

SHOWCASING OAKVILLE'S *first* GreenHouse™ CERTIFIED HOME



GRAND OPENING • SATURDAY, MAY 8 • 1-4

Meet our GreenHouse™ suppliers at 2305 Belyea, Bronte Village, Oakville



Come see how beautiful green living can be! Greenbilt staff and suppliers will explain the features and tell you how you can go green

www.greenbilthomes.ca
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GREENbilt Homes
GREENING HOMES



Combining beauty, comfort and energy consumption

It was a classic case of “out of the mouths of babes” when a 10-year-old gave the green light to a couple of Oakville real estate veterans to start a new building company. “My son told somebody that I was a green builder, and that individual followed up with a call to ask about my services,” recalled Mike Manning. “I was very interested in green homes because I trained as an R-2000 builder in school, but when my partner heard that Riley was telling people I could build green houses, she thought it was the go-ahead sign.”

Mr. Manning, with a 20-year history as a general contractor, quickly signed up for green courses to augment his architectural technology background. Partner Catherine Marshall, with a commercial real estate background, began researching green materials and technologies. “We realized that we needed information from the right suppliers, and we went across the province to find them.”

They formed Greenbilt Homes with the goal of building beautiful and comfortable houses which meet the criteria for sustainability. With the completion of Oakville’s first certified GreenHouse™ in sight, the partners credit their suppliers for helping to achieve their goal. “Our suppliers worked like team members,” said Mr. Manning. “Many of them had some green knowledge, while other ones self-educated on new materials, or helped us come up with creative approaches.”

An example came during a consultation on interlocking pavers. “Brampton Brick showed us their new water-permeable paver, and different kinds of green driveways, and we expanded on their ideas to develop a driveway that looks different and supports rainfall going into the ground, not into the sewer,” Ms. Marshall said. “When people see how simple the concept is, I think they will be pleasantly surprised.”

Another creative idea came from architect John Willmott. “We wanted some shading on highly exposed western windows. John started drawing as we talked, and quickly had a design for “sun shades” that are so attractive we would have wanted them even if they weren’t functional,” said Ms. Marshall.

“There are many more stories like this,” Mr. Manning added, “and the suppliers will be there to tell them at the Grand Opening. Come expecting to be entertained.”

For more information visit www.greenbilthomes.ca or call 905-849-4333.



Greenbilt Homes is in the process of building Oakville's very first GreenHouse

best green feature around. But what the public needs to know is that from an energy efficiency point of view, solar panels are the last thing to do, not the first."

She explained that because most houses weren't built to Energy Star standards, they are energy inefficient. Meeting this overly large energy demand with a high-cost, low volume electricity source like solar doesn't make sense since, under ideal conditions, a solar panel in the GTA only generates enough power to light the equivalent of ten 100-watt lightbulbs about 35% of the time.

"Use the \$25,000 it costs for one solar panel to make your house energy efficient instead and you are much further ahead," she said.

Green Houses in Toronto

Most of the green housing in the Toronto area has been built on behalf of an owner and has not been on public display. A few exceptions include custom demonstration homes such as the Archetype Sustainability Home at the Kortright Centre for Conservation north of Toronto, or subdivision Archetype Sustainability Home demonstration homes by companies such as Reid Heritage Homes which look like the rest of the homes on the block. Ms. Marshall thinks neither type of demonstration home has whetted the public's appetite for green housing.

Greenbilt's vision for a green house

"I think the public needs to emotionally connect with a green house to get excited about sustainability, and I think the easiest connection is to a home that embodies the traditional, sustainable lifestyle of our forefathers," said Ms. Marshall

"Not that many generations ago our so-

ciety was very green, by necessity perhaps, but early Ontarians didn't waste, and built things that were made to last. I feel these values when I see these houses that they left for us," said Ms. Marshall, adding that a visit to the family farm in Flamborough created an emotional connection to her own heritage.

"They built houses for their time, and we wanted to build a house for our time that pays homage to their values."

