and
 - (ii) access and facilities for persons with disabilities (if this is a requirement in terms of section 118); and
 - (b) continue to comply with the other provisions of the building code to at least the same extent as before the alteration.
- (2) Despite subsection (1), a territorial authority may, by written notice to the owner of a building, allow the alteration of an existing building, or part of an existing building, without the building complying with provisions of the building code specified by the territorial authority if the territorial authority is satisfied that,—
 - (a) if the building were required to comply with the relevant provisions of the building code, the alteration would not take place; and
 - (b) the alteration will result in improvements to attributes of the building that relate to—
 - (i) means of escape from fire; or
 - (ii) access and facilities for persons with disabilities; and
 - (c) the improvements referred to in paragraph (b) outweigh any detriment that is likely to arise as a result of the building not complying with the relevant provisions of the building code.

Section 115 – 'Change of Use'

An owner of a building must not change the use of the building,—

- (a) in a case where the change involves the incorporation in the building of 1 or more household units where household units did not exist before, unless the territorial authority gives the owner written notice that the territorial authority is satisfied, on reasonable grounds, that the building, in its new use, will comply, as nearly as is reasonably practicable, with the building code in all respects; and
- (b) in any other case, unless the territorial authority gives the owner written notice that the territorial authority is satisfied, on reasonable grounds, that the building, in its new use, will—
 - (i) comply, as nearly as is reasonably practicable and to the same extent as if it were a new building, with the provisions of the building code that relate to—
 - (A) means of escape from fire, protection of other property, sanitary facilities, structural performance, and fire-rating performance; and
 - (B) access and facilities for persons with disabilities (if this is a requirement under section 118); and
 - (ii) continue to comply with the other provisions of the building code to at least the same extent as before the change of use.

F 1/AS 1 is also very useful in identifying types of hazardous agents (contaminants) on site that may be discharged as liquid waste. There are also local by-laws and guidelines that set criteria for the discharge of trade-waste and protection of outfalls.

While reviewing a project for trade-waste, consider whether there are '*facilities for the safe and hygienic collection, holding, treatment and disposal of the waste*'.

See Table 1 and Figure 1, G14/AS1 for examples of treatment and disposal methods.

Example: a truck wash bay and slab may require an oil interceptor sump/trap to contain oil washed from the vehicles. The oil is required to be contained and then collected and disposed of without contaminating the stormwater or sewer system.

A larger industrial plant may require its discharge to be metered and controlled to an appropriate outfall. While a commercial kitchen may require a grease trap to contain grease and protect the sewer drain. Backflow prevention may also be required on the potable water supply line.

West Coast Regional Council also provides advice and has rules for the discharge of contaminants to the environment. This will apply to rural industrial operations such as dairy farms, timber processing plants etc.

Section 363A – Certificate of Public use (if applicable) Public use of premises may be allowed before issue of Code Compliance Certificate.

Section 100 – Compliance Schedule may be required as a result of this building work.

Dangerous goods

Depending on the activity, size of building and type of dangerous goods being stored on site, the *'building shall be constructed to avoid the likelihood of people within the building being adversely affected by hazardous agents or contaminants on the site'*.

F1 Hazardous Agents on Site - If you are designing and submitting a building consent that may contain Dangerous Goods, you are required to provide information on the type of goods, quantity and where it will be located on site or in the building. The site and building will be assessed to determine the potential threat of any hazardous material to people on the site.

Commercial buildings

The use of a commercial building is more than likely to be frequented by the public, either as an employee, customer or as public facility, ie school, library.

The *Building Act Section 118 and Schedule 2* outline a large range of commercial buildings to which access and facilities for people with disabilities are to be provided for. This schedule describes most commercial buildings / use.

If you are intending to submit a building consent application for work to a commercial building as described in the schedule, access for people with disabilities and means of escape will always be assessed for compliance with the New Zealand Building Code.

A 'Change of Use' will include protection of other property, sanitary facilities, structural and fire rating performance.

