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When Galiano gets going ~ Tom Hennessy

Of late, it seems that it is not often that everyone on Galiano can agree on something, but all Islanders now recognize that lack of affordable housing is a very serious problem facing our community. Island housing prices are high, jobs are low-paying and rental accommodation is all but non-existent. As always, young people are attracted to the island and welcomed as fire-department volunteers, construction workers, care givers for the elderly and staff for Island businesses. Although their presence is key to keeping the community viable, there is simply no place for them to live.

No affordable housing has been built on Galiano since the Galiano Lions Club built a small and very successful development of apartments for senior citizens in the '70s. With present day prices for lots starting at over \$300,000 and construction costs at over \$100,000 for a small cottage, there is a desperate need for new ideas to solve this problem which is becoming a critical issue not only on Galiano, but all over the Gulf Islands and Canada. Our research has shown that some of our younger community are sleeping in the backseat of cars, four and five to a room, old mouldy trailers, drafty tool sheds and even under the Sturdies Bay ferry dock.

The Galiano Land & Community Housing Trust has struggled since the mid-'90s with this problem, exploring many options including rental registries and establishing an affordable housing community which would enable people to build and own a home of their own on community-owned land. During this time, the problem has grown exponentially, to the point where our school population has dropped from a high of 115 to fewer than 50 students.

In typical Galiano fashion, a group of creative Islanders, frustrated with the slow pace of large-scale projects, have come up with a timely fix for the problem.

I am an industrial designer with a life-long interest in housing and shelter issues, so I designed a one-person, self-contained, eco-friendly and movable 'mini- house' which could

be placed on any property where there was a need for a caretaker or caregiver, or for a temporary residence for a home-builder or family member. It could also serve as a first home for a new Islander, who could build one for a modest sum, paying off a loan in a couple of years at \$300 per month instead of paying high rent and it could then function as the core of a larger home.



The prototype comes out of the woods.

The goal was to, as much as possible, eliminate the prohibitive initial costs of building a dwelling. I examined all the barriers and came up with an alternative to each one. The design of the dwelling was determined by the best assembly of the alternative solutions. My goal was to find a solution that was allowed within the existing rules and regulations.

I felt that it was essential to cooperate with all departments of the provincial government and that they too would be willing to assist in the search for acceptable solutions to this most urgent issue. I checked with CRD building and health inspectors to ensure that the concept did not violate any regulations. Originally dubbed the EcoPod, it soon was nicknamed the EcoPad by Dave Morgan. Instantly, all kinds of people could see how useful one of these flexible units would be for their island situation.

The next step was to go to Victoria and talk to the CRD building inspector and show him my design. The building inspector has explained that if it is on wheels, it is not their responsibility. He also explained that the CRD's main objection to standard trailer design was that they cannot safely dispose of gray water or black water. Since the Eco Pad design does not use pump-out tanks but processes its own sewage, this problem is solved. The health department explained that if there is no waterline into the building and no discharge, that it does not contravene any provincial legislation. In other words, anyone can build one of these for themselves. If someone wants to start manufacturing, they would have to conform to a standard such as trailer or mobile home.

This structure collects rainwater from its roof and processes

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ECOPAD ON DISPLAY AS ELECTION CENTRE

Photo: Henny Schnare, wwwhenny.ca

its own gray water with an evaporation/irrigation system for gardening and a composting toilet. Photovoltaic would provide power to a 12 volt system for fans, pumps, computer and lights. Each system is simplified for the highest efficiency at the lowest cost.

Building The EcoPad

Chris Gaylor donated a used trailer which was swiftly stripped down to the trailer frame by an enthusiastic group of wreckers including Nahani Daikun, David Gaylor, Zak Sebelius, Virginia Crough, Zeus Cochrane, Carolyn Oko and Kim Lenglet. The frame was moved to my property where Robin McKenzie also joined in with his carpentry skills.

After over-wintering at Nahanni's house, the EcoPad paid a brief visit to the Daystar Market before returning to to my place for the completion of walls, roofing and much of the interior. Gary Coward and Richard Nathans joined in a the last push. Many others donated time, materials, tools and enthusiasm.

Doug Latta and his trusty four-wheel drive moved it back to Daystar Market where it functioned as an election center. Many people have stopped by to admire the project, ask questions, offer trailer frames for the next prototype, and, in the case of eleven-year-old Noel Doffing-Balint, ask when and how he can start building his

own EcoPad design.

The crew will next fit the solar panels, water collection system, sewage system and other high and low tech features that will make this wondrous dwelling truly self-sufficient. It's hoped the first resident will begin an off-the-grid lifestyle sometime next spring.

We intend to produce plans for the EcoPad and the proceeds from the sale of the plans will be donated to the Galiano Community Land and Housing Trust. Any individual can build an EcoPad or recruit friends or hire people to help them build it. An exciting idea is to build them at recycling centers. The community can then see what is needed and people will start bringing their extra lumber and building materials as donations to the project.

Cost - the cost would depend on what percentage of the materials were recycled or donated and how much labor was volunteered as well as the amount of sweat equity the owner was willing to provide. An EcoPad can cost as little as \$10,000. The estimated cost of the first EcoPad is \$20,000 because the use of all new materials (except for the trailer frame) and some paid labour.

Heating and cooking - the heating will be provided by passive solar when the sun is shining and at other times, wood which is so readily available in this part of the world. Because the EcoPad is so well-insulated it will be easily heated by a very



Ecopad from bedroom end, kitchen on left.

Photo: Henny Schnare, wwwhenny.ca

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small wood heater which can also be used for cooking. The back-up cooker will be a 2-burner inset propane range-top. A propane light is also being considered for the winter when there is less sunlight to charge batteries—propane lights can also effectively function as heaters for a well-insulated shelter of this size.

‘Granny cooler’ - For about 1/2 of the year, an insulated cooler could be used. Cool air at night is allowed into the cooler and the vents are closed during the day to keep the food cool. This is an example of a low tech solution that still works.

Water - The building will collect an average of 5 gallons of water a day.

Recirculating shower - To save water, we are designing a recirculating shower which might use as little as 2 quarts of water.

The benefits of this concept include less waste to pollute the environment, lower rate of depletion of ground water supplies, in that the shelter can collect its own water at an average rate of 5 gallons per day, less consumption of electricity due to alternate forms of energy use and high levels of insulation, less wasteful use of space and materials, incorporation of the latest innovations in technology, incorporation of proven low-tech solutions for a low impact lifestyle and, most crucially, lower costs for construction, mortgage and maintenance.

The EcoPad concept has the potential to improve living

standard for citizens by making their income go farther, removing the burden of land ownership and providing green accommodation in healthy, rural settings. The EcoPad also allows temporary use of density allowances. This single concept is part of the solution instead of part of the problem.

This is only one step toward the development of low cost temporary housing. The community also needs housing for families and housing for seniors but it’s hoped that the research that comes out of this project would influence the development and design of more permanent solutions for affordable housing on Galiano Island.



Ecopad from the other end.

Photo: Henny Schnare, www.henny.ca

For more information: www.galianosolarproject.com (also a work in progress) or call Tom Hennessy at 250-539-2960. ✉