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CAN/US \$7.95
NOV/DEC 2012
PM40048073 R09064

BUILT IN 30 HOURS

Ray Kappe's California
prefab comes to Canada,
with the strength to take
on sweltering summer heat
and frosty winter chills
By Alison Garwood-Jones
Photography by Finn O'Hara



LAST JANUARY, A CONTRACTOR, A CRANE OPERATOR AND A HANDFUL OF ONLOOKERS STOOD ON A LOT in a quiet residential neighbourhood of Toronto, guiding into place six modules for a contemporary, green home designed by Ray Kappe, father of the modern California prefab house. The four-bedroom, 288-square-metre eco-house is the brainchild of Steve Glenn, an entrepreneur from Santa Monica, California, whose design firm, LivingHomes, hired Kappe in 2004 to draw up plans for the first modular LEED Platinum home in North America. The Kappe design is now making its debut north of the 49th parallel, where dramatic temperature changes have meant a number of construction alterations and adjustments.



↑ The house is fully kitted out with green features, including geothermal heating and cooling. The exterior uses a fibre cement rain screen system that helps prevent leaky house syndrome.

↗ It took just over a day for cranes to lift and position the six modules and lock them into place. Unlike the California prefabs it is modelled after, this winterized version includes a concrete basement.





↖ Fibreglass-framed windows, seen here in the living and dining areas, are more resilient than aluminum or wood when it comes to harsh climates and conductivity. They're also non-toxic and corrosion-proof.

←← Open stair treads made of natural oak let in the light from a vertical window facing the street.

← The master bedroom's Wetstyle bathtub and sinks are made of Wetmar, a 100 percent recycled stone composite. Floor tiles are by Porcelanosa.

↑ In the kitchen by Scavolini, the Caesarstone countertops are made with recycled quartz and car mirrors.

Like the original Kappe houses (five have been built since the first one was snapped into shape in 2006), this newly minted winterized version has everything a green-conscious owner could want: geothermal heating and cooling, LED lighting, FSC-certified oak floors, VOC-free paints, a Scavolini kitchen with top-of-the-line Euro-appliances (AEG and Liebherr) and a green, solar-ready flat rooftop. Gary Lands, managing director of Toronto's Nexterra Green Homes and an investor in LivingHomes, brought Glenn's concept to Canada, and plans to build an eco-enclave of Kappe homes, starting with this Toronto site. Three more are planned to occupy neighbouring lots that share dramatic vistas of a conservation-protected ravine.

If the project isn't quite the structure Charles and Ray Eames had in mind when they first sketched out the modern prototype for the manufactured home of the future – i.e., completely framed in steel, with full-height windows on all sides – it comes pretty close. The main floor is occupied by

living and dining areas with virtually no walls, and glazed walls in the kitchen face on to wide decks and the tree-filled lot beyond. Upstairs, a deck off the master bedroom overlooks the property, while the other bedrooms enjoy views of the green roof.

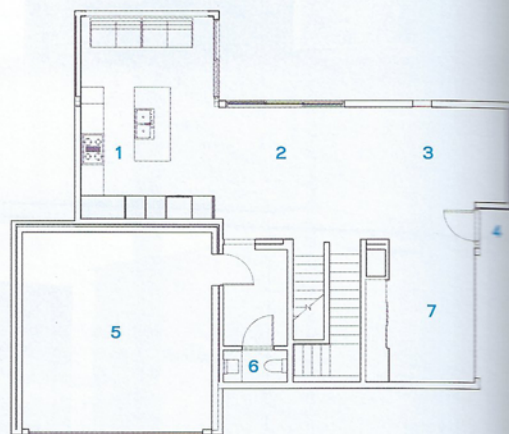
To winterize the house, the LivingHomes designers reworked Kappe's original specs, changing the exposed steel frame to wood and installing fibreglass window frames and double panes insulated with argon gas, to prevent thermal breaks and condensation. The insulation, a soy-based spray foam, was also beefed up to standards that exceed regional codes, to R38 in the walls and R50 in the roof. They also added a basement, which they saw as a necessity in the Canadian market where they are the norm. Otherwise, the design is not so different from the California model.

When the modules arrived on wide-load flatbeds from the factory in Bristol, Indiana, during a cold spell last winter, the neighbours stood by,

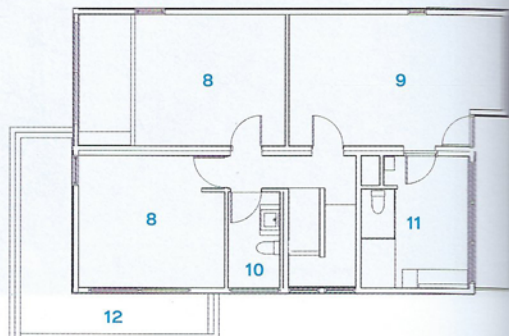


← Many of the furnishings were sourced locally, including second-life area rugs from Elte in Toronto. The wood burning stove is by Jøtul.

GROUND FLOOR



SECOND FLOOR



GROUND FLOOR

- 1 Kitchen
- 2 Dining room
- 3 Living room
- 4 Entrance
- 5 Garage
- 6 Powder room
- 7 Office

SECOND FLOOR

- 8 Bedroom
- 9 Master bedroom
- 10 Bathroom
- 11 Master bathroom
- 12 Green roof

mouths agape, as the crane lifted and clicked each piece into place in just a day. “I always thought traditional site construction was messy, time consuming and wasteful,” says Lands. “For months, you have multiple cars parked at the site, lots of coming and going of trucks, and a huge pile of material that ends up in landfills, not to mention weather delays. If there’s a better, quicker and more sustainable way, then why not?”

Lands admits that this project is not a road to riches: “It’s more of an experiment. I have to prove to myself that it can really work.” So far, the house (at the time of this writing listed for \$1.69 million) has attracted

a long line of visitors but no serious offers. People don’t care that it’s prefab – they can’t even tell – but they love that it’s green and modern. “More consumers today want good design, health and sustainability in their homes; still, not many are willing to pay for it – yet,” says Lands.

When you consider that developers, not architects or environmentalists, control what is created in our built environments, one can only hope that our pocketbooks catch up with Glenn and Lands, two developers who are putting purpose right up there with profits. **AZ**