

THE ARCHITOURIST

A sustainable home with all the bells and whistles

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The new 'Active House' in Bradford is full of new features that improve efficiency, from minuscule things, such as electrical outlets sealed to prevent tiny drafts and leak detectors under every faucet, to major construction elements, such as the insulation under the basement slab.

GREAT GULF

The next time you're driving along Holland Street West in Bradford, Ont., take a hard right at sculptor Ron Baird's shining, kinetic dragonfly, and drive past the big pond. And just like Mr. Baird's sculpture is hard to miss, since it's perched atop a nine-metre pole, the house in question, just off Summerlyn Trail, recalls a famous Sesame Street song, *One of These Things (Is Not Like the Others)*.

Indeed. Hiding in plain sight among the unnecessarily complex roof shapes, pediment-topped garages with oculus windows and columned front porches, 8 Downy Emerald Dr. is a horse of a different colour.

Opened about a week ago and a few years in the making, the Great Gulf-designed project is the builder's third "Active House" – the first two were designed by the architectural firm superkül and located in Thorold and Etobicoke. It might be the first time homebuyers will get excited about a higher price tag.

And that, says Tad Putyra, Great Gulf president of home technology, is because the planning involved and the myriad systems installed to make it high-performance and sustainable all take a back seat to creature comforts: “I call the entire concept of the Active House a Trojan Horse.

“You put the very functional, very well-performing house, which is attractive to families ... and you have to wrap it into something attractive to the consumer,” he continues. “A house where you can control CO2 and all of the sudden you are discovering that you sleep better, and the children are less tired.”

“There are a lot of things that are [for] comfort or just little add-ons, but they also serve the feature of sustainability,” adds Shaun Joffe, Great Gulf executive director of sustainability and building sciences. The shower in the principal bathroom, for instance, will turn itself on when a homeowner announces their presence, and then notify them when their preferred temperature is reached. And the water going down the drain as they brush? It travels to a Greyter recycling unit in the basement where it will be used to flush the toilets.



Active House, 8 Downy Emerald Dr., Bradford, Ont.

GREAT GULF

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But what is an Active House? Is it a cheeky response to the Passive House standard that's the opposite? Not at all: Both are international certifications that are awarded when certain conditions are met for energy efficiency. And, as U.S. architect Suzanne Zahr wrote in a 2020 blog post, “the strategies are not actually in conflict with one another.”

And, at Summerlyn Active House in Bradford, the Great Gulf team has installed a number of “truth windows” (a term this author learned almost 20 years ago at a straw bale house: a foyer window reveals the tied-up bales behind the plaster) to allow the curious consumer to see what all the fuss is about. Walk through the house and marvel at the minuscule things, such as electrical outlets sealed to prevent tiny drafts and leak detectors under every faucet, to the bigger moves, such as the insulation under the basement slab or how closets upstairs and a tiny home office on the main floor can transform, fuss-free, into an elevator shaft so that homeowners can age in place.

If a visitor isn't sure of what they are looking at, interpretive plaques are positioned near each window.

And speaking of windows, the actual, triple-glazed ones that let in daylight have been strategically placed as well. Using computer modelling, light has been "directed" to the shared areas first – the family room and kitchen – where it is allowed to linger longer, and less to areas where it isn't required (the laundry room). Upstairs, a massive, operable skylight rains photons onto an open lounge area by the stairs, and light tubes in closets bring in so much natural light selecting the day's outfit doesn't require electricity ("To the point that we had some colleagues who were trying to turn it off," Mr. Putyra says with a smile).

There is also a little window in the large home office that looks into the kitchen area. This was developed during the pandemic when thoughts about entire families working and learning at home were top of mind. "We were in the house during framing, and we came up with the idea of line-of-sight," Mr. Joffe says. "If the mother is in the kitchen, she could see her kids doing their homework in the room here."

"Or vice versa, if the mother is working," corrects Mr. Putyra, who adds that the WiFi is so strong in the house, that one could work from pretty much anywhere.

Panels on the roof generate electricity that is stored in a Tesla unit in the basement. "Solar on the roof can do a lot, but if you don't have a battery downstairs when the power goes out, that solar doesn't feed your house any more, it just goes to the grid and disappears," Mr. Joffe says. Not far away is the heat recovery ventilator – "the lungs of your house," Mr. Joffe says – which saves energy and heat. The HRV can be easily swapped out with an ERV (which also recovers humidity) since it'll fit in the same box.

There are a great many more things: great insulation (extra in the powder room to avoid embarrassment at dinner parties); automated blinds; and cold air returns in all bedrooms. And there are cool apps to monitor it all from one's smartphone but, really, it's the walk-through that's the pudding-proof here. Summerlyn Active House is incredibly sunny; it's pin-drop quiet; it smells fresh; and, for a high-volume builder's house, feels custom and architectural.

And now that retail has followed, it's a real community: "I remember when we came here in 2008 and I said 'What are we going to do,'" Mr. Putyra remembers. "There's nothing here, there's a ditch with some brown water ... and now there's an ice cream truck coming here."

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