

## Founding Custom Home: The Rudd Residence



Masonry Fireplace.

Photo by Evolve Builders

The Home Sweet Home Competition is proud to present the elegant, innovative and very ecological “Rudd Residence” strawbale home as our Founding Custom Home. The home was built by Evolve Builders Group Inc, based in Guelph. (See below for more on Evolve and the other project partners).

This beautiful elliptically shaped home nestles into its surroundings in Hillsburgh while taking optimal advantage of daylighting and passive solar energy gains to reduce energy demands. In fact, heating requirements for this home are 30-50% lower compared to conventional construction, and strategic use of shading and thermal massing eliminates the need for air conditioning completely.

Much of the home’s modest heating needs are met through a remarkable clay-covered masonry heater that serves as a centre-piece for the room as well as an efficient wood burning stove, powered partly by dead wood from the Rudd property. In addition, a heavy concrete subfloor as well as 1 ½” of plaster on the interior of the R40 bale walls, combine to provide excellent thermal storage capacity. This mass absorbs heat when it is generated via the sun or the radiant floor heat distribution system, and then gently releases this heat again as the air temperature declines.

The Rudd Residence is also impressive in light of its use of natural, healthy, local materials. The wood for the interior doors, cabinet doors, window sills, stair treads and baseboard were all milled from the Rudd’s own woodlot, with natural oil finishes in lieu of petrochemical based urethanes. Silicate dispersion paints – Canadian manufactured using silica sand and natural mineral pigments – were used throughout to provide rich colour and naturally mildew-free painted wall finishes. One room was even more specially treated with a clay veneer instead of any paint at all, leaving a suede-like texture that immediately attracts attention. Local clays were used to make durable, natural, earthen-based plasters on site to finish the fireplace and some baseboards. Locally produced mineral wool batt insulation was used in the attic, providing a higher insulating rating, hydro-phobic properties, and easier installation.

The wood floors are made from FSC certified or reclaimed wood, and the kitchen counter top is comprised of recycled post-consumer paper waste.

Perhaps most impressively, Evolve Builders has strategically systemized construction processes and details for straw bale walls to make this labour intensive building method cost-competitive with ordinary construction.

Evolve has a strong reputation for leading edge work in strawbale construction and other sustainable building techniques, as well as educating and training the next generation of sustainable builders in Ontario. Evolve's Ben Polly is a highly sought-after guest lecturer at institutions such as Ryerson University and Ontario College of Art and Design. Evolve only performs work that has a purposeful intent of being more efficient, better for human health and/or more desirable for the environment, and they have a strong commitment to using local materials and favouring social enterprises and family owned or local businesses for sub-contractors.

Please see the detailed profile of this home from Evolve Builders' at [www.hsh-competition.ca](http://www.hsh-competition.ca) (click on Winners button).