PETER BUSBY, C.M., FRAIC, AIA INT'L ASSOC., LEED FELLOW

Managing Director

Internationally recognized and published for his contributions to Architecture and Planning, Peter Busby's award-winning portfolio embodies his philosophy of social responsibility and commitment to sustainable design. Since opening his Vancouver practice in 1984, Peter's body of work has gained a reputation for design excellence and innovation, becoming a powerful catalyst in the growth of the green architecture movement in North America and abroad. After merging his firm with Perkins+Will in 2004, he became a driving force across the company, compelling its industry-leading sustainable design initiatives. In 2012, Peter relocated to be the Managing Director of Perkins+Will's San Francisco office.

EDUCATION

Honorary Doctorate in Science,
Ryerson University, Toronto, 2008

Bachelor of Architecture,
University of British Columbia, 1977

Bachelor of Arts (Political Philosophy),
University of Toronto, 1974

REGISTRATIONS

Architect: British Columbia, Alberta, Ontario, Oregon

PROFESSIONAL AFFILIATIONS

Fellow, Cascadia Green Building Council
Member, Order of Canada
CaGBC Faculty, 2003-2005
USGBC Faculty, 1997-2002
Fellow, Royal Architectural Institute of Canada
Member, Architectural Institute of British Columbia
Member, Alberta Association of Architects
Member, Ontario Association of Architects
Member, American Institute of Architects
Founder, Board Member, and Chair, Canada Green Building Council
Member, Urban Development Institute
Member, British Columbia Construction Roundtable
Former Board Member, BC Hydro

RELEVANT EXPERIENCE

Dockside Green Development
Master Plan
LEED-ND Platinum Certified
Victoria, BC

Dockside Green Development
Balance + Synergy (Phases 1 +2)
LEED-NC Platinum Certified
Victoria, BC

Cross Roads Mixed-Use Development
LEED-CS Gold Certified
Vancouver, BC

One Wall Centre
Vancouver, BC

The Acqua + Vento Mixed-Use Development
LEED-NC Platinum Certified
Calgary, AB

North Macadam Development Master Plan + Merriweather Towers
LEED-NC Gold Certified
Portland, OR

District of North Vancouver Municipal Hall
Addition + Renovation
North Vancouver, BC

VanDusen Botanical Garden Visitor Center
Vancouver Board of Parks and Recreation
Vancouver, BC

Centre for Interactive Research on Sustainability (CIRS),
University of British Columbia
Vancouver, BC

Edmonton City Centre Redevelopment
Beyond Carbon-Neutral Community
Edmonton, AB

Energy. Environment. Experiential. Learning (EEEL)
University of Calgary
Calgary, AB

Earth Sciences Building (ESB)
University of British Columbia
Vancouver, BC

Husky Union Building
University of Washington
Seattle, WA

Mount Pleasant Community Centre
LEED-NC Gold Target
Vancouver, BC

Oregon Health + Science University
Schnitzer Campus Framework Plan
Portland, Oregon

Living with Lakes Centre
Laurentian University
LEED-NC Platinum Target
Sudbury, ON

PETER BUSBY:
SELECTED WORK

MANAGING DIRECTOR
PERKINS+WILL SAN FRANCISCO

PERKINS+WILL

VANCOUVER BOARD OF PARKS AND RECREATION
VANDUSEN BOTANICAL GARDEN VISITOR CENTRE

LOCATION Vancouver, BC
COMPLETION DATE August 2011
CONSTRUCTION COST
Project Budget: $21.9 million CAD
Construction Budget: $14.4 million CAD
SIZE 1,810 SM (19,483 SF)
SUSTAINABILITY TARGETS:
Living Building Challenge
LEED® New Construction v 1.0
Platinum Registered
Visitor Centre

AWARDS
2013, Metal Architecture Design Award, Metal Roofing Category
2013, Wood WORKS! BC Wood Design Awards, Wood Innovation Award
2013, Globe Award for Excellence in Urban Sustainability, Finalist
2012, World Architecture News (WAN) Engineering Awards, Winner
2012, Lieutenant-Governor of British Columbia Merit Recipient
2012, Lieutenant Governor's Award For Engineering Excellence, ACEC-BC

Reflecting the City of Vancouver's initiative to be the "Greenest City in the World" by 2020, the VanDusen Botanical Garden's new Visitor Centre is one of the public faces for sustainability in Vancouver.

In 2007, Perkins+Will was commissioned to create a signature, green facility that would increase the VanDusen Botanical Garden's visitorship and enhance its international stature. Designed to be one with nature, the Visitor Centre creates a harmonious balance between architecture and landscape—from both a visual and an ecological perspective. Inspired by the organic forms and natural systems of a native orchid, the project is organized into undulating green roof 'petals' that float above rammed earth and concrete walls. These petals and stems are connected by a vegetated land ramp that links the roof to the ground plane, encouraging use by local fauna. The building houses a café, an expanded library, volunteer facilities, a garden shop, office space and flexible classroom spaces for meetings, lectures, workshops and private functions.

