

FWPA achieves National Building Code change

Changes to the National Construction Code: Building Code of Australia – Volume 1 will now permit the use of fire and acoustic rated timber-framed construction systems for 3 storey Class 3 buildings (e.g. hotels, motels) enabling timber framing to be used on a wider range of projects. The new regulations come in to force on the 1st May 2014.

Over the past few years, Forest & Wood Products Australia’s (FWPA) Codes & Standards program has been steadily working to expand the markets for timber products through changes to the National Building Code and related Standards. These changes are achieved through targeted FWPA funded research & development projects in conjunction with the Codes & Standards program which aim to dispel negative perceptions of the fire performance of timber products. Changes to the Building Code of Australia (BCA) can have a dramatic impact on increasing the sales of timber products.

We are all familiar with the growth in market share for “stick frame” products with the acceptance of fire and sound rated timber-framed construction systems that are deemed suitable for apartment buildings up to 3 stories in height. These “stick frame” systems are commonly referred to as Multi-residential timber-framed construction (MRTFC). Table 1 illustrates the existing maximum building storey heights for MRTFC building systems.

Rise in storey	Type of Construction					
	Class 2	Class 3	Class 5	Class 6	Class 9a	Class 9b
	Apartments	Hotels	Office	Shops	Healthcare	Schools & public buildings
4 or more	A	A	A	A	A	A
3	A	A	B	B	A	A
2	B	B	C	C	B	B
1	C	C	C	C	C	C

Table 1 – Current MRTFC Maximum Storey Height by Building Classification

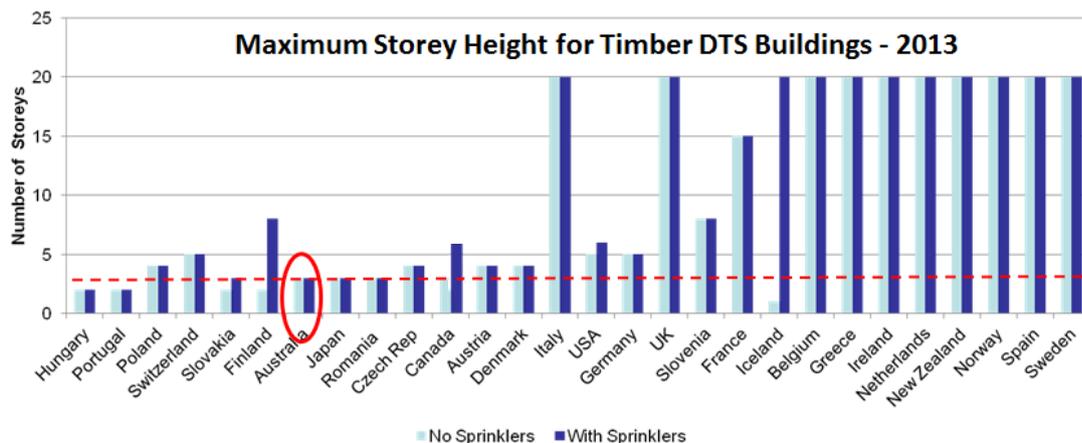
FWPA made a submission to the Australian Building Codes Board (ABCB) seeking a change to the BCA to permit 3 storey Class 3 buildings. To demonstrate the safety of fire rated timber-framed systems a research project, funded by Forest & Wood Products Australia (FWPA), demonstrated that there was no discernable difference in fire severity between non-combustible (steel) and “combustible” (timber) fire-rated building systems. This research report is titled “*Extension of the Concession which Allows Timber Framed Construction in Class 2 Buildings to include Class 3 Buildings, FWPA 2011*”.

Based on this submission and the supporting R&D, a change to the BCA has been achieved and will commence from the 1st May 2014 – refer Table 2.

Rise in storey	Type of Construction					
	Class 2	Class 3	Class 5	Class 6	Class 9a	Class 9b
	Apartments	Hotels	Office	Shops	Healthcare	Schools & public buildings
4 or more	A	A BCA 2014	A	A	A	A
3	A	A	B	B	A	A
2	B	B	C	C	B	B
1	C	C	C	C	C	C

Table 2 – BCA Vol. 1 2014 MRTFC Maximum Storey Height by Building Classification

It is interesting to note, following a review of overseas Building Codes, that Australia’s Building Code places severe restrictions on the use of timber building products as deemed-to-satisfy solutions when compared to other countries – refer below. The Codes & Standards program is continuing its work to address these restrictions and broaden the market opportunities for timber products; both structural and non-structural.



There is no doubt that timber building systems can meet the performance requirements of the BCA as has been demonstrated by the Lend Lease 10 storey Cross-laminated timber (CLT) building – Forté (opposite). This is currently the World’s tallest timber apartment building with other similar building projects under development. All aspects of the Forté structure are constructed of CLT; from the walls, floors, lift shaft to the emergency stairs.

The need for greater inner urban developments will see the use lightweight materials, such as timber, come to the fore. Timber’s inherent strength, environmental credentials and useability have thrust it into the minds of designers and developers alike.



Visionary designers are also beginning to imagine even taller timber buildings. One of these firms, Michael Green Architects, has developed prototype timber buildings up to 30 storeys high (see below).



Source: Michael Green Architects

Building regulators understand the need to find balance between regulation and innovation and FWPA will continue its work to advance the use of timber building solutions. There are a number of Technical Guides that are currently available through WoodSolutions (FWPA's specifier program) to enable the specification of timber building systems using Multi-residential timber framed construction [MRTFC] (Guides 1, 2 & 3) and Cross-Laminated Timber [CLT] (Guide 16). There are 19 Guides currently available.

This change to the BCA is a positive step for the timber industry as well as the building industry which gains a broader material palette along with the option of bringing the environmental and construction advantages of wood to more projects. FWPA will continue its efforts in addressing building codes and standards to assist in enhancing the use of this sustainable, renewable resource in innovative ways and provide the timber industry with new market opportunities.

As the saying goes... the sky's the limit!

A copy of the December 2011 report on which the submission was based:

Extension of the Concession which Allows Timber Framed Construction in Class 2 Buildings to Include Class 3 Buildings

A report from the Alternative solution compliance resource for fire safe timber design project is available from: <http://www.fwpa.com.au/sites/default/files/MRTFC Report - Issue 1.pdf>

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