Canada Mortgage and Housing Corporation (CMHC) is the Government of Canada’s national housing agency. We help Canadians gain access to a wide range of quality, affordable homes.

Our mortgage loan insurance program has helped many Canadians realize their dream of owning a home. We also provide financial assistance to help Canadians who are most in need to gain access to safe, affordable housing. Through our research, we encourage innovation in housing design and technology, community planning, housing choice and finance. We also work in partnership with industry and other Team Canada members to sell Canadian products and expertise in foreign markets, thereby creating jobs for Canadians here at home.

We offer a wide variety of information products to consumers and the housing industry to help them make informed purchasing and business decisions. With Canada’s most comprehensive selection of information about housing and homes, we are Canada’s largest publisher of housing information.

In everything that we do, we are helping to improve the quality of life for Canadians in communities across this country by helping them live in safe, secure homes. CMHC is home to Canadians.

You can easily access our information through retail outlets and CMHC’s regional offices.

You can also reach us by phone at 1-800-668-2642
(outside Canada call 613-748-2003)
By fax at 1-800-245-9274
(outside Canada 613-748-2016)

To reach us online, visit our home page at www.cmhc.ca

Cette publication est aussi disponible en français sous le titre: Bâtir un avenir écologique
Première nation Seabird Island Projet de démonstration - collectivités durables 63554

Canada Mortgage and Housing Corporation (CMHC) supports the Government of Canada’s policy on access to information for people with disabilities. If you wish to obtain this publication in alternative formats, call 1-800-668-2642.
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Unique in the World

WHAT IF YOU COULD LIVE IN A HOME THAT WOULD PROVIDE FOR YOUR NEEDS NOW, IN THE FUTURE AND IN YOUR CHILDREN'S FUTURE?

Sound like a dream? It’s not – it’s the core idea behind the Seabird Island First Nation Sustainable Community Demonstration Project (the Seabird Island Project) – the first on-reserve development of its kind in the world.

For the first time, renewable technologies and products, Healthy Housing™ and FlexHousing™ design concepts, rainscreen technology, and sustainable community planning have been brought together to create housing that will serve the needs of a First Nation community on many different levels – over many different lifetimes.

The seven homes in the project were built by the Seabird Island First Nation on their reserve near Agassiz, BC (about an hour-and-a-half drive from Vancouver, BC) in partnership with Canada Mortgage and Housing Corporation (CMHC) and the Department of Indian and Northern Affairs Canada (INAC). The homes were designed under the direction of Seabird Island First Nation and CMHC, by Broadway Architects (Sieniuc + de Ridder) in Vancouver, BC. Their challenge was to:

- Demonstrate an integrated approach to designing sustainable housing
- Develop housing models that address key housing issues facing Aboriginal people living on reserve across Canada – including those in remote areas
- Incorporate traditional design elements reflecting the community’s culture and heritage

To ensure the project would be affordable for others to duplicate, it included appropriate higher density development in the form of two single family homes (with four to six bedrooms each), a triplex and a duplex – reinforcing the importance of using land efficiently and sustainably.

While six of the homes were funded within the guidelines of CMHC’s Non-Profit On-Reserve Housing Program, the seventh, a demonstration home, was funded with the generous support of CMHC and INAC, as well as more than twenty sponsors. The demonstration home will stay open for tours and public education for two years, after which time it will be gifted to the Seabird Island First Nation.
A Home for Many Lifetimes

**THE SEABIRD ISLAND PROJECT IS PART OF THE SEABIRD ISLAND FIRST NATION’S SUSTAINABLE COMMUNITY PLAN.**

The Seabird Island Project is part of the Seabird Island First Nation’s Sustainable Community Plan. The idea behind sustainable community planning is to use land and design neighbourhoods in a way that reduces costs and minimizes environmental impacts, while creating a livable community – to create housing that serves our needs now, in the future and in our children’s future.

