October2014

UK Passivhaus Conference 2014

Case Study : Climate Energy Homes
Passive Close, Rainham, Essex

climateenergy homes

Passive Close, Rainham, Essex

- **Client:** Circle Housing
- **Target market:** Affordable rental
- **Development:** 51 homes: 1, 2 & 4 bedroom flats, 3 – 4 bedroom houses
- **Sustainability:** Passivhaus and Code for Sustainable Homes level 4

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Passive Close, Rainham, Essex

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Political Profile

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Mayor of London's Infrastructure Plan 2050

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Passivhaus Certified

cocreate

Authorised by:
Passive House Institute
Dr. Wolfgang Feist
Rheinstr. 44/46
64283 Darmstadt, DE

Certificate

Cocreate Consulting hereby certifies the following building as a

Quality Approved Passive House

15-22 Passive Close, New Road, Rainham, RM13 8HQ, United Kingdom

Client: **Circle Housing**
1-3 Highbury Station Road, London, N1 1SE, UK

Architect: **Climate Energy Homes**
Venta Court, Jewry Street, Winchester SO23 8RZ, UK

Building Services: **Climate Energy Homes**
Venta Court, Jewry Street, Winchester SO23 8RZ, UK

This building was designed to meet Passive House criteria as defined by the Passive House Institute. With appropriate on-site implementation, this building will have the following characteristics:

- Excellent thermal insulation and optimised connection details with respect to building physics. High thermal comfort during the summer has been considered and the heating demand or heating load will be limited to

15 kWh per m² of treated floor area and year or 10 W/m², respectively

- A highly airtight building envelope, which eliminates draughts and reduces the heating energy demand. The air change rate through the envelope at a 50 Pascal pressure difference, as verified in accordance with ISO 9972, is less than

0.6 air changes per hour with respect to the building's volume

- A controlled ventilation system with high quality filters, highly efficient heat recovery and low electricity consumption, ensuring excellent indoor air quality with low energy consumption
- A total primary energy demand for heating, domestic hot water, ventilation and all other electric appliances during normal use of less than

120 kWh per m² of treated floor area and year

This certificate is to be used only in combination with the associated certification documents, which describe the exact characteristics of the building.

Passive Houses offer high comfort throughout the year and can be heated with little effort, for example, by heating the supply air. The building envelope of a Passive House is evenly warm on the inside and the internal surface temperatures hardly differ from indoor air temperatures. Due to the highly airtight envelope, draughts are eliminated during normal use. The ventilation system constantly provides fresh air of excellent quality. Heating costs in a Passive House are very low. Thanks to their low energy consumption, Passive Houses offer security against energy scarcity and future rises in energy prices. Moreover, the climate impact of Passive Houses is low as they reduce energy use, thereby resulting in the emission of comparatively low levels of carbon dioxide (CO_2) and other pollutants.

Issued by:
Paul Smyth, Cocreate Consulting, 20 Dalston Lane, E8 3AZ
26th September 2014

Smyth

Certificate-ID: 9647_Cocreate_PH_20140924_PS

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ecoTECH Build Systems

QUALITY

Air Tight at Weather Tight

CERTAINTY

On Programme

VALUE

Cost on Par with Traditional Build

CHAS®

registered LABC

NHBC

buildoffsite Property Assurance Scheme

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