Designed to exceed LEED Platinum, the Visitor Centre is pursuing the Living Building Challenge—the most stringent measurement of sustainability in the built environment. The Visitor Centre uses on-site, renewable sources—geothermal boreholes, solar photovoltaics, solar hot water tubes—to achieve net-zero energy on an annual basis. Wood is the primary building material, sequestering enough carbon to achieve carbon neutrality. Rainwater is filtered and used for the building's greywater requirements; 100% of blackwater is treated by an on-site bioreactor and released into a new feature percolation field and garden. Natural ventilation is assisted by a solar chimney, composed of an operable glazed oculus and an aluminum heatsink, which converts the sun's rays to convection energy. Summer sun shines on darker surfaces to enhance ventilation further. Located in the centre of the atrium, and exactly at the centre of all the building's various radiating geometry, the solar chimney highlights the role of sustainablility by form and function.

VANDUSEN BOTANICAL GARDEN VISITOR CENTRE /

VANDUSEN BOTANICAL GARDEN VISITOR CENTRE /

PROJECT DETAILS

PROJECT VanDusen Botanical Garden Visitor Centre
LOCATION 5151 Oak Street, Vancouver, BC
CLIENT Vancouver Parks Board
DESIGN 2007 - 2008
CONSTRUCTION 2009 - 2011

TECHNICAL DETAILS

SIZE Building Area: 19,483 SF (1,810 SM)
Project Area: 17,000 SM (183,000 SF)
CONSTRUCTION COST
Project Budget: $21.9 million CAD
Construction Budget: $14.4 million CAD

DESIGN TEAM

Perkins+Will (formerly Busby Perkins+Will):
Principal Design Team: Peter Busby; Paul Cowcher; Robin Glover; Harley Grusko; Jim Huffman; Penny Martyn; Supporting Team: Chessa Adsit-Morris; Aneta Chmiel; Robert Drew; Benjamin Engle-Folchert; Jacqueline Ho; Rebecca Holt; Ellen Lee; Matthieu Lemay; Joanna Peacock; Max Richter; Sören Schou

CONSULTANTS

General Contractor: Ledcor Construction
Structural Engineer: Fast + Epp
Mechanical Engineer: Integral Group (Cobalt Engineering)
Electrical Engineer: Integral Group (Cobalt Engineering)
Civil Engineer: R.F. Binnie & Associate
Code Consultant: B.R. Thorson Ltd.
Cost Consultant: BTY Group
Envelope Consultant: Morrison Herschfield
Landscape Architect: Sharp & Diamond Landscape Architecture Inc. with Cornelia Hahn Oberlander
Lighing Design: Total Lighting Solutions
Ecology Consultant: Raincoast Applied Ecology
Acoustical Consultant: BKL Consultants
Commissioning Ageng: KD Engineering

Commissioning Authority: KD Engineering Co.

VANDUSEN BOTANICAL GARDEN VISITOR CENTRE /

ENVIRONMENTAL CONSIDERATIONS

The VanDusen Botanical Garden Visitor Centre is targeting the International Living Future Institute's Living Building Challenge, which promotes the most advanced measurement of sustainability in the built environment possible today.

Sustainable Site

- The building was sited to preserve rare trees, shrubs and other plants in the garden.
- The Centre reverses the trend of land degradation and invites nature's functions into a healthier interface with built and natural systems.
- The surrounding native plant landscape, including the green roof, features bilingual English-Musqueam plant labels and is perfectly adapted to the local climate.

Water Efficiency

- Building and landscape water use comes from captured precipitation, where permitted by building code.
- Blackwater and greywater is treated on site—for the first time in a building in Vancouver in over 45 years.

Energy and Atmosphere

- The building is designed to be net-zero energy on an annual basis.
- Solar hot water tubes (176,000 kWh), PV panels (11,000 kWh) and a geo-exchange system are employed in the energy strategy.

Materials and Resources

- Materials used throughout the Centre have been rigorously researched and documented for material health at all levels of their life cycle.

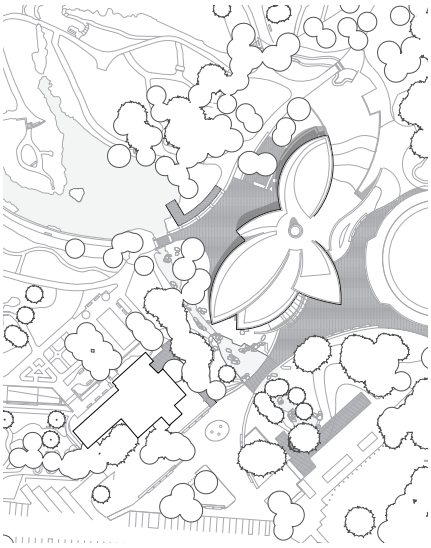
Indoor Environmental Quality

- The design focuses on the major conditions that must be present for a healthy interior environment to occur.

