

Showcasing B.C.'s architects and interior designers

DESIGN

QUARTERLY

Spring 2004 | Vol.4 No.4



- Eva Matsuzaki • Shaw Tower • Sustainable Development
- C.K. Choi and Storm-water Management



Seabird Island Project

CREATING A CLIMATE OF CHANGE

by Rob Sieniuc, MAIBC

Images courtesy of Broadway Architects

It goes without saying that buildings have an enormous impact on our environment. They occupy land; alter the ground, vegetation, and percolation of rainwater; interrupt wildlife patterns and consume multiple resources, labour, materials and fuel. They account for 30 to 35 per cent of all energy expended worldwide with the residential sector comprising up to 80 per cent of all structures constructed. The adverse effects of greenhouse gas, overall global pollution and the destruction of micro eco systems as well as the rapid depletion of non-renewable energy sources are well-documented.

Architects, interior and industrial designers, engineers and other related design professionals are in a unique position to provide leadership in shaping and becoming stewards for a sustainable future. Years ago, Thomas Edison recognized the importance of renewable energy, a major component in achieving this goal. As a society, we are at the crossroads he foretold. Design professionals can lead the way to create the new approach that will be required – one that integrates ecologically based community planning, architecture and environmental design into all our future developments.

The Seabird Island Project, located eight kilometres north of Agassiz on the Fraser River, has assembled a whole range of strategies, new technologies, innovations and products to demonstrate an integrated approach to sustainable community development. A primary objective was to develop practical, energy-efficient, environmentally sensitive and affordable design solutions for First Nations housing that would be easily transferred to communities across Canada.

In view of the rising fuel costs, building energy-efficient, healthy houses that are powered by alternative sources of energy makes sense – particularly for remote communities that have never been able to take advantage of the existing delivery systems.

The Seabird Island project demonstrates the use of many innovative building and energy conservation measures, affordable renewable energy strategies and environmental design development approaches including:

- Solar, wind and geo-thermal systems
- Recycled building products
- Local lumber from ISO- and SFI-certified sustainable managed forests
- Energy-efficient systems to reduce greenhouse gas emissions
- Water-efficient plumbing
- Rainwater collection for irrigation and toilets
- Non-toxic building materials
- Use of natural day-lighting
- Solar energy preheats water, provides heating
- High-efficiency water heater (radiant floors, domestic water)
- Wind generators supply power
- Energy-efficient appliances, lighting fixtures, windows and doors
- Modular construction to reduce construction waste
- Building products made from recycled materials
- Drought-tolerant landscaping

The Seabird Island First Nation Sustainable Community Demonstration Project is a community-based initiative. It has been developed in partnership with the Seabird Island First Nation, Canada Mortgage and Housing Corporation, Indian and Northern Affairs Canada, Natural Resources Canada and with the support of more than 25 sponsoring suppliers and manufacturers. ❖

Rob Sieniuc, MAIBC, is a principal of Broadway Architects & Environmental Designers in Vancouver, www.broadwayarchitects.com. For more information about the Seabird Island project, please call 604.731.0009 or e-mail rsieniuc@broadwayarchitects.com. This project was featured in Sustainability 2004: Greening the Built Environment (www.sustainability.ca).

Top: The site plan for the Seabird Island project.

Below: An artist's rendering of the Seabird Island Sustainable Community.

