

Case Study Chapel Conversion at Stokesby, Norfolk



"The available space in any house build project is ultimately important to the layout and design of the living areas. For the Chapel conversion project in Stokesby the design of the heating and hot water system was to become a primary factor in maximising living space both inside and outside the property. Altherma from Daikin was chosen because it provided the best solution which met the needs of the developer." (Renenergy Ltd, Specialist in Renewable Heating Solution)

The old Methodist Chapel was located on a relatively small plot in a prime location in Stokesby, Norfolk. Swallowtail Properties Ltd decided to renovate the property, turning it into a stunning two bedroom house. The ground floor would contain the kitchen, dining, study and the two ensuite bedrooms, while the first floor would have a large living room and mezzanine area.

Swallowtail Properties Ltd. had to overcome many building challenges, not least on how to maximise the living space in the 150m² plot. They were also very keen to differentiate the house from other properties in the area and although the property had many unique features, a renewable energy efficient solution for the heating and hot water system would give the property

added value when going to market. There was no gas main in the village and the property had insufficient room in the garden to locate an LPG tank. The solution for heating and hot water was to be a key factor in the overall design and layout for the old chapel house.

Renenergy, a local specialist renewable heating company were asked to recommend and design a solution for heating and hot water. As specialists in renewable energy installations they have experience in heat pump systems connected to underfloor heating. The Altherma heat pump system in conjunction with underfloor heating on both floors was recommended as the best solution for this project to ensure that the specification requirements of Swallowtail Properties Ltd. were met.

The main features of this solution are:

- The 7 kW Altherma system is compact and would not take up valuable space inside or outside the house.
- The outside wall at the side of the house could easily accommodate the Altherma outdoor unit.
- Inside the house, the Altherma hydrobox and water cylinder



Case Study Chapel Conversion at Stokesby, Norfolk



could be conveniently installed inside a cupboard in the largest bedrooms.

- The underfloor heating system allowed more efficient use of space in the living areas in comparison to wall mounted radiators being used
- The design of living areas could be optimised.
- Given that underfloor heating is the most energy efficient type of heat emitter, the combined solution with Altherma will provide year round heating with an average CoP (measure of efficiency) of between 3-4.
- Altherma provides a total solution and there is no need for additional back up heating.
- The cost of installing Altherma and the underfloor system was comparable to carrying out an oil or LPG equivalent for this project.
- The estimated cost for annual heating and hot water supply was £400, which is around 50% lower than costs for similar properties running on conventional systems

- The Altherma system provided extra Marketing value to the developers, as potential buyers would be attracted by energy costs savings compared to oil or LPG (if they had been used)
- The installation of the Altherma renewable technology provided the property with added marketing value through the positive 'environmental credentials.'

"Not only have we built a house that is well designed and optimises all the available space incorporating many unique features associated with an old chapel. We have built a house where the owners will gain the satisfaction of knowing that they have a sustainable, energy efficient heating system, giving them lifetime cost savings of many thousands of pounds." (Swallowtail Properties Ltd.)

To find out more about Altherma contact Daikin UK today on 08456 419421 or visit www.altherma.co.uk

