



>> HOMES & CONDOS

Closer look inside Ontario's 'Earth home'

EARTH HOME from H1

The dealer paid the Potters \$1 apiece to take them off his hands.

"These walls will be here in 1,000 years," says Chuck, 67, of the 2,300-square-foot house. "It's the strongest wall you can build."

But the 75-centimetre-thick structures are only part of the story. Tucked into a hillside on a 15-hectare wooded lot 20 minutes south of Bancroft, the house the couple built by hand — with help from volunteers — runs on nature.

Relying on the sun and Earth, it's designed to heat and cool itself by absorbing, storing and emitting passive solar energy. Even on the coldest night of -40C, the interior can't go below 10C, the temperature of the ground below the frost line.

"Nature's wonderful. It's all free energy," says Chuck. "This is the most sustainable home you can build without having an impact on the planet."

And that's how it all began decades ago, when two books put them on the path to an extreme green lifestyle. For Chuck, it was the 1972 publication of *The Limits to Growth*, a controversial study warning about global economic collapse and the depletion of non-renewable resources. For Pat, who was reviewing environmental books for the CBC at the time, it was U.S. architect Michael Reynolds' 1990 manual on how to build an "Earthship."

Curiosity sent the couple to New Mexico to see Reynolds' designs for themselves. Three years of manual labour and \$45,000 later, they had their own version, adapted to withstand Canadian winters.

To the first-time visitor, the 30-metre-long house appears to have sprouted from the earth berm in which its north-facing backside is buried. On the exposed south side,

dazzling sunlight dances on 16 sloping windows — a minor inconvenience because the 60-degree angle means snow has to be cleared off.

Inside, Mother Nature makes herself right at home, sending spring breezes through two dormer windows to play among the leaves of avocado, strawberry, jasmine, grape and fig plants.

"You can grow anything here. The figs go crazy," Pat, 65, says of the thriving indoor gardens that are irrigated by a grey water system.

With tongue-and-groove pine ceilings and structural support posts from a 100-year-old maple, the house has a natural, healthy scent. The curved walls, encased in concrete and coated with cistern paint as a vapour barrier, offer no hint of their rubber innards.

The roof and outside walls are insulated but the floors, made from a 7.5-centimetre layer of concrete, are not.

"The key is, don't insulate the floor or the house won't heat itself," Pat says, explaining that insulation would be a barrier to the Earth's heat.

"It's low-tech geothermal without the pipes and pumps," Chuck adds.

If back-up heat is needed, they use the 100-year-old Findlay wood stove on which they cook. With other operating needs looked after by six solar panels to produce electricity, a 90-metre well, solar and composting toilets, small wind generator and plenty of dead trees for firewood, the Potters pay no utility bills.

They raise organic vegetables in the summer and are building a 12-metre by three-metre tire greenhouse to grow more of their own food.

The couple was recently lauded by Bayer Canada as part of the company's 150th anniversary celebrations. The Potters are among 22 Canadians — including David Suzuki and Rick Mercer, university presidents and



CAROLA VYHNAK PHOTOS FOR THE TORONTO STAR

Indoor gardens are among the benefits of Chuck and Pat Potter's passive solar home.

company CEOs — to receive awards from the pharmaceuticals giant for improving the quality of life through science and innovation.

"We're in crisis," Chuck says of the planet. "Everything they said in *The Limits to Growth* is happening. Knowledge has to be passed on."

They're thrilled that their grandson Justin Hayes has started his own company, Sustainable Engineering and Design, which specializes in designing and building earth homes.

"We're using all the age-old design concepts people don't apply any more," says Hayes, who built an earth home of his own in Bancroft.

Ontario now has about 40 such houses that the Potters know of. "People are just beginning to wake up," says Chuck.



Feeding the birds who keep the insect population under control is all part of Chuck and Pat Potter's eco-friendly lifestyle.

> PROPERTY LAW

Floor-by-floor sales venture better as a condominium

Myriad of legal sinkholes in unfeasible, impractical real estate proposal

BOB AARON
SPECIAL TO THE STAR

My nomination for the most oddball real estate scheme of the year is last week's proposal by Larry Chilton and his real estate broker to sell separate floors of his Victorian rooming house facing Trinity Bellwoods Park.

As reported by Kamila Hinkson last week in the Star, the first and second floors are available for about \$480,000 each, plus the cost of renovating the house to create separate units.