Beauty and Inspiration

- This project contains design features intended solely for human delight and the celebration of culture, spirit and place appropriate to the function of the building

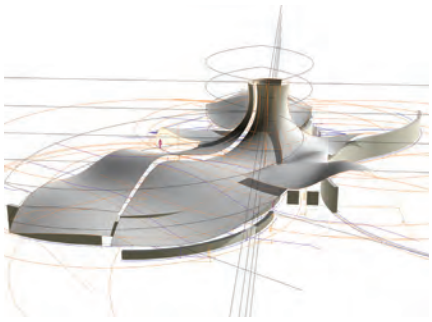
VANDUSEN BOTANICAL GARDEN VISITOR CENTRE /



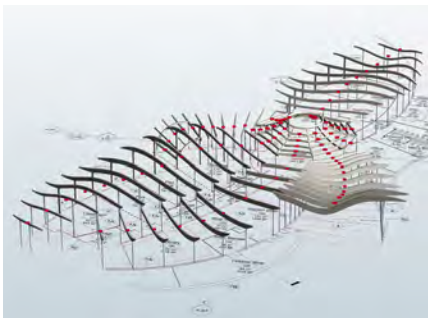
CONTEXT Located at Oak and 37th Street, VanDusen is less than 5 km from downtown Vancouver and is looking to draw visitors from an increased street presence.
PROGRAM The 1,765 SM facility houses a cafe, an expanded library and volunteer facilities, a new garden shop, administration and flexible classroom space.

Only MATERIALS that efficiently utilize resources are used in the project.

An operable GLAZED OCULUS with a solar heat sink allows for passive ventilation.

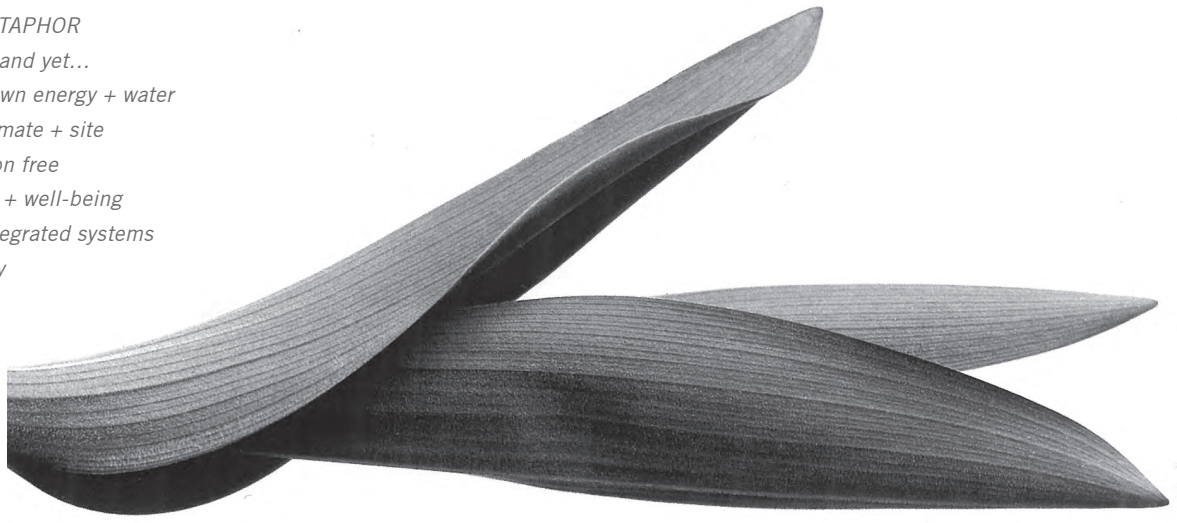


RHINO SOFTWARE was used to design and 3D model the undulating roof forms.



The complex petal ROOF STRUCTURE utilizes a glulam post-and-beam assembly.

FLOWER AS METAPHOR
Rooted in place and yet...
harvests all its own energy + water
is adapted to climate + site
operates pollution free
promotes health + well-being
comprised of integrated systems
embodies beauty



INNOVATION The VanDusen Botanical Garden Visitor Centre is tailored to its stunning natural context, creating a harmonious balance between built and natural landscapes and demonstrating the positive co-evolution of natural and human systems.

The petal-shaped green roofs contain native planting that encourages use by local fauna, butterfly meadows and rainwater collection areas. An extensive water management system includes rainwater, stormwater and blackwater strategies.

VANDUSEN BOTANICAL GARDEN VISITOR CENTRE /

UNIVERSITY OF BRITISH COLUMBIA
CENTRE FOR INTERACTIVE RESEARCH ON SUSTAINABILITY (CIRS)

LOCATION Vancouver, BC
COMPLETION DATE August 2011
CONSTRUCTION COST $23 million CAD
SIZE 5,675 sm (61,085 sf)
SUSTAINABILITY TARGETS:
Living Building Challenge Preliminary Certification
LEED® New Construction v 1.0 Platinum Certified

AWARDS
2012, AIBC Innovation Award,

2012, Canadian Geographic named John Robinson Environmental Scientist of the Year

2012, GLOBE Awards for Environmental Excellence, Excellence in Urban Sustainability Finalist

2011 & 2012, Treehugger Best of Green: Best Office or Commercial Design & Reader's Choice Winner.

