

LEED®-NC Gold Certified

Owner:

Simcoe Country District School Board

Architect:

Ted Handy and Associates

**LEED Consultant,
Energy Engineer,
Green Education
Program Design:**

Enermodal Engineering Ltd.

**Mechanical/Electrical
Engineers:**

Smith and Andersen
Consulting Engineering

Civil Engineer:

Greenland Ltd.

Commissioning Agent:

CFMS Inc.

Cost Consultant:

Curran McCabe Ravindran
Ross Inc.

Contractor:

Percon Construction Inc.

Mundy's Bay Public School

Midland, Ontario



PHOTO CREDIT ENERMODAL ENGINEERING

Simcoe County District School Board is committed to demonstrating sound environmental principles in its daily activities, decision making, and future planning. The decision to pursue certification under the LEED rating system is one demonstration of these principles.

Mundy's Bay Public School is a 4,800 m², two-storey brick school serving students in from kindergarten to grade 8. In addition to classrooms, library, gymnasium and meeting/staff rooms, the school has extensive open space for sports facilities and play.

Energy-conserving Building Design

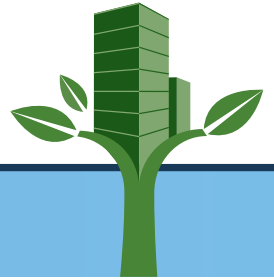
Mundy's Bay Public School has many energy-conserving features:

- a well-insulated walls and roof
- high performance windows that reduce heat transfer
- a heat pump system that uses the earth's temperature to heat and cool the school
- a heat recovery system that uses heat in building exhaust air to pre-heat or pre-cool in-coming air
- occupancy sensors that reduce ventilation in spaces that are not in use (to save energy) and increase ventilation when spaces are in use (to ensure optimum air quality)
- light sensors that dim or shut off lights when daylight levels are sufficient
- a building commissioning program
- a long-term building energy monitoring plan

Natural Lighting and Good Air Quality for Healthy Learning

The school design team paid special attention to indoor air quality so that students and staff enjoy exceptional learning and working conditions. During construction, every effort was made to prevent the contamination of indoor air and interior materials by pollutants associated with construction. After building construction, testing confirmed that the indoor air was of high quality.

Materials such as paints, sealants, adhesives, and carpeting were selected to be non-polluting (that is, they will not off-gas volatile organic compounds—VOCs).



Indoor sources of pollutants, such as janitorial closets, have separate ventilation systems.

Mundy's Bay Public School is designed for abundant natural daylighting and views to the outdoors, because studies show that both students and staff are healthier when daylight is provided. Daylighting also reduces energy use because lighting can be dimmed or turned off by daylighting sensors when natural light levels are sufficient. Operable windows allow occupants control over outdoor air ventilation and temperature.

Doing More with Less

Resource conservation starts with reducing the amount of new products and materials used to construct and furnish buildings. At this school, many materials from local, deconstructed schools (including the original Mundy's Bay school edifice) were re-used: fireplaces, brick, banisters, and classroom doors, to name a few examples.

A construction waste management plan diverted 95% of construction waste from landfill to recycling facilities.

About 17% of the school's construction materials have high recycled content, and these include concrete, steel, and drywall.

When construction materials are locally sourced, fuel used to transport materials is conserved, the local economy benefits. About 29% of construction materials are from within 800 km of the building site. These materials include concrete, asphalt, and rubber flooring.

Water Conservation a Top Priority

Mundy Bay Public School is designed to save water. Outdoors, drought-resistant landscaping plants eliminate the need for an irrigation system.

At this school, rainwater falling on the school roof is stored in a cistern and used for toilet flushing. Low-flow fixtures are used throughout the facility. This saves about 2.2 million litres of potable water yearly, or an indoor water savings of about 66%.

Site Planning to Reduce Off-Site Impacts

The school's site plan has many features designed to improve environmental quality on-site and in the area:

- a stormwater management pond reduces water run-off after a storm and allows pollutants to settle out of stormwater instead of entering local streams
- extensive open space with naturalized vegetation that allows rainwater to percolate into the soil
- a night-sky friendly lighting plan
- an erosion and sedimentation plan was implemented during construction to protect water quality in local water bodies

For more information, contact
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