The basic concepts of sustainable planning can be tailored to every community’s unique needs. The Seabird Island homes are designed to be:

- **Affordable** – affordable to build, operate and maintain
- **Durable** – they use high quality materials with a long lifespan and construction techniques that will reduce future maintenance and repair problems
- **Energy efficient** – their design integrates renewable energy sources such as wind, solar and earth energy to save on heating and lighting costs
- **Achievable** – easy to change and maintain
- **Flexible** – they use flexible floor plans and barrier-free designs to accommodate the changing needs of families and Elders
- **Healthy** – they use healthy building materials, have superior indoor air quality and are more comfortable to live in
- **Environmentally responsible** – they conserve resources, use recycled materials and have a low environmental impact
- **Community oriented** – they reflect the preferences, culture and needs of the community

All of these requirements – and more – were met by using CMHC’s FlexHousing™ and Healthy Housing™ design concepts, which can be applied to any type of building, take virtually any form, and be used in new construction or a renovation project.

In Canada, CMHC is the leading researcher in Healthy Housing™ and FlexHousing™ and we used our research and expertise to help Seabird Island First Nation and Broadway Architects create a sustainable design that would provide for the community’s housing needs now and well into the future.

“...This project provided a great opportunity for our construction crew to learn the latest building techniques, as well as provide needed employment for our members. I encourage other First Nation communities to develop their capacity to build and maintain their own housing.”

-Dwayne McNeil, Construction Manager, Seabird Island First Nation
SUSTAINABLE SOLUTIONS FOR ABORIGINAL COMMUNITIES

While sustainable housing is a good idea for anyone, it offers some good solutions for Aboriginal communities in particular. Aboriginal people are the fastest growing segment of Canada’s population and their life expectancy is steadily increasing, creating a demand for adaptable, barrier-free housing that can meet the needs of both growing families and Elders. In addition, First Nations have a disability rate that is roughly twice the national average, making accessibility an important part of any housing solution.

As well, more and more people are returning to their reserves, putting pressure on already strained housing resources. More affordable, high quality homes are needed to house the growing on-reserve populations.

Many First Nation communities are remote and have no access to the urban power grid or other infrastructure – they need achievable solutions around energy efficiency.

Many of the homes in these communities are old, overcrowded and in need of repair or replacing, but their location makes building new housing a challenge. Resource-efficient design that uses local materials, durable construction techniques and products, and that the community can build and repair, is a necessity.

IN 2001, THE DEPARTMENT OF INDIAN AND NORTHERN AFFAIRS CANADA (INAC) ESTIMATED THAT THERE WAS A SHORTAGE OF ABOUT 8,500 HOUSES ON RESERVE AND THAT ROUGHLY 44% OF THE EXISTING HOUSES REQUIRED RENOVATIONS. SUSTAINABLE HOUSING, TAILORED TO THE NEEDS OF EACH INDIVIDUAL COMMUNITY OFFERS A VIABLE, LONG LASTING SOLUTION.

The Seabird Island Project models ways of addressing these needs and provides solutions that communities located in both remote and urban settings can take home with them.
KEY CONCEPTS USED IN THE SEABIRD ISLAND PROJECT

“Seabird Island First Nation is pleased to be a partner of this phenomenal project. By developing a comprehensive community plan that incorporated the theme of sustainable development, we addressed the housing concerns of our community members and also complimented First Nation teachings about environmental stewardship.”

-Wendy Phair, Capital Housing Manager, Seabird Island First Nation

HEALTHY HOUSING™: GOOD FOR YOU AND THE ENVIRONMENT

Healthy Housing™ is a key concept in creating sustainable communities. Everything that goes into our homes has a major effect on our health and on the health of the world around us. The materials and systems we choose can contribute to our family’s well being, reduce energy costs, conserve natural resources and minimize pollution and waste.

Indoor air quality is one of the biggest issues in Healthy Housing™. Poor indoor air quality can trigger asthma and allergies, and it can also be the cause of common ailments such as a stuffy nose, headaches and tiredness. The source of the problem can range from a relatively minor one such as dust mites or animal hair to the more serious problem of mold, or gasses from building materials, furniture, cleaning products and heating systems.

A healthy home controls the indoor air quality with good ventilation and a building envelope that handles moisture effectively (both of which help to prevent mold growth), and finishes and furnishings that reduce off-gassing (they don’t release harmful vapours such as formaldehyde). Healthy Housing™ is an ideal way to address many of the issues, such as mold and poor indoor air quality, facing First Nation communities located in wet coastal climates.