Located on a dense site at the University of British Columbia, CIRS houses 200 researchers from private, public and non-government organization sectors, who work together under a common mission: to accelerate sustainability. Including lab space, academic offices, meeting rooms and social spaces, CIRS is organized around two four-storey wings, linked by an atrium that serves as a building lobby, entry to a daylit 450-seat auditorium and 'social condenser' space.

Exceeding LEED Platinum status, CIRS was designed to put sustainable systems on display and to be 'net positive' in seven different ways—net-positive energy; structural carbon neutrality; operational carbon; net-zero water; turning passive occupants into active inhabitants; promoting health and productivity; and promoting happiness. This 'living building' harvests sunlight, captures waste heat from a nearby building, and exchanges heating and cooling with the ground—and returns 600-megawatt-hours of surplus energy back to campus annually. CIRS collects rainwater for potable use and purifies wastewater in an on-site solar aquatics biofiltration system. More than a building, CIRS is a research tool that demonstrates the possibilities in sustainable design, serving as a catalyst for change.

CENTRE FOR INTERACTIVE RESEARCH ON SUSTAINABILITY (CIRS) /

CENTRE FOR INTERACTIVE RESEARCH ON SUSTAINABILITY (CIRS) /

CENTRE FOR INTERACTIVE RESEARCH ON SUSTAINABILITY (CIRS) /

PROJECT DETAILS

PROJECT Centre for Interactive Research on Sustainability
LOCATION Vancouver, British Columbia
CLIENT University of British Columbia
DESIGN 2008-2009
CONSTRUCTION 2009-2011
COMPLETION August 30, 2011

TECHNICAL DETAILS

SIZE Gross Area: 5,675 sm (61,085 sf)
CONSTRUCTION COST $23 million CAD

DESIGN TEAM

Perkins+Will (formerly Busby Perkins+Will):
Principal Design Team:
P. Busby, M. Cocivera, S. Garon, B. Gasmena, J. Grävenstein, H. Lai, M. Nielsen, B. McCarry, Z. Smith
Supporting Team:
C. Adsit-Morris, C. Blackman, L. Cavallin, I. Chan, W. Dahl, J. Deutscher, J. Doble, R. Drew, B. Engle-Folchert, B. Greig, R. Holt, J. Huffman, I. Illic, H. Kao, T. Miller, S. Moran, A. Pilon, R. Rheaume, M. Richter, S. Schou, N. Shuttleworth, R. Sun, K. Wardle
Project Manager
Alberto Cayuela, P.Eng. PMP, University of British Columbia

CONSULTANTS

Construction Management: Heatherbrae Construction
Structural Engineer: Fast + Epp
Mechanical Engineer: Stantec
Electrical Engineer: Stantec
Landscape Architect: PWL Partnership
Civil Engineer: Core Group Consultants
Geotechnical Consultant: Trow Associates Inc
Interior Design: Perkins+Will Canada
Building Envelope: Morrison Hershfield Limited
Code Consultant: LMDG Building Code Consultants
Acoustic Consultant: BKL Consultants
Quantity Surveyor: Spiegel Skillen
Audio Visual Consultant: MC Squared System Group
Furniture, Fixtures and Equipment: Haworth
Owner Representative: UBC Properties Trust
Wastewater Consultant: Eco-Tek Ecological Technologies
Rainwater Consultant: NovaTec Consultants
Photographer: Martin Tessler

WINDMILL WEST, VANCITY ENTERPRISES
DOCKSIDE GREEN, BALANCE

LOCATION Victoria, BC
COMPLETION DATE May 2009
SIZE 14,420 SM (155,215 SF)
LEED® New Construction v 1.0
Platinum Certified
Multi-unit Residential Building
FSR 3.46

Building on their successful completion of Phase 1 Synergy, Perkins+Will designs Balance, the second phase of Dockside Green, one of the first carbon neutral developments in the world.

In 2009, Perkins+Will completed the second phase of Dockside Green, "Balance." Also in 2009, the development was named one of the first carbon neutral projects by the Clinton Climate Development Initiative. Comprised of two buildings of 10 and 11 storeys, Balance includes 177 residential units, a common underground parking structure, and townhouses at grade.

Like its sister project Synergy, Balance takes part in Dockside Green's integrated energy system, which includes a biomass gasification plant that converts locally-sourced wood waste into a clean burning gas to produce heat and hot water. The project's many other sustainable features include: on-site wastewater treatment that will save more than more than 200 million litres of water annually; rooftop gardens; a car co-op with Smart Cars; and additional energy-saving features, including Energy Star appliances, heat-recovery ventilations units, low-E double-glazed windows and exterior blinds on the west and south faces of each building. A series of ponds spread throughout Dockside's central greenway also assist in on-site stormwater storage while the greenway itself provides significant public amenity space.