Like today's green adherents, early Ontario pioneers used natural resources sparingly and carefully. Materials were used and reused, with little waste. "We are just three or four generations removed from this value system. Many of us grew up being reminded of it as children," said Ms. Marshall. "I got my aunt's hand-me-down clothing just as my mother got her aunt's hand me downs. The clothing was often made by hand and durable and it lasted through several different children."

Ms. Marshall is hopeful that some of this "memory" is still embedded in society and can be reawakened. "We are trying to use a house to create a touchstone of what it is to be green."

Development of the GreenHouse

Ms. Marshall and her partner Greenbilt President Mike Manning starting looking for pictures of old houses to find the right touchstone. "I was reading Old Toronto Houses and suddenly there it was – an old farmhouse in Scarborough, 'Elderslie'". Its classic Georgian center hall design, its rear entrance with a porch and mudroom, and the large and welcoming front porch were among the features that attracted her.

To connect the GreenHouse to its Oakville

location, Ms. Marshall studied some of the oldest houses in Oakville, spending evenings at the Oakville Historical Society section of the Oakville Library. She noticed that many houses had the same colour scheme as the home of Oakville's founding Chisholm family, Erchless, with its signature red brick, black shutters and roofs, and notable amounts of handcrafted white wooden trim.

Ms. Marshall said she wanted to marry the Georgian centre hall farmhouse with the old Oakville exterior so that the house felt like it belonged in Oakville. "I hope the beauty and familiarity of the design will touch an emotional chord that will encourage people to return to the values of yesteryear."

New Urbanism Supports Green Living

The GreenHouse is located in Oakville's Bronte Village, a former fishing centre founded in 1834. Some of Bronte's original settlers were United Empire Loyalists and many of the streets, including the GreenHouse location on Belyea Street, were named after these early settlers.

With a compact, walkable area with a wide array of shops, restaurants and attractions centered around the Marina at Bronte Harbour, the Village is a quintessential "new urbanism" area which supports green lifestyles. It is well served by public transit, and the Bronte GO train station is within easy biking distance.

There is a strong feeling of community in Bronte Village, another feature of New Urbanism. "People want to feel that they have roots in their community, and this house really supports that," explained Ms. Marshall. "When the residents sit out on the big front veranda to escape the afternoon heat they will be saying hello to neighbors that they know."

Green Features

Many features in the GreenHouse are based on common characteristics of early Ontario homes such as daylight for lighting, overhangs for passive cooling, a masonry exterior to keep the house cool at mid-day, cross ventilation for shoulder season cooling, and the earth's coolness to preserve food.

One of the signature features of the house is an 80 sq. ft. walk-in cellar that is ground-source cooled by a very simple and inexpensive system that came out of Greenbilt's research program. The coolness comes from water circulating through pipes around the exterior of the house below ground that terminate in the cold cellar. A small radiator and fan extract the cooling

lar. A from the water and blow it into the room. "This will eliminate the need for a second fridge, beer fridge, wine cellar, you name it," said Mr. Manning.

In early Ontario, water was used sparingly, not only because of drought, but because of the time and effort required to pump it. "My mother told me that bath water was always reused, for cleaning or for watering. It was never just thrown away," said Ms. Marshall.

Although water conservation is an important feature of the GreenHouse, it is achieved through widespread use of low flow facets and dual flush toilets rather than avoiding pumping. "The difference between a farmhouse and the GreenHouse is that water conservation features is easy and residents won't even notice that it is happening."

In fact, making conservation easy is theme throughout the GreenHouse. "A lot of people quote Kermit the Frog saying "it isn't easy being green," said Mr. Manning, "but in fact it is pretty easy being green these days if the house is designed to be that way. It's all in the planning and the building."

There is no skimping on light in the house, for instance, because natural daylight provides ample lighting during the day, and energy efficient lighting doesn't translate into any reduction in the light available in the evening.

