Why Build with Alternative Building Systems?

∑ Alternative building systems use renewable or sustainable resources. As opposed to wood, steel, masonry or concrete, straw and earth are both renewable resources. Straw is a waste product from the harvest of a variety of grains and is usually burned. Earth can often be used directly from the work site.

∑ Alternative building systems are energy efficient. Straw, earth and polystyrene all have insulating qualities superior to conventional insulating materials. Straw insulates at three times and polystyrene at twice the rate of conventional buildings. Earth buildings are cool in the summer and warm in the winter thanks to their insulating abilities.

What are Alternative Building Systems?

∑ Straw Bale: Uses the straw bales as the main structural support or the in-fill. Bales are stacked like building blocks, often on a poured concrete wall foundation, with wooden frames for windows and doors. Steel, wood or bamboo pins can join the bales and reinforce the walls, or the bales can sit in a wood, steel or masonry/concrete structural system. Straw bale buildings are energy efficient, affordable and ecological.

∑ Earth: Uses earth in the form of baked bricks, cut sod, wattle-and-daub or cob (mud mixed with chopped straw), rammed earth or pisÈ (earth compacted into wooden forms) or tiles as the main building material. Earth is affordable, simple, a durable and an adaptable material, abundant locally, plastic yet strong, rot and termite proof, cool in summer and warm in winter.

∑ Polystyrene Cement Building Forms: Uses a mixture of recycled polystyrene waste products and cement to make wall panels. Steel reinforcement bars are installed into the panels during the wall raising. Concrete is then poured into the panels to form a monolithic ìhoneycombedî wall. Panels are finished with exterior plaster or wood paneling and have superb sound insulation and energy efficiency qualities.

Sources:

∑ Pearson, David. The Natural House Book. Simon & Schuster, New York: 1989.
∑ King, Bruce. Buildings of Earth and Straw. Ecological Design Press, California: 1996.