



## Case Study: Solar Hot Water Sunbury Aquatic Centre

This project, designed and installed by The Environment Shop, provides over 2000 litres of hot water per day for the Sunbury Aquatic Centre. The system makes use of state of the art Evacuated Tube solar water heaters capable of providing hot water throughout the whole year.



The Sunbury Aquatic Centre is located at 20 Ligar Street, Sunbury. Existing facilities were upgraded with additional showers, toilet and change rooms to be constructed on the south side of the existing indoor pool. The new facilities include five showers with *water saving shower heads* and four basins which will be fitted with *flow restrictors*.

### Savings

Energy	~ 35,000 kWh / year
Greenhouse Gas	~ 50 Tonnes / year
Finances	between \$5000 and \$10,000/year

### System Design

This system uses 16 Sunplus CPC 12 tube panels covering a total of 32 square meters. These are plumbed to a ground level 2,000 litre storage tank. Two pumps and a differential temperature controller are used to circulate the water from the panels to the tank. A heat exchange unit located in the storage tank transfers heat from the water circulating through the panels to the water in the storage tank. When drawn from the storage tank it passes through an instantaneous water heater which boosts the temperature if it is not hot enough.

Client: **Hume City Council**  
Location: **Sunbury Aquatic Centre**  
Project Completion:  
Project Value:  
Area: 32m<sup>2</sup>  
Water provided: 2000L/day



This whole system is capable of supplying all the hot water need irrespective of demand, flow and solar conditions. The solar system is capable of supplying at least 60% of annual hot water demand. It will reduce gas costs for the centre by between \$5,000 and \$10,000 per annum.



*Installing the hot water tank, pumps, controller, booster and other components*



### **Solar Collectors**

16 x Sunplus CPC Evacuated Tube Solar Panels.

Collector aperture area = 2 m<sup>2</sup>  
Total aperture area = 32 m<sup>2</sup>.

### **Storage Tank**

200L stainless steel with copper chlorinator coils and side tank.

### **Pump**

2 Wilo pumps and controller.

### **Boosting**

Rinnai HD250E Commercial Instantaneous Gas Water Heater