Nor is there a loss of convenience or performance from the inclusion of natural gas appliances in the kitchen and laundry room. Although natural gas dryers and ranges are more expensive to buy, they are much cheaper to operate and have a longer expected life than their electric counterparts.

Creating "spot heating" zones with radiant floor heating generally creates more enjoyment and is more energy efficient than the alternative of jacking up the thermostat and heating the whole house in order to warm up a bathroom, added Ms. Marshall.

Products containing recycled material such as the concrete foundation, the insulation or the kitchen cabinets have no visible differences from their conventional counterparts. On the other hand, some recycled materials such as the Silestone Quartz countertop or the Interface FLOR carpets are actually enhanced by the recycled materials.

Contrary to some preconceptions about green housing, all modern conveniences, including air conditioning, are included in the GreenHouse. "Our air conditioning system is among the most energy efficient

"It's very hard to do and it's expensive. It's expensive at first in order to achieve it, but once you've done it, there are savings, and this is what I think a lot of people don't realize. It's an investment. You're putting a little more money up front to be LEED certified, but in the future you will be saving, plus look what you're giving back,"

- Joseph Mancinelli, LIUNA vice president for central and eastern Canada

possible," said Mr. Manning. "So while the house has been built to minimize the need for air conditioning – due to passive cooling features, the masonry exterior, the high level of insulation, and excellent cross ventilation – when the AC is running, the air tightness, the insulation and the Heat Recovery Ventilator system mean the minimum amount of power is being used.

Going Green Isn't Just For Homes

Businesses are also becoming more and more aware of the environmental impact their large office buildings are having on our community.

Pine Glen Soccer Centre, for example, is the first Leadership in Energy and Environmental Design (LEED – a green building rating system that provides a suite of standards for environmentally sustainable construction) compliant public buildings in Oakville.

Many building standards were put to use when constructing the Centre including the higher insulation of the roof and walls to ensure comfort as well as reduced utility bills, putting the latest technology in HVAC and electrical fixtures to use as well as incorporating over 20,000 used tires to create the infill of the playing field.

Another building standard put to use in the Centre is the tremendous amount of natural light used to light the facility. An enormous number of windows were constructed throughout the facility including within the playing field as well as through the many offices to reap the benefits of the natural sunlight rather than having to continuously light then entire facility.

Another first for Oakville's businesses is the LIUNA (Labourer's International Union of North America) office building located at 1315 North Service Road E.

The seven-storey, \$30 million structure is Oakville's first Silver LEED certified office building. This means it has achieved an internationally recognized standard of

environmental excellence for the materials selected in the building's construction, the water and energy efficiency present in the building, the building's indoor environmental qualities and more.

During the topping off ceremony held in June 2009, Joseph Mancinelli, LIUNA vice president for central and eastern Canada, spoke about the building and what it took to set it apart.

"The windows themselves will have sensors on them so that when the sun dims, on a day like today where it's not that bright out, the lights inside will actually get brighter," said Mancinelli. "In the mid-summer when it's really, really bright they will dim because on those days you don't need the light."

Mancinelli said similar sensors will also be in place to pick up the temperature outside and adjust it inside when appropriate. "Even if it's marginal, there are huge savings," he said. "Not only monetary savings, but we're not using energy, which from running at full blast on a cool summer's day is the whole idea."

Mancinelli said there were a number of hoops LIUNA had to jump through to get Silver LEED Certification.

The materials used for the building's construction needed to be recyclable and the windows, walls and every other aspect of the building had to pass efficiency tests to make sure they were in keeping with LEED.

"It's very hard to do and it's expensive. It's expensive at first in order to achieve it, but once you've done it, there are savings, and this is what I think a lot of people don't realize. It's an investment. You're putting a little more money up front to be LEED certified, but in the future you will be saving, plus look what you're giving back," said Mancinelli.

"You're doing things in an environmentally friendly way and that's where I think buildings are going to go. We're doing this in 2009, in another 10 years everyone will be doing it this way because this is the way to go."

* LIUNA files from David Lea, The Oakville Beaver