Although even the smallest change, such as improving the ventilation in your home, is a step in the right direction, CMHC has developed five principles – all of which were used in the homes at Seabird Island – that go into the design of a Healthy Home:

1. Healthy for the occupants
2. Energy efficient
3. Resource efficient
4. Environmentally responsible
5. Affordable to build, operate and maintain
**FLEXHOUSING™: ADAPTS TO YOUR CHANGING NEEDS**

FlexHousing™ is the other key concept used in sustainable housing – its basic principles are adaptability, accessibility and affordability.

Adaptability means that the space is designed to evolve easily and with minimum expense as the needs of the people living in it change. For example, some of the rooms in the Seabird Island demonstration home are designed so that they can be easily subdivided to accommodate new babies, home offices or even self-contained suites.

Accessibility means that the home is barrier-free. Everyone benefits from an accessible home – not just older people or people with special needs. For example, wider hallways in some of the homes at Seabird Island make it easy to move furniture – or a wheelchair – from room to room.

Affordability means that the house is relatively inexpensive to change. Although some features may be slightly more expensive to install in the beginning, they recover their initial expense over the long term because it’s inexpensive to renovate. And features such as wider doorways and lower, more accessible, light switches, which cost very little to incorporate at the time of construction, would be much more costly to install later on. For example, compare the extra cost of reinforcing a bathroom wall for grab bars during construction ($75.00), to tearing a bathroom apart later to reinforce the walls and install the bars ($530.00)!

The key to flexible housing design is to think about what your long-term requirements will be before you build or renovate, and to design with those needs in mind. Some features are installed at the time of construction; others are built into the design so that they can be inexpensively added later. The best FlexHousing™ design also includes the principles of Healthy Housing™.

**FLEXIBLE FLOOR PLANS: PROVIDING FOR THE FUTURE**

The seven homes at Seabird Island are spread out over a triplex (three bedrooms plus a den/office or alternate bedroom in each unit), a duplex (three bedrooms in each unit) and two single-family homes (four to six bedrooms each). If the need arises, each unit in the triplex, and each detached home, can be easily converted into two, self-contained suites to create five more units of housing.

The demonstration home is located in one of the triplex units. When it is converted into two separate suites, the main floor becomes an 840-sq. ft., one-bedroom suite and the upper floor becomes a 915-sq. ft., two-bedroom suite. The ground floor bathroom has a large, wheelchair-accessible shower, making it ideal accommodation for an Elder or a person with a disability.

**FIND OUT MORE**

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**FlexHousing™ Homes that Adapt to Life's Changes ($9.95) – 60945**

This beautiful, full-colour guide shows consumers how FlexHousing designs can be part of any renovation or new building project. Includes examples of award-winning housing, floor plans, design options and decorating tips.

**FlexHousing™: The Professional's Guide ($24.95) - 61844**

This guide shows housing professionals how to incorporate FlexHousing design concepts when building or renovating a home. Includes various floor plans that you can incorporate into your housing project.
AFFORDABLE, DURABLE, HIGH QUALITY HOMES

One of the key principles driving the design decisions at Seabird Island was cost reduction. The homes needed to be inexpensive to operate and maintain and they needed to be long lasting so that the initial investment in energy-efficient systems and durable materials could be recovered over the long term by savings on utility and repair bills. (The base unit cost of these homes is approximately $75.00/ sq. ft.). At the same time, they needed to be attractive, comfortable and pleasing to live in. Their simple design, low-tech systems and use of readily available materials make them easy to build, operate and maintain. And their durable building envelopes, flexible floor plans and energy-efficient systems mean that they will meet the community’s needs for many generations.

The project uses life cycle costing to demonstrate how savings can be realized over the estimated 100-year lifetime of the homes. For example, the high performance building envelope, combined with the renewable energy systems, is expected to result in a 75% reduction in energy consumption. Over 100 years, this will more than offset the initial cost of installing the systems.

