

# It's Easy



by Karen Mitchell  
Photography by Tim Murphy



Two architects utilize energy-saving products and eco-sensitive materials in their own Boulder home.

# Being Green

Call them architectural alchemists, transforming seemingly cold materials into the warmth of home. Architects Betzi and David Barrett, of Barrett Studio, Boulder, chose concrete, stucco, and cork to create a highly personalized house for themselves and their 11-year-old son Will. Dubbed the Garden House, the two-story passive solar design with courtyard proves that low maintenance/low energy living can be achieved in a city setting.

The Barretts' north Boulder city lot sits in an established, low-density residential area, but their home is poised on the cusp of city and garden, adjacent to fields of irises and community gardens. The 2,700-square foot house, with a studio over the detached garage, feels more spacious as the distinction between interior and exterior is blurred by a living area that extends outside.

A succession of outdoor rooms is marked by a central apple tree that once was the lone inhabitant on the property. Concrete tiles, wood ceilings placed over the eating porch, and Betzi's vegetable and cutting gardens distinguish the rooms. A luxuriant grape arbor that creates dappled light provides a connection to the house and the studio.

"I would rather have less square footage and higher quality materials," Betzi says. "Building this house was an opportunity for us to live in our art. This size was as much of a footprint as I wanted. We paid attention to the details, and because we built from the ground up, the only parameters were size and height."

Though the Barretts have worked together for 21 years, the Garden House is the first they've designed for themselves. They entrusted the construction to Dominique Gettliffe, a local architect/builder and a close personal friend.

Previous pages, the west-facing view of the two-story stucco/cement house, left, backs onto community gardens. The low concrete wall conceals a hot tub. Right, more concrete forms shape the front, street-side entry.

Opposite, an arbor connects the main house to the detached garage and studio. Opposite below, the 2,700-square-foot building flows from the shared living spaces, far left, to the second-story master suite in the center, to the garage.

The exterior is mainly cement stucco over CEMPO (cement and recycled polystyrene), corrugated cement panels, and flat Hardi panels (cement-based panels). The house is topped with a thick roof with broad overhangs, proportionate to the structure and in response to the climate. "Shadow lines cast by the structure of the CEMPO add a three-dimensional quality to the exterior," Betzi says. "The stucco reflects light differently than do flat smooth surfaces, and the combination adds interest."

The house is oriented to the southern sun and west to the gardens and mountain views. Passive solar, with radiant heat, its energy-saving potential is maximized by large expansions of glass on the south side and heavy materials inside. The concrete absorbs the southern sun from the glass, minimizing heating needs.

Interior design considerations and space planning were equally critical. "Don't scrimp on finished materials," Betzi advises. "They're tactile and will make you happy. We have concrete floors on the main level but I wanted a cork floor in the kitchen. I told David I couldn't stand on hard concrete and devalue shrimp." The design details are evident throughout, in cantilevered fir kitchen and bath cabinets that seem to float, in a horizontal kitchen cabinet with easy access to dishes and glasses, and in the deep built-in drawers of the master closet.

"Lighting also was critical for me," she adds. "I wanted the ability to have gentle lighting on a dimmer. It's important to give yourself options within a room to create the atmosphere you'd like, soft or sparkle. We up-lit the entryway porch area so it feels like there's a lantern out there, not just a light next to the door."

The living room, with its tongue-and-groove fir ceiling and exposed Glulam (glued laminated timber) beams, spills

## A succession of outdoor rooms marked by a central apple tree

over to connect with the dining room and kitchen. "The rooms are open but there are thick walls in between them as sculptural elements," David says. "To the north side of the living room is a high band of windows with a view up to the sky and trees, giving privacy from the street as well as light and ventilation."

A dramatic steel and pine staircase, with a windowed view of a garden at the landing, leads to two second-story bedrooms. In the carpeted master bedroom a lowered curved wall adds softness and offsets the effects of a structural ceiling beam.

"There's a lot of comfort in knowing that we have a house that will withstand day-to-day wear," Betzi says. "David and I have talked about the future, imagining that 500 years from now the bones of the Garden House will still be standing because of how solid it is."

*Karen Mitchell writes about architecture, audio/visual design, business, and travel. She divides her time between Boulder, Colorado, and Hanoi.*

**Architect** Barrett Studio Architects  
**Builder** Gettliffe Construction  
**Landscape design** David and Betzi Barrett



A vaulted tongue-and-groove fir ceiling, exposed beams, and concrete floors delineate the expansive living room, below. Right, the second-floor master bedroom is softened by carpeted floors and a gently curving wall that doubles as a headboard. Below right, the work kitchen includes fir cabinets and cork floors.

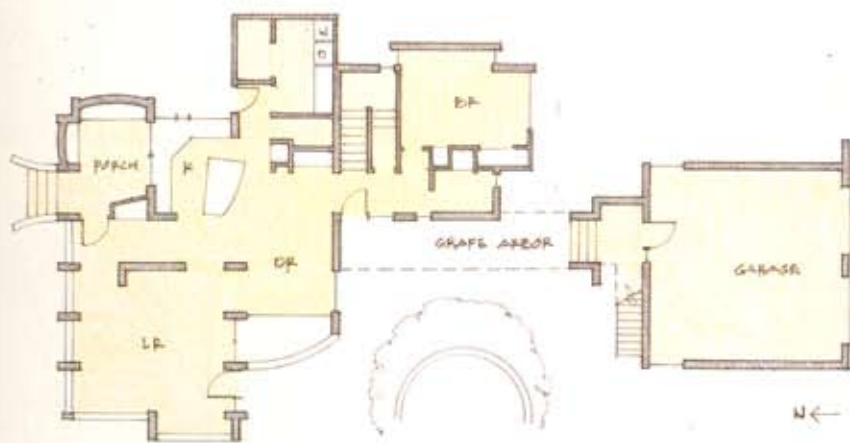




Everything from the finished underside of the overhangs to the high-performance windows, far left, was carefully considered. The open functional staircase, left, adds a sculptural element to the studio entrance.

Opposite, wood ceilings above, concrete tiles below, and the branches of an apple tree define a welcoming outdoor dining room. Another exterior room, a small second-story sleeping porch, overlooks the patio.

Main Level



Upper Level



### ARCHITECTS EXPOUND ON ECO-FRIENDLY PRODUCTS

Designing low energy, healthy, and eco-friendly materials is an opportunity to work with the textures and colors of natural products, creating what architects Betzi and David Barrett refer to as living architecture.

Outside, concrete in flat and corrugated sheets works as textured siding. Along with concrete, cementitious stucco is fire-resistant, stable, and won't break down from sun exposure. Both require infrequent repainting and may be left natural. Inside, exposed concrete floors and walls store solar heat.

Natural cork flooring requires minimal ongoing maintenance. Bamboo, another resilient floor product, is composed of fast-

growing grass, not wood. "People aren't always aware that a lot of alternative sustainable materials are readily available," says Betzi. "They're good for the earth, and hold real beauty."

One newer low-maintenance material is CEMPO, a wall system of cement and recycled polystyrene. "It puts the waste in your walls, not in the landfill," David says, "providing insulation, low energy bills, and the potential for a smooth, glassy, and lasting stucco finish."

"Put your money into high-performance glass and thermally broken window frames," he adds. "Good-quality windows are a must, as is high insulation in the roof and walls. A well-insulated roof is like wearing a good hat—our mothers were right again!"

