

Inchcape Honda, Romford

The Japanese car manufacturer Honda has opened its first “eco” car showroom in Romford, Essex. It is notoriously difficult to conserve energy in car showrooms due to their large glazed areas. This new eco showroom has planned to reduce energy costs by 30% compared to other showrooms of a similar size. To achieve this, they plan not to use traditional high energy cooling systems and introduce solar panels and our ground source heat pump to provide heating, with secondary cooling in the summer months.

The innovative approach to air conditioning is the introduction of low level ventilation louvres at the base of the building and ventilation terminals on the roof. This allows the air to circulate throughout the building. In the summer months the heat pump can be switched to cooling to aid the natural ventilation.

Rainwater is also collected and stored in an underground tank to be used for toilet flushing. The water is also given UV treatment so that it is clean enough to wash the cars.

The ground source heating system comprises of 9 separate borehole ground loops at 75 metres deep, which are connected to a closed loop, water-to-water heat pump. One heat pump is used to provide the energy for the heating and cooling of the project. To avoid any major disruption to the surrounding grounds the boreholes were drilled underneath the car park of the project. The distribution system used is underfloor for heating and cooling.

The EarthEnergy system characteristically has a very long life, requires no routine annual maintenance and reduces CO₂ emissions by 40 – 60%, when compared with a traditional heating or cooling system.



Ground loop Type	9nr boreholes
Heat Pump size	80 kW Heating 85 kW Cooling
Distribution System	Underfloor
Client	Honda
Commissioned	August 2008