The Seabird Island First Nation used their own construction team to further reduce costs as well as develop their capacity to build, maintain and operate their new homes.

RAINScreens: STAYING DRY

When water is trapped in a home’s exterior and interior walls, it can cause mold, mildew and wood rot. The homes at Seabird Island use a rainscreen wall assembly in the building envelope and CMHC’s 4-D moisture management principles to keep water out:

1. **DURABLE** building materials, such as a metal roof, are used in areas of the envelope that often get wet.
2. Water is **DEFLECTED** from the envelope by large roof overhangs, flashing, and cedar board and batten siding.
3. A cavity behind the cladding **DRAINS** water from the walls.
4. Any water vapour that reaches the stud cavity can pass to the outside through the moisture barrier, allowing the structure to **DRY**. Drying air is also vented through the cavity behind the cladding to allow exterior walls to dry.
Experts around the world predict that global oil production will peak about the year 2010, with oil supplies running out a few decades later. In the meantime, gas and oil will continue to become more and more expensive.

That’s why building energy-efficient houses that are powered mostly by alternative sources of energy makes sense — particularly since 80% of the world’s energy consumption is residential. And for remote communities that have never been able to take advantage of the existing delivery systems for energy, alternative energy systems are a necessity.

The homes at Seabird Island are extremely energy efficient; heat and energy are supplied by the earth, wind and sun. They are also highly affordable to operate — energy consumption is reduced by up to 75% for a typical home.

Three wind generators at Seabird Island, which is a very windy site, contribute about 15% of the total energy required by the homes. Most space and water heating is provided by four inexpensive, low-tech methods: a solar roof, earth tubes, radiant heat floors and recirculated hot air from a solarium. There are no furnaces in the homes, only gas hot water heaters supplemented with a fan coil (for two-storey units).
**SOLAR ROOF**

The dark green metal roofs on each home at Seabird Island are used to collect solar heat. The roofs are applied to strapping that creates a cavity from the eaves to the peak. As the solar-heated air rises in the cavity, an opening in the framing near the peak captures the hot air, which is ducted down into the solarium with the help of a high-efficiency fan (the fan operates only when the air temperature in the cavity reaches more than 35°C). The hot air is drawn by a fan to the concrete floor slab, which then radiates heat into the home.

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**EARTH TUBES AND RADIANT HEAT FLOORS**

The earth tubes buried near each home at Seabird Island are a very low-tech version of a geothermal energy system – easy and inexpensive to install. They reduce space heating costs in winter and provide cool indoor air for the summer.

Plastic pipe is buried in the ground below the frost level, where the temperature is a constant 12°C. Outside air is drawn through the earth tubes by a fan, warmed to ground temperature, mixed with indoor return air, and then heated to the correct temperature by a fan coil unit before being ducted to the slab and/or upper floors. In the summer, the earth tubes cool the incoming air. Radiant heat floors eliminate the need for a forced-air furnace and metal ducting—a major capital cost saving.

The earth tubes used in the project tie in well with the Seabird Island community’s traditions and culture. The Stó:lo people used to live in ancestral pit houses which were circular ground dwellings that supported their communities and protected their people from the elements.
Solar heat is used to preheat the domestic water at Seabird Island, drastically reducing energy consumption. In the typical home, hot water heating accounts for about 30% of the energy bill.

Cold water from a local source enters an uninsulated tank located under a window seat in the solarium (sun room), and is warmed by hot air from the peak of the home, which is being drawn by a fan down past the tank to the concrete floor slab. The preheated water then travels to the water heater for further heating and to the fan-coil unit (where it heats air for the upper floors).
AFFORDABLE

AFFORDABLE TO CREATE, OPERATE AND CHANGE

- Average construction cost of $75.00 per sq. ft.
- Higher density development makes efficient use of the land and reduces costs (four standard lots were used for seven units)
- FlexHousing™ design will reduce future renovation costs
- Low maintenance costs due to durable materials and finishes and ability of community to do most repairs
- Lower heating and electricity costs due to energy efficiency; solar orientation of homes will reduce annual heating costs by as much as 30%
- Seabird Island First Nation members trained to build housing, supporting local economy
- Modular and repetitive design elements mean housing is easily duplicated

