



4WALLS ADVANCED S.I.P's

The 4Wall Advanced Structurally Insulated Panel (S.I.P's) system is a thermally more efficient alternative to other off-site panel systems.

4Wall provides a full chemically bonded panel with outstanding 'U' values, airtightness and strength. As well as the added benefits of being fire resistant, undamaged by water, an integrated wiring conduit in every panel and no internal plaster boarding required.

The 4Wall external panel system is faced using a magnesium oxide board, making it capable of accepting a direct finish using render or brick slips, timber or other cladding products to give a slim, finished wall with an excellent thermal and airtightness performance.

The 4Wall system requires NO membranes (inside or outside) to achieve its high level of performance.

WHY CHOOSE 4WALL?

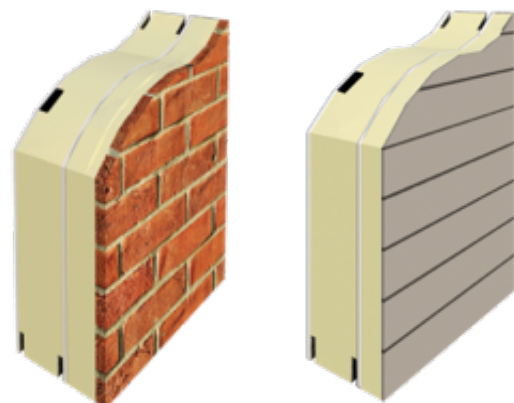
- Zero thermal bridging in the dwelling.
- Fireproof – excellent fire resistance during and after building
- Airtight – no need for additional tapes or membranes
- Excellent thermal performance – from 0.09 W/m²k
- Ultimate design strength – can carry concrete flooring systems
- Waterproof – designed to cope with flood conditions
- No infestation risk – resistant to rodents & insects
- Cost competitive – compared to other off-site systems

The 4Wall panel is 185mm thick with a structural galvanised C section bedded vertically within the insulation panels to give it structural strength and durability. The insulation is foamed around the steel section ensuring that there are no thermal bridges or 'cold spots' within the panel construction.

The 4Wall external wall panel has a thickness of 185mm, if required, additional insulation can be added to the external face of the panel to provide a higher level of insulation. This surface would then be able to carry the external façade.

4Wall panel thickness	Additional insulation thickness	Thermal U Value.W/m ² K
185mm	-	0.136
185mm	50mm EPS	0.112
185mm	100mm EPS	0.095
185mm	150mm EPS	0.083

4Walls has been designed to be used as a monolithic construction but can also be used in a standard cavity construction with a brick or stone external leaf.

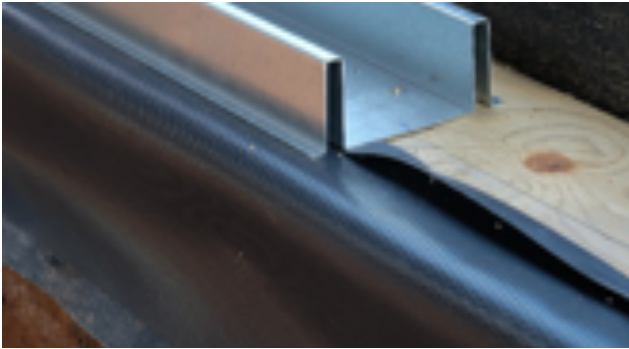


With brick slips

With timber cladding

HOW IT GOES TOGETHER

4Walls can be used with any standard foundation system. As with all factory engineered systems, the need for precision is required. For homes building to a low energy or Passivhaus specification, we would recommend the use of the Future Foundation system to provide the complete thermal envelope. The 4Wall panels are inserted into a steel track which has been mechanically fastened to the timber sole plates with a damp proof membrane underneath.



The panels are designed so that the insulation over-sails the steel channel to eliminate cold bridging.



Service conduit runs within every panel, so that you have complete design flexibility in your room layouts.

The 4Wall panels are then connected on the vertical joints using a thermal fin.

Technical detailing, including for all wall, floor and roof junctions, are contained with the KIWA BDA Agremont certificate:

BDA Agrément® BAW 18-079/01/A

The 4Wall System also has LABC System Approval and Warranty.



BDA Agrément® BAW 18-079/01/A

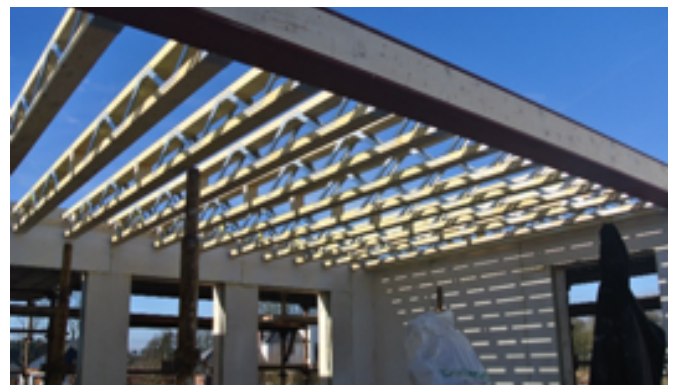


INTERNAL WALLS & INTERMEDIATE FLOORS

The 4Wall systems can be used with either timber or concrete internal systems.

If using timber stud walls for the ground and first floor, we would recommend the use of metal web joists. Alternately, if using block work walls, then a concrete or timber floor can be used.

Both systems would be finished with a lightweight self-levelling screed with underfloor heating pipes installed as part of the Evolution turnkey solution.



ROOF

We can offer a range of roofing solutions to work with the 4Walls system using traditional trusses or purling systems to provide a room in the roof. This will be designed to suit your home.