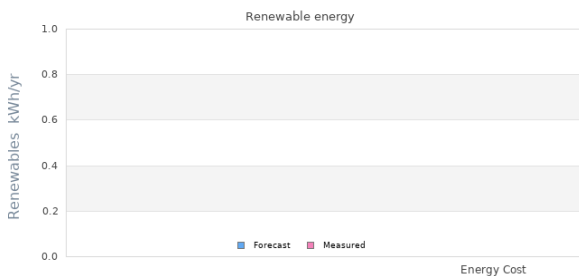
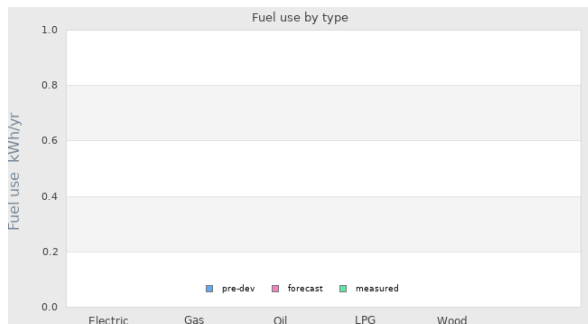
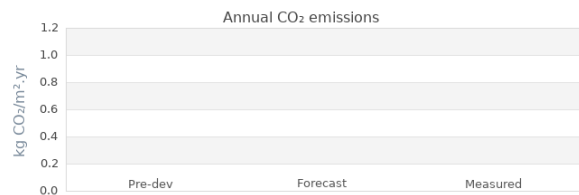


Project name The Old Foldyard, Chartham, Canterbury, Kent

Project summary New detached house in a conservation using natural materials and finishes to blend in with Kent vernacular.



Project Description

Projected build start date	04 Jul 2010
Projected date of occupation	01 Sep 2012
Project stage	Occupied
Project location	Canterbury, Kent, England
Energy target	AECB Silver
Build type	New build
Building sector	Private Residential
Property type	Detached
Existing external wall construction	Softwood frame
Existing external wall additional information	Ground floor walls cavity construction
Existing party wall construction	
Floor area	250 m ²

Project team

Organisation	Conker Conservation Ltd
Project lead	Paul Mallion
Client	T Perry Rutt
Architect	T Perry Rutt
Mechanical & electrical consultant(s)	Green Building Store
Energy consultant(s)	Conker Conservation Ltd
Structural engineer	John McAnally
Quantity surveyor	
Other consultant	Conker Conservation Ltd
Contractor	Period Restorations 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

5 person family

Space heating

Hot water

Ventilation

Paul Novus 300 system complete from Green Building Store, with silencers, filter box, frost protection coil.

Controls

Cooking

Lighting

Appliances

Renewables

Strategy for minimising thermal bridges

All details drawn at large scale and analysed. Foamglas Perinsul used at load bearing junctions under masonry

Building construction

Storeys	2
Volume	1084m ³
Thermal fabric area	841m ²
Roof description	Pitched roof using 400mm I joists filled with cellulose fibre insulation with OSB sheathing board enclosing both sides.
Roof U-value	0.09W/m ² K
Walls description	Cavity walls to ground floor, 300mm mineral wool with Teplo ties, dense clockwork internally. First floor walls 300mm timber I joists fully filled with cellulose fibre, sheathed externally with 50mm wood fibre insulation and finished with timber cladding.
Walls U-value	0.10W/m ² K
Party walls description	
Party walls U-value	
Floor description	Suspended concrete slab and ground bearing slab, both with 250mm EPS insulation with 75mm screed over.
Floor U-value	0.13W/m ² K
Glazed doors description	Internorm triple glazed timber aluminium composite
Glazed doors U-value	0.87W/m ² K uninstalled
Opaque doors description	
Opaque doors U-value	
Windows description	Internorm triple glazed timber aluminium composite
Windows U-value	0.87W/m ² K
Windows energy transmittance (G-value)	52%
Windows light transmittance	
Rooflights description	Fakro FTT triple glazed units with Thermo flashings
Rooflights light transmittance	55%
Rooflights U-value	0.94W/m ² K

Project images





