

https://www.lowenergybuildings.org.uk/

Project name Lancaster Cohousing Project

Project summary Lancaster Cohousing Project is a certified Passivhaus / Code for Sustainable Homes Level 6 (carbon neutral) and Life Time Homes, affordable community housing project. This groundbreaking exemplary (car free) owner occupied eco housing project has evolved through a participatory design process with the 41 individual householders and EcoArc Architects. The aim was to design a neighbourhood based upon Passivhaus / ecological values, where it is very easy to live a low carbon, sustainable lifestyle.



Project Description

Projected build start date

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Projected date of occupation	01 Aug 2012
Project stage	Occupied
Project location	Halton, Lancaster, Lancashire, England
Energy target	PassivHaus
Build type	New build
Building sector	Private Residential
Property type	Mid Terrace
Existing external wall construction	Masonry Cavity

Existing external wall additional information	
Existing party wall construction	
Floor area	2979 m²
Floor area calculation method	APPROX
Building certification	Passivhaus certified

Project team

Organisation	Eco Arc Architecture
Project lead	Andrew Yeats
Client	Lancaster Cohousing
Architect	Eco Arc Architects: Ecological Architecture
Mechanical & electrical consultant(s)	Alan Clarke, Nick Grant
Energy consultant(s)	
Structural engineer	Ramboll: Gary Willis, David Tasker
Quantity surveyor	
Other consultant	
Contractor	Whittle Construction: Graham Bath

Design strategies

Planned occupancy
Space heating strategy
Water heating strategy
Fuel strategy
Renewable energy generation strategy
Passive solar strategy
Space cooling strategy
Daylighting strategy
Ventilation strategy
Airtightness strategy
Strategy for minimising thermal bridges
Modelling strategy
Insulation strategy
Other relevant retrofit strategies
Other information (constraints or opportunities influencing project design or outcomes)

Energy use

Fuel use by type (kWh/yr)

Fuel	previous	forecast	measured
Electri			
С			
Gas			

Fuel	previous	forecast	measured
Oil			
LPG			
Wood			

Primary energy requirement & CO2 emissions

	previous	forecast	measured
Annual CO2 emissions (kg CO2/m².yr)	-	-	-
Primary energy requirement (kWh/m².yr)	-	-	-

Renewable energy (kWh/yr)

Renewables technology	forecast	measured
-		
-		
Energy consumed by generation		

Airtightness (m³/m².hr @ 50 Pascals)

	Date of test	Test result
Pre-development airtightness	-	-
Final airtightness	-	-

Annual space heat demand (kWh/m².yr)

	Pre-development	forecast	measured
Space heat demand	-	-	-

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vvnole	house energy	calculation	method

Other energy calculation method

Predicted annual heating load

Other energy target(s)

Building services

Occupancy

Space heating

Hot water

Ventilation

Controls

Cooking

Lighting

Appliances

Renewables

Strategy for minimising thermal bridges

Building construction

Storeys

Volume

Thermal fabric area

Roof description

Roof U-value

Walls description

Walls U-value

Party walls description

Party walls U-value

Floor description

Floor U-value

Glazed doors description

Glazed doors U-value

Opaque doors description

Opaque doors U-value

Windows description

Windows U-value

Windows energy transmittance

(G-value)

Windows light transmittance

Rooflights description

Rooflights light transmittance

Rooflights U-value

Project images

