

## Project name Carrowbreck Meadow

**Project summary** Carrowbreck Meadow consists of two 3-bedroom, six 4-bedroom detached houses, four 2-bedroom and two 3-bedroom semi-detached houses all of which are Passivhaus certified, completed in October 2016. The design response is a contemporary rendition of a well established and local typology, a Norfolk style defined by a number of references to the historic barn vernacular seen throughout the county. A material pallet of white render, black stained timber cladding and either slate or plain red roof tiles also reflects the materials used in the adjacent Carrowbreck House.



## Project Description

Projected build start date

Projected date of occupation

Project stage Occupied

Project location Norwich, Norfolk, England

Energy target PassivHaus

Build type New build

Building sector Private Residential

Property type Semi-Detached

Existing external wall construction

Existing external wall additional information

Externally insulated Porotherm block

Existing party wall construction

Floor area

181 m<sup>2</sup>

Floor area calculation method

Building certification

Passivhaus certified

## Project team

Organisation

Project lead

Client

Architect

Hamson Barron Smith

Mechanical & electrical consultant(s)

Energy consultant(s)

Structural engineer

Quantity surveyor

Other consultant

Contractor

R G Carter 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
<b>Electric</b>			

Fuel	previous	forecast	measured
<b>Gas</b>			
<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

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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

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## Project images

