

## Ground Source Heat Pump Installation in Mid Wales



This old stone-built Welsh cottage was undergoing a full renovation and conversion to upgrade the property and to conform to the current building regulations. It was to have new double glazed windows and a full insulated roof as well as a complete overhaul of the heating system.

The owners also wanted to explore the possibility of a renewable system for heating and hot water and liked the idea of a **ground source heat pump** coupled with **underfloor heating**.

### The Problem:

WDS Green Energy were contacted and, after various interactions, recommended the installation of a **Dimplex SIK 16 ME ground source heat pump**, with ground loops to utilise the ample land space adjacent to the property.

Heat pumps are ideal for combining with underfloor heating as they are able to operate most efficiently to provide low grade heat which the underfloor heating is able to disperse throughout the property whilst also keeping the slate slab floor comfortable at all times.

### The Solution:

WDS Green Energy were able to provide underfloor heating throughout the lower levels of the property with ease however the ceiling height of the upstairs rooms posed quite a challenge as they were very limited upon height and therefore there was no room under the floor in which to installed heating.

The client proposed the novel idea of installing the heating pipes within the newly constructed partition walls, thus providing a large surface area to allow low grade heating for the newly created rooms without either compromising the ceiling height or requiring the use of radiators.

### The Benefits:

This old Welsh cottage now conforms to the current building regulations and is nice and warm thanks to the **ground source heat pump** and **underfloor heating system** installed by WDS Green Energy.

As well as saving money on their heating bills thanks to the newly insulated nature of the building the heat pump installation itself will entitle the owners to a tariff payment under the Renewable Heat Incentive when it begins in Early 2014 which is guaranteed for seven years and is inflation linked.

