



Halsall

GREEN PLANNING & DESIGN
CONSULTING SERVICES



company profile

<http://www.halsall.com>

Since 1956 Halsall has been delivering projects with the commitment and intensity required of a true partner. Each project's success is predicated on three core elements: truly understanding the client's vision, engaging the full depth of our multidisciplinary team, and consistently applying innovative strategies and solutions. The true measure of a job well done is best reflected in the success and satisfaction realized by our clients and in the communities where we work.

Halsall's mission is to provide an environment that supports our commitment to the delivery of "best-in-class" service in each market served. Guided by a process that engages nearly 300 employees, Halsall is driven by a unique corporate culture based on shared success.

The many awards and engineering distinctions received by our team are a testament to the quality and innovation of the service we provide on projects throughout the world. Since 2006, Halsall has ranked as one of the "Best Workplaces in Canada" as reported in *The Globe and Mail*. This is the 7th year that Halsall has been recognized by a national organization as an outstanding place to build a career.

Our services are provided from offices in Vancouver, Calgary, Burlington, Toronto, Sudbury, Ottawa, Dubai, and through cooperation with partners in Halifax, Bermuda, Trinidad and Washington.

Visit us online at: www.halsall.com.

Contact Information:

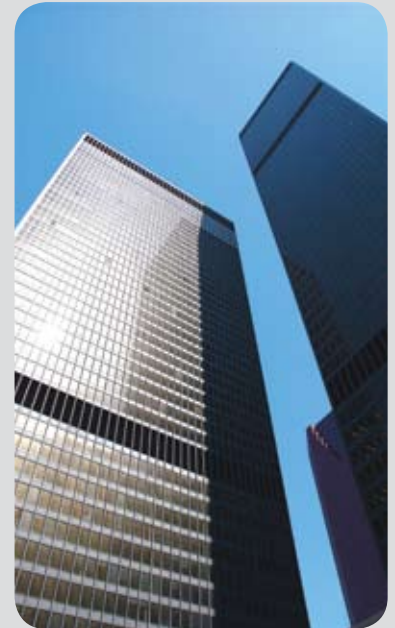
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Green Building Business Manager
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Beaver Barracks, 424 Metcalfe St. Ottawa, ON



TD Centre Toronto, ON





Federal Judicial Centre Toronto, ON



Herman Miller Canada Head Office Toronto, ON

Halsall Associates A National Leader In Green Building Consulting

Currently, we are pursuing certification for over 175 LEED projects including:

- 58,000,000 ft² of LEED-EB work on some of Canada's premier buildings
- over 40 LEED-EB registered projects and 85 LEED-EB feasibility studies
- 18,000,000 ft² of LEED-NC and CS projects
- 600,000 ft² of LEED-CI projects
- Ontario's first LEED-CI Platinum certified project (210 Gladstone Ave., Ottawa)
- green building standards for 13 municipalities throughout Ontario
- energy plans and sustainability framework for 15 communities across Canada

The Canada Green Building Council (CaGBC) engaged Halsall to develop the LEED-EB Standards for Canada.

green planning & design

services overview

Finding solutions that maximize the value of city planning and building, now and for future generations, is core to our business. There is no more critical time than today to have this as a focus.

Experience has taught us that the best way to effect change is to look at each project as being part of something larger and not isolating its individual systems or issues. Through this holistic approach we develop strategies that optimize the performance of communities, buildings and infrastructure. This allows our clients to make more informed decisions, from options that would not have otherwise been considered.

Halsall's experience and dedication to green building is leading to increased influence, including the responsibility for developing the LEED® Canada Standard for Existing Buildings Operation and Maintenance (EB OM) for the Canada Green Building Council. Having intimate knowledge of the LEED-EB process allows Halsall to better assist building owners and managers to maximize property value and retain a competitive position in the marketplace.

