

**Architect:**  
Rebanks Pepper Littlewood  
+ Shoalts and Zaback

**LEED Consultant:**  
Enermodal Engineering

**Mechanical/Electrical  
Engineer:**  
MCW Consultants

**Site/Civil Engineer:**  
Josselyn Engineering Inc.

**Structural Engineer:**  
Roney Engineering Ltd.

**Landscape Architect:**  
Scott Wentworth Group Ltd.

**General Contractor:**  
M. Sullivan & Son Ltd.

## Kingston Police Headquarters

Kingston, Ontario



PHOTO CREDIT WAYNE HEBERT

The new Kingston Police Headquarters represents a unique step forward in the design of police facilities, as it incorporates conventional security considerations with “green” building design. The headquarters successfully expresses a commitment to environmental stewardship shared by the Kingston Police, the Kingston Police Services Board, and the City of Kingston.

In addition to meeting the requirements of LEED GOLD, the design team adhered to four key guiding principles: Reduce, Reuse, Recycle, and Rethink.

The headquarters is a two-storey, 11,000 m<sup>2</sup> facility that houses offices and training facilities, forensic laboratories, vehicle maintenance facilities, detention facilities, and staff support rooms.

### Good Neighbour Policy Improves the Environment

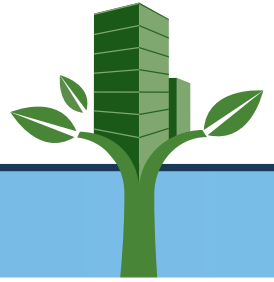
An early commitment to “being a good neighbour” led to many environmentally-aware decisions. It was decided to rehabilitate a site with existing contaminated soils. Some soil was moved to a storage area underneath the parking lot, separated from surrounding areas by an impervious clay cap. Other soil was removed to a soil remediation facility.

A “night-sky friendly” landscaping plan includes exterior lighting that does not “spill” light onto adjacent properties or upwards into the night sky.

The Kingston Police Headquarters includes over 7500 m<sup>2</sup> permanently devoted to landscaped open space that provides pleasant surroundings for building occupants and neighbours; improves air quality; allows rainwater to infiltrate the ground; and provides wildlife habitat.

### Efficient Resource Use

A stringent waste management plan diverted over 93% of the construction waste from landfill. This material—gypsum board, concrete, steel, and cardboard—was sent to a variety of recycling facilities.



The building design team made extensive use of recycled materials. Over 15% of the materials in the headquarters, by cost, are from recycled sources. These materials include concrete, steel, insulation, ceiling tiles, asphalt, gypsum board, and wood doors.

### **Energy Conservation Guides Building Design**

The Kingston Police Headquarters will achieve a 53% reduction in energy use. The building design team approached energy issues by first conserving as much energy as possible and then meeting the remaining energy demand with the most efficient methods possible. To conserve energy, the building has a well-insulated envelope and high performance windows. Occupancy and daylighting sensors ensure that ventilation and lighting operate only when required. Mechanical equipment includes high-efficiency condensing boilers and air handling units with a free cooling mode. Heat recovery units recover heat from building air before it is exhausted to the outdoors.

The Kingston Police have committed to a detailed monitoring program during the building's first year in operation. Monitored results will be displayed on an interactive computer kiosk that is part of a green education program.

### **Rainwater Cistern and Water-Conserving Landscaping**

The Kingston Police Headquarters was designed to save significant amounts of water—a 71% reduction in indoor water use and an 82% reduction in the water used for sewage conveyance. A rainwater cistern stores non-potable water for use in toilet flushing. The cistern and water-conserving plumbing fixtures at the Kingston Police Headquarters save close to 2 million litres of potable water annually.

### **Designing for Resource Conservation and Healthy Indoor Air**

The Forest Stewardship Council (FSC) certifies wood that is grown and harvested in accordance with the highest standards of resource conservation. FSC-certified materials in the Kingston Police Headquarters include MDF (medium density fibreboard), melamine-faced MDF, and plywood.

In addition to resource conservation, the selection of materials was guided by the need to protect indoor air quality for construction workers and building occupants. Thus, paints, coatings, sealants, and adhesives do not off-gas toxic amounts of volatile organic compounds (VOCs). All carpeting is certified as Green Label, all composite wood is free of added urea-formaldehyde and all furniture is GREENGUARD.

### **For more information,**

Contact Enermodal Engineering, [info@enermodal.com](mailto:info@enermodal.com)