

Project name Christow, Dartmoor.

Project summary The project has been led by the Christow Community Land Trust (CCLT), a voluntary collection of villagers, in partnership with local affordable housing provider, Teign Housing. The land was donated for 1 by Teignbridge District Council. Dartmoor National Park Authority supported the CLT through the planning process. This was the first Passivhaus project for the contractors and the client and provided a challenge to produce a quality product which met the requirements for Passivhaus. The 18 affordable dwellings comprise of two, three, and four bedroom houses & bungalows. 14 are available to rent as affordable housing and 4 have been sold on the open market. The timber framed homes have large window overhangs and solar thermal hot water. Annual heating and hot water bills are expected to be less than 100 per year.



Project Description

Projected build start date

Projected date of occupation

Project stage

Occupied

Project location

Christow, Devon, England

Energy target

PassivHaus

Build type

New build

Building sector	Public Residential
Property type	Semi-Detached
Existing external wall construction	
Existing external wall additional information	
Existing party wall construction	
Floor area	1439 m ²
Floor area calculation method	
Building certification	Passivhaus certified

Project team

Organisation	
Project lead	
Client	Christow Community Land Trust & Teign Housing
Architect	Michell Architects
Mechanical & electrical consultant(s)	
Energy consultant(s)	
Structural engineer	Airey & Coles
Quantity surveyor	
Other consultant	
Contractor	Pearce Construction

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
Electric			
Gas			
Oil			
LPG			
Wood			

Primary energy requirement & CO2 emissions

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

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
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

