

■ **Brampton Brick** is pleased to announce the opening of its newest plant in Farmersburg, Indiana. This site was selected for its proximity to an adjacent shale pit, with an estimated 100 year supply, and will produce 100 million standard brick equivalents per year.



Brampton Brick employees at the opening of newest plant in Farmersburg, Indiana
Photo by: John F. Klaiber Jr.

■ **A Certification in Energy Excellence** was awarded to the first North American industrial organization. After completing an in-depth, third-party energy assessment, St. Marys Cement located in Bowmanville, Ontario, has been awarded the Silver Certification in Energy Excellence (CEE).

360 Energy Inc. developed the CEE program to demonstrate an organization's dedication and long-term commitment to energy management. In order to be certified, St. Marys Cement met the required parameters in areas such as commitment to energy from senior management, energy procurement practices, energy efficiency investments, and improvements in energy performance.



St. Marys Cement

■ **JAZBRICK** is pleased to announce the addition of seven new colours to their extensive line up:

Rexdale Brick:

- Peninsula
- Sauble
- Thornbury



Centennial Stone:

- Kincardine
- Saugeen Shore
- Tobermory



Century Brick:

- Olde Wellington

■ **CCMPA**, on behalf of the masonry industry, presented a cheque in the amount of \$6,500 to the Society of Portuguese Disabled Persons' Building Fund. These funds were raised through the annual CCMPA raffle.



Jack Prazeres receiving the cheque from Erminio Oliveri & Marina de Souza, CCMPA

■ **MCAT** would like to congratulate Joe De Caria on celebrating 25 years of service.

2009 Membership

Gold Members



Canadian Concrete Masonry Producers Association



Silver Members



Richvale York Block Inc.



Universal Workers Union Local 183

Bronze Members

- Atlas Block Co.
- BLAIR Building Materials Inc.
- Boehmers Block Division
- Bradstone (Division of Wintergreen Ltd)
- Don & Son Building Supplies Ltd

- Essroc Italcementi Group
- Ferrell Building Supply Ltd.
- Holcim
- JAZBRICK
- JV Building Supply
- Lafarge Canada Inc

- Masons Masonry Supply Ltd.
- Permacon Group
- PowerHouse Building Solutions
- St. Marys Cement Group



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Environmentally-friendly, sustainable and green: The benefits of building with masonry

A message from the board

Although masonry products have stood the test of time, this year we were faced with a recession which has been tough on every industry. Over 80 per cent of the Fall MasonryWorx survey respondents report a down year in 2009, and the current number one concern for the industry is price pressure, followed by volumes and costs.

But with any challenge comes opportunity.

As newly-elected president of MasonryWorx, I see an association of leaders that will continue to manufacture products that are leaders in their category. That's why as an association, we will continue to increase awareness of the benefits of masonry among consumers. We will collaborate with government officials to lobby for changes to the building code that will protect the health of all Ontarians, benefit the environment and stimulate the economy.

I would like to take this opportunity to thank Judy Pryma whose tenure as President has come to an end. Judy's hard work and

dedication over the past two years has helped us through our toughest years yet. We wish her continued success in her next endeavour.

In this issue we will focus on the environmental benefits of building with masonry products. Included is an article on the sustainability of masonry in construction by Patrick Kelly, director Quality Systems, Hanson Brick and Hardscape. We also sat down with Peter Moffet, partner at Robertson Simmons architects inc. to talk about École secondaire de Barrie, a LEED Gold candidate in Barrie, Ontario.

As always, we thank you for taking the time to review this issue and please visit our website www.masonryworx.com for more information.

Dante Di Giovanni
President, MasonryWorx



LEED GOLD Candidate - École secondaire de Barrie

Photo by: Shai Gil Photography

Sustainability of Masonry in Construction Today

By: Patrick Kelly, director, Quality Systems, Hanson Brick and Hardscape, P.Eng, LEED AP

Masonry is one of the oldest building materials used by man and has been around for thousands of years. It is also still the most widely used building material for a variety of reasons, including its durability, structural capacity, energy performance, construction waste management, and environmental impacts.

Durability

Masonry durability is recognized by the Ontario Association of Architects (OAA) and the Canadian Standards Association (CSA S478) and should be part of building envelope designs. Its units are not only durable but they also contribute to building assemblies that remain useful in the material cycle for long periods of time. If properly detailed, the use of masonry units will minimize the risk and environmental costs of premature failure of building components. However, the importance of wall systems extends well beyond the durability of materials, which is why masonry walls also include a drainage cavity, directing any moisture that has entered the wall back into the exterior.



Because of the durability of masonry and masonry structures, masonry buildings are often ideal candidates for building reuse, allowing units to be recycled when carefully dismantled. Masonry also compares favourably with Life Cycle Analysis that includes materials, construction and energy consumption.

Masonry is resistant to forms of degradation including fire, mould and termites. It is inherently fire resistant and provides fire safety for people, helps stop the spread of fire, and reduces the environmental impacts of fire.