DURABLE & RESOURCE EFFICIENT

USES HIGH QUALITY, LONG-LASTING BUILDING MATERIALS

- Homes have an estimated 100-year lifecycle
- Durable building materials (e.g. metal roofing, full dimension rough-cut cedar siding, logs, concrete and wood flooring, wood countertops)
- Multi-functional elements (e.g. concrete finishes floor; stores heat, and is part of the structure)
- Steel roof provides long-lasting protection and solar heat
- Water-efficient plumbing fixtures (e.g. low-flow toilets)
- Recycled building materials (e.g. Altwood® Plastic lumber for sill plates and strapping, refinished telephone poles for interiors, carports and carvings, recycled steel in metal roofs)
- Indigenous building materials (e.g. gravel, wood, logs, river rock)
- Use of local suppliers supports local economy
- Drought-tolerant plantings require less irrigation
- Can be easily converted to provide more housing units without using more land

ACHIEVABLE

EASY TO CHANGE AND MAINTAIN

- Simplified FlexHousing™ design is easy to change
- Construction training during the project and the use of local materials mean that maintenance can be done by the First Nation at a reasonable cost
- Use of durable construction techniques and products, such as mold-resistant drywall, make the project easier to maintain
ENERGY EFFICIENT
HAS EFFICIENT HEATING AND COOLING SYSTEMS, SUPERIOR INSULATION, ENERGY-EFFICIENT LIGHTING AND APPLIANCES

- Homes oriented to the south to take advantage of sun’s heat
- Solar energy preheats water
- Metal roofs provide solar heat
- Solariums retain heat, offer year-round gardening
- Earth tubes preheat/cool incoming outside air
- Heat is constantly recycled throughout the house
- Radiant floor heating system eliminates need for a furnace
- Well insulated building envelope
- Energy-efficient appliances, lighting fixtures, windows and doors
- Wind generators supply extra power
- Water-efficient plumbing fixtures

HEALTHY FOR OCCUPANTS
HAS SUPERIOR INDOOR AIR AND WATER QUALITY, GOOD LIGHTING, LOW NOISE

- Non-toxic building materials, including several new products: Tyvek™ supro roof sheathing was used as a secondary membrane and air barrier on the solar roof sheathing so that the heated air is healthy to breathe
- Mold-resistant drywall and formaldehyde-free insulation were also installed
- Low-emission paints
- Hardwood, polished concrete and tile floors reduce off-gassing
- Cabinets and shelves made from materials that do not emit formaldehyde or other harmful vapours
- Lead-free faucets
- High efficiency fans prevent moisture build-up and mold growth
- Rainscreen technology handles moisture and prevents mold growth
- Plenty of natural light

ENVIRONMENTALLY RESPONSIBLE
HAS A LOW IMPACT ON THE ENVIRONMENT

- Waste and pollution control during construction
- Solar, wind and geo-thermal energy systems conserve energy and resources
- Uses building products that require less energy to manufacture, and recycled materials
- All lumber is ISO and SFI™ certified from sustainably managed forests
- Efficient site planning results in smaller building footprint
- Energy-efficient systems result in fewer greenhouse gas emissions (residential buildings produce up to 35% of the world’s greenhouse gases)
- Water-efficient plumbing, rain water collection systems

COMMUNITY ORIENTED
REFLECTS THE NEEDS OF THE COMMUNITY

- FlexHousing™ design provides safe, comfortable housing for Elders, growing families and people with disabilities
- Traditional design elements in architecture and landscaping reflect community’s culture and heritage
- A spiritual healing garden, which features locally carved totem poles and a wind turbine in the centre of the garden representing the colors of the medicine wheel and Stó:lō Nation, provides a cultural focal point in the landscape
WHILE THE SEABIRD ISLAND PROJECT OFFERS A HOUSING SOLUTION THAT IS UNIQUE TO THE NEEDS OF THE SEABIRD ISLAND COMMUNITY, IT IS HOPED THAT MANY ELEMENTS OF THE PROJECT, AND THE PRINCIPLES IT USES, CAN BE USED BY OTHER FIRST NATION COMMUNITIES ACROSS CANADA.

