

MASONRY PRODUCTS & LEED

LEED Opportunities

This guide is intended to outline opportunities available to achieve credits towards sustainable building in accordance with Leadership in Energy and Environmental Design (LEED®) Canada – NC Rating System 1.0 Addendum, March 2007. More comprehensive details, including assessment tools, are available upon request.



The following opportunities exist when using concrete masonry products manufactured by Brown's Concrete:

1. Optimized Energy Performance (EA) Credit 1
2. Waste Management (MR) Credits 2.1 & 2.2
3. Recycled Content (MR) Credits 4.1 & 4.2
4. Local/Regional Material Use (MR) Credits 5.1 & 5.2
5. Durable Building (MR) Credit 8
6. Flexible by Design (ID) Credit 1.x
7. Indoor Air Quality (ID) Credit 1.x
8. Passive Fire Resistance (ID) Credit 1.x
9. Buildings with Minimal Maintenance (ID) Credit 1.x
10. Increased Security/Safety (ID) Credit 1.x

Optimized Energy Performance (EA) Credit 1 (Points 1-10)

Because concrete masonry products have a high thermal mass and specific heat, it provides very effective thermal storage. This lets the walls remain warm or cool long after the heat or air-conditioning has shut-off. This, in turn, can effectively: reduce heating and cooling loads; improve occupant comfort by moderating indoor temperature swings; and, shift peak heating and cooling loads to off-peak hours.

Waste Management (MR) Credits 2.1 & 2.2 (Points: 2)

The ultimate objective is to prevent materials from landfill disposal; because concrete products are a relatively heavy construction material and the measurements are typically made on a weight basis, it is imperative to redirect the associated byproducts from disposal. Saw-cut scraps and broken pieces can be crushed and reused onsite as fill material. Intact and unused product can typically be returned for re-sale, redirected to other projects, or donated to charitable organizations such as Habitat for Humanity.

With respect to the packaging, pallets can be returned to the manufacturing plant for continued use, while the plastic wrap and/or banding can be recycled in most municipalities.

Recycled Content (MR) Credits 4.1 & 4.2 (Points: 2)

The basic ingredients of concrete include cement, aggregates, water and pigments.

The cement used in the production of our concrete masonry contains 6% post-industrial recycled material. Being Supplementary Cementing Materials, there is a double benefit of reducing cement requirements while utilizing a waste material; as a result, the LEED Canada credit applies a multiplier of 2 to the reduction in cement content.

The pigments used to create our vibrant coloured products contain 65% post-consumer recycled materials.

The use of recycled materials as aggregate alternatives and recycled mix water are under ongoing investigation. At Brown's, we do not want to compromise quality for the sake of potential credits.



A Commitment to Quality as Strong as our Product.

Main Office

3075 Herold Drive
Sudbury, ON
P3E 6K9

Phone:

(800) 461-4888
(705) 522-8220

Fax:

(705) 522-2732

Email:

bcpl@bell.net

Website:

www.brownsconcrete.com

Local/Regional Material Use (MR) Credits 5.1 & 5.2 (Points: 2)

Aggregates, which constitute approximately 84% by weight of our concrete products, are from sources and reserves located within 25 km of our manufacturing facility. Our cement is derived from the nearest available manufacturing facility to us. Ultimately, less than 1% by weight of the materials used in production of our products comes from beyond a 400 km radius.

Our centralized location in Sudbury not only brings us to within an 800 km radius of all major communities within Northern and Southern Ontario, but also places us at the crossroads of the main inter-Canada rail lines. Our close proximity to shipping terminals in Killarney and Manitoulin make barging another transportation alternative.

Durable Building (MR) Credit 8 (Points: 1)

With our aggregate supply being derived from granite, which is one of the hardest and most durable construction materials in use, Brown's products have proven to be some of the strongest in the industry.

The durability of our concrete products, when combined with a system of drainage cavities and stainless fasteners, results in a long service life for the building envelope.

Innovative Design (ID) Credit 1.x (Points: 1-4; Max. Points in ID Category are 4)

Masonry products can be used for both building structure and interior or exterior finishes, and provide a wide range of profiles, textures and colour options that require little or no additional treatment to achieve aesthetically pleasing results. The modular components allow their use on intricate designs with the synergy of reducing additional load bearing structural capacity. This structural/finish combination reduces the need for the production, installation, maintenance, repair and replacement of additional finish materials.

Indoor Air Quality (ID) Credit (Points: 1)

Other finish materials could otherwise worsen indoor air quality, especially if they are known to emit volatile organic compounds (VOCs) or are prone to mold growth/damage. Studies by Masonry Canada have proven that Concrete Masonry does not emit VOCs or support fungal mold growth.

Passive Fire Resistance (ID) Credit (Points: 1)

Concrete masonry has long been recognized for its inherent passive fire resistance. Firewalls between and within structures do not contribute fuel to the fire, and provide compartmentation to isolate fires and prevent their spread to surrounding properties. They remain structurally sound and provide protection to fire fighters, even if water supplies or active systems are inoperative.

Buildings with Minimal Maintenance (ID) Credit (Points: 1)

Concrete masonry requires minimal, if any, long-term maintenance, even in the most demanding locations like schools, hospitals and prisons. "Impact resistance" from human traffic to severe weather can result in significant long term savings – according to the Insurance Bureau of Canada, an average of \$500 million is spent annually in Canada alone due to damage from severe weather.

Increased Security/Safety (ID) Credit (Points: 1)

The increasing occurrence of terrorist attacks and mass shootings has prompted the demand for safer buildings, not only from the occupants but also from the police. Studies conducted in cooperation with the RCMP clearly showed the increased bullet and projectile resistance of concrete masonry as compared to other wall assemblies.