

Students finish earthship

by Ryan Summerlin
Mail Staff Writer

Across the river from Swissvale, an army of students from around the world and alternative building experts have been constructing an earthship, tire by tire and can by can.

At about 5,500 square feet, this is one of the largest projects in the 50-year history of Earthship Biotechnology, a Taos, N.M., earthship construction company. The walls are made from discarded tires, glass bottles, and soda and beer cans still visible through the concrete.

A greenhouse extending the width of the building forms the front outer layer of the top floor, with an atrium in the middle.

The house's heating and cooling uses a natural convection system with eight cooling tubes running through the hillside, cooling the air that it pulls in from outside. Hot air can escape through five skylights in the roof, creating a suction that pulls air through the cooling tubes. And 20 solar panels line the roof with the home's windows angled to capture the sun's heat in winter. The tires also act as a thermal mass which absorb the sun's heat.

All of these systems work together to create a home that doesn't need to be connected to any utilities. The house is a whole living system, said owner Hollie Hirst.

An earthship essentially addresses the issues people are facing all over the world, said Earthship Biotechnology founder Michael Reynolds. Everyone in the world, no matter how poor or wealthy, has to deal with having a shelter that has heating, cooling, electricity, water and sewer, he said.

"And this house will provide all of that with no need to hook up to a nuclear power plant," said Reynolds.

In Earthship Biotechnology's early years everyone took them for "off-the-wall crazies," said Reynolds. "But then with climate change, everyone started listening."

Reynolds said that through the decades his company has gotten better and better at building earthships while the world's environmental crises have become more and more dire.



Photos by Ryan Summerlin

Ben Adams, a Pennsylvania State University student, spreads rocks on top of the newly constructed earthship.

The project came together in eight weeks with the work of more than 100 people from all over the world, mostly students of Reynolds' Earth Ship Academy in Taos. "We couldn't have done it unless we had a lot of people who were committed to busting their (butts) for six days a week," said Reynolds.

Jordan Porter, a 22-year-old Earthship student from North Dakota, came to the project having already worked on one Earthship Biotechnology project on Easter Island.

Porter said she was drawn to the academy by all the like-minded people trying to find a more sustainable way to build and live with the earth rather than just taking from it.

"This is a great organization that started with a crazy man building from garbage in the desert, and now it makes these beautiful houses that are also beautiful artwork," said Porter.

Ben Adams, a Pennsylvania State University student who'd already been through a couple internships with Earthship Biotechnology, said all the students believe in the project so much that they've paid their own way to get here and work long hours with no compensation.

"This is such a varied mix of people with different backgrounds and perspectives. But all of us have in common a desire to change the norm in our society," he said.

Long before this project began, Hirst lived in Salida from 1997-2001, during which time she bought the land the earthship is built on. She first encountered Reynolds' work

while she was part of a cooperative nature sanctuary in southern Indiana in the late 1980s. She followed his work for years until deciding she wanted to become part of the movement.

Hirst's own life experiences and studies led her to the idea of opening the earthship as a therapy retreat center. She has an undergraduate degree in human and behavioral science and her graduate degree is in organization management and development. She's also a yoga instructor and has worked with survivors of domestic violence and trauma at a safe house in Boulder and a trauma center in Boston.

And for the last five years Hirst has worked with horses for equine therapy. Being a survivor of trauma and abuse herself, Hirst said she's experienced firsthand the therapeutic potential of yoga and equine therapy to mitigate post-traumatic stress responses.

Her ultimate vision is for a therapeutic retreat center that could take on a variety of issues from survivors of trauma to autistic children.

Though she'll have to wait on approval of special use permits, she's also planning to build a barn on the property as a "horse hotel," where guests could stable their horses and ride them on BLM land during their stay.

Hirst said she would welcome community feedback about how the earthship could be integrated within the community, possibly to be used in conjunction with other area businesses like rafting companies.