Clay Brick: Resource Management & Reduced Environmental Impacts

The clay brick industry adheres to strict operating principles ensuring the choices of future generations are not compromised by activities of the current one. All clay brick quarries operate under the License granted by the Ministry of Natural Resources, in accordance with the Aggregate Resources Act, with additional targets set by the Ministry of Environment.

Although quarries impact the environment to a certain extent, the impact is limited to the area of the quarry, is extremely

controlled and results in significant benefits. For example, a 200 acre quarry is able to provide sufficient brick to clad approximately 10,000 houses (1.2 million square metres of wall area annually), in contrast to approximately 12,000 acres of farmland needed to produce enough straw bales to cover the same wall area.

Regardless, the goal of the clay brick industry is to make clay mining operations environmentally neutral. Although the clay used to make brick is a very prevalent natural resource, brick manufacturers work diligently to ensure quarry sites are reused responsibly and efficiently by developing them in a manner consistent with the criteria of sustainability and returning the land to a state as close as possible to what it had been, ensuring future generations have equivalent potential for use and development.

In addition to maintaining land for future generations, the clay brick industry has also succeeded in reducing the environmental impacts of producing building materials by accomplishing a significant reduction in the necessary energy to manufacture brick – over 50% since 1981, and an additional 10% since 2004.

Dematerialization, doing more with less without comprising quality or performance within the manufacturing process is another example of how the clay brick industry is positively reducing energy consumption and the use of resources. The industry has accomplished this by reducing the thickness of the brick veneer and gradually increasing the voids within brick.

Also, by increasing the use of scrubbers to 75% on new and old clay brick plants, the industry has aggressively reduced environmental emission and effluent throughout all steps in the manufacturing process.

Since clay occurs naturally, it is virtually inert even when formed into brick. Consequently, clay brick is the only cladding material which emits no gases, needs no maintenance, and is impervious to chemical leaching. Moreover, brick is naturally fireproof and requires no coatings or cleaning products which could produce environmentally harmful off-gassing or toxic fumes when burning.

The use of masonry units in construction has a diverse and extensive history for a wide range of reasons. In addition to its durability and structure, it assists energy performance, waste management, and the environment. Furthermore, the progress in recent years in these key areas will ensure that the future of masonry units will be just as extensive. **MW**

Credit: A full version of this article appeared in the November/December edition of Construction Canada magazine.

QUESTIONS? COMMENTS? SUGGESTIONS?

We are always looking for readers' input on newsletter content and we are actively looking for individuals interested in writing or submitting articles for the quarterly newsletter. Please contact us at info@masonryworx.com with your questions, comments and suggestions. You may also visit us on-line at:

www.masonryworx.com

LEED GOLD Candidate - École secondaire de Barrie

We recently had the opportunity to sit down with Peter Moffet, partner at Robertson Simmons architects inc. to learn more about École secondaire de Barrie, a LEED Gold candidate in Barrie, Ontario.



Photo by: Shai Gil Photography

The site plan for École secondaire de Barrie was developed in response to the irregular nature of the property and the belief that a courtyard design best reflected the student body. The 'L' shaped building meets three principle objectives:

- The school fronts onto Essa Road, providing a welcoming south-west oriented façade and vehicular access for visitors.
- The large programme elements of the school have been located to the east, backing onto a playing field, outdoor teaching area and loading corridor.
- A west facing campus courtyard has been created, which is directly connected to the driveway and bus drop off. This wing provides a setting for the administrative, academic, and learning corridors.

The project is LEED registered and is targeted to achieve LEED Gold certification with upwards of 60% energy savings over the Model National Energy Code for Buildings (MNECB).

Q. What features of this school will contribute to the achievement of LEED Gold status?

A. Big question. The most significant contribution is the energy performance of the building, targeted to achieve 10 of a possible 10 points with upwards of 60% savings over the MNECB. We are also targeting significant points for sustainable site design and indoor air quality.

Q. What percentage of the building is masonry?

A. 95% of all exterior and interior walls are concrete block and approximately 50% of the exterior cladding is brick veneer. The brick used for this project was Hanson Brick Sonoma Smooth, metric modular size.

Q. How do you think constructing a building using masonry contributes to the environment and to achieving LEED credits?

A. In the big picture, using masonry can contribute to the air quality in the school as it is generally chemically inert, it is often possible to source brick from a local manufacturer, helps with the overall insulation of the building and the thermal mass of the building.

The primary benefits would fall under sustainability of the product and primarily the durability of masonry means a longer life. However, at this time, there are no LEED points for life cycle of a product, but this is still the primary reason to use masonry.

Q. Why was masonry chosen over other cladding materials?

A. Load bearing masonry was determined to be more cost effective than a steel structure. Concrete block is used for 95% of all interior load-bearing and non-load bearing partitions due to its durability. Brick veneer is used for its durability and aesthetics.

This project involved a team of experts:

- Masonry contractor: Bernel Masonry Ltd.
- General contractor: Aquicon Construction Co. Ltd.
- Architect: Robertson Simmons architects inc.
- Owner: Conseil scolaire de district du Centre-Sud-Ouest



Photo by: Shai Gil Photography