



**YMCA CAMP KI-WA-Y ENVIRONMENTAL EARTH RESIDENCE: ST. CLEMENTS, ONTARIO**



**Firm's Role**

Sustainable Design Consulting and Mechanical Engineering

**Description**

The Earth Residence, a 350 m<sup>2</sup> (3700 ft<sup>2</sup>) 40-person residence for the Kitchener-Waterloo YMCA Environmental Learning Centre, embodies sustainability principles to support the client's commitment to environmental values, knowledge, and practice.

**Features**

- Earth bermed
- Off-grid 100% renewable energy supply using wood (14 kW masonry heater), solar, thermal, photovoltaics, wind, and human powered bicycle generators
- Highly insulated with super windows, earth sheltering and passive heat recovery ventilation
- Good thermal comfort and air quality without furnace, air conditioner or power
- Daylighting during the day, high efficiency fluorescent lamps and LED exit lights
- Composting toilets and Waterloo Biofilter for greywater recover nutrients and provide high quality effluent at low volumes
- Recycled construction materials, 95% recycled wood including beams, interior and exterior wood siding, window frames and carpeting from recycled PET soda bottles

**Architect:** Charles Simon Architect

**Owner:** YMCA

- Canadian Wood Council Design Award 1997