DOCKSIDE GREEN, BALANCE /

DOCKSIDE GREEN, BALANCE /

PROJECT DETAILS

PROJECT Dockside Green Phase 2 Balance
LOCATION Victoria, BC
CLIENT Windmill West, VanCity Enterprises
DESIGN 2005 - 2006
CONSTRUCTION 2007 - 2009

TECHNICAL DETAILS

SIZE Site Area: 1.01 acres - 4,101 SM (44,131 SF); Building size: 14,420 SM (155,215 SF)
UNITS Residential: 177 units
CONSTRUCTION COST $35 million CAD
FSR 3.46

DESIGN TEAM

Perkins+Will (formerly Busby Perkins+Will):
P. Busby, R. Drew, M. Driedger, J. Huffman, R. Maas, K. Wardle (Vancouver office); E. Berglund, P. Cowcher, A. Fawkes, C. Foyd, P. Johannknecht, T. Judge, S. Patterson, D. Harris, G. Underhill, T. Williams (Victoria office)

CONSULTANTS

Structural Engineer: Read Jones Christoffersen
Mechanical Engineer: Stantec
Electrical Engineer: Stantec
Civil Engineer: Worley Parsons Komex
Civil Engineer: RCL Consulting
Ecology/Stormwater: Aqua-Tex Scientific Consulting
Green Building: BuildGreen Consulting
Cost Consultant: Payne Group
Landscape Architects: PWL Partnership
Environmental Soils: Quantum Environmental Remediation
Surveyor: Focus Group
Geotechnical Consultant: C.N. Ryzuk & Associates
Traffic Consultant: Boulevard Transportation Group
Contractor: Farmer Constructors Inc
Interior Designers: False Creek Design
Code Consultant: Gage-Babcock & Associates
Envelope Consultant: Morrison Hershfield
Green Building Consultant: BuildGreen Consulting

DOCKSIDE GREEN, BALANCE /

ENVIRONMENTAL CONSIDERATIONS

Sustainable Site

- Erosion and sedimentation control plan was developed
- Site is on former industrial land
- Provides a site density of over 23,000 SM/HA and is located within 800 meters of area amenities
- Easy walking distance to public transportation
- Bicycle storage and change rooms are provided
- Two hybrid and alternative fuel vehicles are provided
- Has a 29% reduction in parking requirements
- Restores open space through use of green roofs
- Total site area restored is 184,697 SF and 53% of the remaining site area, excluding the building footprint
- Rainwater management visibly demonstrates rainfall capture on buildings and the flow from the buildings to the central waterway and then to the harbour
- Rainwater harvesting is used for site irrigation
- Approximately 90% of all parking is underground
- Combines green roofs with high-albedo roofing materials for 76% of roof surfaces

Indoor Environmental Quality

- Meets the requirements of ASHRAE 62-2001
- Smoke-free in all common areas of the building
- Monitors carbon dioxide
- Follows a stringent IAQ plan and testing
- Uses low-VOC adhesives, paints, coatings and sealants in addition to low•emitting carpet and urea-formaldehyde-free composite wood products
- Uses operable windows, temperature and lighting controls
- In compliance with ASHRAE 55-2004
- Provides daylight for 99% of regularly occupied spaces and views for 97% of spaces

Water Efficiency

- No municipal potable water is used for irrigation; rainwater and reclaimed site blackwater is used instead
- 100% of all sewage is treated on-site at the Waste Water Treatment Facility (WWTF)
- Water is reused for toilet flushing, green roof irrigation and to replenish the waterway and pond features
- Achieves a 67% reduction in potable water use over baseline by using dual flush toilets, low-flow sinks and showers, and by providing greywater from the WWTF

Energy and Atmosphere

- Synergy uses a central renewable district energy system
- There is no CFC-based refrigerants in the HVAC&R systems and no use of halons in the fire suppression equipment
- Dockside includes an on•site biomass gasification system that utilizes waste wood to heat all building for space and domestic hot water heating
- Green Power purchased for Synergy
- 85% energy reduction on a residential building of similar size and features

Materials and Resources

- Synergy incorporates easily accessible recycling
- Achieves a 96.02% waste diversion rate
- Achieves an average of 17.08% recycled content in the building materials
- Achieves an average of 23.9% local/regional materials
- Dockside incorporates renewable materials

Innovation and Design Process

- Implements a Green Housekeeping Plan; developer provided six months of eco-certified cleaning products
- Green Guidelines and product literature are handed out
- Offers site tours and on-site signage

LAURENTIAN UNIVERSITY
VALE LIVING WITH LAKES CENTRE

LOCATION Sudbury, ON
COMPLETION DATE 2011
CONSTRUCTION COST $15.7 million CAD
SIZE 2,643 sm (28,441 sf)
LEED® New Construction v 1.0 Platinum Certified

AWARDS

2012, Wood WORKS! Ontario Green Building Wood Design Award

2012, Canadian Consulting Engineers (CCE) Award of Excellence Building Category

2008, Holcim Award for Sustainable Construction, Bronze Award

The Vale Living with Lakes Centre (LLC) for Applied Research in Environmental Restoration and Sustainability is located beside Lake Ramsey, Sudbury's drinking water reservoir. With its history of environmental damage caused primarily by mining smelters, and its location at the centre of more than a million lakes of the Boreal Shield ecozone, Sudbury is the ideal location for an environmentally advanced building that works towards rehabilitating its surroundings.

