

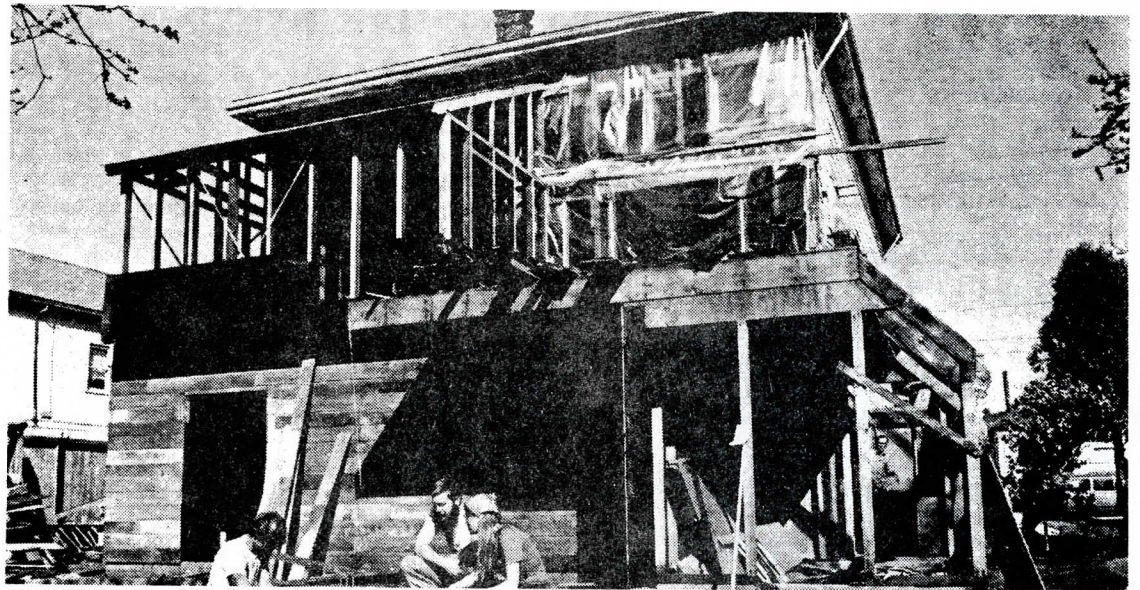
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An Organic House Grows in Berkeley



URBAN RENEWAL? . . . a group of architects, biologists, engineers and students in Berkeley are more than refurbishing this old Victorian on Fifth Street. See page 3 to learn about their ambitious project.

Photo by Dick Wheeler

Trying to Run a House on a Minimum of Technology

...And Asking, 'Can People Take It?'

By HOWARD GOODMAN

Heat from solar panels. Food from vegetables in the garden and animals in the pen. Recycling systems for re-using human wastes. Aquacultural ponds to raise fish and algae for protein. A commitment to bio-engineering and whole life systems.

It all sounds like a model modern, rural homestead or a wishful description of the future — with a grateful debt to the past — inspired by a heady reading of "The Whole Earth Catalog."

But it is neither rural nor wishful. It is soon to happen in a small lot in northwest Berkeley, where a group of pragmatic biologists, architects, engineers and students is busily building a model live-in laboratory, hoping to prove that people can live in harmony with nature and not leave the city.

A run-down Victorian house at 1516 Fifth St. is now in disarray — part-torn, part-rebuilt, with volunteers spiritedly hammering and modeling, with debris and ideas scattered with equal abandon.

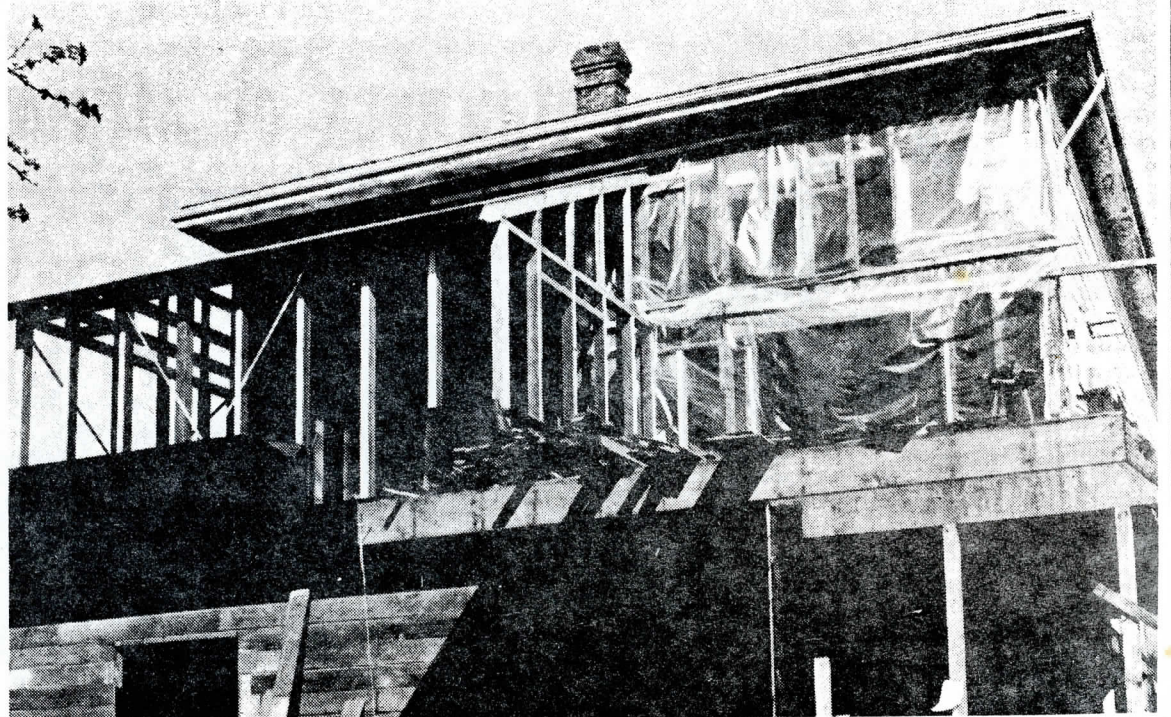
Only a neat early spring garden indicates that by April 1 four persons will move into the Farollones Institute's Integral Urban Homestead to begin open-ended experiments to test new low-technology systems for urban areas.

