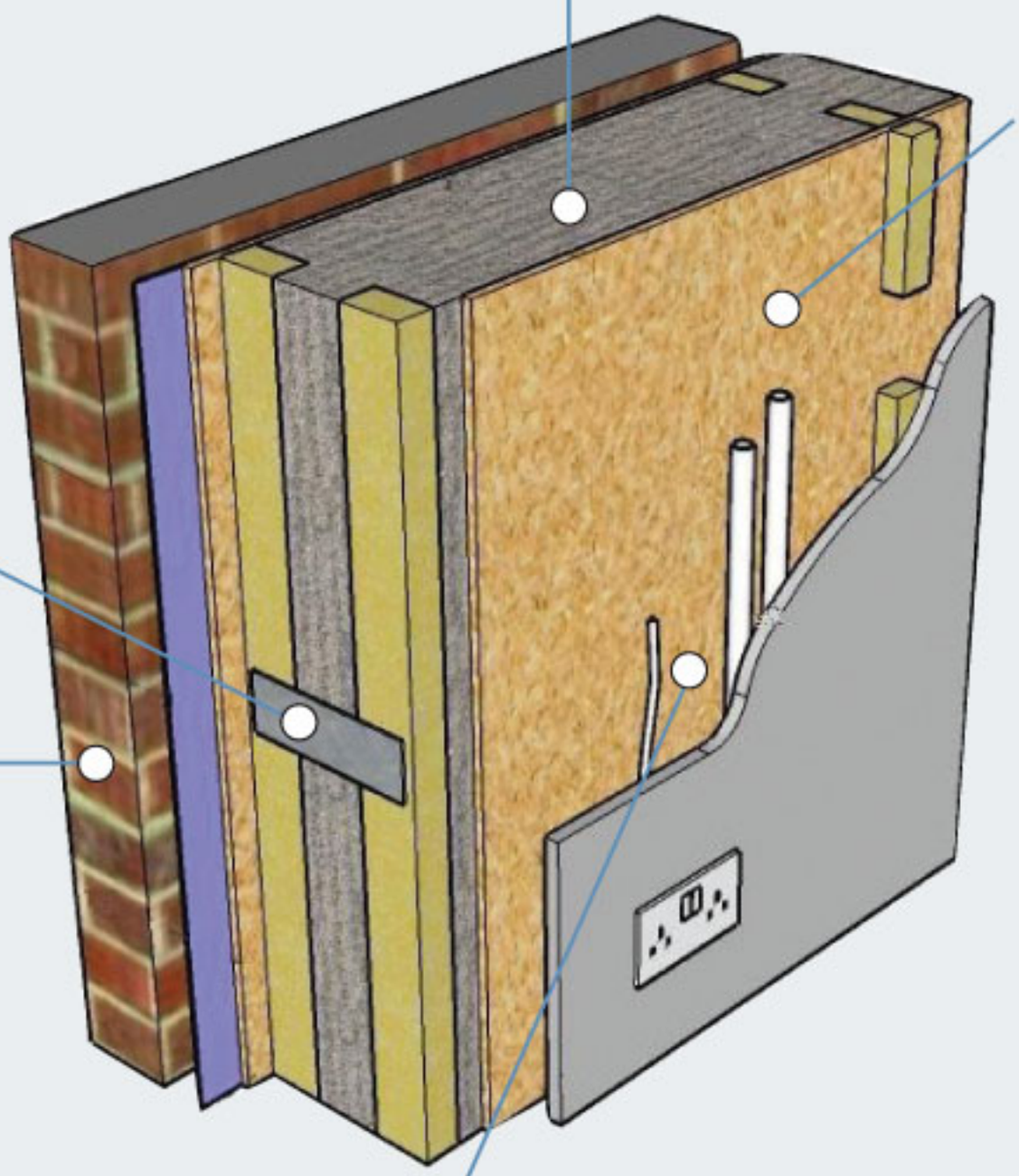
BEHIND CLOSED WALLS: SIGMA II

Thermal bridging. Instead of a conventional solid timber stud, the specially designed "space stud" comprises of two pieces of timber joined by metal webs to reduce thermal bridging. The smaller size of the timbers also means locally grown, less mature trees can be used rather than importing timber from Scandinavia.

Insulation. Blown insulation is fitted in the factory. The preferred option is bonded expanded polystyrene beads, which fill the cavity and the gaps between the "space stud" and set firmly to prevent slump and settlement. U-value of 0.15W/m²K.



Airtightness. The oriented strand board is used as the primary air seal for the walls. The panels are designed with lock joints and factory fitted compressible foam seals at the head and foot of the panels which form a seal between the panel and the sole plate. Vertical joints are taped. This approach does away with the need for a separate air membrane and should achieve an air permeability of 3m³/h/m².

Outer skin. Conventional brick work is used for the outer leaf of the wall making an overall wall thickness is 412mm.

Service zone. A 50mm cavity for services such as cabling and pipework is factory fitted and this is finished on site with conventional plasterboard.