



# Energy efficient retrofit

Peabody Gallions, Thamesmead Estate, South East London

## Highlights

Axis undertook the construction phase of a pilot retrofit project aimed at increasing energy efficiency and generating sustainable power. Completed in early 2012 the project refurbished a hard to treat, pre-cast concrete panel, end terrace in the Thamesmead Estate, South East London.

The TSB funded project aims to trial and monitor innovative new technologies to identify and share best practice retrofitting measures. The measures fitted to this property included: external insulated wall render system, new flat roof with additional EPS insulation, Aerogel Solar Collector, nine photovoltaic panels to provide electricity, and a solar thermal hot water heating system.

## Specifications

- External insulated wall render system
- Aerogel Solar Collector
- Photovoltaic panels
- Solar thermal hot water heating system
- New flat roof with additional EPS insulation
- Concrete works



The property was monitored whilst tenants occupied the dwelling and the results will feed into nationwide design guidance to ensure the success of future low carbon programmes. First year results showed a significant cut in CO<sub>2</sub> emissions and the family of seven living in the property saw their gas and electricity bills reduce by more than a half.

According to Ofgem, the typical dual fuel bill in the UK is £1,420 per year. The residents only paid £730, showing a saving of £690 against the national average. The CO<sub>2</sub> emissions are now a fifth of what they were prior to refurbishment – with an annual saving of 83kg CO<sub>2</sub> /m<sup>2</sup>. Alongside this, air permeability of the home has been more than halved and the amount of renewable energy provided by the photovoltaic panels has exceeded the original forecast. The building was also nominated for a CIBSE Building Performance Award in 2013 in the Refurbishment Project category. The CIBSE Building Performance Awards give recognition to the role of building service engineers and highlight best examples of actual performance, innovation and practice.



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