Our Green Building Services include:

DESIGN SUPPORT

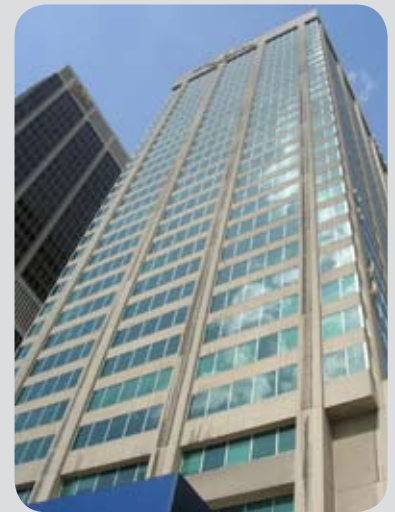
- Integrated Design Process Management
- Performance Modelling & System Concepts
- LEED, BOMA, BESt Green Globes Compliance
 - Existing Buildings
 - Commercial Interiors
 - Core & Shell
 - New Construction

SUSTAINABILITY PROGRAM CONSULTING

- Benchmarking & Policy Advice
- Education Delivery
- Standard Development for Procurement & Operations

COMMUNITY PLANNING SUPPORT

- Green Development Standards & Policies
- Community Energy Plans
- LEED for Neighbourhood Development Compliance
- Energy & Environmental Options Assessment



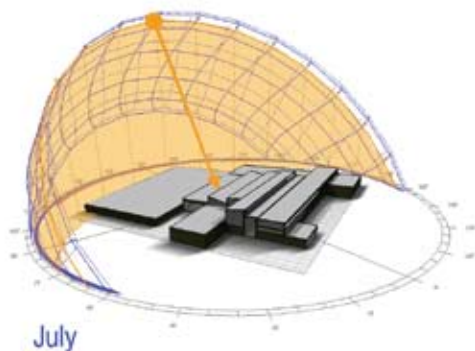
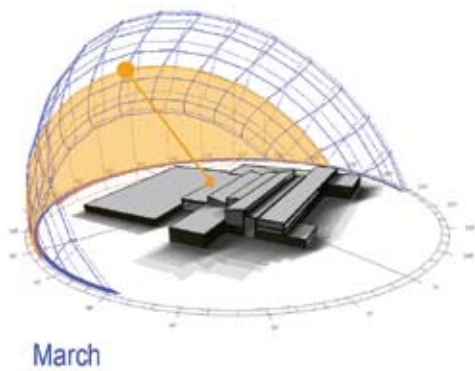
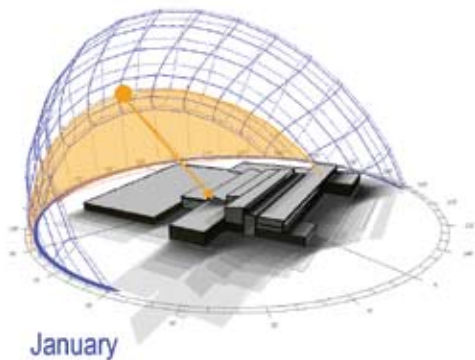
Brookfield Portfolio LEED-EB Screenings
Across Canada

About LEED-EB

The focus of the LEED-EB system is to maximize operational effectiveness. Included in the process are energy efficiency, indoor air quality improvements, sustainable site management, green cleaning and waste recycling.



Annual Sun Path



Building Performance Simulation & Climate Analysis

Passive design starts by understanding the unique context within which a development must thrive. Effective passive design can improve occupant comfort while reducing the quantity of non-renewable energy a building uses for heating, cooling and lighting. It can also influence the time of day the energy is consumed. Halsall uses several climatic analysis software tools to provide design advice on passive strategies. These tools enable us to effectively describe climatic conditions, evaluate incident solar radiation, perform shading analyses at different scales and evaluate preliminary energy performance.

As the design develops, building performance simulation can provide design teams with early feedback regarding the impact that their design decisions have on the comfort of future occupants and on the building's energy consumption.

Halsall's experienced team of specialists present performance predictions in both numeric and graphic formats to assist owners and designers in understanding how the building will feel and operate. Given the predicted performance and the client's priorities for the project, we provide innovative design strategies that increase the building's effectiveness.

team profile

introduction to our key team members

DOUG WEBBER P.ENG., LEED AP Green Building Practice Leader



Doug has been working in green development for over 15 years. During this time he managed the design and building of high-performance residential, commercial, institutional and neighbourhood projects. As a member of the Canadian Green Building Challenge team, he evaluates some of Canada's best green buildings for presentation every three years at international Sustainable Building Conferences (most recently at SB08 in Melbourne).

