

10 terrific timber homes

Building with wood has many advantages, including excellent eco credentials

WORDS REBECCA FOSTER

Timber's ready availability and versatility has made it a popular construction material for many centuries. The choice of current wood-based building methods includes open and closed panels, traditional oak-frame systems and structural insulated panels (SIPs). There are a wide number of finishing materials that are compatible with these techniques, so the design possibilities of building your home with timber are varied.



1 BRANCHING OUT

Stunning views of woodland are one of the highlights of this three-bedroom timber-frame house, situated on the edge of the South Downs. PAD Studio designed the 185 square metre property with a highly insulated timber frame to minimise the environmental impact of the build, specifying materials to reduce the project's embodied carbon footprint. 'The timber frame was selected for reasons of buildability, high thermal performance, low carbon impact and issues around the restricted site access,' says Wendy Perring, design director of the practice. Wood shingles, sourced from local and renewable suppliers, clad the exterior to complement the Arts and Crafts style of houses in the local area. Many of the interior walls have been lined with pale Douglas fir boards, which helps to reflect light around the space. (padstudio.co.uk) >>



HOME ON THE FARM

When the Balcaskie Estate in Fife was struggling to attract a head stock person, they came up with a persuasive strategy to entice one: a high-spec new home to go with the job. Estate manager Sam Parsons took the lead when it came to co-ordinating the self-build. Conscious that the estate had favoured traditional construction methods in the past, but keen to create an efficient home, Sam investigated timber frame. Fleming Homes was chosen to design and manufacture the pre-insulated open-panel structure, which has been clad in corrugated steel. The four-bedroom house cost £404,000. 'We're very proud of it,' says Sam. 'It's been an excellent exercise in testing what's possible on a greenfield site.' (fleminghomes.co.uk)

3 A FAST FINISH

Mandy and Bob Williams decided to build their own home when they couldn't find a house they liked in the right area of Cornwall. Impressed by the thermal efficiency and fast construction of off-site timber-frame construction, the couple's four-bedroom home was installed by self-build specialists Potton for £630,000 using the Kingspan Ultima build system.

The external shell was erected on site in four weeks. A chalk-white pre-coloured render gives the exterior of Mandy and Bob's home a crisp finish that complements the pale-grey composite window frames and slate roof. Inside, an air source heat pump powers the central-heating system, which includes underfloor heating. (potton.co.uk)



ECO SLEEK

This four-bedroom home in California is a vision in western red cedar, blackened steel, glass and concrete. Built using a wood-frame structure, the exterior walls are principally of wood stud construction, with engineered truss joists forming the floors and roof. John Lum Architecture worked closely with the owners to achieve their eco aspirations, including the installation of solar panels. Expanses of glazing provide garden views and were positioned to avoid internal overheating. As well as brightening the living spaces, roof lights provide ventilation, drawing out warm air. (johnlumarchitecture.com) »

5 URBAN OPPORTUNITY

When architect Jonathan Pile of the Oval Partnership Architecture came across this tight plot in south London, he knew a certain amount of design ingenuity would be required to make the most of the available space. The three-bedroom house, where Jonathan lives with his family, is of a hybrid construction. The single-storey part of the property is a timber-frame construction, while the two-storey pitched roof element incorporates steel portal frames, infilled with timber.

'Going down this route allowed for thinner wall construction, as insulation could be infilled between timber posts rather than introducing an extra layer, and therefore extra thickness,' says Jonathan. 'The primary sustainable achievement of the house is the ingenuity involved in finding a way to get a generous car-free family house into a tight, awkwardly shaped site.'

Another advantage of choosing timber frame was that the materials could easily be cut to fit on site. (oval-uk.com)



6 HIGH-PERFORMANCE HOME

Michael and Carolyn Lloyd decided to trade in their draughty Victorian house in West Sussex for a thermally efficient home. The couple worked with timber-frame supplier Scandia Hus to build a four-bedroom chalet-style house. Construction components were delivered and erected in 14 days. Panels of the exterior walls are lined with insulation and a multilayer quilt to the inside face of the walls and roof. Carolyn and Michael completed their home with traditional cladding materials, including slate-effect fibre-cement roof tiles and Old Duxford bricks from Vandersanden (vandersandengroup.co.uk). A similar project would cost approximately £2,150 per square metre. (scandia-hus.co.uk) >>



LOW-IMPACT ANNEXE

Nestled in the New Forest National Park, this annexe was built to provide a place for the homeowner's adult children to stay when visiting, and as a place to hold parties. It has two bedrooms, a bathroom and an open-plan living space, with a mezzanine storage area. Designed by Strom Architects, the building is clad in locally sourced sweet chestnut to match the main house. The walls, floor and roof are highly insulated to keep energy requirements to a minimum. It also sits on a brick plinth, so the floor retains the warmth generated by the underfloor heating, releasing it slowly to maintain a constant temperature. A similar project would cost £4,500 per square metre. (stromarchitects.com)



DOUBLE ACT

Sarah and Guy Bowden had initially planned to demolish and replace their 1800s cottage in Monmouthshire with a new-build. But a conversation with local planners changed their minds, and they came up with a new strategy to enlarge their home using two oak-frame extensions.

Welsh Oak Frame (welshoakframe.com) designed a new roof for the cottage and added a porch and single-storey side extension (on the right). The new addition was built using structural insulated panels (SIPs) clad in timber and stone; extra insulation was fitted above the roof to allow beams to be exposed inside the house. Sister company Arborea (arborea-oak.com) built the glazed-oak garden room on the other side. Welsh Oak Frame say that oak frames accounts for a third of the project cost, with builds starting at £375,000. >>

9 IN A TIGHT SPOT

Located in Vancouver, Canada, this asymmetric annexe is the work of Campos Studio. It was designed to provide supplementary living space for a multigenerational family who live in the main house and has two floors with a single bedroom upstairs.

The angular shape of the 59 square metre annexe responds to the tight dimensions of the plot and was built using a high-performance timber-frame skeleton with mineral wool insulation between the studs, plus an outer layer of insulation. Wood was also chosen for the exterior cladding in the form of split-face cedar shakes, complemented by custom-milled cedar soffits.

Inside, polished concrete floors boost the thermal mass of the building and are warmed by underfloor heating. The dark hue of the exterior contrasts with pale finishes inside, which include white-stained wood. (campos.studio)

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10 HEALTH AND WELLBEING

The desire for a healthy family home made from non-toxic materials led the owners of this house in Oregon towards a timber frame. Designed by In Situ Architecture, its style complements that of other houses in the area. The flat roof and surrounding parapet ensure the ridge height of the new-build remains below that of homes nearby. Energy efficiency was a top priority for the family, who were keen to build to Passivhaus standards. As a result, the structure was pushed to the north boundary of the plot with plenty of glazing on the south elevation. Continuous exterior insulation and triple-glazed windows helped create an airtight shell. A similar project would cost £2,900 per square metre. (insituarchitecture.net) GD