

# BOXED

## BOXED ENERGY CASE STUDY TOWER BLOCKS

## QUEEN ELIZABETH COURT & QUEEN ANNE COURT

**Client:** Places for People

**Project details:** Queen Elizabeth Court and Queen Anne Court

**Address:** Raeburn Pl, Sheffield S14 1SG

**Technical Partner:** Baxi Heating

**System Commissioning/HSA Start Date:** 27 November 2015



When Places for People needed to replace the aging heating system at two 1950s tower blocks in Sheffield, Boxed Energy's commissioning, installation and servicing package presented the ideal solution – with no upfront costs.

Queen Elizabeth Court and Queen Anne Court are two 12 storey tower blocks, built in 1959 and refurbished in 1998. Each block contains 48 individual residential units and a communal area on the ground floor.

The properties currently house general needs social housing tenants and are managed by Places for People Homes.

In 2015, the scheme's annual gas consumption was measured at approximately 1,500,000 kWhs.

**Steve Mather, Property Services Director at Places for People said:**

Residential tower blocks come with their own distinct challenges, such as ensuring reliable heat and pressurisation reach all parts of the building. The taller the building, the greater the challenge of delivering consistent heating to customers.

At Queen Elizabeth Court and Queen Anne Court, an aging heating plant was responsible for the heat supply to two tower blocks, leading to high annual gas consumption with obvious potential for greater efficiency.

We knew that replacing key facilities like heating systems traditionally requires a significant capital investment.

Through the Boxed Energy finance model, we were able to commission the necessary improvements without the need for upfront capital expenditure. This freed up our capital budget to invest in domestic heating improvements throughout the building.

## SYSTEMS INSTALLED AT QUEEN ELIZABETH COURT AND QUEEN ANNE COURT

### Boiler Room

Six high efficiency condensing boilers (Potterton Commercial Sirius 2 WH110kW) installed on a galvanized 'skid' platform

State-of-the-art control system, allowing remote monitoring and operation

Booster Pumps

### Other domestic works

Thermostatic Radiator Valves (TRVs)

Time and temperature controls for each flat

Pipework Insulation





**Through its innovative Heat Supply Agreement (HSA) model, the new heating system at Queen Elizabeth Court and Queen Anne Court will be owned and maintained by Boxed Energy, for the duration of a 20-year contract.**

**All system maintenance will be managed by Boxed Energy, with Places for People paying:**

- a monthly standing charge for the replacement system
- a monthly fixed energy charge
- a monthly operation and maintenance (O&M) charge

Baxi Heating is a leading domestic and commercial heating and hot water brand. Through its extensive product range, Baxi Heating offers high-quality, reliable, energy efficient solutions; including boilers and water heaters, heating controls, combined heat & power products, as well as solar thermal systems.

Boxed Energy sourced third party funding for the necessary upfront capital through its Energy Performance Contract (HSA) model, and commissioned its technical partner Baxi Heating to design and manufacture a replacement heating system.

Boxed Energy's skid-mounted solutions are designed to fit seamlessly into existing heating infrastructure, wherever they are located within a building.

**Andy Green, from Baxi Heating's Commercial Team:**

“Queen Elizabeth Court and Queen Anne Court both have their heating supplied from an external plant room on site. Baxi designed a bespoke heating system that would integrate seamlessly with the existing infrastructure on site – our skid-mounted solution.

Along with six new and highly-efficient gas boilers, we also installed a technical monitoring system that provides remote management and system data. Through the Boxed Energy heat supply agreement (HSA), Baxi Heating will be responsible for all O&M of the new heating system, so the accurate performance data provided will prove invaluable going forward.

We were also commissioned to install thermostatic radiator valves, along with time & temperature controls for each apartment, meaning customers can now easily manage their heating needs.”

**Derek Watters, Head of Environmental Sustainability at Places for People:**

“Through the Boxed Energy model, we've been able to make major improvements to the communal heating system at Queen Elizabeth Court & Queen Anne Court, without any significant upfront expenditure.

As the Boxed Energy finance model has freed up vital capital for investment, we've also been able to upgrade the controls in each residence as part of the same retrofit project. This means our customers can now monitor and reduce their own energy consumption, whilst the whole building benefits from a far more efficient heating system.

We've achieved improved performance from our building's heating system, and already reduced our carbon emissions on site by over 40 tonnes this year – without the need for any upfront capital outlay.

Places for People is committed to finding novel ways of reducing its environmental impact across the entire business, as part of our Carbon Reduction Strategy. Boxed Energy has helped us address energy consumption in our communal buildings, making a significant contribution towards our long term sustainability goals.”