He is a founding member and Honorary Director of the Greater Toronto Chapter of the Canada Green Building Council and past National Board Member. Doug oversees all technical aspects of our work ensuring that the design team is achieving innovative and practical sustainable design within the context of the project parameters.

ADRIEN DEVEAU M.A.SC., P.ENG. Green Building Business Manager



Adrien has been providing consulting services to building managers, developers and designers for over a decade. He has been instrumental in managing and building Halsall's industry leading Green Building team. As a Project Principal for well over 100 green building projects, Adrien's experience includes both new and existing buildings, and ranges across the commercial, residential and institutional sectors. He was also a member of the Halsall team that developed the Canadian LEED-EB rating system for

the CaGBC, which was released in August 2009. Adrien is a NAIOP and BOMA member, serves on the NAIOP Toronto Chapter Sustainability Committee, and frequently gives presentations on Green Building at industry events. He is responsible for ensuring that we provide the appropriate resources for every project.

IAN THEAKER B.Sc., P.ENG. Senior Sustainability Consultant & Energy Specialist



Ian has been a leader and innovator in green building for over 15 years. He coauthored one of North America's first building assessment systems in 1993, the Building Environmental Performance Assessment Criteria (BEPAC), followed by others, including the Santa Monica Green Building Design and Construction Guidelines in 1999 and LEED-BC (the precursor to LEED Canada) in 2002. As the former CaGBC Technical Manager, Ian pulled together a team of volunteers from across Canada to develop the

original LEED rating system. With experience co-authoring building assessment systems and managing a team of engineers who provided building performance simulation, green building consulting, and integrated design process facilitation, Ian has cultivated an extensive knowledge base.

Team Strength

Halsall Associates is made up of 300 employees with offices across Canada. Our green building team has over 40 professionals (engineers, energy specialists, architects and planners). We serve clients in new development, existing buildings, community planning and government policy work. For more information please visit us online at www.halsall.com.



team profile

introduction to our key team members

GRAEME SCOTT M.ENG., P.ENG., LEED AP Vancouver



Graeme manages our Western Canada Green Building services. With over 20 years of building consulting experience, Graeme acts as the Project Principal on a wide variety of green projects and proposals, including new and existing buildings and communities. Graeme oversees all aspects of the project delivery in Western Canada, ensuring that our work is meeting the project purpose.

This includes defining the deliverables, assigning responsibilities, learning and communicating client expectations to our team, and tracking progress against agreed milestones and deliverables.

CHRIS LOVE B.TECH., RRC, LEED AP Calgary



Chris started Halsall's Calgary office and brings over 20 years of building evaluation, restoration and renewal experience to the Western Canadian construction and real estate market. In his Project Principal role, Chris is responsible for communicating the client's needs and expectations to the project team and ensuring that the appropriate resources and standards are applied in the delivery of the project. He is also responsible for

business development activities, meeting with clients to discover new opportunities and bringing Halsall's various service offerings to them as needed.

BRANDON MALLECK B.A.SC., LEED AP Ottawa



Brandon is the primary contact for Ottawa's Green Planning and Design team. He is responsible for overseeing project delivery in the Ottawa green building market, as well as facilitating communications between the client and project team. Brandon has experience consulting on various green planning and design projects including Algonquin College's new LEED Platinum building, West Block Parliament Life Cycle Analysis and a Renewable Energy Study for

the City of Kingston, where he has provided technical support and sustainability program development services. In addition, Brandon has consulted on over 5,800,000sqft of existing space in the Ottawa area. Brandon has published numerous reports on improving the sustainability of the built environment. He has guest lectured at Carleton University and taught green building strategies at Algonquin College.

