

Little Kelham, Sheffield Wall Heating System



Wall heating
system



Sheffield
South Yorkshire



TPS
Thermostat

Electric Wall heating for flagship low-carbon scheme

Heat Mat's wall heating is at the heart of a new-build development of highly energy efficient, low carbon homes under construction at Kelham Island in Sheffield, South Yorkshire.

The Goal

Little Kelham is a private development, rising from a former steel works on a brownfield site. The community, by sustainable developers CITU, consists of 153 one to four-bed homes, being completed in a number of phases.

The scheme includes solar PV, which will give it an EPC 'A' rating once installed. The homes are built using a passivhaus timber frame system, they are super airtight and extremely well insulated. Conventional central heating was not required so a flexible and modern heating solution had to be specified.



Heat Mat's Solution

Heat Mat worked closely with CITU and M & E designers LEDA, who specialise in low energy buildings, to investigate the feasibility of applying wall heating systems to the development.

"Heating mats are usually fitted under floors or floor tiling," said CITU Operations Manager Dave Berry. "We wanted something to heat the space within the walls for what is low-heat demand housing - fitted under internal stud walls. Essentially this is a follow and fit heating system very different from usual installs," he added. "We decided on wall heating to provide homeowners with flexibility over which type of floor they wanted. Wall heating made sense."

"We calculated heat losses in every room, while Heat Mat provided data, with project manager Paul Brandon building a physical mock-up and testing different scenarios to demonstrate that this form of heating would meet the criteria."

A combination of 160W and 200W wall heating mats are fitted into the bedroom, living room and hallway walls of a selection of properties. The mats are mounted onto board, fixed with tile adhesive then plastered over. Heat Mat's manual TPS thermostats monitor air temperature and switch the wall heating off when required.

The Result

CITU has developed the low-carbon sustainable building concept to a modular scheme largely manufactured off-site.

"The original specification was driven by LEDA, who had considered radiators but these were not in keeping with the concept of a more intuitive, digitally enabled smart home," Dave Berry explained.

LEDA's Jim Wild said: *"We were looking at electric heating options for CITU and came to Heat Mat as an economic solution, discrete, low output, quick response domestic system."*

The developer's own CITU tech software controls the heating as part of CITU's smart home commitment. Their 'Actuate' app allows remote control of residents homes and 'The Home & Away' switch allows all non essential power, including the wall heating to be turned off at the touch of a button. Heat Mat's wall heating system integrates seamlessly into the home automation and energy-saving devices in use at Little Kelham.

This flagship scheme has paved the way for a larger low-carbon development of 312 homes now planned in Leeds.



A property at Little Kelham in Sheffield

Project in detail

Date Installed:

November 2015

Location:

Sheffield, South Yorkshire

Client:

Little Kelham by CITU
www.littlekelham.com

Installer:

LEDA

System Specifications:

- 160W and 200W wall heating mats
- TPS manual thermostat timers



About Heat Mat

With more than 1,200,000m² of underfloor heating installed and 20 years' experience of the UK underfloor heating market, you can rely on Heat Mat to understand your needs and supply the products to satisfy your requirements. This is why we are the Professionals' Choice, the number one underfloor heating supplier to the professional installation market.

Contact us

01444 247020

sales@heatmat.co.uk

www.heatmat.co.uk or

www.iceandsnowsystems.co.uk



Heat Mat

Underfloor Heating

Heat Mat Limited, Ashwyn Business Centre,
Marchants Way, Burgess Hill, West Sussex, RH15 8QY