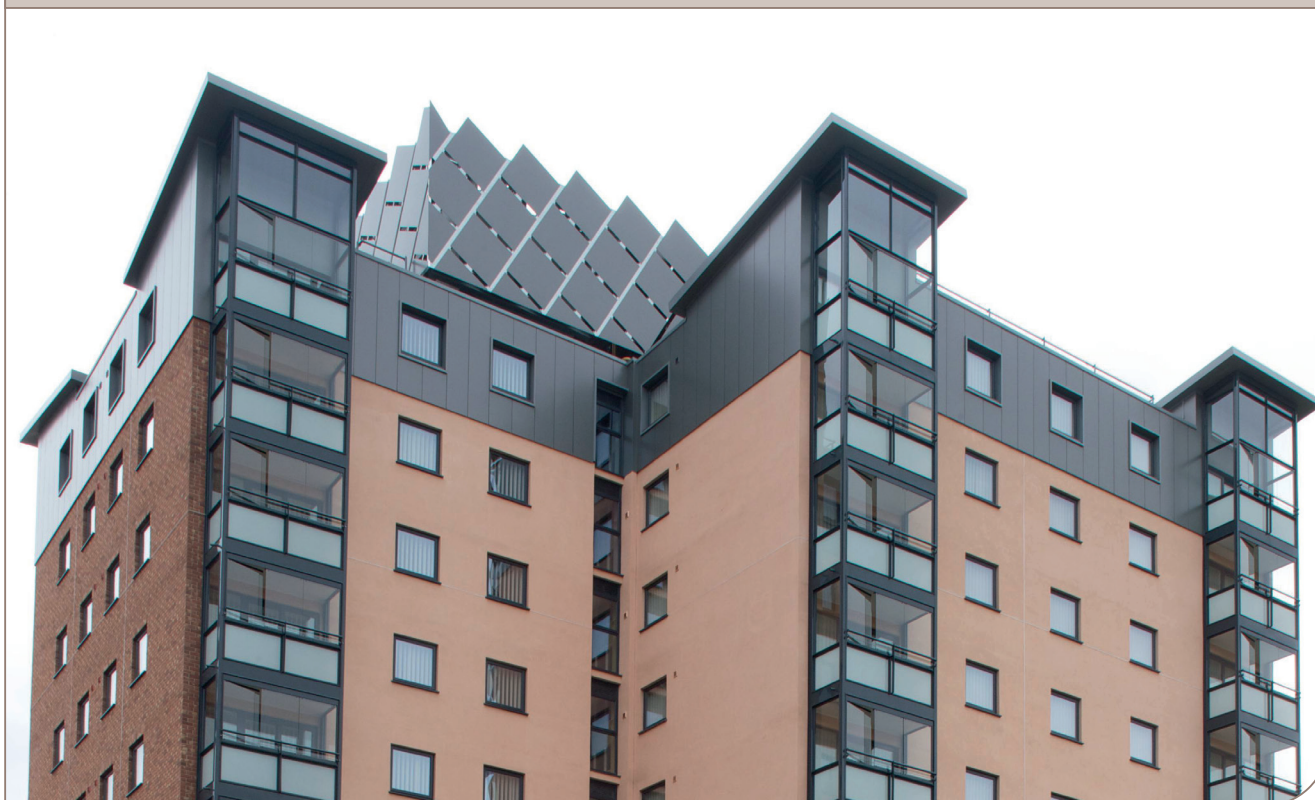




# Optimized return temperature brings huge energy savings

Mini City adds new perspectives to social housing project in the UK Case Story



Photos: Belfry Group

The Barton Village regeneration scheme is a model project for Mini City. Thanks to optimized return temperature, the yield from solar panels can be increased considerably.

## With its advanced control functions, Mini City Indirect allows optimized return temperatures with subsequent energy savings.

The Belfry Group is a major British facility management and building services operator. The company has developed a groundbreaking heating system – EcoPod – combining e.g. cascade boilers, biomass, heat pumps and solar panels. The substation Mini City Indirect from Alfa Laval has a key function in this system, which is now being installed to address fuel poverty within a flagship regeneration project (Barton Village) in the city of Manchester.

## Addressing fuel poverty

In the past and due to high fuel costs, problems arose when financially vulnerable tenants were heating only one room or the whole apartment insufficiently. This caused damage by damp and mould.

To address the problem, the managers called upon the Belfry Group. By installing EcoPod, they are now able to reduce fuel costs and carbon emissions by an estimated 40 percent. This way they will provide heating at a cost that tenants can more readily afford.