AARON DENT M.SC.E, LEED AP Sudbury



Aaron serves the Northern Ontario green building market from our Sudbury office. He has worked on a wide range of green building projects, including LEED buildings, municipal green development policies, neighbourhood sustainability projects, as well as residential straw bale structures and passive solar homes. Aaron is also an active member in greening the City of Sudbury as the chair of the Greater Sudbury Environment Network, a

founding member of Eat Local Sudbury Cooperative, a steering committee member of EarthCare Sudbury, and a committee member of the Research and Evaluation Task Group under the Sudbury United Nations designation as a Regional Centre of Expertise on Sustainable Development.



777 Bay Toronto, ON



Bell Creekbank Phase 3, 5025 Creekbank Rd. Mississauga, ON



Testimonials

"It is without hesitation that I express our satisfaction with the work and effort Halsall has provided on our new Campus that will be located in Markham. Halsall understood our objectives and provided the expertise we required in order to ensure we designed a LEED Gold Head Office. Their knowledge and patience in helping me personally understand each aspect of this process is appreciated."

**Lois Ferg, Senior Manager, Administrative Services
Honda Canada Inc.**

"On behalf of Ryerson University, we wish to extend our sincere thanks to all of your team members who helped us with this process. Halsall's commitment to this project has allowed us to achieve this most celebrated milestone."

**Erica Tornquist, Campus Planning & Facilities
Ryerson University**

"Halsall have been instrumental in helping us to articulate a comprehensive plan for both the sustainable capital and operational phases of the project. Most impressive has been their openness to embrace and technically inform our vision for the project. It is no exaggeration to suggest that without their involvement this project would have been the poorer for it. It is without hesitation that I recommend their services."

Robert Plitt, Manager of Sustainability, Evergreen

"We've been working on a number of projects throughout the TD Centre with Halsall's Green Building team. These projects are all critical to maintaining/developing the most desirable address for major tenancies. Throughout all stages of these projects, your team has demonstrated that they are proactive, considerate, communicative, and technically skilled. Moreover, they bring a fantastic attitude to the table."

I would like to extend my appreciation for the excellent performance they've demonstrated. Please keep up the great work!"

**Adrian Sluga, Senior Manager, Tenant Projects
The Cadillac Fairview Corporation Limited**



200 King Street West Toronto, ON

project examples

highlighting our range of experience



TD CENTRE Toronto, ON

[Ongoing] Halsall is conducting a LEED for Existing Buildings (LEED-EB) feasibility study for Cadillac Fairview for the 5 office towers which comprise the 5.2Mft² TD Centre. The LEED-EB program looks into ways in which an existing building's operations and maintenance practices can be enhanced to meet a set of green building goals. Aspects being evaluated pertain to (amongst others) energy and water efficiency, waste management and green purchasing strategies.



LAWRENCE-ALLEN REVITALIZATION Toronto, ON

[Under Design] Halsall is the sustainability consultant for the planning team preparing a Master Plan for this 342-hectare existing community. We provided the team, led by planning Alliance, with a decision framework through which options are evaluated relative to the City's sustainability goals as well as benchmarks for setting targets. Halsall is also preparing a Community Energy Plan to address the long-term energy requirements of the neighbourhood. The objectives are to minimize energy use, establish energy security, and maximize the renewable energy contribution.



DEVELOPING THE LEED® CANADA STANDARD FOR EXISTING BUILDINGS

[2008] Halsall provided consulting services to the CaGBC, assisting in the adaptation of the USGBC's LEED for Existing Buildings for the Canadian market. We helped to flag and resolve issues associated with implementing the current system in Canada.



FIRST CANADIAN PLACE Toronto, ON

[Ongoing] Halsall is providing LEED-EB consulting for this 72-storey, 3.5Mft² office building. We have evaluated the current performance of the facility to identify the initiatives required to achieve certification, and are now working to implement them.

About Our Experience

Halsall implemented sustainability as a process for changing our own practices in the late 1990s. Over time, we have established our green building team as a recognized facilitator for integrated design and green building development.

Since then, we have provided green planning and design advice on nearly \$2.5B worth of buildings, as well as planning work on \$10B worth of development.

