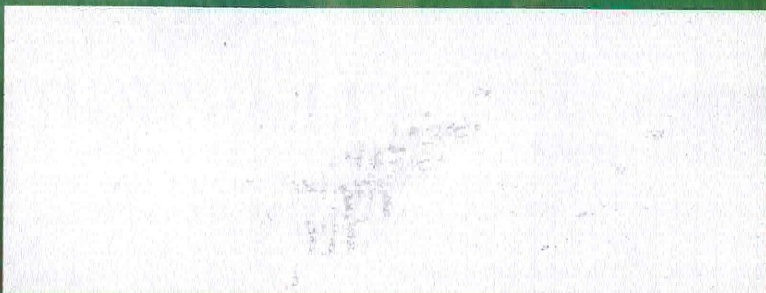


# alumni

SUMMER 2007

## SHADES OF GREEN

RAISING THE BAR IN HOW WE PROTECT THE PLANET



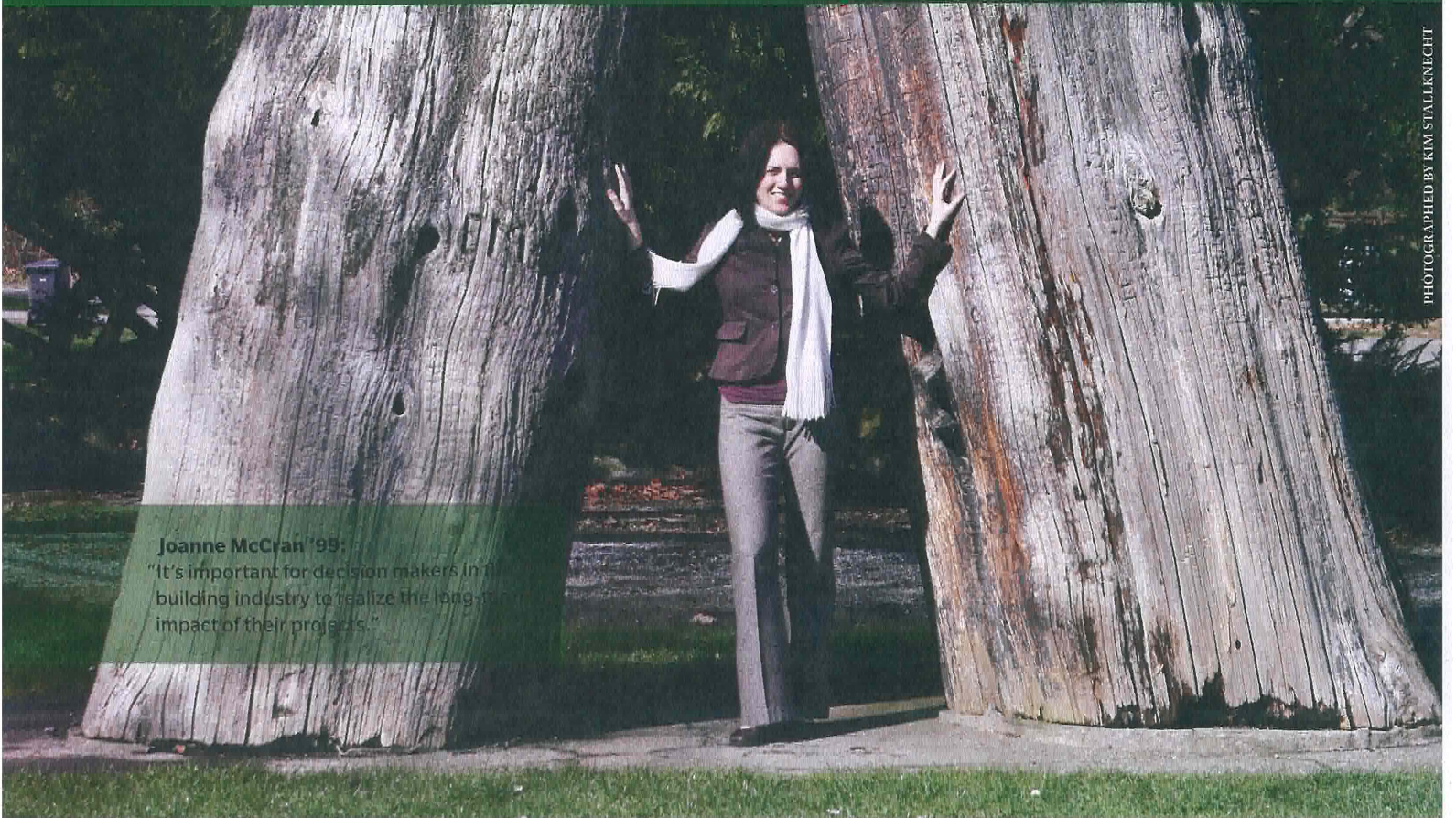


**Jean Findlay Starchuk '03:**  
"We've got to make the effort  
to make better buildings."

# LEEDing the way

How two Architectural Science graduates are introducing sustainability to the built environment

By Lindsay Borthwick, Journalism '02



**Joanne McCran '99:**  
"It's important for decision makers in the  
building industry to realize the long-term  
impact of their projects."

Sustainability has emerged as a guiding principle in design in the 21st century, reflecting mounting concerns for the environment. Canadians in the building industry have taken note. For example, starting this month, a large tract of industrial land in central Vancouver is being transformed into an Olympic Village – one that will be based on green principles and certified by LEED® (Leadership in Energy and Environmental Design) Canada, a national benchmark for green building. From coast to coast, Ryerson alumni are embracing LEED® and ushering in a green revolution in their communities.

The LEED® Green Building Rating System was created in the U.S. by building industry leaders who recognized in the early 1990s that they could create buildings that were environmentally responsible, energy efficient and healthier places to live and work. In 2002, the Canadian Green Building Council (CGBC) was formed to offer a version of LEED® adapted to Canada's climate and government regulations. Today, LEED® is the most sought-after green building standard in the marketplace. In Canada, more than 50 buildings have been certified, and more than 400 (representing five million square metres) are awaiting certification.

In addition, more than 2,400 Canadians are LEED® accredited. Among them are Architectural Science alumnae Jean Findlay Starchuk '03 and Joanne McCran '99. "LEED® is transforming the industry," says Joanne, who is designing a portion of Vancouver's Olympic Village known as Millennium Water. "It's creating competition among designers, builders and building owners to think beyond simply energy-efficient facilities."

