



## Case Study: Seldown Eco-Village

Client:



Solar Twin Ltd  
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Main Contractor:



Roofing  
Contractor:



The Seldown Eco-village in Poole Dorset is being developed by Western Challenge Housing Group. The original design allowed for solar collection by including roofs at 30 degrees, facing due south, but cost constraints meant that at the tendering stage solar thermal was not included. Shortly before going on site, Solartwin made a presentation to Western Challenge, who were impressed by the simplicity and surprised at the modest cost of Solartwin. They asked for six systems to be installed on the upperfloor of two blocks of one and two bedroomed flats.

### Simple plumbing

We connected the Solartwins directly on to open vented thermal stores, which in a new build situation have a number of advantages.

The Solartwin's will deliver hot water to the top of the the cylinder as would usually be the case with a standard open-vented domestic hot water system.

Solartwin also provides mains pressure hot water at flow rates comparable with combination boilers or unvented cylinders, but without the expense of annual maintenance.

As the water in the cylinder that the panel is circulating is not going out to the taps, we were able to overcome water hardness by treating it with Fernox MB-1 Scale Inhibitor, mixed to 4% of total storage volume.



### Special roof mounting

Solartwin worked closely with the roofing and main contractors to design a bespoke mounting system, which the roofing contractor could integrate into the polymeric roof covering without affecting the integrity of the roof surface. Structural engineer's calculations showed that a Solartwin panel raised 150mm above the roof would produce wind loadings well within the limits of the timber frame and insulation construction.

### Seldown Blocks D & G Renewable Energy Technology Datasheet:

Renewable energy type: Solar thermal  
Application: Domestic hot water  
Number of collectors: 8  
Orientation: South  
Angle of tilt: 30 degrees  
Collector total aperture: 22.4 sqm  
Panel type: freeze-tolerant

Pump type: 24V variable speed  
Power supply: 5 Watt PV cell (x8)  
Calorifiers: 170 litre thermal store (x8)  
Backup fuel: Gas  
Global warming target: save 2000 kg CO<sub>2</sub> p.a.  
Manufactured in: England

