



KETCHUM RESIDENCE



Firm's Role

Sustainable Design and Engineering

Description

The Ketchum residence, located in south-central Ontario, about 60 kilometres northwest of Toronto, is off-grid and functions on 100% sustainable energy. Sustainable EDGE Ltd. designed the Ketchum residence in response to the clients' desire for an ecologically responsible house in a country setting. Without heating, the temperature of the house never falls below 10°C.

Features

- Built into a steep slope with north and east sides having two stories below grade
- Structural wall built using woodchip-cement blocks (Durisol) reinforced with concrete filled cores
- 4" rigid mineral wool (Roxul) on outside to provide additional drainage and insulation
- South and west walls double-framed with mineral wool batt (R40 insulation)
- Ceilings constructed of concrete-metal-pan composite for enhanced mass
- Windows are triple-glazed with argon gas fill, fibreglass frames and insulated edge spacer
- Heat recovery ventilator (65% effectiveness) with high efficiency, low energy fans
- Fresh air supply preheated by ground tube in north bermed wall to avoid frosting of HRV
- Masonry contra-flow wood heater with built-in bake oven, hot water heating coil, and cook stove
- Solar absorbers beneath skylights
- Composting toilet and indoor greywater treatment growing bed

Designer: Sustainable EDGE Ltd.

Owners: Anthony & Mary Ketchum

- North Eastern Sustainable Energy Association (NESEA) Award