It's not difficult to understand the growing popularity of sustainable design. The environment, particularly the issue of global warming, has emerged as a leading public-policy issue. Add to this the fact that up to 40 per cent of greenhouse gas emissions in Canada come from residential and commercial buildings. The inevitable conclusion? That greening Canada's buildings is critical to combating climate change – and protecting the environment.

But just how green is LEED®? And how does a rating system promote sustainability? According to the CGBC, LEED® buildings are, on average, 44 per cent more energy efficient than conventional facilities. Moreover, LEED® facilitates innovative designs that, among other benefits, enhance water efficiency; improve indoor air quality; encourage the development of sites with green space and bike racks; and promote the careful selection of materials (maximizing the use of recycled, renewable, non-toxic and durable building supplies).

While some LEED® features aren't obvious to building users, other differences are readily apparent. They include green roofs, waterless urinals, a layout that allows for plenty of natural lighting and furnishings that don't give off a "new building smell." In the end, the more green features a building has, the more green credits it receives, earning one of four LEED® ratings: Certified, Silver, Gold or Platinum.

At the moment, Jean Starchuk of Enermodal Engineering is seeing platinum – one of her projects is close to achieving this coveted LEED® rating. Even her two-story workplace, known as Green on the Grand, was the first C-2000 office building in Canada. The C-2000 program promotes environmental responsibility and energy efficiency in commercial construction. Located on the Grand River in Kitchener, Ont., Green on the Grand has numerous sustainable features and overlooks a "cooling pond" that absorbs the building's waste heat.

