ourhouse

The living and dining rooms of Lori Leinbach and Chuck Linton's berm house in Southboro are filled with light.

Life in a berm

By Julia Quinn-Szcesuil
Photography by Tom Rettig

Surrounded by earth, Southboro house makes the most of the sun

Lori Leinbach and Chuck Linton emphatically shatter the perception most people have when they hear how the couple make their home in a berm house.

"No, we don't live in Little House on the Prairie," Leinbach says, laughing. Yes, the Southboro home has windows and modern appliances. And it repels, rather than attracts, dust and dirt. No, it's not like a rabbit hole.

CONTINUED ON PAGE 42

Three walls of the Leinbach-Linton home are built into the hillside. The one exterior wall blends into the landscape.

CONTINUED FROM PAGE 41

They understand the assumptions. After all, they didn't know quite what to expect when they first saw this house with its grass rooftop.

When the couple were looking for a home two decades ago, they had a firm list of must-have necessities. A garage and single-level living were non-negotiable, but when they saw the home, they made some drastic adjustments. "This house didn't meet any of the requirements at all," says Linton.

Nestled into the side of a hill, the berm house, as it's known, struck a chord with them. Maybe with Linton first, says Leinbach.

"He's an engineer and from the look on his face, I knew he wanted to live here," recalls Leinbach. After growing up in a traditional split-level home, Leinbach wasn't so sure about living in a home surrounded by dirt and lacking central heating. "I was more concerned about freezing to death," she says.

With reassurances that the massive wood stove overwhelming the living room offered plenty of heat for both the first level and the four bedrooms on the lower level, they both knew the home was something special. Hard to explain and certainly quirky, the house, says Leinbach, is one that can't be classified by checking a box on a typical survey. "It's just a very clever house," says Linton.

But of course, it's so much more than that. With three of its four walls in the hillside, the lone exterior wall is unobtrusive and blends into the landscape. Concrete decorative and functional elements

like a small balcony blend in with a monochromatic look and help the home recede, offering privacy and an inconspicuous presence. It's the anti-McMansion.

Inside, soaring ceilings and white walls give the home a spacious, airy feel, even with windows only on one side of the house. And for all its open feeling and enormous windows, the home feels secluded, tucked high in the hill, not at street level. "I love the feeling of being in the woods and having that upstairs feeling," says Linton. "It's like you're in a tree house."

With the supportive concrete shell and four load-bearing "I" beams, the interior walls can be put up and knocked down to make rooms smaller or bigger because they don't have to worry about support. The couple took advantage of that when Leinbach's cooking business, The Culinary Underground School for Home Cooks, grew. Named with the underground home in mind, she ran the business from the house for six years and easily fit a dozen cooks in the kitchen. Before the Culinary Underground outgrew the space, Leinbach and Linton were even able to expand the kitchen without nearly as much hassle as a traditional house would have presented.

According to the Department of Energy, there are two kinds of earth-sheltered homes. An underground home is built entirely below the earth's grade, but generally gets light from windows that face a central courtyard.

A berm house can remain somewhat above ground, with at least one wall being sheltered entirely by the earth. The berm house, like Linton and Leinbach's, is generally strategically designed to make the most of the sun's energy, so a south-facing wall of windows provides heat in winter.

Popularity of berm houses grew during the oil crisis of the 1970s and early 1980s when high prices and a shortage of supplies led people to consider other more self-sufficient ways of living.

Building a home into the ground is a different process than building one from a concrete foundation up. The berm home is built in a concrete shell that is sheathed in rubber to keep moisture out.

CONTINUED ON PAGE 45

Top photo, Chuck Linton and Lori Leinbach at their home in Southboro.

Leinbach's cooking business, The Culinary Underground School for Home Cooks, started in her home kitchen and was named with the house in mind.

The house is designed with south-facing windows to make the most of the sun's energy and light. Above and below, succulents thrive in the heat. A heat pump in the house also provides heat, cooling and moisture control.

CONTINUED FROM PAGE 43

A layer of rock is placed on top before an earth layer and finally sod round out the final construction.

The house does have quirks. Yes, the roof is grass and they do mow it (and installed a small fence to keep animals from unwittingly running off the edge). And their back door is located on the lower level right under their front door. With no other outside wall, the placement is odd but makes sense.

As a passive solar home, the house is designed to work directly with nature. The south-facing windows flood the home with sunlight and warmth in winter. In summer, the leaf cover of the deciduous trees in the front yard gives cooling shade for the whole house. Spring and fall offer riots of colors from new green buds to the flaming reds and oranges of the sugar maple out front.

"Most houses are darker in the winter and lighter in the summer," says Linton. "Ours is the reverse." Because of its location snug in the temperate earth, the home, says Leinbach, never goes below 55 degrees, making it a mecca during neighborhood power outages.

Although a wood stove did heat the house nicely for the nine years before the couple bought it, the insurance company's refusal to cover them without central heat prompted them to install a heat pump with central air. The gas fireplace

CONTINUED ON PAGE 46

CONTINUED FROM PAGE 45

that replaced the massive wood stove offers a soft flame and is flanked by two windows.

Because the home is so contained and under the ground, moisture does need to be controlled. Generally the heat pump keeps moisture levels normal in winter. Rarely, the hot, muggy temperatures of summer start to hang around inside, and then the air conditioner or a dehumidifier dries it out. Radon occurs naturally underground, so the home is ventilated to keep those levels normal as well.

There are a few downsides to living in a berm house. You can't add on to it, as it is encased in an underground concrete shell, which doesn't take well to additions. Traditional houseplants just fry in the sun, says Leinbach, so succulents or cacti work nicely. And despite the predominant theme of nature, they can't hear the meditative sound of raindrops falling on the roof during a storm.

Because it's built in the earth and not up from it, whipping winds, lashing rain and roaring thunder all take on a muted, less intimidating sound. Being encased in the earth gives a solid feeling of protection and safety. The normal creaks and groans that are infamous in New England homes don't make their middle-of-the-night appearance here. Berm homes don't experience settling and all the accompanying random noises that can be unnerving at 2 a.m.

Instead, a profound stillness envelops anyone in the home. And drafts or dust? Those are things only traditional homes introduce.

They don't adhere strictly to zero-footprint mandates, but Linton and Leinbach both like living a little greener. "I've always been interested in energy efficiency," says Linton who makes lifestyle choices with energy in mind and drives a Prius. "It makes me feel better to be more conscientious," he says.

With all the home's fun attributes and interesting stories, it is, in the end, still a home that offers respite from the rest of the world. When all the unique qualities are pushed aside, it serves the couple's needs perfectly.

"It's a very cozy, low-maintenance contemporary," says Leinbach.