Half the house is also for sale, and the whole house is tagged at \$1.7 million.

In my experience practising real

estate law in Ontario, I've never seen anything like this proposed joint venture with total strangers.

It simply won't work here because it's unfeasible and impractical. To be honest, it's a pipe dream.

During an interview with CBC host Matt Galloway, listing agent Daniel Freeman admitted, "In our jurisdiction, there aren't any guidelines or laws that allow us to do this very easily."

"You're buying an interest share in the property," he said, "not unlike two people who know each other coming together and buying a property together... We're bringing people together and forming an alliance and a partnership."

That's much easier said than done. Freeman added, "We're going to have a contract where we flesh out all the little details of sharing."

In fact, the details aren't so little.

There are numerous big problems, including:

- > The difficulty of two partners obtaining joint financing together and the impossibility of financing parts of the house separately.
- > Dealing with one owner's default in mortgage payments, for which both owners would be equally responsible — the owner in good standing could be evicted by the bank for his partner's arrears.
- > Similar challenges where one owner's utilities are in arrears and water, cable, phone, gas, Internet or hydro is shut off even though the other partner's contributions are up to date.
- > Unwinding the venture and selling a share to a third party, especially where one party wants to sell and the other does not.
- > The absence of a legislative structure such as the Condominium Act

or a skilfully crafted co-operative or co-ownership agreement such as those used in larger multi-residential buildings in Toronto.

> How to deal with repairs, especially where they are necessary in one unit only, or where one party is unable or unwilling to contribute his share.

> The huge cost of creating new Ontario legal contracts, similar to those in common use in Quebec, California and elsewhere.

> The challenge and cost of physically separating the units and staircases according to current Building Code and fire regulations, so that each owner has a private, self-contained apartment.

As I see it, it would be far more cost-effective to convert the house to a condominium.

Even if the conversion, surveying, legal and renovation costs were as

much as \$250 per square foot, or \$100,000 for the whole building, the return on that investment could easily be recovered by the increase in the total value of the building.

In a condominium, one owner's arrears of mortgage payments, common expenses, taxes or utilities cannot be charged against the other owners in the building.

It seems to me that the listing of this Queen Street West neighbourhood house for sale by the floor — in the absence of a serious proposal for the operation of any sort of partnership — was just a clever and somewhat entertaining publicity stunt, but one which is totally impractical and doomed to failure.

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Christopher Hume

Tallest tower does good job of connecting at street level

For the most part, we view construction sites with a mix of irritation and resentment. They slow us down, muddy the streets and are so noisy they destroy our eardrums.

At the same time, however, the 21st-century construction site in Toronto is a remarkable place.

Consider the case of Aura, Canada's tallest residential tower, now taking shape on the northwest corner of Yonge and Gerrard Sts.

Though upper portions of the 78-storey skyscraper remain very much a work-in-progress, the podium down below is already open for business. An enormous steel canopy extends over the sidewalk on both sides to protect those coming and going.

The rush to open, to generate cash, speaks of the huge cost of construction.

In a world where time is money, a project such as Aura is simply too large to approach as a single entity. The three-storey base contains stores whose point of reference is



CHRISTOPHER HUME/TORONTO STAR

Aura, soon to be the country's tallest residential tower at 78 storeys, connects nicely to the street with help from its construction safety canopy.

the street — not those cubicles in the sky above.

Strangely enough, the temporary safety canopy sets off the podium quite nicely, despite its size. It adds a sort post-apocalyptic baroque sensibility to what would otherwise be an elegant but not unexpected neo-modernist exercise.

Certainly, passersby could be forgiven if they failed to notice the base held up anything more than itself. The architects have done a good job connecting the street-level part of things to street level.

Indeed, Aura is the best thing to happen to this stretch of Yonge St. in some time. Though flanked on both ends by architectural standouts — the old Eaton's College Street store to the north and John Lyle's bank-

turned-pub to the south — the new complex feels every bit as much a part of things as its neighbours. In other words, this part of Aura belongs to the city. The tower almost doesn't exist from down on the ground.

The canopy reinforces the importance of what happens at street level. Even the tallest building must meet the ground, and here that's accomplished successfully.

Torontonians, and, therefore, city planners, tend to be focused strictly on height. Though understandable, this is only one of many considerations. As Aura reminds us, it's what's below that matters, not what's up top.

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