The Farollones Institute, supported by grants and donations from individuals and foundations, was founded last spring by several biologists, engineers, designers and craftspeople who have experience in designing small, durable life-support systems and habitats.

Among the first features of Integral House will be:

- Four flat-plate solar panels to heat all the water in the house.
- A water recycling system, which will recycle through sand filters all the domestic waste water (showers, dishwater, everything but lavatory) for use in the garden.

(see page 6)



THE INTEGRAL HOUSE . . . will have what it takes to live compatibly with nature while remaining in the city if the Farollones Institute's Integral Urban Homestead proves successful.
Photo by Dick Wheeler

Experimenting with Low-Technological Life

(from page 3)

- A clivus composter, to slowly decompose human fecal wastes into humus for the garden; a urine retention system to decompose or dilute human urine into garden material; as well as a standard toilet, to conform to city code.
 - A herd of rabbits, eight frying chickens, six laying hens and possibly a hog and a goat to be raised largely on low-grade wastes — plant debris and insects — for meat and eggs.
 - Ponds to breed clams, fresh water shrimp and at least one type of fish capable of surviving the winter.
 - A garden that will yield fresh and preserved vegetables the whole year around, using drip irrigation and mulching techniques.
 - Ornamental plant gardens, a butterfly garden and beehives.
 - A laboratory, a greenhouse heated and cooled by experimental techniques, and teaching and seminar rooms for a masters' program in Ecosystem Management offered jointly by Farallones Institute and Antioch College West.
- These systems are designed to meet many of the energy needs of a family of four. Electricity, water and gas will come from municipal sources. Methane gas — which may eventually be generated from human wastes —

may run a small refrigerator. Wood and municipal gas will provide heat for cooking and space heating. There is no windmill.

The power and importance of Integral House is that it is an urban project, said its coordinators, Helga and William Olkowski, biologists and founders of the Oxford Tract urban garden four years ago.

"We have two guiding criteria on bioethics that we're working on," Ms. Olkowski said. "One is that we're looking for devices or ideas or technologies that will take us to a solar economy. Green plants, of course, are a part of that."

"Does It Teach?"

"And we're also asking of every sort of thing that we're doing — does it teach in the process of someone's participating in it? We're not just looking for simple machines. We're really looking for systems that will teach people about the natural world, and their relation to the natural world, through their participation in the process."

"We're oriented," William Olkowski said, "to turning people on to things they can incorporate in their own habitats without hiring an architect or making huge expenditures. We're into small-scale survival kind of things people can do themselves."

The initial costs of Integral House's systems are admittedly high. The solar water heating system will cost \$700 to \$800 without labor costs, according to Scott Matthews, an architecture graduate student. But there is no real way to measure systems' costs or savings until people have used them over a period of time, the house's planners said.

Four volunteers will live in the house amid the new technology and research. Their emotional reactions to life in new settings will be as important a component of Integral House's annual reports as careful economic reports or energy flow charts, Ms. Olkowski said.

"And what will be most important is what the people who live here say," she said. "What kind of personal constraints do they experience making a real conscious effort to live in a way which is less of a burden on the planet — and still not live poor, in the sense of impoverishing their own life?"

"We don't know yet which things will work and which won't, and what they'll cost," Helga said. "But of every thing we will ask: Does it take us to a solar economy? Is it an energy drain? What are the outputs and inputs of a system? Is it expensive?"

Among the contributors to Integral House is Sim Van der Ryn, professor of architecture here who designed the natural energy pavilion on display here last spring, and Sterling Bunnell, marine biologist, psychiatrist and naturalist who is overseeing the house's fisheries.

The institute, headquartered at Point Reyes Station, Calif., also maintains a rural homestead site in Occidental, Calif.

The Integral House staff welcomes peoples' curiosity and energy, but cautions that the house will not be operative until the beginning of April. In the meantime they ask that inquiries be written to 1516 Fifth St., Berkeley.