If you're interested in adapting some of the housing ideas at Seabird Island for your community, here are some steps to help you get started:

1. Create a long term housing plan for your community that includes both your current and future needs. Be sure to include any special needs your community might have such as housing for Elders or people with physical disabilities, homes for growing families, energy self-sufficiency or design for extreme weather conditions. Get community input - host planning meetings at which everyone is welcome and open discussion is encouraged. Ensure that you have the support of your elected officials, Chief and Council.

If you don’t already have one, form a housing committee so that the various tasks in this process can be assigned to different people. During the planning process, be sure that your housing plan is integrated with your community's fiscal development plan (long-term budget).

INAC also has programs that may assist in the development of your community's housing plan. For more information, contact your Capital Specialist.

2. Explore the housing solutions in the Seabird Island Project by visiting the project, arranging for a more detailed workshop in your community, watching the video, visiting our Web site at www.cmhc.ca or ordering our housing publications.

SEABIRD ISLAND PROJECT TOURS / PROJECT VIDEO
To arrange an on-site tour, please contact:
CMHC’s BC and Yukon Regional Office
Tel: 604-731-5733
E-mail: communicationsbc@cmhc.ca
A video has been produced and will be available to First Nation communities.

SUSTAINABLE COMMUNITY: HOUSING DESIGN WORKSHOP
This full day workshop covers the main features used in the project and is ideal for housing and construction managers, community planners and others who are interested in learning more about the Seabird Island project. To book a workshop in your community:
Allan Dobie, Senior Research Consultant
CMHC’s BC and Yukon Regional Business Centre
Tel: 604-737-4074  E-mail: adobie@cmhc-schl.gc.ca

FIND OUT MORE

Basic Home Maintenance (free) - available Summer 2004
This comprehensive guide addresses general maintenance issues that are common to First Nation communities across Canada. Includes information on everything from painting to maintaining your furnace, to Healthy Housing and Indoor Air Quality. This guide is part of CMHC’s Aboriginal Capacity Development workshop on Home Maintenance for Home Occupants.

Building Communities First Nations Building Environmentally Sustainable Housing (free) - 63063
Illustrates and explains other First Nation sustainable housing projects across Canada. Focuses on proven alternative construction methods, materials and techniques to achieve Healthy Housing and environmentally sustainable community and economic development.
The solarium retains heat and also offers a comfortable living environment and year-round gardening.
PUBLICATIONS
For more information about various features of the project such as Healthy Housing™ and FlexHousing™, you can order publications from CMHC. To order, call our toll-free line at 1-800-668-2642 or complete the order form at the end of this booklet.

3 Decide which housing solutions at Seabird meet, or can be adapted to meet, your community’s needs and work them into your housing plan at a very early planning stage.

The Checklist of Sustainable Features in this guide can help you match your housing requirements, such as energy efficiency, with a possible solution. The Product Directory can help you locate suppliers. Use the expertise of suppliers, especially ones with whom you have a long-term relationship, as an information resource.

At this stage, you may want to hire an architect or architectural designer to produce three or four house designs that are suitable for your specific location and climate. These designs can be used many times, spreading the cost over many projects. While you can select house plans from a book, they will have to be modified to suit the site. A professional designer can help you make informed choices and will add value to your final product.

4 If you need assistance funding the construction of affordable housing, you may be eligible for help from CMHC’s Non-Profit Housing On-Reserve Program (Section 95). This program helps eligible First Nations construct, purchase, rehabilitate and administer affordable housing on reserve. Under this program, the units are owned by the First Nation and provided to First Nation members as affordable rental housing. CMHC provides an operating subsidy for a maximum of 25 years.

For more information, contact your CMHC BC Assisted Housing Officer at 604-731-5733. For other areas, contact your regional CMHC office.

5 Hold a community meeting to discuss the finalized community housing plan and budget. Continue to host regular meetings to share your progress and get community feedback. You may wish to show the Seabird Island video at your meeting.

