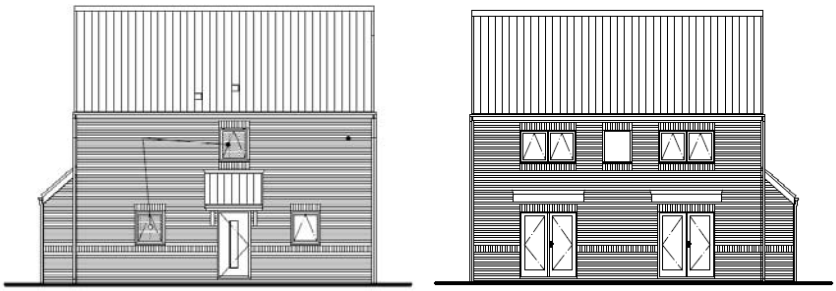
BRE
Garston, Watford, Herts WD25 9XX
T +44 (0)1923 664000 F +44 (0)1923 664010 E enquiries@bre.co.uk

Design Stage Approval

The Building Research Establishment hereby confirms the following building has been designed to the Passivhaus standard



47 John Rous Avenue, Canley, Coventry

This building was designed to meet Passivhaus standard 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 living area and year or 10 W/m², respectively

- A design stage assumption of 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 living/habitable area per year

Performance outputs:

Specific building demands with reference to the treated floor area				use: Monthly method	
	Treated floor area	74.9	m²	Requirements	Fulfilled?*
Space heating	Annual heating demand	12	kWh/(m²a)	15 kWh/(m²a)	yes
	Heating load	10	W/m²	10 W/m²	yes
Space cooling	Overall specific space cooling demand		kWh/(m²a)	-	-
	Cooling load		W/m²	-	-
	Frequency of overheating (> 25 °C)	0.2	%	-	-
Primary Energy	Space heating and cooling, dehumidification, household electricity.	105	kWh/(m²a)	120 kWh/(m²a)	yes
	DHW, space heating and auxiliary electricity	61	kWh/(m²a)	-	-
	Specific primary energy reduction through solar electricity	122	kWh/(m²a)	-	-
Airtightness	Pressurization test result n_{50}	0.6	1/h	0.6 1/h	yes

* empty field: data missing; "-": no requirement

Passive House?	yes

Issued: 08.05.13

Kym Mead,
Head of Passivhaus
Building Research Establishment

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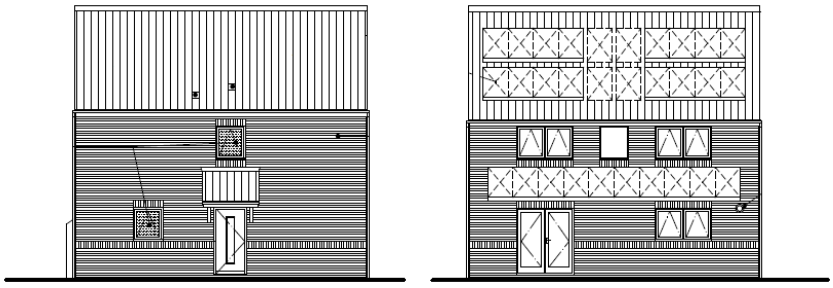

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- A total primary energy demand for heating, domestic hot water, ventilation and all other electric appliances during normal use of less than

120 kWh per m² of living/habitable area per year

Performance outputs:

Specific building demands with reference to the treated floor area				use: Monthly method	
	Treated floor area	74.9	m²	Requirements	Fulfilled?*
Space heating	Annual heating demand	15	kWh/(m²a)	15 kWh/(m²a)	yes
	Heating load	10	W/m²	10 W/m²	yes
Space cooling	Overall specific space cooling demand		kWh/(m²a)	-	-
	Cooling load		W/m²	-	-
	Frequency of overheating (> 25 °C)	2.9	%	-	-
Primary Energy	Space heating and cooling, dehumidification, household electricity	101	kWh/(m²a)	120 kWh/(m²a)	yes
	DHW, space heating and auxiliary electricity	56	kWh/(m²a)	-	-
	Specific primary energy reduction through solar electricity		kWh/(m²a)	-	-
Airtightness	Pressurization test result n_{50}	0.6	1/h	0.6 1/h	yes

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Passive House?	yes

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