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NZS 3604:1999 Timber framed buildings

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Abbreviation

NZS 3604:1999

Amendment

Amendments 1 and 2 (Simple House Acceptable Solution only)

Valid from

02/06/1999

Replaces

[NZS 3604:1990](#),

Information provider

Standards New Zealand

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Standards New Zealand

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New Zealand Standard

Format

PDF

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Description

This Standard provides suitable methods and details for the design and construction of timber framed buildings up to three storeys high. This standard is intended to apply to domestic dwellings, most residential and some commercial and other buildings, without the need for specific engineering design. Cited in Ministry's Simple House Acceptable Solution.

Scope

NZS 3604 sets down construction requirements for timber framed buildings within the limitations specified in 1.1.2.NZS 3604 applies only to buildings within the following limitations (this is not a complete list):

- (a) Buildings shall be founded on good ground;
- (b) Buildings shall be Category IV or V buildings (see table 1.1). Buildings not covered by this Standard are those without external walls, such as free standing carports and pergolas;
- (c) The total height from the lowest ground level to the highest point of the roof shall not exceed 10 m;
- (d) The design snow load shall be not greater than 1 kPa, as determined from section 15;

- (e) Buildings shall have uses comprising:
 - (i) Domestic;
 - (ii) Residential. The buildings in this category comprise multiunit or group dwellings, communes or maraes, boarding houses, halls of residence, holiday cabins, hostels, hotels, or nurses homes (but excludes buildings with communal balconies);
 - (iii) Institutional. The buildings in this category comprise hospitals, old peoples homes or health camps (but excludes those with operating theatres or rooms containing heavy equipment, i.e. where loads exceed those given in (v) below);
 - (iv) Educational. The buildings in this category comprise early childhood centres, colleges, day care institutions, centres for handicapped persons, kindergartens, schools or universities (but excludes buildings that have libraries with book stacking systems, i.e. where loads exceed those given in (v) below);
 - (v) Other buildings provided the loadings are demonstrated to the satisfaction of the Building Consent Authority, to be no more than 3 kPa uniformly distributed load, or 2.7 kN concentrated load on the floor, or 0.25 kPa uniformly distributed load on the roof. The floor and roof live loadings applicable to (i) to (iv) shall be as given in table 1.2, provided that the floor loading shall not exceed 1.5 kPa for the uppermost floor of 3 storey buildings.
- (f) Single storey buildings may include a part storey basement or a part storey in the roof space. Single storey buildings shall be supported on any one or a combination of the following foundation structures:
 - (i) Piles;
 - (ii) Foundation walls;
 - (iii) Concrete slab-on-ground.
- (g) Two storey buildings shall comprise a timber upper floor and upper storey timber walls. The lower storey walls may be timber, or full height concrete masonry to NZS 4229. The lower floor may be slab-on-ground or suspended timber as follows:
 - (i) For buildings with slab-on-ground the lower storey walls shall be in timber framing, or full height concrete masonry to NZS 4229;
 - (ii) Buildings with the lower floor of suspended timber and lower storey timber walls shall be supported on either or a combination of foundation walls and piles;
 - (iii) Buildings with the lower floor of suspended timber and lower storey full height concrete masonry walls shall be supported on foundations to NZS 4229.
- (h) Three storey buildings shall consist of the following:
 - (i) No more than 2 storeys supported on timber framing;
 - (ii) One storey shall be a part storey in a roof space;
 - (iii) The middle storey and part storey shall be directly supported on a lower storey of concrete masonry walls and foundation walls to the provisions of NZS 4229;
 - (iv) The ground floor shall be either concrete slab-on-ground or a suspended timber or concrete floor to the provisions of N
- (j) The slope of any roof plane shall not be steeper than 60° to the horizontal.
- (k) For the purpose of forming a mansard roof only, a wall of an uppermost storey may slope by up to 20°.
- (m) The building wind zone determined from 5.2.1 and table 5.1 shall be low, medium, high or very high (i.e. L, M, H or VH). SED in table 5.1 indicates specific engineering design is required, which is outside the scope of NZS 3604.
- (n) The plan floor area shall:
 - (i) Be unlimited for 1 or 2 storey buildings where all storeys are of timber frame;
 - (ii) Not exceed 300 m² for 2 storey buildings of other forms of construction;
 - (iii) Not exceed 250 m² for 3 storey buildings of other forms of construction.
- (o) Buildings with wings or blocks shall be designed as if the wing or block was a separate building;
- (p) Concrete slab-on-ground floors in accordance with 7.5 may be used for vehicle garages for vehicles up to 2500 kg tare.

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