6 If community members plan to do all, or some, of the construction, you may want to investigate construction training programs. CMHC administers The Housing Internship for First Nations and Inuit Youth Program on behalf of Human Resources Development Canada (HRDC). This program provides work experience and on-the-job training in various aspects of the housing industry, including construction.

HOUSING INTERNSHIP
For more information in BC and the Yukon contact:
CMHC
Cliff Grant, Senior Advisor; Aboriginal Capacity Development
Tel: 604-737-4102

For other areas, contact your regional CMHC office.

The eagle carving in the spiritual healing garden represents wisdom, strength and protection. The three other carvings located in the garden include a welcome figure of a woman to greet residents and visitors, a bear with fish, to feed the people and a wolf with cub/puppy to symbolize the importance of family.
Beyond Seabird: Homes for Remote Communities

Seabird Island is the first step in a larger project aimed at creating models of simple, but very efficient, high quality houses that can be affordably built and maintained in remote areas.

In Phase II of this project, which is still pending approval, CMHC proposes to select two or three other First Nation communities to fully assess the practicality and affordability of the concepts developed at Seabird Island. The new housing would be built in remote locations where resources, energy utilities and skilled labour are not easily available.

The design of the homes would be based on community consultation, resources, needs, geography, climate and access. The plans from the Seabird Island project could be used and modified to adapt to the needs of the community. The new homes would be funded through the First Nations’ regular allocation of housing units under Section 95 of the National Housing Act, which CMHC delivers.
When communities have project ideas that deal with health, affordability and quality housing issues, such as the one at Seabird Island, CMHC’s Aboriginal Capacity Development initiatives have been able to provide financial support and advice to make these ideas a reality. We are always looking for innovative housing proposals to help communities build for the future.

We also offer housing education and training programs to First Nation groups and individuals – everyone from homeowners, to housing managers, to those interested in a career in the housing industry. Ask us about the Native Inspection Services Initiative (NISI) Housing Internship Initiative for First Nations and Inuit Youth (HIIFNIY) and any of these workshops:

- Arrears Manager
- Client Counselling
- Construction Contract Administration
- Developing Community Housing Policies
- Home Maintenance
- Housing Committees that Work
- Indoor Air Quality (IAQ)
- Property Management
- Sustainable Community: Housing Design Workshop on the Seabird Island Project

Essential to these activities is the involvement of the Aboriginal Housing Committee for British Columbia (AHC-BC). It is a group of knowledgeable and committed First Nations representatives that provide on-going advice to CMHC and INAC on ways to improve programs, policies and strategies to ensure they are more responsive to the immediate and long-term needs of Bands and residents.

Call CMHC toll-free at 1-800-639-3938 or contact our Aboriginal housing expert for more info
Cliff Grant, Senior Advisor - Aboriginal Capacity Development
Canada Mortgage and Housing Corporation
BC & Yukon Business Centre
Tel. 604-737-4102 Fax 604-737-4125
Email: cgrant@cmhc-schl.gc.ca
Website: www.cmhc.ca
The Seabird Island First Nation, a member of the Stó:lo Nation, is one of the largest First Nation in the Fraser Valley. Our reserve is located near Agassiz, BC, about an hour-and-a-half drive from Vancouver, B.C.

The Seabird Island Band is a First Nations Governance Authority with an elected Chief and seven Councillors. They share the responsibility of representing the band at all levels of government.

Since 1975, the registered membership of the band has more than doubled from 316 to 720 members. The majority of registered members reside on the reserve. As the community has grown, so have the infrastructure, public facilities and resident services. Seabird Island currently has a housing stock of 176 dwellings, most of them single, detached dwellings with basement entries. With two farms near Agassiz, Seabird is also British Columbia’s single largest producer of both sheep and hazelnuts.

Seabird Island was an ideal location for this project because of its accessibility to major transportation routes (a consideration for the demonstration home). In addition, our community is strongly committed to the development of affordable, sustainable housing, both for our growing population of young families, and the increasing number of Elders who require safe, accessible dwellings. With this project we not only provided for their future, but for their children’s future.

For more information about the Seabird Island First Nation, please visit our Web site at www.seabirdisland.ca.