As a Green Building Specialist, Jean facilitates the design, construction and certification of buildings under LEED®. Each day, she juggles the interests of architects, engineers, owners and contractors, steering them through each phase of the building process. "It's a challenge bringing together different disciplines and getting them to work collectively when it comes to achieving LEED®," Jean says.

Introduced to sustainable design at Ryerson, Jean also has project management experience, having helped the Upper Grand District School Board retrofit its schools to increase energy efficiency. One of the fun aspects of her job, says Jean, is working with people who aren't familiar with LEED® or sustainable design. "Everyone has some interest in going green," she says. "People can see why we've got to make the effort to make better buildings."

Across the country, Joanne McCran also has sustainable design on her mind. But she's taking green a step further: Joanne and her colleagues at Cobalt Engineering are part of the Millennium Water project team that's helping the City of Vancouver create a sustainable community in the waterfront area known as Southeast False Creek. The new 5.6-hectare development will be a mixed-use urban centre with a strong focus on sustainable design. The Millennium Water project team is leading the majority of the development that will serve as the Vancouver Olympic Village for the 2010 Winter Games.

Joanne left her native Toronto to join Cobalt in 2006. The opportunity to work on the Olympic Village played an enticing part in her decision, she says. As Cobalt's Sustainable Building Designer, she has worked on various aspects of the development, most notably a Net Zero Energy Building that will eventually serve as a low-income seniors' residence. The Net Zero designation means the facility will produce as much energy as it consumes on an annual basis – a goal that can be attained through aggressive low-energy design, and the use of renewable energy systems, such as wind and solar power. Joanne is also leading a team to develop a plan that will measure how well the building achieves its targets.

Joanne, who also has a master's degree in energy efficient building from Oxford Brookes University in the U.K., is enthusiastic about Vancouver, particularly the city's emphasis on sustainable living. It's an ethos she tries to live by. "I'm acutely aware that steps must be taken to curb the impact new buildings will have on our already limited natural resources," she says. "The future of life on this earth

depends on the decisions we make today, and that's why it is important for decision makers in the building industry to realize the true long-term impact of their projects and get on board." As part of her commitment to sustainable design, Joanne promotes the use of assessments, which review buildings once they have been completed to measure people's satisfaction, and to identify ways to improve comfort levels and energy performance.

The dedication of alumni like Jean and Joanne, the leadership of communities across the nation, and programs such as LEED® are helping Canadians begin to realize the goal of sustainable living. At the Vancouver 2010 Winter Olympics, Canada may show the world a better future: a sustainable one.



**Ryerson staff member  
Siu-Man Wong:**

guiding the facility at  
105 Bond St. toward  
sustainability.

## CAMPUS BUILDING GOES GREEN

Behind the historic façade of 105 Bond St., things have been rapidly greening. The building underwent an extensive six-month renovation under the guidance of Ryerson architect and Manager, Projects Siu-Man Wong, following the LEED® (Leadership in Energy and Environmental Design) Green Building Rating System. Ryerson purchased the building from book publisher Doubleday Canada in 2006 and immediately saw enormous potential behind the facility's staid exterior. "It was a once-in-a-lifetime opportunity," says Ms. Wong, to transform the interior of an existing building on campus.

When it opens in September, 105 Bond St. will welcome the School of Urban and Regional Planning. The facility will offer several sustainable features, including energy-efficient heating and lighting, improved air quality and renewable finishing materials, such as wood. The renovated building will also house bright, spacious studios, a marking room, a student lounge and a high-tech presentation room.

But as the first campus building to achieve a LEED® Certified rating, 105 Bond St. represents more than technical achievement. It reaffirms the university's commitment to sustainable design, a commitment that's becoming increasingly aligned with LEED®. Ryerson's new Master of Architecture program, for example, includes an elective course on rating green buildings and designing with LEED®.

"LEED® certification is another indication that Ryerson University is an environmental-conscious community," says Ms. Wong.