Schedule 2 of the Building Act 2004

s 118(2) Schedule 2

Buildings in respect of which requirement for provision of access and facilities for persons with disabilities applies

The buildings in respect of which the requirement for the provision of access and facilities for persons with disabilities apply are, without limitation, as follows:

- (a) land, sea, and air passenger transport terminals and facilities and interchanges, whether wholly on land or otherwise:
- (b) public toilets wherever situated:
- (c) banks:
- (d) childcare centres and kindergartens:
- (e) day-care centres and facilities:
- (f) commercial buildings and premises for business and professional purposes, including computer centres:
- (g) central, regional, and local government offices and facilities:
- (h) courthouses:
- (i) police stations:
- (j)

or change of use. This section of the New Zealand Building Code outlines the acceptable provisions for sanitary facilities, bathroom layouts and privacy issues etc.

Heating, Ventilation and Air Conditioning ("HVAC")

The objective of NZBC G4/AS 1 Ventilation *'is to safeguard people from illness or loss of amenity due to the lack of fresh air'*.

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

Plans, specifications and details of these systems are required for building consent.

The system is to be designed and specified by an experienced or qualified person in accordance with G4/AS 1.

For larger HVAC installations the design engineer will provide a Producer Statement of Design (PS 1) and oversee the installation.

A producer statement construction review would then be issued at the completion of the job once the commissioning test had been carried out and approved.

If the system is ducted or has a cooling tower a Compliance schedule will be required for the Building Warrant of Fitness. This is to be stated on the building consent application when submitted for consent.

Trade waste

Trade-waste issues are more likely to arise in industrial and commercial activities where products are being manufactured, processed or refined, ie, meat and dairy processing plants, timber treatment plants, furniture manufacturers etc.

However these issues can also apply to smaller uses, such as restaurants, paint shops and truck yards.

The objective of New Zealand Building Code, G14 Industrial Liquid Waste, *'is to safeguard people from injury or illness caused by infection or contamination resulting from industrial liquid waste'*.

- (1) The following summary details these areas and occupancies: Four or more floors.
- (2) Three storeys, upper two floors have >50 occupants or a floor area >50m².
- (3) Two storeys, upper floor have >40 occupants or a floor area >400m².
- (4) An upper floor, irrespective of design occupancy, is to be used for the purposes of public reception areas of banks, central, regional and local government offices and facilities, hospitals, medical and dental surgeries, and medical, paramedical and other primary health care centres.

The installation criteria for Lifts are defined in D2/AS1, 'Mechanical Installations for Access'.

Although access is now provided to a site and building in accordance with D1/AS 1, the site and building also requires facilities for the physically able and disabled persons. NZS 4121 'Design for Access and Mobility – Buildings and Associated Facilities' outlines all the requirements to assist those with disabilities.

Sanitary facilities

As described under *section 112 and 115*, Sanitary Facilities in accordance with G1/AS1 may also require upgrading or a new installation. All new buildings are to be assessed for full compliance with G1/AS1.

Under *sections 112 and 115 of the Building Act*, Sanitary Facilities for persons with disabilities are to be provided, if not already provided for in the building. The size and layout are detailed in both G1/AS1 and NZS 4121. The facility may be unisex or provided for each gender.

If a 'change of use' (*section 115*) is occurring, additional toilet facilities may be required depending on the use and occupant load of the building.

Example: Office changes to a nightclub, from say 50 on a floor to 300 occupants. The toilet facilities may be insufficient for the increased numbers. These occupant numbers may also effect a liquor licence application if toilet facilities are not provided.

Description of uses and occupant number tables are provided in G1/AS1, Tables 1-4 to assess the facilities required for a new building, alterations

- (k) hotels, motels, hostels, halls of residence, holiday cabins, groups of pensioner flats, boarding houses, guest houses, and other premises providing accommodation for the public:
- (l) hospitals, whether public or private, and rest homes:
- (m) medical and dental surgeries, and medical and paramedical and other primary health care centres:
- (n) educational institutions, including public and private primary, intermediate, and secondary schools, universities, polytechnics, and other tertiary institutions:
- (o) libraries, museums, art galleries, and other cultural institutions:
- (p) churches, chapels, and other places of public worship:
- (q) places of assembly, including auditoriums, theatres, cinemas, halls, sports stadiums, conference facilities, clubrooms, recreation centres, and swimming baths:
- (r) shops, shopping centres, and shopping malls:
- (s) restaurants, bars, cafeterias, and catering facilities:
- (t) showrooms and auction rooms:
- (u) public laundries:
- (v) petrol and service stations:
- (w) funeral parlours:
- (x) television and radio stations:
- (y) car parks, parking buildings, and parking facilities:
- (z) factories and industrial buildings where more than 10 persons are employed:
- (aa) other buildings, premises, or facilities to which the public are to be admitted, whether for free or on payment of a charge.