Halsall's services are structured to help you green your operations and at the same time seize valuable leadership and marketing opportunities.



project examples

highlighting our range of experience



BLUEWATER HEALTH CENTRE Samia, ON LEED-NC

Halsall is providing structural engineering and sustainable design management on this \$220M hospital project, which includes renovation to the existing building and a 250,000ft² addition. The client wants the building to be a key part of the community and a leading example of green design in the health care sector. Halsall is responsible for implementing the integrated design process and administering the LEED® process for certification.



150 KING ST. W. Toronto, ON

[Ongoing] Halsall was engaged to pursue LEED-EB certification for this 28-storey, 550,000ft² office building. Steps already taken to green this facility included GoGreen Plus certification in 2009, and it is in the LEED Canada EB Pilot Program. In an effort to reduce energy use, the following major building retrofits have been implemented to date: upgrade to high efficiency condensing boilers, installation of occupancy sensors in washrooms, reduction of stairwell lighting levels, and installation of CO₂ sensors for outdoor air volume control.



THE UNIVERSITY OF TORONTO

ROTMAN SCHOOL OF BUSINESS Toronto, ON

[Under Design] Halsall is working with KPMB Architects on the design of this \$70M state-of-the-art facility. The project is designed to achieve LEED Canada NC - Silver certification and is comprised of approximately 170,000ft² of teaching, collaboration and office space. Halsall is identifying energy-saving measures for the building's cladding, mechanical and lighting systems.



MEADOWBROOK Montreal, QC

[2007 - Present] Meadowbrook is currently a 57-hectare golf course on the western edge of Montreal. The site is to be redeveloped into a net zero, carbon-zero waste, urban mixed-use development centred on a commuter rail station. Halsall's team is working closely with the developer and planning team of L'OEUF and BNIM Architects to operationalize the vision.



Rockcliffe Redevelopment, Canada
Lands Corp. Ottawa, ON



Pearson Airport Fire Training Facility
Toronto, ON



project examples

highlighting our range of experience



EVERGREEN at the BRICK WORKS, Toronto, ON

[Under Construction] Halsall is the sustainability consultant for the redevelopment of the 12-acre Don Valley Brick Works site into an urban environmental showcase for the Evergreen Foundation. The site is located at the historic Don Valley Brick Works and will include the restoration of several historic elements. The project will include campus-wide sustainability measures and is to include a new LEED Platinum certified building.



HERMAN MILLER CANADA HEAD OFFICE

Toronto, ON LEED-CI

[2004] Halsall was engaged to reorganize the design and construction of their building after construction had started in order to achieve LEED certification as a pilot project under the new LEED for Commercial Interiors standard. The project included 1,800m² of showrooms and offices.



BANK OF MONTREAL, OAKVILLE & AJAX BRANCH

[Construction Complete LEED Application Submitted]

Halsall helped the bank to quickly establish sustainability goals for two of their new branches while maintaining their architectural branding. Different energy performance strategies were used at each branch to test what options work best for the bank. Aggressive water reduction strategies as well as waste management practices were achieved due to a good working relationship between the design and construction teams and Halsall.



ARCHIVES OF ONTARIO AT YORK UNIVERSITY

[Under Construction] Halsall is the sustainability consultant for this 410,000 ft², 10-storey multi-use building. This facility will house the archives of Ontario, a collection of information documenting our province's history. This project involves an expansion of existing retail space, as well as access to the new subway. A 7-storey 'research tower' will be set back on the podium, containing an additional 120,000 ft² of academic and research space. This project is targeting LEED Silver.



Flex Building, 6696 Financial Dr.
Mississauga, ON



North Bay Regional Health Centre
North Bay, ON



project examples

highlighting our range of experience



ADNOC HEADQUARTERS, Abu Dhabi

[Under Design] Halsall is providing sustainability and LEED consulting services for this 103,597m², 40-storey office building in Abu Dhabi. The building is designed to minimize solar gains and maximize solar energy usage by integrating solar panels in envelope and installing a double skin façade in the glazed areas. It features a planted atrium to enhance natural air buoyancy and reuses the waste cooled air from the office spaces in the public areas. The incoming air is pre-cooled by means of an earth tube system. The building maximizes water efficiency by reusing water for irrigation and flushing.



