



## Phynson Hayes - Private New Build

### The challenge

Phynson Hayes is an executive new build property set in acres of countryside. The client was not on mains gas and wanted a heating system that would be efficient, kind to the environment and, most importantly, cost effective.

Another important consideration was the ability to give the contract for the heat pump and the heating system to just one company. The client also specified that

he would require full control of the underfloor heating system, allowing for unused areas to be heated to a lesser degree.

### The solution

Retherm looked at the plans for the house and proposed that with the plentiful supply of land, and an excellent standard of insulation in place, the whole project would be ideal for a ground source heat pump.

A three phase electricity supply was available thereby allowing for the use of a large single heat pump .

With many bathrooms and en-suites, a plentiful supply of hot water was needed. The client therefore opted for two 300 litre water tanks.

Retherm designed the underfloor system with a large buffer tank to allow total control of the heating in every room of the house.



### Specification

**Location:**

North Shropshire.

**Heat Pump:**

NIBE Fighter 1330 30kW

**Source:**

1800m MDPE ground collector

**Heat distribution:**

Full underfloor

**Accumulator:**

2 x NIBE VPA 300/200

**Funding:**

Low Carbon Buildings Grant - £1200

### Results

**Running costs prior to installation:**

None -new build property.

**New installation running costs:**

Not available at time of going to press.

All NIBE equipment was supplied by NIBE Energy Systems Ltd, Chestfield, and manufactured by the parent company in Sweden.

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## Perton Cottage - Domestic Installation

### The challenge

The client, a retired couple, were unhappy with the costs and performance of their existing heating system. They had identified one particular room that they would like to use more, but it could not be heated sufficiently to become comfortable and so it remained unused.

The property, a well-insulated, 3 bedroom cottage, used a wet system of radiators, supplied by a small tank heated with LPG

which required to be on every morning and evening.

The desire to be comfortable in their own home was being prohibited by annual heating costs in excess of £5000.

Retherm's brief to cut the costs of the heating and hot water whilst providing a more pleasant living environment was one we enjoyed taking on.



### The solution

Retherm carried out a technical survey of the property and due to the lack of available ground discounted a ground source heat pump, but saw an air source unit as the right product for this situation.

The system Retherm designed incorporated a NIBE 2005 air source with a VVM internal unit. NIBE air source heat pumps are designed to work in Nordic conditions, so are ideally suited to our mild UK climate.

The robust outside unit was sited near the property, with the VVM unit being indoor where the existing boiler had stood.

The VVM unit houses the mains pressure hot water cylinder and the controls for

the system. Removal of the hot water cylinder, replaced by a small radiator kept the airing cupboard warm.

The running cost for electricity, now the only cost in regards to supplying energy to the house, is averaging £100 per month after completion of Retherm's installation.

"We are delighted with the system and to have constant heating and hot water all of the time is a joy."

*Mrs Franklin*

This was a very straightforward project for Retherm engineers - installation and commissioning took just three days.

### Specification

**Location:**

Wolverhampton

**Heat Pump:**

NIBE Fighter 2005 11kW

**Source:**

Air source

**Heat distribution:**

Radiators

**Accumulator:**

VVM 300

**Funding:**

Low Carbon Buildings Grant -£900

### Results

**Running costs prior to installation:**

In excess of £5000 per annum.

**New installation running costs:**

£100 per month (electricity).

All NIBE equipment was supplied by NIBE Energy Systems Ltd, Chesterfield, and manufactured by the parent company in Sweden.



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