Indian and Northern Affairs Canada

The Department of Indian and Northern Affairs Canada (INAC) was pleased to participate in this project with Seabird Island First Nation and Canada Mortgage and Housing Corporation (CMHC) to provide a holistic approach to community housing on reserve.

As a result of our limited funding for First Nation housing programs, we are always looking for ways in which to maximize those dollars. The project that Seabird Island and CMHC are co-ordinating should serve as a model in sustainable communities who are searching for ways to meet or enhance their housing needs.

Our department applauds Seabird Island’s initiative, approach and foresight in finding a creative solution towards a sustainable community for this generation, and many more to come.

For more information on INAC programs and services please visit us on our Web page at www.inac.gc.ca.
Broadway Architects (Sieniuc + de Ridder) is an interdisciplinary architecture and community planning practice that offers sustainable environmental design as part of our standard services. Our projects and client list are diverse: recreational, commercial and residential developments and planning projects for communities, resorts and First Nations throughout western Canada.

We advocate a participatory planning and architectural design process and our projects are very client driven – each project attains its own distinct identity from specific historical, cultural and environmental contexts.

Our firm is a pioneer in ecologically sensitive building design, particularly in projects that incorporate energy-efficient and sustainable development strategies. We have more than 25 years of hands-on experience in this area.

We are honoured to have been the architectural and planning consultant on the Seabird Island Project. For more information about our work, please visit our Web site at www.broadwayarchitects.com or call 604-731-0009.

TANG G. LEE

As an architect and teacher, I am committed to providing better buildings in which to work and live, and it was an honour to work with Broadway Architects on the design of the Seabird Island Project.

In addition to working as a consultant to other architects, I operate my own practice, write position papers for all levels of government and teach building science and environmental health at the University of Calgary.

To view some of my projects and papers, please visit my Web page on the University of Calgary Web site (www.ucalgary.ca) or e-mail me at lee@ucalgary.ca.
THE SEABIRD ISLAND DEMONSTRATION HOME FEATURES NUMEROUS PRODUCTS AND DESIGN CONCEPTS THAT PROMOTE A HEALTHIER, MORE FLEXIBLE AND COMFORTABLE ENVIRONMENT.
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Canex opened for business in Chilliwack, B.C. in the fall of 1983, servicing both the retail and contractor markets. From its inception, Canex intended to offer a local competitive alternative to the existing choices for the consumer within the Chilliwack community. The business was fostered by competitive pricing, but more importantly by a penchant for customer satisfaction. Canex business clientele evolved into a mix focusing predominantly on the contractor and developer sectors and the agricultural community. The company has embarked on a plan to be a competitive leader in the Lower Mainland of B.C. and has invested heavily in order to grow into a company with a strong attention to building customer relationships with a sense of urgency and competitive spirit. These goals have brought Canex to its current platform one of rapidly expanding growth with the ability to compete with industry leaders.
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Emco operates as two strategic business segments, Distribution and Manufacturing, with its corporate office located in London, Ontario. Both segments are market-driven and dedicated to working in effective partnership with customers, suppliers and employees.

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Omni Films has produced documentaries, dramas and TV series with an emphasis on natural history, travel and science, and has won more than 60 national and international awards. Omni has worked on a variety of projects with First Nations groups, from half-hour dramas retelling native legends to one-hour documentaries featuring the teachings of prominent elders. Their productions have received widespread international distribution and have been broadcast on most major Canadian networks, as well as BBC, Channel 4, PBS, Discovery Europe, Animal Planet, Travel Channel, Discovery Health, A&E, and worldwide.

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Based in Calgary, Alberta, CPR has been connecting Canadian businesses and consumers to the world since 1881. CPR’s high-density mainline network serves major Canadian ports and cities from Montreal to Vancouver and key centres in the U.S. Midwest and Northeast. Its Vancouver-Chicago corridor provides shippers with the most direct route between these two key transportation centres, while its Montreal-Chicago corridor is part of the most direct route from Europe to the U.S. Midwest.

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www.seabirdisland.ca
604-796-2177

Department of Indian & Northern Affairs Canada
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Other Contributors to Project
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John Walsh
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403-319-7000

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georgej@inac.gc.ca
819-994-7425

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