

## 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

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 m<sup>2</sup>

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
<b>Electric</b>			
<b>Gas</b>			

Fuel	previous	forecast	measured
<b>Oil</b>			
<b>LPG</b>			
<b>Wood</b>			

### Primary energy requirement & CO2 emissions

	previous	forecast	measured
<b>Annual CO2 emissions</b> (kg CO2/m <sup>2</sup> .yr)	-	-	-
<b>Primary energy requirement</b> (kWh/m <sup>2</sup> .yr)	-	-	-

### Renewable energy (kWh/yr)

Renewables technology	forecast	measured
-		
-		
<b>Energy consumed by generation</b>		

### Airtightness ( m<sup>3</sup>/m<sup>2</sup>.hr @ 50 Pascals )

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

### Annual space heat demand ( kWh/m<sup>2</sup>.yr )

	Pre-development	forecast	measured
<b>Space heat demand</b>	-	-	-

Whole 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

## 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

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## Project images

