

Project name Hope View House

Project summary Built into a steeply sloping site, this elegant forever-home maximizes the panoramic views of the surrounding countryside in an Area of Natural Outstanding Beauty. The site has a collection of Listed Buildings at the base of the hill prone to flooding. A Paragraph 55 exception dwelling was required to unlock planning policy, and Passivhaus was set as a statement of intent at planning stage. There are three key components to the concept: trees, meadow, house. The upper part of the site has been planted by the clients with over 1200 deciduous trees, whilst the lower part of the site has been replanted as wildflower meadow and orchard. The long and low south facade, a horizontal accent in the hillside, draws an 85m line of stone between the two landscapes just as the neighbouring dwellings across the valley do. As the local stone craftsmanship is such a key feature of the design, keeping the stone masons happy was an important task on site.



Project Description

Projected build start date	01 Jan 2016
Projected date of occupation	01 Oct 2016
Project stage	Occupied
Project location	, Herefordshire, England
Energy target	PassivHaus

Build type	New build
Building sector	Private Residential
Property type	Detached
Existing external wall construction	
Existing external wall additional information	
Existing party wall construction	
Floor area	256 m ²
Floor area calculation method	PHPP
Building certification	Passivhaus certified

Project team

Organisation	
Project lead	
Client	
Architect	Warren Benbow
Mechanical & electrical consultant(s)	
Energy consultant(s)	Nick Grant & Alan Clarke
Structural engineer	Alan Pearce
Quantity surveyor	
Other consultant	
Contractor	Covenhope Construction Ltd

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