For the first time, internationally recognized scientists with expertise in protecting and restoring damaged ecosystems worked with a design team to create a facility that not only minimizes its ecological footprint but also assists in the restoration of ecosystems, all while providing a working environment conducive to collaborative research.

Occupied by Laurentian University's Science Communication graduate program, the Ontario Ministry of Natural Resources, and the Ontario Ministry of the Environment, the LLC includes offices, three multimedia rooms, and 600 sm of open area research wet lab, as well as a watershed research facility.

With climate change a focus of the LLC's research, the building is also designed to adapt to a 2050 climate. Some of the design features that address energy and water conservation include: green roofs to reduce stormwater runoff; a high-performance thermal envelope; a ground source heat pump; hydronic radiant floor heating; passive heating and cooling; solar domestic water heating; stormwater and greywater treatment; permeable paving for driveways and parking lots; natural daylighting; energy-efficient lighting and appliances; smart building systems; and the use of non-toxic materials. Furthermore, the LLC is instrumented to monitor the effectiveness of these strategies. Results are conveyed through web-based media and interpretive exhibits at Science North, Sudbury's internationally renowned science centre.

VALE LIVING WITH LAKES CENTRE /

Demonstrating Laurentian University's core values of environmental stewardship, the Vale Living with Lakes Centre is LEED Platinum certified and is designed to be adaptable to a 2050 climate.

ENVIRONMENTAL INITIATIVES

Sustainable Site

- Minimizes the ecological footprint and assists in the rehabilitation of its surroundings
- Restores the local site and water ecology
- Has a positive net environmental impact (measured before and after construction)

Energy and Atmosphere

- Designed to be adaptable to a projected 2050 climate
- Designed to operate at 77% below the MNECB and be one of the most energy-efficient buildings in Canada
- Features demonstration sustainable building technologies, such as geo-exchange heating and cooling, a biomass powered boiler, solar evacuated hot water heating and green roofs

Water Efficiency

- Designed to utilize the water falling on the building and site
- Design includes an on-site rainwater treatment system, low-flow toilets and waterless urinals

Materials and Resources

- Seeks to eliminate the use of materials identified on the Living Building Challenge Red List
- FSC wood used for a minimum 50% of wood by cost
- Steel trusses for on-site bridge salvaged from the local nickel mine; existing granite boulders and stone terrace salvaged and reused
- Extensive use of Manitoulin Island limestone building and paving materials help neutralize the acid by-product of the area's smelting process and the stormwater runoff
- Specified materials sourced within the designed radius outlined in the LEED guidelines
- More than 75% construction waste recycled and diverted from local landfills

Indoor Environmental Quality

- Design allows 100% of the workspaces to be naturally daylit and ventilated
- Project includes healthy and zero- or low-emitting finishes
- Building performance monitored to provide a high-quality work environment with low operating costs, demonstrating long-term sustainability

VALE LIVING WITH LAKES CENTRE /

PROJECT DETAILS

PROJECT Vale Living with Lakes Centre
LOCATION 935 Ramsey Lake Rd, Greater Sudbury, ON P3E 2C6
CLIENT Laurentian University
DESIGN 2006 -2009
CONSTRUCTION 2009-2011

TECHNICAL DETAILS

SIZE Site Area: 40,934 sm (440,610 sf)
Project Area: 2,643 sm (28,441 sf)
Main Building Area: 2,125 sm (22,865 sf)
Watershed Building Area: 518 sm (5,576 sf)
Lab Space: 600 sm (6,460 sf)
Office Space: 350 sm (3,770 sf)
HEIGHT 2 storeys
CONSTRUCTION COST $15.7 million CAD

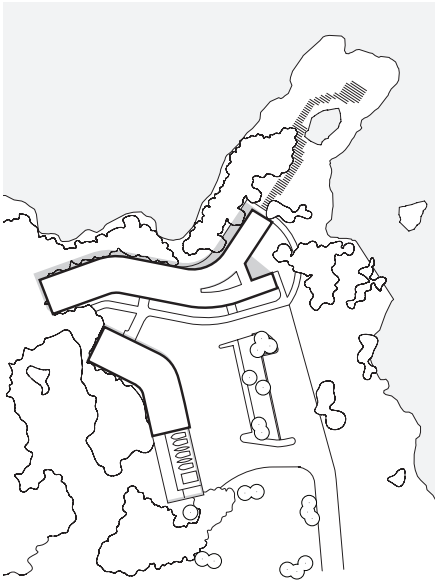
DESIGN TEAM

Perkins+Will (formerly Busby Perkins+Will):
P. Busby, N. Shuttleworth, B. Wakelin
In joint venture with J.L. Richards & Associates Limited