**Brand trust and product performance**  
*Keith Rimmer* is the Managing Director

of the Belfry Group. He describes the partnership with Alfa Laval as a joint development effort.

### FAST FACTS

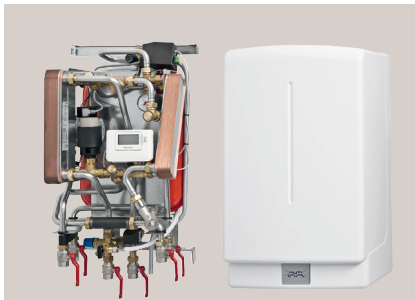
**The customer:** Belfry Group, a major British construction & facility management operator

**The scene:** Barton Village, City of Manchester, England

**The task:** Energy-saving for a major social housing project

**The challenge:** Addressing “fuel poverty”

**The result:** An estimated 40 percent cut of energy costs



## THE SOLUTION

### Mini City Indirect

A fully automated substation with advanced functions for individual temperature settings. When used for tap water and space heating in collective buildings, it offers unique options for energy-saving by optimized return temperature – especially when combined with the intelligent flow control unit AlfaPilot.

- Easy installation (Plug & Play)
- Low weight – compact measures
- Advanced, fully automated temperature control
- Pipes and plates of stainless, acid-resistant steel
- Well-planned plumbing – flexible installation
- ISO 9001:2008 certified and CE marked

“As part of our commitment to tackling fuel poverty, we are constantly developing EcoPod to see what aspects we can fine tune to deliver even more efficiencies and savings in the future. Alfa Laval plays a key role in that process, to the extent that they have access to our R&D facility in Warrington and we can draw on their R&D resources in Sweden”.

*Keith Rimmer* also accentuates the importance of the substation for the efficiency of the system as a whole.



The Belfry staff has visited the Alfa Laval R & D facilities in Sweden and is well prepared to handle service and technical support for Mini City in the UK.

**“We’ve worked closely with Alfa Laval from the outset on EcoPod. They provide the key interface with the end user so it’s vitally important from our point of view that this part of the system is right, because it’s the bit everyone sees”.**

*Keith Rimmer* concludes by summarizing the partnership with Alfa Laval in a long-term perspective.

“The Belfry staff have visited Sweden and are now fully trained on the Mini City range of products. This enables the engineers to finely tweak the units to allow for even greater savings to Belfry customers. Also with a partnership between Alfa Laval and Belfry, even more aftercare can be provided to the UK market by utilising the Belfry engineers as commissioning and fault-finding experts.”

### Model application for Mini City

*David Green*, Channel Manager at Alfa Laval in the UK, has been involved in the Barton Village project from the very beginning and describes it as something of a “model application” for Mini City.

“With the EcoPod system, tenants will only use heat and domestic hot water when required and Mini City can be set to match individual needs exactly. Easy operation via a user-friendly interface is a key factor in the process, and Mini City offers this. Compact dimensions and simple installation are other crucial factors”.

### TOTAL ANNUAL SAVINGS EUR 4613

#### Engels House – a typical example

The Engels House provides a typical example of potential energy savings thanks to the capacity of Mini City and its control functions to interact with other parts of the system. The ten-storey building comprises 64 apartments (2 – 3 rooms each).

#### Local cost for electrical power:

**0.17 EUR/kWh**

#### Local cost for energy from gas:

**0.059 EUR/kWh**

#### Indoor temperature

By reducing the speed of the circulation pump, restricting the setting of indoor and tap water temperatures and adjusting room temperature sensors, an annual electrical energy reduction of 88kWh/apartment annually is possible. This means a reduced annual cost of **EUR 15** for the tenant.

#### Primary side

Due to the indoor adjustments allowing flow and return temperature optimization, the heat consumption can be reduced by 43 500 kWh/year. Saves **EUR 2567** annually.

Due to optimized flow, the pump capacity usage can be reduced considerably – in this case by 50 percent. The electrical energy saved amounts to 5200 kWh/year – which means **EUR 884** saved annually.

Due to lower return temperature, the solar panels can be utilized even more. Depending on the number of sun hours, fuel consumption savings can thereby reach up to 18 percent. This will save 19440 kWh, which means **EUR 1147** saved annually.

#### Total annual saving

**EUR 4613**

### How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at [www.alfalaval.com](http://www.alfalaval.com).