Structural

Any building work outside the New Zealand Building Code, B 1 Acceptable solution, will require specific design by a suitably qualified engineer.

A Producer Statement of Design (PS 1) and a Schedule of inspections will be requested at application and building consent stage.

Building Consent will not be issued until these are received and approved for the project.

Engineering plans and details for the structural design are required to be submitted and signed by the engineer providing the Producer Statement. The engineer will state on the Producer Statement that the structural design will achieve the requirements of the New Zealand Building Code and/or relevant NZ Structural Design Standards.

Prior to issuing of Code Compliance Certificate, a Producer Statement Construction Review will be required to be provided confirming whether the inspections from the engineers Inspection Schedule have been undertaken and approved.

Any as-built building work will be amended, approved by the engineer and forwarded to council for approval and their records.

If the building is undergoing a 'Change of use' a structural upgrade may be required. This will require an assessment and report from an engineer depending on the 'use' and extent of work.

The building may be an 'earthquake prone' building which will require an assessment and report by an engineer.

A schedule for upgrade may be requested by the Council Officer(s) reviewing the application.

Fire

Fire safety in a commercial building is assessed under the New Zealand Building Code, C Clauses, C/AS 1.

Any work in a commercial building will require a fire report detailing compliance with these clauses. This will be required at building consent stage.

Any fire rated construction, ie. walls, floors or ceilings are to be shown on the plans and sections and construction details provided.

The proposed work may be 'just an office fit-out' but this can impact on means of escape and the positioning of sprinkler and smoke alarm heads.

As discussed earlier the level of fire upgrade will be dependant on whether the building is undergoing 'Alterations' or a 'Change of use'.

Depending on the size and cost of work involved, your designer may be able to provide this service, otherwise a Fire Engineer is recommended due to their training, expertise and knowledge.

Access and facilities for disabled persons

As detailed earlier, any proposed work to a building as described in Section 118(2) and Schedule 2 will require a review for accessibility to '*provide facilities and access for persons with disabilities*'.

The objective of D1.1(c) is to '*ensure people with disabilities are able to enter and carry out normal activities and functions within buildings*'. They are not to be discriminated due to their disability, which may be a short term accident or long term disability. Please refer to the 'Performance' description of D1/ AS 1 Access for clarification.

NZS 4121 also reflects relevant sections of the New Zealand Building Code for accessible access and facilities, primarily D 1/AS 1 and G 1/AS 1 and details other requirements to achieve these objectives. See Appendix A, B and C.

Council Officers may request an Accessible Features report depending on the work proposed or extent of upgrade required. Most TA's have a report template on line for you to access.

Please ensure any proposed work to a building as described in the above section and schedule has been assessed for access and facilities. These are to be specified and detailed on the submitted plans for building consent.

Lift requirements

A lift may be required depending on the 'area' of the upper floors or the 'occupant loads' of the upper floors.

If the 'use' or 'occupant load' changes, the building will be assessed to determine whether it complies for lift requirements.

D1.34 'Performance Provisions' outline the criteria for a Lift as does NZS 4121, Section 9.1.3.2 Two and Three storey buildings.

Useful websites

Certified Builders Association of NZ Inc (CBANZ)
www.certified.co.nz

Registered Master Builders Federation Inc (RMBF)
www.masterbuilder.org.nz

New Zealand Institute of Architects (NZIA)
www.nzia.co.nz

Architectural Designers NZ Inc (ADNZ)
www.adnz.org.nz

Association of Consulting Engineers (ACENZ)
www.acenz.org.nz

BRANZ Ltd
www.branz.co.nz

NZ Institute of Quantity Surveyors Inc (NZIQS)
www.nziqs.co.nz

NZ Institute of Surveyors (NZIS)
www.surveyors.org.nz

Department of Building and Housing (DBH)
www.dbh.govt.nz
Downloads of Building Act and Building Code information

Institution of Professional Engineers (IPENZ)
www.ipenz.org.nz

NZ Institute of Building Surveyors Inc (NZIBS)
www.buildingsurveyors.co.nz

Consumers' Institute of New Zealand
www.consumerbuild.org.nz