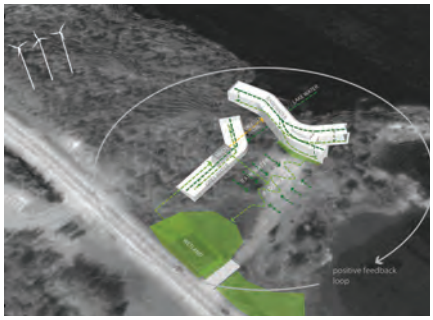
CONSULTANTS

Structural Engineer: Fast + Epp / J.L. Richards
Mechanical Engineer: Stantec Engineering / J.L. Richards
Electrical Engineer: K.L. Engineering
Civil Architect: J.L. Richards

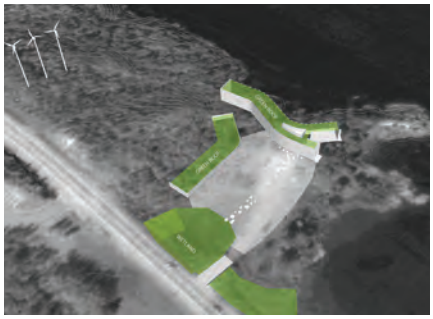
VALE LIVING WITH LAKES CENTRE /



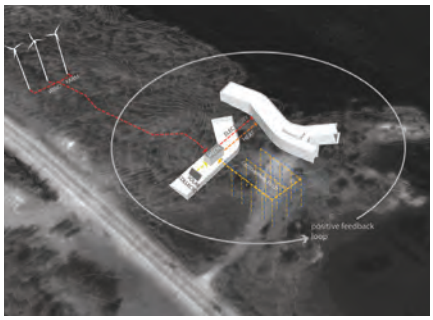
CONTEXT Located beside Lake Ramsey, Sudbury's drinking water reservoir.
PROGRAM The Centre includes offices, labs, multi-purpose lecture facilities and a watershed research facility.



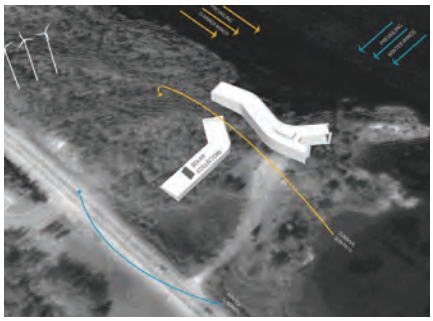
RAINWATER from the building and site is filtered and used for flushing toilets and cleaning field study equipment.



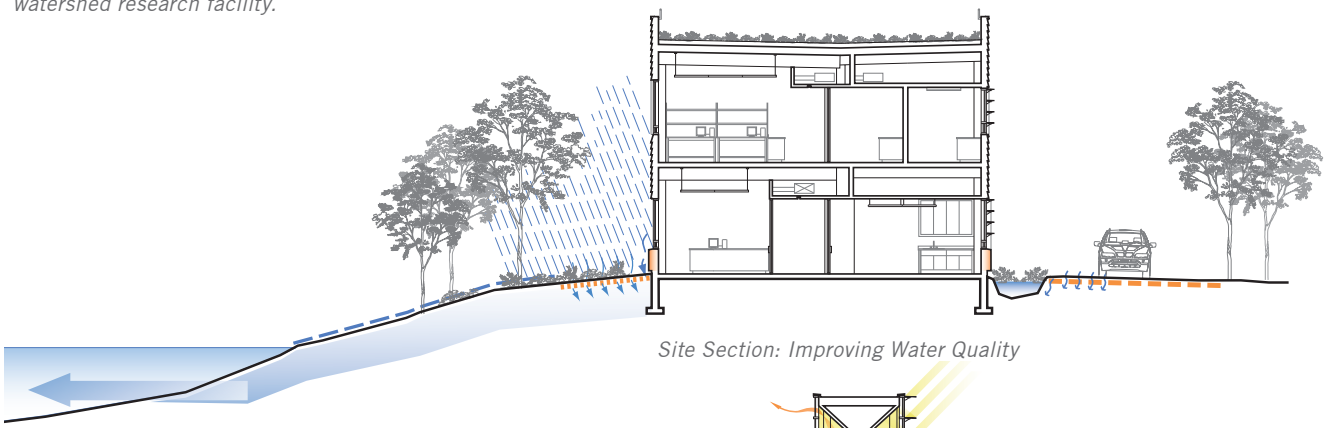
The use of Manitoulin Island limestone and permeable pavers help neutralize ACIDIC stormwater runoff.



