

## 🏠 East Van passive home proves 'unbuildable lot' perfect site for narrow build

*Designed to last at least 100 years and use 90 per cent less energy than a typical dwelling, this family home wins four HAVAN Awards For Housing Excellence*

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May 29, 2021 • June 2, 2021 • 3 minute read



Harmony Sense Interiors owner, Lucila Diaz, thought her friend architect Nick Bray was joking when he suggested building a five-bedroom passive house on a 25-foot lot. MARTIN KNOWLES

Lucila Diaz, founder and creative director at Harmony Sense Interiors Ltd., recalls having a conversation two years ago with her friend, Vancouver architect Nick Bray, owner of Nick Bray Architecture.

She says, “He told me all about a passive house he was developing for his family in East Vancouver, how it would have five bathrooms, five bedrooms, 12 foot ceilings, huge windows and a roof deck. Then he added, ‘We’ll build all this on a lot just 25 feet wide.’ I thought he was joking, but he wasn’t.”

The outcome of Bray's determination to build a home that would use 90 per cent less energy than a typical dwelling, coupled with Diaz's interior design expertise that helped fit the living components into an extremely slender space, is Passive House – A Narrow Perspective.

The project, which was brought to life by a host of talented professionals, recently won four HAVAN Awards For Housing Excellence: Best Custom Home \$1 Million – Under \$1.5 Million; Best New Kitchen Under \$50,000; Best Non-Certified High Performance Home, New or Renovated; and Excellence in Building Science Innovation in Residential Construction.

Passive House – A Narrow Perspective was designed by Bray as a case study to last at least 100 years while making an architectural statement on a lot considered by many to be unbuildable. The site, a peat bog, required the development of a unique foundation/shoring/tanking system to make the home one of a few residences on the block with dry, level floors.



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Bray designed the interior to be flexible: while currently configured as a three-bedroom-home over a two-bedroom suite, it can also be set up as a four-bedroom house over a one-bedroom suite, or even just a single, big open space.

Maximizing space for Bray's growing family was achieved partly by the upper floor being on two different levels, which enabled much taller windows to receive more solar gain on the front of the house and reduced the amount of corridors.

Providing storage was another challenge. This was achieved by creating storage spaces between floors and Diaz selecting furniture with built-in storage (such as sofas, dining room benches and beds).



Using 90 per cent less energy than a typical dwelling, coupled with Harmony Sense Interiors design expertise created a project that captured four HAVAN Awards for Housing Excellence.  
MARTIN KNOWLES

In order to be certified as a Passive House, Bray's creation had to be developed according to strict air tightness and ventilation guidelines as well as insulation standards, hence the creation of a high performance building envelope and elements such as triple glazed windows plus a heat recovery ventilation system.

To help develop these design solutions and build to such high standards, Diaz created a complete virtual reality tour of the entire house. "This not only allowed Nick's wife to see what the interior would look like, it enabled him to tweak or change elements," she explains. "It also helped achieve clear communication between the trades during the construction process."

In many ways, Passive House – A Narrow Perspective is an example of what is possible for 21<sup>st</sup> century residences. In addition to it being energy efficient and providing a harmonious living experience, it advances the design of passive houses in general. That's because these types of residences started out as cubes with small punched windows, and according to Bray, the cube form remains the easiest configuration with which to achieve certification: "But if we're downgrading the architectural quality in any way, then we're not doing it right."



Lucila Diaz's interior design expertise helped fit the living components into an extremely slender space. MARTIN KNOWLES

Bray's home also represents a substantial contribution to environmental sustainability. "When you think of some countries, 50 per cent of their total energy use is used within the buildings that people live and work in," he says. "So if we reduce the energy usage of buildings up to 90 per cent, that's going to have a huge, positive impact on the environment, reduce CO2 emissions and really tackle global warming."

Passive House – A Narrow Perspective could be the shape of things to come in the Vancouver residential market, considering the city's building codes are directed towards all buildings being net zero energy consumptive by 2032.

While the Bray family is enjoying the many benefits of their new home, Diaz, whose company was nominated as an associate for the top two of the four Haven awards Passive House received, stresses that the project "brought together an outstanding group of professionals to turn Nick's vision into reality." They include JDL Homes Vancouver, Black Thumb Contracting Ltd., WireChief Electric, Audio Insider Technology Design and Designs by KS.

"If we have one wish, it's that these types of houses will become more common. From the environmental considerations to the personal benefits, passive houses really are the best places in which to live."

*This story was created by [Content Works](#), Postmedia's commercial content division, on behalf of Harmony Sense Interiors Ltd.*