

AUGUST 2013 Volume 49 Number 7

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BUILDING PRODUCTS NEWS

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ON TIMBER DESIGN

BATHROOMS

## Prefabrication reigns supreme





ECOply from Carter Holt Harvey was used extensively through the re-fit of the Sound Alliance office in Sydney.



**There is more choice when considering commercial buildings. Instead of two materials, steel and concrete, architects now have a third - timber.**

Designed by Philip Johnson Landscapes, and keeping with an environmental approach to landscape design, Intergrain's water-based coatings were used to seal and protect the 'sunset platform' timber viewing deck along with the timber boardwalk and architecturally designed timber studio.

**Innovative timber designs**

Timber is being used in new innovative ways design-wise in projects both locally and internationally.

This is because it is natural, sustainable, and the carbon cost of preparing and transporting the wood is significantly less than other building materials.

Blogging on the WoodSolutions website, architect Nicolas Pratt says anyone with a social conscience is doing their bit for the environment, which is why architects love designing with timber.

"Not only is it a great source of insulation, but timber has a low embodied energy. This essentially means that the carbon cost of harvesting, milling, preparing and transporting wood is considerably lower than other building materials. General timber has half the carbon cost as steel and is 15 times less costly than aluminium," Pratt says.

One issue when designing with timber, particularly in complex structural applications, he says, is that architects are at the mercy of timber engineers.

"Architects are reliant on engineers for full knowledge and while these consultants will generally find a solution to a given problem, architects are in a better position to push for innovation and think outside the box.

"Architects who are fortunate enough to have a close relationship with timber engineers are better equipped to deliver an outstanding project," Pratt says.

Thus why timber is becoming increasingly popular in commercial uses. Also because of new work in long-span buildings and using construction tricks similar to those used with concrete, Dunn says.

"Since timber has similar compressive strength to concrete, many of the tricks used on concrete are applicable to timber. We now have post and pre-stress timber beams and walls, composite concrete timber floor, cassette timber floors to nine metres and so on," he says.

For architects, designers and builders this means there is more choice when considering commercial buildings. Instead of two materials, steel or concrete, architects now have a third - timber.

A fit-out for the new offices of marketing and publishing company Sound Alliance called for timber finishes - even referencing Mad Men as inspiration - that were

economical and environmentally friendly.

Project architect at Environa Studio Rory Toomey used ECOply extensively in the fit-out as he is a fan of the product, using it to wrap the floors, walls, ceiling and joinery, creating an immediate impact.

Sustainability played a big part in the fit-out, with plywood sheets screwed in place so they can be removed easily and reused. It was chosen as it is strong and durable, and has a relatively low carbon footprint, creating little wastage.

Another use of timber being used innovatively was at the University of Western Sydney's Climate Change and Energy Research (CCER) Facility at Richmond, New South Wales.

The refurbishment project incorporated the existing 1930s two-storey brick building with new research facilities, laboratories, offices, lecture theatres, and a publicly accessible atrium and conference space.

Blackbutt timber linings and details were used extensively in the development, creating a contemporary 'vestibule tube' which connects the east and west entries of the building. Blackbutt timber battens were used in the construction of four fully functioning thermal chimney stacks, which hang above the main atrium. The battens were incorporated into wall and ceiling linings as an acoustic control.

Suter Architects senior associate Michael McPherson says, "The design intent was to clearly differentiate the old from the new through material choices and detailing, while also maintaining the integrity of the original building.

"As a natural and locally produced material, timber was the ideal choice due to its conceptual link to the building's function of providing empirical data to assess the impact of climate change on Australia's land and water resources," McPherson says.

"The Blackbutt species was selected for its longevity, durability and versatility. Its golden yellow and pale brown colours worked well with other material selections, providing a perfect balance to the rich, earthy textures of the brickwork on the existing structure." ●