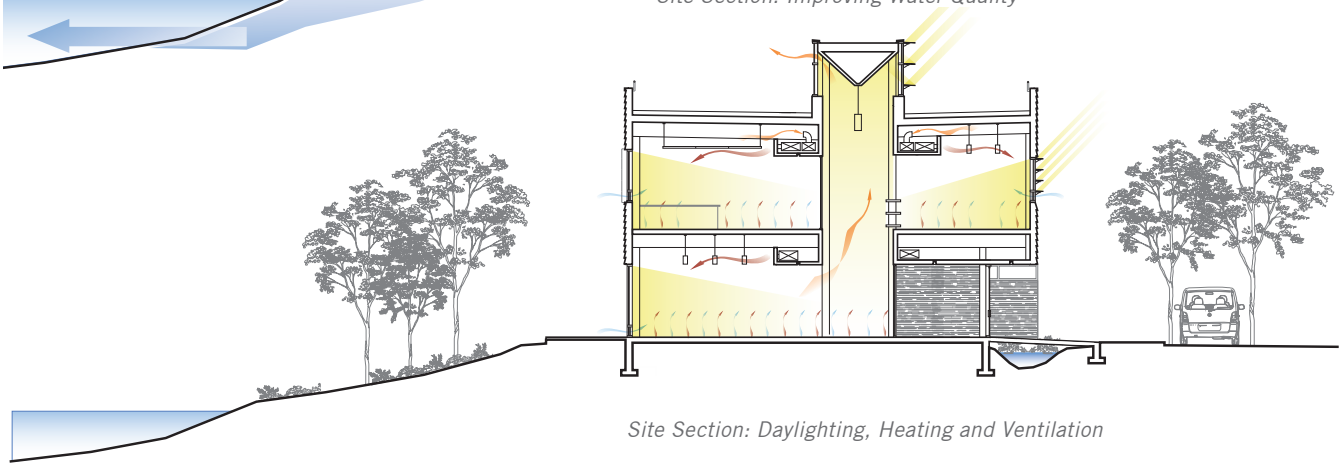
A GEO-EXCHANGE field with ground source heat pumps achieve a 77% energy reduction.



An east-west ORIENTATION reduces summer solar gain but allows for passive heating.



Site Section: Improving Water Quality



Site Section: Daylighting, Heating and Ventilation

INNOVATION Through the use of passive systems and renewable energy available today, the Living with Lakes Centre has detached itself from the economic burdens of increasing fossil fuel prices to ensure operational sustainability.

Eventually, with the incorporation of increasingly economical renewable energies, as well as design strategies that adapt to a 2050 climate, the Living with Lakes Centre could become a carbon-neutral, net-energy producer.

Vale Living with Lakes Centre
Laurentian University, Sudbury, ON

"A great piece of architecture that also works for the user and exceeds our expectations."

ELIZABETH BAMBERGER
BUSINESS MANAGER BIOLOGY DEPARTMENT
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CITY OF EDMONTON
BLATCHFORD REDEVELOPMENT (EDMONTON CITY CENTRE)

LOCATION Edmonton, AB
COMPLETION DATE 2011
SIZE 215 hectares (600 acres)

AWARDS
2011, WAN (World Architecture News) Urban Design Awards, Long List

2011, City of Edmonton, Edmonton Urban Design Awards, Implemented Design Master Plan, Award of Merit

The Edmonton's Blatchford Redevelopment creates a sustainable community focused on providing strong and prosperous connections.

The winner in an international design competition, Perkins+Will's master plan for the redevelopment of Edmonton's airport lands repairs a 215-hectare rift in the city's urban fabric and creates a truly memorable place for Edmontonians. The plan—called 'Connecticity'—creates a world-class sustainable community for 30,000 residents and pursues four strands of connectedness, each embodying key sustainability principles.

Cultural Sustainability: Connecting to Site History—Embedding the site's past in its future, the plan repurposes historical airport features as new community amenities and reuses runways as organizing elements.

Ecological Sustainability: Connecting to Nature—Preserving more than half the land as green space, the plan includes a destination park that acts as a regional draw; neighbourhood-scaled open spaces at the park perimeter extend into the city to knit together now-disparate communities.

Social Sustainability: Connecting Communities—The plan extends the surrounding pattern of streets through new neighbourhoods to connect future and current residents. A new LRT line will connect the site to more distant neighbourhoods and provide easy access to downtown.

Economic Sustainability: Connecting to Growth Catalysts—The proposal fosters economic vitality, not only by creating a deeply mixed-use community, but by connecting to the growth potential of four major existing catalysts: a planned LRT line; the Northern Alberta Institute of Technology; a new rehabilitation hospital; and Kingsway Gardens Mall, a vibrant retail area that will extend into the site's new Town Centre.

Finally, an innovative energy strategy reduces carbon emissions from the community by 3.2 million tonnes over 20 years. Energy produced through biomass and deep geothermal sources will create enough electricity to fully meet the development's needs. Surplus energy will be sold to public buildings in the area, resulting in a 'beyond carbon neutral' community.

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DESIGN TEAM

Peter Busby – Managing Director
Martin Nielsen – Principal-in-Charge
Joyce Drohan – Project Manager, Urban Design Lead
Achim Charisius – Intermediate Designer
Blair McCarry – Energy Strategist

CONSULTANTS

Community Planning Consultant
Joseph Hruda and Dan Daszkowski
Civitas Urban Design and Planning, Vancouver

The Design Team also worked in collaboration with the following expert consultants:

Landscape Architects
Chris Phillips
Phillips Farevaag Smallenberg, Vancouver

Mechanical and Electrical Engineer
Cobalt Engineering LLP

Sustainable Building Design
Archineers

Land Economics
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PERKINS+WILL