

Straw eco house offers sustainable living in Yorkshire



Yorkshire



1



4



4



1

A self-build sustainable house on the outskirts of York has pushed the boundaries of carbon-neutral living with the help of a Mitsubishi Electric Ecodan air source heat pump.

Chris Gibbins, a former business analyst, set out earlier this year to build a four-bedroom, three-storey home for his young family made from straw bales, and has allied this highly sustainable material with a raft of other energy efficient measures in his mission to produce an exemplar in sustainable house building.

Chris was faced with either the choice of oil or electric energy as there is no gas in the village.

“We installed the heat pump as a background source to ensure that we achieved the right level of comfort throughout the winter period”, explains Chris.



The solution

This interesting project utilises straw as the main construction material. Straw is a waste product, does not produce carbon and is excellent for building because it is an excellent thermal insulator.

In order to achieve this challenging task ahead, a four-day course on building with the material gave Chris the skills and ability required to start his project, and the house is now complete.

The property has under-floor insulation, loft insulation, high-grade windows, photovoltaic roof panels and solar thermal and uses an efficient 8.5kW Ecodan air source heat pump to convert energy from the outside air into central heating and hot water.

Originally, the house was designed so that it did not necessarily require heating, however, during a particularly lengthy period where temperatures dropped to -13°C, the decision was taken to install an air source heat pump to supplement their existing heat source.

“The whole house is incredibly efficient” and “Despite the fact that it is quite a large house we have installed a very modest sized heat pump, as that is all that will be required to achieve the desired level of heating.” Says Chris Wilde of Yorkshire Energy Systems, who installed the Ecodan unit.

Summary:

- Self-build zero Carbon Solution located in an off gas area
- Ecodan air source heat pump provides an efficient and effective heating solution
- Eligible for a government grant that helped to make this project highly cost effective



Product Overview:



8.5kW



DHW Cylinder



Radiators



PV



Telephone: 01707 282880
email: heating@meuk.mee.com
ecodan.co.uk

- @Ecodanheating
- Mitsubishi Electric Heating UK
- @MitsubishiElectricHeatingUK
- mitsubishi_electric_heating_uk
- Mitsubishi Electric Heating UK
- thehub.mitsubishielectric.co.uk

UNITED KINGDOM Mitsubishi Electric Europe Living Environment Systems Division, Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, England. Telephone: 01707 282880 Fax: 01707 278881 IRELAND Mitsubishi Electric Europe, Westgate Business Park, Ballymount, Dublin 24, Ireland. Telephone: (01) 419 8800 Fax: (01) 419 8890 International code: (003531)

Country of origin: United Kingdom - Japan - Thailand - Malaysia. ©Mitsubishi Electric Europe 2021. Mitsubishi and Mitsubishi Electric are trademarks of Mitsubishi Electric Europe B.V. The company reserves the right to make any variation in technical specification to the equipment described, or to withdraw or replace products without prior notification or public announcement. Mitsubishi Electric is constantly developing and improving its products. All descriptions, illustrations, drawings and specifications in this publication present only general particulars and shall not form part of any contract. All goods are supplied subject to the Company's General Conditions of Sale, a copy of which is available on request. Third-party product and brand names may be trademarks or registered trademarks of their respective owners.

Note: The fuse rating is for guidance only. Please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a fluorinated greenhouse gas, R410A (GWP:2088), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), R1234ze (GWP:7) or R1234yf (GWP-4). *These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. In case of Regulation (EU) No.626/2011 from IPCC 3rd edition, these are as follows. R410A (GWP:1975), R32 (GWP:550), R407C (GWP:1650) or R134a (GWP:1300).

