

Eco-refurbishment of two large town houses, Clifton, Bristol

Client: **Footprint Building**

Working with architects [White Design](#) undertook energy modelling using SAP, 2009 to produce predicted EPCs; advised on thermal envelope design; and developed outline specifications for energy systems. Advised on M&E procurement.



Outline Specification	
Walls	internal wood fibre insulation (0.15 W/m ² K)
Windows	double glazed low E, argon, sash windows
Photo Voltaics	2.6kWp PV - Sanyo HIT-240HDE4
Solar Thermal	3m ² Strebel Eltron AS100 DF6 evacuated tubes
Boiler	15 kW Vaillant ecoTEC Plus 615 with weather compensation
Domestic Hot Water Storage	500l twin coil, unvented
Zones and Heat Emitters	Zone definition and under floor heating and radiator sizing
Controls	bespoke web based control and occupant feedback system, developed with Carnego Systems