



## CASE STUDY

Project:	Merlin Haven
Location:	Wotton-under-Edge
Completed:	November 2013

Sylva was approached to work on this home by an architect we had worked with many times before. On this occasion, the architect was designing the home for a family member so everything *really* had to be just right.

The house is a three storey home incorporating a basement that is hidden from the front but has access to the rear garden given the steeply sloping nature of the site. The ground floor is largely open plan, having a double height space that features a stunning feature staircase. There are three bedrooms and a study upstairs featuring vaulted ceilings and high level glazing.

### PROJECT DETAILS

Project Type:  
4 bed home with basement

Size:  
190m<sup>2</sup>

Thermal Performance:  
Ever Green

Build Cost:  
£300,000

Build Duration:  
10 months

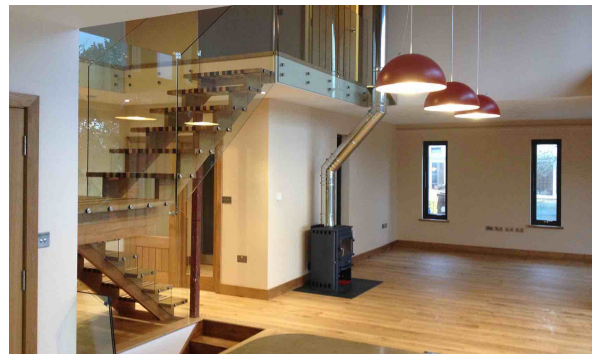
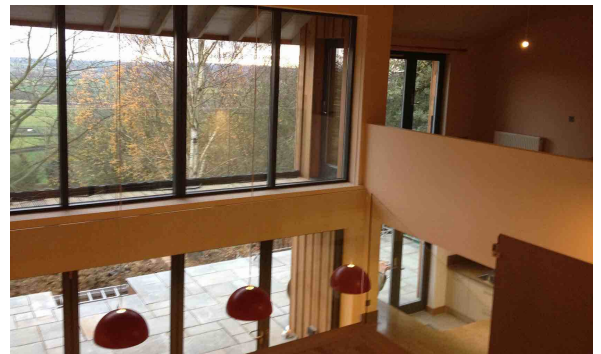
The basement itself houses a dedicated games and media room.

Careful design and site management was required to integrate the high performance timber frame panels with the basement walls. Special attention was also given to the large first floor cantilever which provides a covered approach to the front door and integrated garage.

The basement was dug and cast on site, taking around six weeks, prior to the arrival of the super insulated timber frame panels. The timber frame was assembled in two weeks, the windows fitted and the building was ready to fit out internally whilst the external finishes were applied; brickwork for the basement, render and timber for the upper floors.

The timber frame is a version of our Ever Green system, incorporating thermally decoupled studs filled with Hemcrete and hemp fibre insulation. Roof rafters were fully filled with insulation and a final layer of insulation was installed under them providing exceptional levels of thermal performance.

Whilst the client opted not to certify, the building follows Passivhaus principles including very limited thermal bridging and low levels of airtightness.



There is underfloor heating and a whole house ventilation system with heat recovery to take advantage of the fabric first approach.

The interior is beautifully finished with glass balustrading, wooden floors, a sleek kitchen and modern bathrooms, as well as those feature stairs.

From start to finish, the build was just under ten months including the external landscaping. The client moved in at the end of 2013 and is enjoying living in their new home.