18 YORK ST. Toronto

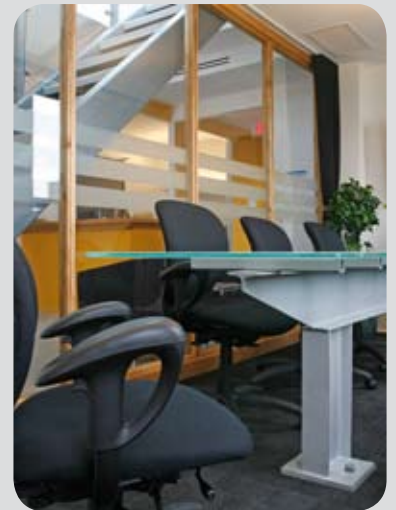
[Under Construction] Halsall is the sustainability consultant for this 26-storey, 620,000 ft² building located on a Brownfield site within the Toronto Railway Lands. The project is targeting LEED-CS Gold certification. Halsall is helping the team maximize building performance early in the design process through energy modelling and design consultation. The building will be connected to the downtown Toronto deep-lake water cooling and district steam heating system and will feature a high-performance curtain wall.



BEAVER BARRACKS, 424 METCALFE ST. Ottawa, ON

[Under Design] Halsall is providing green building design consulting, charette coordination and project management services for this affordable housing project on City property. The project involves remediating a brownfield site to provide up to 230 affordable dwelling units in a high density area. It also includes a 7 1/2-storey tower, 2 stacked townhouse clusters, a 4 1/2 6-storey mixed-use building over an underground parking facility. Other features of this development include high-performance envelopes, green roofs, high efficiency HVAC, lighting and appliances, and a community garden. A central geothermal system supplemented by solar collectors will provide affordable low carbon energy under a third-party financed (utility) model program.

“The LEED Certification of your Ottawa office demonstrates that Halsall not only exhibits green building principles in your work but now *also* in your own workplace.”
- Canada Green Building Council (CaGBC)



210 Gladstone Ave Ottawa, ON



project examples

highlighting our range of experience



BROOKFIELD PORTFOLIO Across Canada

[Ongoing] Halsall has been engaged by Brookfield to complete a LEED-CI screening review for 15 existing Canadian Properties totalling about 10.6M ft². Upon completion of the building review, Halsall provided a report outlining how each property can contribute – in whole and in part – to achieving LEED-CI credits for tenants' fit-ups. The findings and documentation will be provided to tenants to help Brookfield's leasing efforts, by demonstrating their ability to help tenants achieve LEED-CI. In addition, LEED-EB screenings were also completed to help Brookfield benchmark the performance of their buildings and evaluate their potential to achieve LEED-EB.



CANADORE COLLEGE North Bay, ON

[Ongoing] Halsall is the sustainability consultant for this \$11M, 3-storey college building. Canadore College is pursuing LEED Canada NC – Silver certification and is comprised of approximately 15,000ft² of computer classrooms, art studios and media spaces. Through energy modelling, Halsall is identifying energy savings measures through passive and active design options. Such analysis includes climatic analysis, daylighting analysis and HVAC system comparisons.



THE SCHOOL OF URBAN & REGIONAL PLANNING, RYERSON UNIVERSITY Toronto, ON LEED-CI Gold

[2004] Halsall was the LEED® Consultant for the 48,420ft² renovation of this new academic space, located within a four-storey historic building. The renovation included a complete interior retrofit, replacing all lighting and mechanical systems and interior finishes. As a result, the space now consumes 35% less energy for lighting and 31% less water than a code-compliant space. This is Ontario's first LEED-CI Gold university building.



CITY OF TORONTO GREEN DEVELOPMENT STANDARD

[2006] Halsall led a multidisciplinary team to assist the City in creating a green development standard. Our work included researching and evaluating green development standards around the world, assessing which have been most successful in affecting change, and why. This information will be used to help Toronto develop their own green development initiative.



West Don Lands District Energy Centre
Toronto, ON



Niagara Health Services St. Catharines, ON

