Erneley Close - RETROFIT

R-GEN DEVELOPMENTS LTD

UK PASSIVHAUS CONFERENCE 2015
20th October, Business Design Centre, London

PROJECT OVERVIEW

Client:	One Manchester
Developer:	R-gen Developments Ltd
Architect:	2e Architects
Mechanical:	Alan Clarke
Passivhaus:	Eric Parks
Structural:	Marston and Grundy
Contractor:	The Casey Group
Certifier:	Warm Associates

PROJECT OVERVIEW

Type:	Refurbishment of 32 two bedroom walk up flats of social housing
Build type:	Cross floor concrete frame
Location:	Manchester
Commenced:	March 2013
Completed:	May 2015
Occupied:	December 2014
Budget:	£3.1m

DESIGN PHILOSOPHY

- Reduce energy bills
- New community green space
- Eradicating of ‘wheelie bin’ environment
- Create a destination of choice

THE CHALLENGE

- Unappealing
- Poor fabric
- Threatening
- Structural failure

DESIGN PHILOSOPHY

AESTHETICS

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AESTHETICS

ENERGY PERFORMANCE

To date we have solely been measuring tenants gas usage for heating and hot water via the communal boilers.

Current performance taken for the first three months of the year has heating take up being at **21.09 kWh(m2a)** compared to the PHPP prediction **of 22kWh(m2a).**

Total Weekday Consumption (kWh)	Average Weekday Consumption (kWh)	Total Weekend Consumption (kWh)	Average Weekend Consumption (kWh)	Total Consumption (kWh)	Average Daily Consumption (kWh)
4.00	0.17	0.00	0.00	4.00	0.13
33.00	1.38	15.00	1.88	48.00	1.50
14.00	0.58	2.00	0.25	16.00	0.50
42.00	1.75	16.00	2.00	58.00	1.81
147.00	6.13	55.00	6.88	202.00	6.31
122.00	5.08	43.00	5.38	165.00	5.16
123.00	5.13	19.00	2.38	142.00	4.44
198.00	8.25	86.00	10.75	284.00	8.88
10.00	0.42	5.00	0.63	15.00	0.47
144.00	6.00	56.00	7.00	200.00	6.25
256.00	10.67	63.00	7.88	319.00	9.97
42.00	1.75	10.00	1.25	52.00	1.63
1,135.00	46.00	370.00	46.25	1,505.00	47.03

Usage for April 2015

USER FEEDBACK

"Before all these works my flat was freezing. I was spending about £15 per week on heating the flat and even using fan heaters to get the temperature up. Since moving back in December, I've only used the heating once. **It's really taken the pressure off**, knowing we won't be spending an arm and a leg on **keeping the house warm**, day in, day out.

More than that though, **everyone here is just so proud of what's come out of this project** – it's really put Erneley Close and Longsight on the map. There's a **real community spirit** here now. All the residents have felt involved in the project and One Manchester have listened to our suggestions about what we think would **improve life** on Erneley Close.

Everyone agrees that the Close has got **the 'wow factor'** now, especially with the colourful cladding. My little grandson calls the building **'Nanny's castle'** because he says it's magical."
(Kim Radcliffe – Erneley Close resident)

Erneley Close residents

CONSTRUCTION APPROACH

CONTRACTOR'S CHALLENGE

Achieving airtightness

- Poor fabric
- Multitude of cavity voids
- Poor brick beam
- Multitude of conduits/trunking

LESSONS LEARNT

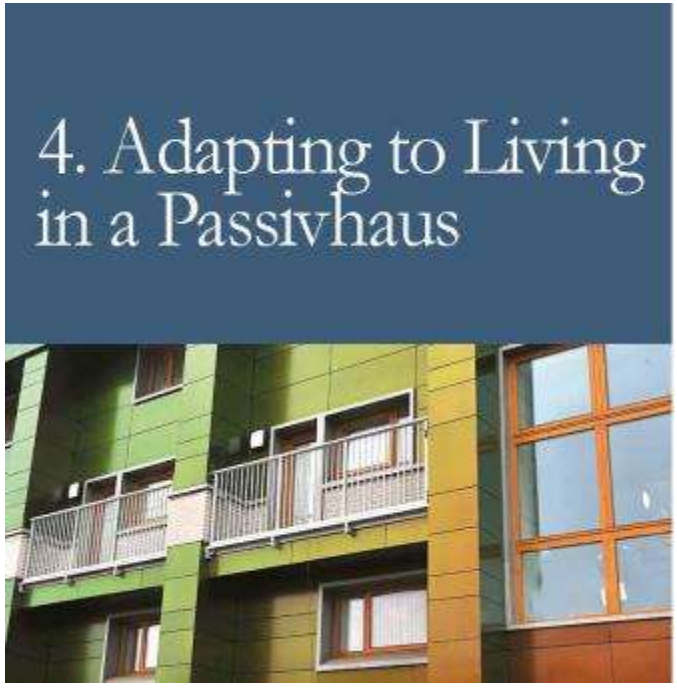
- Enhanced supervision
- Airtightness teams
- Passivhaus training for all site staff
- Test, photograph and test again
- Passivhaus competition

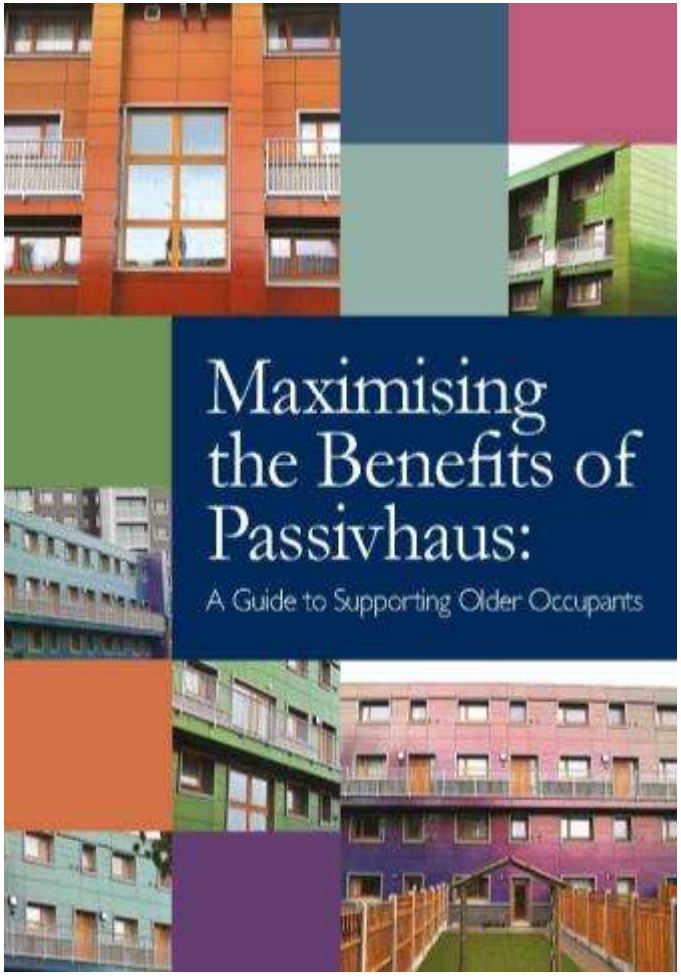
CLEVER COST SAVINGS

- On site construction of timber frame
- Window pods
- Communal boiler v. individual

FURTHER INFORMATION

The University of Manchester has produced a publication 'Maximising the Benefits of PassivHaus: A guide to supporting older occupants' based on this project, which provides an overview of design and lifestyle measures that will assist older people living in a passivhaus.





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