

6 Hogs Edge, Bevendean, Brighton, BN2 4NQ

www.segalselfbuild.co.uk/projects/hedgehogspecific.html



Overview

| | |
|----------------------|---------------------|
| Age/period of house: | 2000 |
| Type: | Detached bungalow |
| Years in residence: | 8 |
| No of bedrooms: | 3 |
| No of other rooms: | 4 |
| No of floors: | 1 |
| Wall type: | Timber frame/cavity |

Key words

- + sustainable timber
- + passive solar design
- + green roof
- + water conservation
- + recycled paper insulation
- + sustainable materials

Introduction and approach

Bevendean is probably one of Brighton's best-kept secrets, and Hedgehog Housing is pure treasure. Ten beautiful self built timber frame houses with idyllic south facing verandas, bathed in sun, face stunning views of the Downs.

Originally the roofs were grass that suffered in dry weather so was replaced with sedum, which has been successful. Energy bills are low thanks to the solar gains from the extensive southerly glazing, the open plan and economic layout, and 'Warmcel' insulation (recycled

paper). Robin Hillier from Architype designed the houses.

Background

The project began in 1996, when a small group of local people without permanent housing became aware of the recently completed Diggers Self Build Project in Brighton, itself an innovative ecological project in Brighton. The four people who initiated the project were all in housing need with little hope of being rehoused by Brighton council, and saw another self build project as a means of enabling them to literally build a future for their children. They used the contacts and structures as put together for the Diggers project to initiate this project with the council – and encountered a positive response. They then spent a good two years building up the group, lobbying councillors and publicising the initiative, and were eventually rewarded with the offer of a beautiful site.

Brigitta came to the project in '96 when a site was still being sought, and once on site the build took 2½ years, each family putting in 30 hours labour a week. She has a huge sense of pride and achievement from building her own home and loves the sense of community. The ecological footprint of Brigitta's family is small due to her conscious lifestyle choices (no car) and careful conservation measures in the home.

Features

Energy efficiency measures

These houses are designed using the 'Segal Method' of timber frame construction, originally developed 30 years ago by the architect Walter Segal. Since its conception, this method of construction has been used in the design

and construction of a large variety of buildings. The architectural practice Architype has developed with particular emphasis to its ecological design development.

The design for this scheme is based on ecological principles that aim to limit the energy use and pollution, which can result from both the building process and the subsequent use of the building. The aim was to build energy efficient houses that are cheap to run and healthy to build and live in. Materials were chosen for their low energy and low pollution in manufacture as well as for their life cycle and performance. The structural frames are softwood, a renewable low energy resource when sustainably sourced. Timber treatments are only used for columns in contact with the ground. Wall, roof and floor constructions use high levels of recycled newspaper insulation – for example, the roof has 450mm of insulation in it.

Energy system and controls

The heating and hot water system is a condensing gas fired combination boiler with intelligent control systems. A plug in programmer controls the heating system itself and all radiators are fitted with thermostatic radiator valves. All of the energy efficiency measures mean that the house is relatively cheap to heat.

Water

Rainwater from the roof is stored in water butts and mains water is metered. Brigitta reuses bath water on the garden and is still working on perfecting an easy-to-use water recycling system.

Materials

Sustainable timber was used throughout the house. British grown larch and Douglas fir was used for cladding, for the veranda and decking, with as little chemical timber treatment used as possible. They are finished with 'organic' non-petrochemical paints, stains and waxes. The windows and doors are high performance double glazed softwood and the insulation throughout is made from recycled newspaper.

The roof is a green roof, to minimise the visual impact of the house when viewed across the valley and was made using the turf from site, with sedum added later by hand as the turf kept drying out. Now it is well established it needs to be weeded twice a year.

What was difficult?

The self build project took a long time to set up with a housing association and families had to commit to 30 hours a week of build time over 2½ years. During the build, on-site child care was a problem, but was solved by building an on-site crèche.

Professional contacts

Architects: Architype – www.architype.co.uk

Penny Anderson Associates – www.pennyanderson.com

Materials

Warmcel recycled newspaper insulation – www.excel fibre.com

Co-ordinated by



Supported by



Prizes donated by

