

The Design Edge

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- *Why do* architects use timber?
- *Why don't* we use more of it?
- How can you as an industry increase awareness of timber and wood products to *increase specification by architects?*

The “Design Edge”

What is it and why are we as architects continually trying to achieve it?

Put simply it is the desire and need to provide....

- artistic *innovation*,
- technological *advancement*,
- current and future *recognition!*

Why is this important to the building designer...

- more *competitive* and *complex* market
- more *discerning clients* with genuine and measurable desire for *sustainability*
- advanced *technological innovations in construction*
- need to provide *integrated design solutions, increased service and strategic partnerships*

More competitive and complex market...

- *more architects* (3000 architects in NSW alone)
- gradual *erosion* of both architects *fees and business*,
- substantial *increase in town planning* requirements, *building codes and regulations*,
- need to provide *more detailed design documentation and specification*

More discerning clients....

- *appreciation of design and building products* through print media, television and the internet,
- appreciation of and *demand for quality*,
- cost conscious but prepared to *pay for value*,
- *desire to embrace* new products and technologies,

Genuine and measurable desire for sustainability...

- *'green' design* is not longer an alternative design, but a *prerequisite for all design projects*,
- green design means *sustainability*, not of individual building products, but of *the total building's lifecycle*,
- sustainability is now considered *'smart living'*, becoming an everyday consideration in the construction market ...
sustainability therefore means smart business,

Advanced technological innovations...

- never before has there been *such a wide selection and choice* of building products and processes,
- nor the *acceleration of building technologies* and processes, or *re-engineering and re-branding* of traditional products and services,
- continued development is being driven by a need for *improved thermal performance, reduction in energy use* and need for *ecological sustainability*,

Integrated design solutions...

- the technological advances in building methodologies and emerging new products *has resulted in greater choice* of products and services but also *added pressure to integrate products and services* to enable higher levels of quality and productivity,
- as a result building designers need a *greater level of understanding of the attributes and limitations* of individual building methodologies and materials
- therefore considering these issues and other pressures facing the building designer,

Why do architects choose timber?

- **tradition**, 'what else do you frame a house in?'
- **availability**, 'all leading timber suppliers?'
- **technical knowledge**, 'NZBC, NZ3604, technical manuals'
- **context (visual/physical)**, 'timber = the NZ vernacular?'
- **sustainability**, 'if its plantation grown it must be good?'
- **budget**, 'resurgence in use of ply cladding, rough sawn shiplap, tongue & groove sarking'
- **exposure**, 'examples of innovative use of timber by others generally through professional publications or leading design magazines'



So then, why don't architects use more timber?

Because perception is often stronger than reality...

Perception....

- sawn and graded *timber* is a traditional building component but is *somewhat limited in use...*

Reality...

- it is a matter of selecting the best structural materials to meet the specification and design intent...
- engineered structural *timber* and cladding *can achieve outstanding results...*

Perception...

- steel and masonry construction is *more durable than timber* and requires *less maintenance...*

Reality...

- *properly selected and specified*, structural *timber*, engineered timber, and *timber* claddings *can be highly durable and low maintenance,*

Perception...

- timber finishes are often *specified for reasons of cost or practicality...*

Reality...

- contextual use of *timber can create physical, visual and spiritual comfort,*

Some other commonly held perceptions...

Perception...

- softwood *timber* requires high levels of preservative treatment *which is damaging to the environment*,

Reality...

- while some preservative treatments can have detrimental environmental effects, *timber manufacturing is substantial less damaging to the environment* than aluminium, steel and cement based masonry products,

Perception...

- *timber lacks durability*, results in *high maintenance*, and untreated timber has contributed to New Zealand's leaky building syndrome,

Reality...

- the issues relating to leaking building syndrome are many fold, however *lack of confidence in timber durability results* from a *lack of understanding of appropriate material use* and construction methodology.

Perception...

- the current drive for energy efficiency and ecologically sustainable design *is a trend* and unlikely to be embraced by the wider community,

Reality...

- *ecologically sustainable design* will become one of the *most significant drivers* of innovation in building materials and methodologies *over the next decade*.

Perception...

- the *timber industry has failed to move with the times*, continues to promote traditional products and services which *lack innovation*, and seems *focused on growth by m3* rather than growth through new products and services,

Reality...

- *true?... except in some areas such as engineered structural components and laminates*, *resulting in loss of market share* to aluminium, masonry and steel.



Perception...

- there is *no centralized marketing* of timber (wood is good!), availability of *information* on timber products is *fragmented*, and the industry *does not showcase* examples of *innovative use of timber*,

Reality...

- *true...in comparison* the *masonry* and *steel* industries *promote* the environmental, energy and sustainability *benefits of their products*, and *provide case studies* to the industry and public on innovative use of products,

(reference to BlueScope Steel Australia 'Environment for Life and Cement Concrete & Aggregates Australia)



The challenge facing the industry...

- ...to provide solutions which will instill confidence in the building designer, an understanding of timber specification and use together with encouragement of innovative use of timber products

How?

Manufacturers must:

- provide a higher level of technological innovation and embrace the development of new engineered solutions in structural, cladding and interior timber products,
- embrace sustainable manufacturing technologies, which provide genuine and measurable sustainability practices, and develop products which contribute to healthy buildings.
- provide integrated solutions, including structural cladding and interior finishing components which combine into a total 'system', rather than just selling individual products.

How?

Industry needs to:

- promote the environmental sustainability of plantation grown timbers, and the environmental benefits of timber products to the design and construction industries,
- promote through print media and the internet innovative use of timber through case studies and recognition,
- establish and develop an effective promotional and marketing campaign to the wider public on the environmental and economic benefits of timber products ('wood is good?')
- develop an industry based timber 'brand' which recognizes and promotes a common quality standard and specification,

How?

Manufacturers and industry must:

- increase information flow and service to building designers and product specifiers,
- create strategic alliances and partnerships which will foster an environment of increased product innovation and quality,

Strategic alliances required ...

- within the professions and supply chains to allow innovative and cost effective solutions,
- with contractors to allow design and construction methodology to suit site context, product and expertise,
- with manufacturers and suppliers to ensure continuing improvement in quality and service, while developing innovation in products, processes, and delivery.

The objective ...?

... for architects and other design professionals to promote and specify wood as a **quality**, sustainable, clean, friendly, and living product.



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