

Renewable Energy and Environmentally Sustainable Design Case Studies

St Leonard's College Sustainable Living Centre

Site: Cornish Campus, Riverend Road, Bangholme

Dates:

- Design Phase Commencement: June 2005
- System Commissioned: July 2006

Client: FMSA Architects, North Melbourne; Cundall Johnston & Partners Pty Ltd, Melbourne.

Project Goals:

- ◆ Design and install of 1.2kW PV grid connect system on exterior of solar chimney.
- ◆ Design and install of 1kW Wind energy grid connect system.
- ◆ Design and install of solar hydronic heating system.
- ◆ Design and install of weather monitoring system and data logging of output of PV and wind systems.

Project Features:

This project involved extensive liaison between Going Solar and the Clients regarding the design and installation of renewable energy technologies for the new Sustainable Living Centre at St Leonards College.

Systems included:

- Eight 160W Schott Solar panels mounted to the exterior of the solar chimney and connected to the grid via a Sunny Boy SB1100 inverter.
- A Whisper 200 1kW wind turbine installed to the west side of the centre and connected to the grid via a Sunny Boy SB1700 inverter.
- Solar hydronic heating system included 20m² of evacuated solar tube collectors and mounted at roof pitch on a cyclone framing system. A 1600L copper open vented stainless steel storage tank with clorofier coils to provide hydronic heating and possible future connection to domestic hot water circuits.

Project Team:

- Haydn Fletcher, Project Manager, Going Solar
- Warwick Johnston, Project Engineer, Going Solar
- Steve Cook, Accredited Installer
- Rory Fort, Solar Hydronic Heating Plumber

Further Information:

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View of Solar Chimneys and Wind Turbine



Eight 160W mounted to top of Solar Chimney



1kW Whisper Wind Turbine