

Project name Passive House Standard Farmhouse, Cambridgeshire

Project summary Bespoke Detached Family Farm House This large 5-bedroom bespoke farmhouse in rural Cambridgeshire is an exemplar of energy efficient, low carbon architectural design. The property is equipped with MVHR and fitted with PV panels that make it 120% energy efficient.



Project Description

| | |
|---|---|
| Projected build start date | 01 Aug 2015 |
| Projected date of occupation | |
| Project stage | Occupied |
| Project location | Cambridgeshire, Cambridgeshire, England |
| Energy target | PassivHaus |
| Build type | New build |
| Building sector | Private Residential |
| Property type | Detached |
| Existing external wall construction | Softwood frame |
| Existing external wall additional information | |
| Existing party wall construction | |

| | |
|-------------------------------|----------------------|
| Floor area | 657 m ² |
| Floor area calculation method | PHPP |
| Building certification | Passivhaus certified |

Project team

| | |
|---------------------------------------|-------------------------------|
| Organisation | Beattie Passive |
| Project lead | Beattie Passive |
| Client | |
| Architect | Tim Chisty RIBA Architect Ltd |
| Mechanical & electrical consultant(s) | |
| Energy consultant(s) | |
| Structural engineer | Canham Consulting |
| Quantity surveyor | |
| Other consultant | |
| Contractor | |

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 | Mechanical Ventilation and Heat Recovery |
| Airtightness strategy | Passivhaus |
| 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 | | | |

| Fuel | previous | forecast | measured |
|-------------|----------|----------|----------|
| 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





