



Trent & Dove Housing helped 133 tenants out of fuel poverty by replacing their night storage heating with ground source heating, all within just 3 months!

In Spring 2015, Trent & Dove Housing and Kensa Heat Pumps delivered the UK's most ambitious retrofit upgrades programme of its time, replacing electric night storage heating with Kensa ground source heat pumps connected to a micro heat network over 133 one and two bedroom bungalows over 15 different sites throughout Burton-upon-Trent.

The success of this project has led to a successful combined campaign led by Trent & Dove Housing and Kensa to encourage other social housing providers to follow Trent & Dove's example using their project as a blueprint.

Completed over a three month period, the Trent & Dove scheme features clusters of micro heat networks over 15 sites, feeding heating and hot water into pairs of bungalows, enabling upfront capital support via the Energy Company Obligation (ECO) subsidy alongside 20 years of Non Domestic Renewable Heat Incentive (RHI) income.

Each bungalow received a 6kW Kensa Shoebox heat pump and new hot water cylinder and radiators in place of its previous night storage heating.

£1.8m
INVESTMENT
COST

(PER ANNUM)
£350-£500
TENANT FUEL
SAVINGS

£2.3m
ECO & RHI
INCOME

Key Facts

- £1.8m investment
- £2.3m ECO and RHI income for 20 years
- ECO subsidy supported
- Non Domestic RHI supported
- Micro ground source heat network
- Displacing electric night storage heating
- Retrofit individual Kensa 6kW Shoebox heat pumps
- New wet system installed (radiator & hot water cylinder)
- 133 bungalows across 15 different sites
- Three month schedule
- Tenant fuel savings of £300-£500 per annum





Costs & income

The retrofit project required an investment of £1.8m, which will be recouped via a £2.3m income through the ECO and RHI. Trent & Dove's initial investment was subsidised by the upfront ECO grant, and will be further off-set by the 20 years of income to be generated via the Non Domestic RHI, thanks to the schemes innovative micro heat network qualifying as a district heating system. The expected payback is 15 years, with Trent & Dove continuing to receive Non Domestic RHI payments as additional income for the remainder of the 20 year RHI scheme.



"With the support of our contractors and Kensa Heat Pumps, Trent & Dove has achieved an outcome that many housing associations dream of; halved tenant energy bills, halved CO2 emissions in our stock, improved tenant health and well-being, and £2.3m of income through the RHI to off-set our £1.8m investment – and all of this in just 3 months."

- Steve Grocock, Director of Property Services, Trent & Dove Housing

Micro Heat Network

With no need for a plant room, Kensa's solution overcomes the drawbacks of traditional "central plant" district heating systems as efficiency is not compromised by heat loss in the distribution pipework; and there is no need to meter and apportion energy bills between dwellings, thus avoiding the need to comply with recent regulations in this area (Heat Network (metering & billing) Regulations 2014).

The product

A 6kW Kensa Shoebox Twin was retrofitted into airing cupboards within each property. Measuring just 56cm H x 60.5cm W x 56.5cm L, the compact Shoebox quietly delivers heating and hot water to the property all year round. Fed by the micro ground source heat network that connects a pair of properties, the Kensa Shoebox distributes hot water via a new hot water and radiator system, fitted in place of the old night storage heaters. Each system has been fitted with easy to use Honeywell programmers and thermostat controllers.



The tenants

Mr and Mrs Carter have lived in their home for 11 years.

“The storage heaters were fine up to a point, but come 6pm in the winter months we had to use an electric fire, which meant we had some quite big electric bills. The letter saying we were going to have a ground source heat pump came just prior to Christmas – and it was the best Christmas present we had that year! It was brilliant – I immediately rang to say thank you!

There is no comparison to this system and the night storage heaters – this is 1000 times better. It is absolutely wonderful. The house actually feels cleaner. The temperature is terrific. You can control it. It's brilliant, absolutely brilliant. I'm sure it's knocked years off my age!”



Mr Rowe has lived in his home for 4 years. He suffers from motor neurone disease, and as a consequence struggles with controls and mobility.

“I struggled with the dials on the night storage heaters, plus I like something when you can change your heating as and when you need it; so I started to use electric fan heaters instead, which wasn't cost effective. The ground source heat pump has made a mega difference – an absolutely amazing difference.

This is the best heating I've ever seen – and the hot water is even better still. I'd recommend it to anybody, and it's not just me talking – I speak to neighbours and they've all said it is fabulous. Everybody I've spoken with has been terrifically pleased with it. I didn't think it would be as good as it is, but it's absolutely amazing. I'd recommend it to anybody.”



Mrs Ball has lived in her house for 9 years. Due to medication, she suffers from the cold.

“The old night storage heaters were difficult to control – you couldn't get the heat when you wanted it. The installation was brilliant, 100%. I've never seen such good, clean workers. They did three houses in a week – brilliant, that's work!

