



CLIENT: New Linx Housing Trust

PROJECT: East Row, South Somercotes, Lincolnshire

Design and construction of an affordable home to Level 5 of the Code for Sustainable Homes.

PROJECT DETAILS:

This development is the first affordable home in East Midlands built to Level 5 of the Code for Sustainable Homes. We have focused on green technologies to ensure excellent environmental performance. The house was designed and constructed in such a way as to allow for flexibility and possible future additions of the new energy saving technologies.

The running cost of the house is significantly lower because of greater energy and water efficiency. Tenants can enjoy improved comfort and satisfaction as they know that by living there they can do their bit for the environment.

This house is ready for the challenges of the 21st century. Thanks to its excellent energy efficiency ratings tenants can be protected against future energy price rises. It does not depend on gas, oil or electricity for heating, which is particularly effective in the rural area of South Somercotes. The property was fitted with a biomass burning boiler to provide heating and hot water as well as solar panels to generate electricity.

FACT

Houses account for 30 per cent of UK's total energy use, 27 per cent of CO₂ emissions and about 24 per cent of greenhouse gasses.

NOTABLE FEATURES

LOW CO₂ APPROACH

- Over 100 per cent reduction of regulated carbon emissions in comparison to 2006 standards.
- Reduced need for heating and lower CO₂ emissions as a result.
- High levels of insulation and good air tightness which minimise the possibility of heat loss through the building fabric.

SMART DESIGN

- Thermally efficient design with 300mm cavity filled with high performance insulation providing a U value of 0.20 W/m²K
- Living spaces positioned to the southern side to maximise the potential of using sunlight.
- Bedrooms located to the rear of the property to minimise the possibility of overheating.

OTHER FEATURES

- Mechanical background ventilation ensures the house has clean, fresh air.
- Heat exchanger extracts heat from the air and returns it into the building.
- Insulated roof with 450mm of glass wool roll insulation between and over the joists providing a U value of 0.14 W/m²K
- Triple glazed windows filled with argon gas. U value of 1.2 W/m²K



WIDER LOCAL BENEFITS

This development is characterised by high performance, green features. However, we have put every effort to allow for flexibility in order to meet the criteria for affordable housing.

It has also contributed to solving the problem of local people who want to live in the rural area of South Somercotes but may find it difficult because of the availability of affordable accommodation.

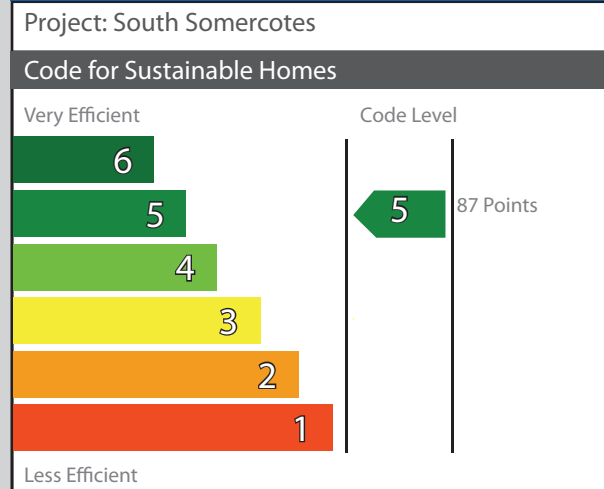
This project was developed in partnership with Eastern Shires Housing Association (ESHA) and Lincs Design Consultancy (LDC).

DID YOU KNOW...?

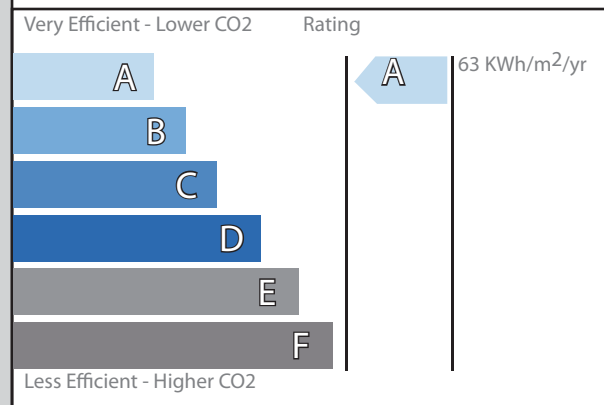
Biomass boilers burn wood pellets, chips or logs to power central heating and hot water boilers. CO₂ emitted when wood fuel is burnt is the same amount which was absorbed while the plant was growing. As long as new trees keep on being planted in place of those used for fuel, the process is sustainable. Burning wood is also an efficient way of using wood waste which may otherwise be sent to a landfill site.



Sustainability Credentials



Environmental Impact (CO₂) Rating



Energy cost: £164.76 per year
 CO₂ Emissions: -0.38 tonne/year
 Air Permeability: 4.0m³/m²/hr at 50Pa
 Energy Credits: 28 out of the 29 available

Sustainability Features

- Roof pv solar panels providing electricity
- Biomass boiler for heating and hot water
- Triple glazed windows
- Layout maximising the use of sunlight and passive solar heat gain.

