Six Nations earthship is 'radically sustainable' living

Shelter made from natural and recycled materials provides affordable, environmental homes

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hwehhoh (Flower)
Doxtador's new
earthship is
designed to provide solid
and sustainable shelter
dovetailing beautifully
with First Nations teachings of respect for Mother
Earth.

But its construction has provided the Sixth Line, Six Nations grandmother of five much more than that.

"It's been an awesome experience and just kind of gives me another outlook that there still is people out there who have a heart, some humanity to give and help somebody in need," she said.

Earthships are the brainchild of environmental visionary Michael Reynolds – low-cost alternative. off-the-grid, "radically sustainable buildings" based on the design principles of utilizing natural and recycled materials, providing thermal and solar heating and cooling, solar and wind energy production, water harvesting, food production and sewage treatment.

"All of this came little



Ohwehhoh (Flower) Doxtador is currently living in a 1971 house trailer with her daughter and five grandchildren, but is looking forward to the addition of a new earthship. She was recommended as a worthy recipient to Earthship Canada's Marianne Griffith through 'a friend of a friend of a friend.'

by little by little," said the 71-year-old Reynolds, originally inspired, fresh out of engineering school, by a news broadcast bemoaning a plethora of discarded drink cans and the negative effects of clear-cut logging. "They've kept evolving and evolving and evolving and evolving and now they're taking care of people."

In rough terms, earthships are residences utilizing berming, thermal mass (tires pounded full of earth doubling as construction blocks; mortar walls incorporating cans and bottles; flagstones or poured floors), solar energy (extensive glassed southern exposure) and convection for passive year-round heating and cooling.

Precipitation is collected in a cistern and filtered for consumption and household usage – the latter grey water recycled via a foodproducing planter, and then again through the household toilet, before exiting as blackwater into a filter bed.

Earthship Central is in Taos, New Mexico, home base for design development and construction projects as far afield as Sierra Leone, Argentina, Easter Island, Fiji, Scotland, Holland and the Lakota Sioux Nation.

Reynolds views earthships as residential empowerment with the potential to help address global inequality, thereby making the world a safer place.

The analogy he uses to

differentiate between the tiny percentage of "haves" among the planet's sevenbillion human inhabitants to its "have nots" is that of a 70-member bus, where one person has a huge sandwich and the remainder are hungry or starving.

"It's not going to be too safe for that one on the bus," he said, declaring a strong proportion of selfinterest in his approach.

"I have to share that sandwich or make it so they can get one themselves. It's not like a moral thing, it's a logical thing."

Northern Canadian First Nations reserves contain a combination of great need, available land and opportunity, says Reynolds, who is frustrated by the oftenlengthy process of acquiring building permits for unconventional designs.

"The kind of activity that needs to take place on this planet at this time doesn't need three years to get permits – we need to do it yesterday," he said.

The independent nature of reserves offers a streamlined process.

"They go over here and say, 'do it here," Reynolds said. "That's the permit."

Six Nations was chosen as a build site conveniently close to the United States border through the legwork of Earthship Canada's Marianne Griffith, originally from London.

"I was convinced it was something that would work really well here and was in alignment with the values of the people here," said Griffith, who was referred to Doxtador as a worthy recipient through "a friend of a friend of a friend."

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Rather than a one-off, the Six Nations build is seen as $\underline{\sigma}$ a bridgehead for expansion.

"We decided to start here and make it work and make connections before we move on next summer," Reynolds explained.

The \$70,000 budget for the scheduled two-week build included materials, equipment and travel expenses, financed through donations including \$1,000 contributions from volunteer participants, who became the extended tent-community workforce. It totalled 68 for the project, including eight Six Nations residents and

six Earthship Central crew responsible for leadership and co-ordination.

"What an honour and a privilege for me to get to take part," said Rob Feagan, a Brantford resident and professor at Wilfrid Laurier, for whom the opportunity melds research on social justice and shelter and the requirement for passionate and dedicated effort for positive, respectful relationshipbuilding to help overcome negative history revealed by the Truth and Reconciliation Commission.

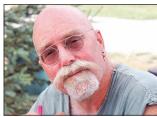
"This kind of shelter meshes with the planet in a more sustainable way," added Feagan, who has worked on Habitat for Humanity projects in El Salvador and Alberta. "I love the passion and energy. I see hope when I see this collection of people getting together with a common purpose."

Gratitude for the opportunity was a sentiment shared by Joelle Lavalle, a Quebec native and nineyear resident of Iqaluit, Nunavut, who works with young offenders but has architectural design in her educational background. Hearing of the project, she decided to attend as the best opportunity to learn about construction with alternative materials and approach.

"To see what we create as a community and a group when we all push in the same direction is pretty amazing," said Lavalle, who hopes to find an Arctic translation for a project which impressed her via rapid progress and the generosity and support of both the surrounding Six Nations community and Reynolds himself.

"He brought it back to basics, simplified and is sharing this 100 per cent. He is just sharing everything he knows."

There was absolutely no issue with effort or enthusiasm. There may be challenges associated



Rob Feagan

with an inexperienced workforce, but you will never hear complaints from site foreman Harrison (Harry) Gardner, a native of Sydney, Australia.

"You can't help but just be so respectful of everyone. They've financed this building." Gardner said.

The Six Nations earthship was designated a simple survival unit, a 32-by-20foot pounded-earth-tire structure with metal roof, timber rafters, a 50-squarefoot planter, 1,700-gallon cistern and solar power, designed for an internal temperature fluctuating only seven degrees Celsius, while illustrating both functionality and affordability with a \$45,000 to \$50,000 price tag for materials.

"Simple, low-impact living," Gardner said. "Conscious living, as in being aware of our effects on the people around us and the environment."

His background is a mixture of the construction and hospitality industries, making money in between the elemental satisfaction of providing shelter or support on international builds in locations including Uruguay (a school), Kenya (two houses and a school) and India (preschools), coming to Earthship Central via a two-month academy in Argentina.

"I've spent months in my life so someone could have a nice floor in their home," he shrugged of his motivation. "It just seems like a smarter investment in my time to be working on a project like this."

Many hands under focused direction saw rapid progress despite considerable heat and humidity. The exterior closed in after just four days. By midway through the second week the "ship" had taken shape, with finishing touches beginning to be applied for a completion ceremony on July 30.

Describing herself as "a student of life and entrepreneur," Six Nations resident Faye Burning was a very interested observer. Jaded by empty words she has heard urging "let's do this or that" but resulting in nothing, she was intently studying the nuts and bolts of the build, seeking improvements and broader First Nations implications.

"This is action," she credited of an "awesome" project. "People have so many questions. I'm seeing the answers."

Rather than simple construction, Burning envisioned the earthship as a spiritual event and people project requiring minimal equipment and offering potential for sustainable living, community building and a healing journey – possibly one part of a complicated solution for challenged First Nations communities.

"My vision isn't just my reserve, it's across Canada, it's my people," she said. "There are so many problems, you just have to look at this and say, 'It fits in there somewhere."

As the process continued to unfold, Doxtador remained overwhelmed at "the amazement of how these people came together and did this," lifting an immense weight off her shoulders in terms of both housing beyond an aging 1971 trailer and legacy for her daughter and the grandchildren she supports, while setting an example for others to follow.

"I've got a feeling this is just the first one on this territory," Doxtador concluded.

"I don't think we'll have to wait very long before people start seeing the positives of it and be ready to jump on and do the the same thing."



