

CASE STUDY | DOMESTIC NEWBUILD | DEVELOPER





Crayfern Homes makes air source heat pumps a house rule

South Coast housing developer Crayfern Homes has wholeheartedly embraced renewable energy and specifies air source heat pumps for all its building projects.

The company has also taken steps to ensure that directors as well as staff in its design, construction and customer service departments all have a thorough understanding of the Daikin Altherma heat pumps it specifies.

Current developments are seeing Daikin Altherma Low Temperature split systems in larger properties and Daikin Altherma Monobloc heat pumps in more compact homes.

Crayfern's construction director John Curry says heat pumps have a double benefit in newbuild properties: they help developers comply with official requirements for low-carbon homes, and they give homeowners the ongoing convenience of low-cost, energy-efficient space and water heating. He says: "They certainly work for us, enabling us to meet our obligations as developers and adding a key selling point to our developments."

The company, based at Hedge End, near Southampton, previously specified regular gas boilers. It added solar photovoltaic systems as an early step towards greener housing.

"We'd probably still be using gas boilers if we hadn't been pushed by the planning system," says John Curry. "The Daikin heat pumps are a much more environment-friendly solution. They also avoid the cost of connecting to the gas network, which can be considerable in rural locations.

"The heat pumps" renewable' performance is so good that we no longer have to use solar PV panels to achieve required standards. We are pleased about this because solar PV has not been well received among customers: you need a lot of panels to make it worthwhile, and that seldom looks good."

Year of installation > 2016

Project requirements

- LT Split
- LT Mono
- HT Split
- Hybrid
- Combustion
 - Smart Controls
- Solar Thermal
- UFH
- Hea
 - Heat Pump Convector

Installed systems

- Low Temperature Split16 KW
- Low Temperature Monobloc 7kW

Crayfern typically builds between 50 and 100 homes each year in an area stretching east from Poole to Worthing and north to Basingstoke. Its actual output depends on market demand and opportunities and ranges from flats to suburban houses and executive country homes.

Typical a Crayfern top-end development is a group of eight houses at Wield Lane in the mid-Hampshire village of Medstead. They stylish properties feature tiled floors with underfloor heating downstairs, with conventional radiators in the upstairs rooms.

All eight houses have 16kW Daikin Altherma LT split systems, installed by Fareham-based Daikin Key Partner, Milew Plumbing and Heating.

Milew director Mike Ellis says the systems are set to deliver water at 35°C for the underfloor heating array and the rest of the system. When needed, the leaving water temperature automatically steps up to 45°C for the radiators and towel rails and 48°C for the 300 litre hot water cylinder. An electrical backup heater is provided for higher DHW temperatures.

The outdoor units are carefully positioned to avoid disturbance to occupants or neighbours. The indoor components – hydrobox, DHW cylinder and expansion vessels – are easily accessible for servicing in a ground-floor cupboard. Even with the doors open, the circulation pump in the hydrobox is scarcely audible.

For the more compact suburban homes it developed recently at Skye Close, Cosham, Crayfern specified the 7kW Daikin Altherma Monobloc heat pump. This unit contains all the necessary hydraulic components and connects directly to the indoor heating circuit, avoiding the need for a hydrobox indoors. As it is a sealed unit there is no refrigerant handling and no requirement for an F-gas qualified installer.

The quiet reliability of Daikin Altherma heat pumps for home heating is a clear advantage for Crayfern Homes, and a session at Daikin UK's Woking training centre gives staff the background to maximise the potential.



John Curry says:

"Our team now has a solid background on heat pumps. As a result, they are able to explain the benefits to customers – and show them how to operate the systems when they move in."

Paul Hutchinson, Heating Sales Engineer at Daikin UK, says: "We applaud Crayfern Homes' focus on heat pump training as it helps to raise public awareness about the great potential of renewable energy for heating homes and workplaces".



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