Above: SIPs were chosen for this traditional style new home in Perthshire thanks to their excellent airtightness and high thermal performance. The package was delivered by JML SIPs (www.jmlsips.co.uk)

6 REASONS TO BUILD WITH SIPS

Could structural insulated panels be the right solution for your project?

Offering super-swift build times, excellent thermal performance and limitless designs, it's no wonder this timber-based method is gaining momentum amongst self builders. The panels are made from two wood-based sheets (often OSB) that encase a built-in layer of insulation. They are fabricated offsite in a factory-controlled environment by your chosen supplier, before being delivered to the plot for assembly.

1 Speedy build times

The high level of prefabrication means a SIPs kit can be taken to weathertight shell stage very quickly. "A SIPs home can be erected as much as 60% faster than traditional methods," says Ian Clay from SIPS@Clays. "The offsite manufacture, coupled with the predictable build programme (ie installation not being subject to weather delays or labour issues) ensures the structure will be weather resistant and ready for handover to clients and follow-on trades within two to three weeks."

2 Strong material

The robust nature of the panels is an advantage. "SIPs are strong, allowing large spans without the need for roof trusses, enabling features such as vaulted ceilings," says John Langley, director of JML SIPs. As with conventional timber frame, SIPs can be used to facilitate an array of styles, including traditional and contemporary homes.

3 Design pinned down early

The level of prefabrication means the bulk of the design decisions are made at the start of your project. So it's worth spending plenty of time at the planning stage to make sure any issues are ironed out before components are manufactured. "Other than minor tweaks such as reductions in window or door openings, design changes cannot be made without cost and delays," says Ian.

4 Excellent efficiency

SIPs offer great performance. "This method ranks right at the top in terms of thermal efficiency and is often used for Passivhaus builds," says John from JML SIPs. "U-values can be as low as 0.1 W/m^{2}K, dependent on panel and insulation thickness." The computer-controlled fabrication of the individual panels ensures that the quality and performance you want can be achieved out of the box.

5 Choice of suppliers

Dedicate plenty of time to researching your supplier and the type of SIPs kit they use. "With a host of systems available, make sure you understand the composition of building components and the benefits of different options. For example, the jointing setup of each system is key to creating an airtight, efficient envelope. Also check certifications and fire performance, strength and stability," says Ian. "Consider a recognised brand such as the Kingspan TEK building system for all round quality."

6 Value for money

Costs are typically slightly higher than conventional timber frame, but you benefit from simplicity in terms of airtightness detailing and on-site quality control. "For a well-finished house, built with high quality materials and fully-managed and erected by a professional, I'd estimate from £1,800 to £2,000 per m^2," says John.

3 great SIPs homes

SIPS@Clays (www.clays.com) created and assembled the superstructure for this eye-catching new property

This timber clad SIPs property by Heb Homes (www.hebrideanhomes.com) offers breathtaking coastal views

Glosford SIPs (www.glosfordsips.co.uk) provided the SIPs wrap for this oak frame, supplied by Carpenter Oak