Vancouver architect Michael Green at centre of mass-timber moment



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Michael Green is a leading proponent of using engineered mass-timber wood components to build tall buildings that make better use of B.C.'s top resource export while contributing to more environmentally sustainable construction. NICK PROCAYLO / PNG

When Vancouver-based architect Michael Green stops to reflect, he acknowledges that his practice of designing big buildings built from engineered mass-timber materials has come a long way in a short period of time as the trend in sustainable construction gains momentum.

"It is definitely wood's moment," Green said. " ... But it's still in its infancy, but what we've seen is on a different level. We've seen major global design firms who said they had no interest in working in mass wood now working in wood."

Green literally wrote the book on modern timber construction, The Case for Tall Wood Buildings, a case study on using materials such as cross-laminated timber panels and engineered glulam wood beams to build skyscrapers as tall as 30 storeys, published in 2012.

He designed the Wood Innovation Design Centre in Prince George, the provincial government's six-storey showpiece to sell the world on using B.C. lumber to construct expansive buildings, which opened in 2014.

There was a wildly popular TED Talk in 2013 that has been viewed more than one million times.

His firm put together a theoretical plan to build a timber structure the same proportions as New York's Empire State Building (aptly termed the Empire State of Wood).

Among the projects Green's firm, MGA (Michael Green Architecture), has been involved with include the T3 building in Minneapolis, Minn., which for a time was the largest wood building in the U.S., a new forest-sciences complex for Oregon State University in Corvallis and a collaboration in

Paris that proposes a virtual forest of 20 residential skyscrapers made of wood.

"I think he's been very influential," said Lynn Embury-Williams, executive director of Wood WORKS! B.C., a not-for-profit that promotes the use of wood in construction and design. "He's always put together all of the pieces. He never talked just about how would it be to build with wood. He linked it to the very solid environmental benefits — carbon sequestration, using natural materials."

With The Case for Tall Wood Buildings, Embury-Williams said Green opened a lot of eyes.

"At the same time, Eric Karsh at Equilibrium Consulting (one of Green's key collaborators on the book) was also working on projects and promoting mass timber," she said. "Just the notion this could even happen was pretty amazing."

And on a recent Tuesday Green sat down to talk with Postmedia News about how his adventurous, outdoorsy youth climbing mountains and kayaking around the world turned him into one of the participants at the centre of the global conversation about how to build more sustainably with wood.

Fisher, the architect's black Lab, greets you first, rolling over for a belly rub outside the MGA boardroom, before you meet a casually dressed Green himself. He walks in wearing a navy T-shirt and khaki shorts looking ready to head for a walk on the beach near the Kitsilano home he and significant-other Sahra Samnani recently finished renovating, instead of the lunch with a lawyer that is his next appointment. He has the lanky build and ruddy complexion of someone who spends a lot of time outdoors.

"I think that adventurous side, mountaineering and kayaking, and my family's history of living in the Arctic, and so forth, all combined on my professional side in being a little bit willing to not follow the status quo,"

Green said.

He was born in Winnipeg, but only because there was no hospital in Baker Lake, Nunavut, where his family was living and where he spent the first five years of his life. The Greens later settled in Ottawa, where Green went to high school, and nurtured artistic talents that led him to choose architecture as a career, a path that took him to Cornell University in Ithaca, N.Y., as his entry point.

It wasn't an easy fit for him, and he "didn't feel like a good architect" for a long time, though he worked in a top firm under Cesar Pelli, one of architecture's star skyscraper designers.

"I did not connect with it at all," Green said, until he started being able to link the values he was developing by immersing himself deeply in nature on mountaineering in places such as the Himalayas and South America. He found his love for the outdoors in the wilds of the Adirondack Mountains of upstate New York as a youth, which he carried on his journeys, experiencing other cultures and observing how other people lived and found happiness, even in sub-standard housing.

And he discovered some of his attraction to wood as a building material by helping his grandfather construct cabins on his summer property in northern Michigan, then in his own wood shop where, during his 20s, he found more satisfaction making furniture than he did in architecture.

"I think that led me to an intersection that natural materials have to be the answer," Green said. "And that requires great responsibility, not just to understanding how materials are used in building, but understanding a lot about where (the timber) comes from and how you make sure forest practices are responsible practices."

He was able to marry the two in his practice when he moved to Vancouver 21 years ago (attracted by the proximity to mountains and the wilderness) and is now part of a growing coterie of experts in the forefront of mass timber.

Green has written a second book, Tall Wood Buildings, Design, Construction and Performance, with editor Jim Taggart, that chronicles some of the prominent projects built in the timber vernacular. He has also started an online education effort, Design Build Research (DBR), which Green hopes will aid his firm in spreading the mass-timber mantra to countries such as China, India and Brazil.

"If we do it wrong, it could cause real risk," Green said, both environmentally in poor forest practices and in safety through poorly designed buildings.

In Vancouver, the city is seeing new mass-timber buildings — the 18-storey Brock Commons student residence and the Virtuoso market-residential building at the University of B.C., and Terrace House, a 19-storey condo development downtown. Green views those as positive steps, but still "baby steps" for a place with a wealth of the natural resources and talent available to do a lot more.

"We can't talk about being a green city unless we can complete the story by building green buildings," Green said.

"We're trying to solve a whole number of big issues in our community, more housing, affordable housing, sustainable housing, and meet climate objectives. Those are things you can do with this, and yet it's not happening," Green said.

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