

**Charnwood**  
Leicestershire

Sector: Social Housing  
Low Rise  
Refurbishment



**Client:**  
Charnwood Neighbourhood  
Housing

**Building Types:**  
Reema x 38  
Wates x 84  
Swedish Timber Bungalows x 9

**Product:**  
• External Wall Insulation  
& Render Finish



## Project Background:

Structherm is working closely with Charnwood Neighbourhood Housing (CNH) on its four year improvement programme to tackle fuel poverty and deliver Decent Homes works to over 2000 homes.

As part of the programme CNH are using funding from the Community Energy Saving Programme (CESP) to improve the energy efficiency of hundreds of its non-traditional homes. This includes a large number of Wates and Reema precast concrete houses and a small number of Swedish Timber bungalows.

These homes in Charnwood and Cossington were in a bad state of repair, looking dilapidated and urgently requiring external refurbishment due to problems with damp, condensation, water ingress and poor thermal performance.

## Client Requirements:

CNH wanted an external refurbishment solution to the problems associated with poor thermal performance and one that would:

- Improve thermal performance and therefore cut fuel bills.
- Reduce CO<sub>2</sub> emissions.
- Improve the external appearance of the houses.



## Design Solution:

Structherm's "High Build" External Wall Insulation (EWI) was specified as it was able to offer solutions to CNH requirements.

The EWI system consisted of a layer of 60mm thick, high performance Phenolic insulation boards. These were fixed to each property using specially selected fixings. Two layers of 3mm basecoat render with glass fibre reinforcing mesh embedded were then applied.

To complete the system the client chose a traditional dry dash system consisting of dash receiver applied 8mm thick with dash aggregate finish. Macerend brick effect render was used as detailing under window cills.

## Results:

- Thermal performance has greatly improved:

Property Type	Existing U value	New U value
Wates	1.36W/m <sup>2</sup> K	0.28W/m <sup>2</sup> K
Reema	1.62W/m <sup>2</sup> K	0.28W/m <sup>2</sup> K
Swedish	1.21W/m <sup>2</sup> K	0.26W/m <sup>2</sup> K

Each property now costs less to heat and has lifted a significant number of tenants out of fuel poverty.
- Lower heating requirements has resulted in a significant reduction of CO<sub>2</sub> emissions.
- The fresh, traditional design along with new high performance windows has transformed the appearance of the properties into modern and attractive homes.

