



Ground works

Daren Howarth's home is everything the self-builder could desire – stunning, sustainable and attainable. The earthship has come of age

THE big idea

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Affordability is still cited as a major stumbling block to incorporating green measures into a new build. But Daren Howarth, a sustainability entrepreneur and consultant, has blown that myth out of the water. His ultra-low carbon, three-bedroom earthsheltered home in Brittany – known as ‘the groundhouse’ – cost just £150,000 to build, including the purchase of the land. “If I could have built this house on the same budget 50 miles from Brighton I would have,” admits Daren. “But you’ll be lucky to find a plot for less than £100,000 back in the UK.”

Nature and nurture

The build is based on the ‘earthship’ approach, which involves ramming old tyres with earth to form strong structural walls. In conjunction with American expert Michael Reynolds, Daren has pioneered European earthship projects. But the groundhouse takes the pair’s ideas to a new level. “One improvement we’ve made is to better contextualise the house within its location through the use of local stone for cladding and a slate conical roof,” says Daren.

That’s not the only change. “Mike’s designs often include a double glass frontage,” he says. “This time we’ve opted for a fully opening front face.” The stunning

arrangement means all rooms on the south side of the house open onto the garden. The windows capture heat in the day, which is soaked up by the walls and released as temperatures dwindle outdoors.

“I decided to boost insulation levels in comparison to other European earthships, too” says Daren. “We even installed underfloor insulation, with a foot of compressed earth above.” So far, so low-tech – but the groundhouse incorporates plenty of modern eco measures, including 11 sq m of solar thermal tiles from Solex.

“Northern Europe doesn’t benefit from a massively sunny climate, so we’ve worked hard to harvest as much heat as possible,” says Daren.

A full day of sun provides several days of warm water, stored in a 1,000-litre hot water tank. “It should be ideal for showers and supplying the underfloor heating, even in winter” he says. The lowest temperature Daren and his partner Adi have experienced indoors is 19°C, even when conditions outdoors dropped to single figures early in the year. But the big test will come when the couple spend their first winter in the house.

New tricks

A recurring theme throughout the groundhouse is the use of salvaged materials. Hundreds of glass bottles have been ‘upcycled’ to

form beautiful ‘windows,’ for example (shown above). Where reclaimed items weren’t suitable, sustainable products have been used. “We opted for Finnforest’s Kerto-S engineered timber facing as it is guaranteed to come from a sustainable source,” says Daren.

Daren’s ethos of combining traditional aesthetics, salvaged materials and the latest eco technologies has resulted in a gorgeous home that should be as sustainable and cost-effective to run as it was to build. ●

Building a groundhouse

Follow Daren’s top tips to get started:

- As with any build, check how your local authority views this type of project before you get too involved
 - Earthships make excellent self-builds. They’re labour-intensive, but I would say they’re even easier to erect than a Walter Segal timber-frame
 - Make sure you get the right advice. It’s tempting to spend time doing all the up-front stuff yourself, but there’s a great knowledge bank to draw on now
 - Working with an experienced team can help you build efficiently. Beginners can also learn by helping out on ‘experience weeks’ at others’ self-build projects
- Visit www.groundhouse.co.uk for more information and a link to Daren’s new blog, which will cover the build process and life in the property. Each week, he’ll be posting answers to some of the most common questions he receives. Daren also runs carbon-management practice Clevel (www.clevel.co.uk)