

# Case Study



**Location:** Aghaghill, Co Antrim  
**Installation date:** January 2006

## Technologies installed:

- Hepworth Underfloor heating
- 16kW, twin compressor, Kensa Heat Pump
- Twin panel Imagination Solar system and 250 litre pressurised system

## The site:

The renewables suite of products is housed within the garage which is no more than 10m from the main dwelling. The garage has a Southerly aspect for the two solar panels, each of which is accompanied by a small photo voltaic panel, used to drive the pump. Slinkies buried in 2m depth trenches, 300mm wide and 40m long. The heat source for the 16kW Kensa heat pump are 4 X 50m slinkies in area behind the garage.



## 16kW Kensa Heat Pump

- Single phase, single compressor heat pump
- Typical power consumption 2kW
- 25 amp rated, 18.7 amp max running current
- Co-efficient of Performance (COP) typically 4



## The Hepworth Underfloor System

- Two manifold system one for living areas and other for bedrooms and bathroom
- Each room individually thermostatically controlled
- Hep20 pipe with Oxygen barrier
- No pipe joins under screed
- Pipe guaranteed for 50 years



## Imagination Solar Drainback Vessel

- The drainback system ensures the system is freeze and overheat protected
- Pump within drainback unit is powered by photovoltaic cells, also on roof
- Linked directly into the solar coil of the 250 litre pressurised, stainless steel, hot water cylinder, with 2 x overheat protectors



## The Imagination Solar Panels

- 5.4 meters squared of flat plate solar system, with 2 x photovoltaic panels
- Each panels weighs only 25Kg
- Connected to drainback unit using 10mm copper
- 3 x 8mm holes through roof felt, flow & return and a PV light sensor to switch system on and off



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## Customer benefits:

- Thermostatically controlled rooms
- Savings on heating bill of approximately £600 per annum
- Lifetime savings of £19,200 (25 years) at today's oil prices (Dec 05)
- Savings on domestic hot water bill of approximately £250 per annum
- No scheduled maintenance
- Significantly reduced carbon emissions
- Grants obtained to value of £2,600

## Testimonial:

"Having installed Hepworth underfloor heating, Kensa heat pump and Imagination solar, the cost of heating our home and having hot water readily available has been a pleasant surprise. The service we received through to installation was excellent"

Michael Johnston,  
LMG Properties



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