



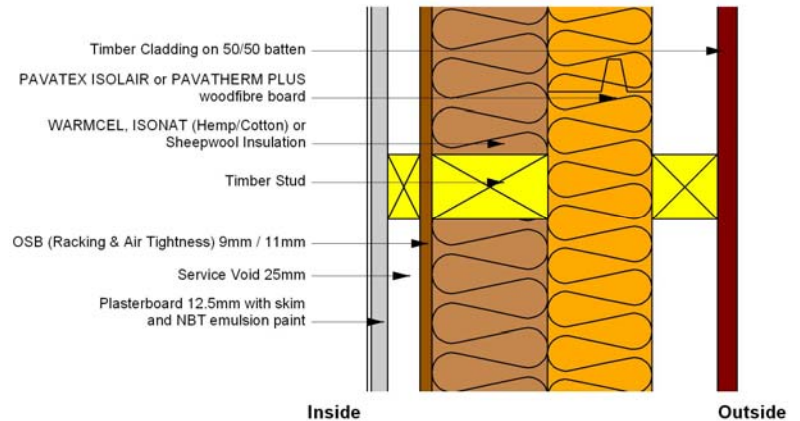
Timber Frame Solutions

PAVACLAD / System description:

NBT Timber Frame Pavaclad System is for timber frame buildings externally finished with any type of cladding including facing bricks, rendered blockwork, timber boards or shingles, tile, terracotta claddings, metal sheet etc.

Pavaclad systems use NBT Pavatex woodfibre boards over the outside of the frame in a continuous layer, with the racking board on the inside of the structure. The racking board acts as the airtightness layer and vapour control in a breathing wall construction. Internally we recommend a service void behind the plasterboard for effective airtightness control and easy service alterations.

NBT Timber Frame PAVACLAD System



System Application:

NBT Timber Frame Pavaclad System can be used with any conventional timber frame design, provided that the racking board is fixed on the inside of the frame rather than the outside. The same limitations apply as to all timber frame applications. With certain cladding materials, multi occupancy applications require fire stops between units in the external cavity. Contact NBT for further details.



System Benefits:

- Excellent thermal performance, with very low thermal bridging, enabling very slim construction for new Part L compliance
- Alternatively very high thermal shell performance possible in slim and cost effective way.
- Excellent airtightness by design
- Excellent acoustic insulation
- Good overheating control
- Fully breathing construction
- Full design and site support from NBT
- Full systems parts from NBT
- Tried and tested system, fully certified

Environmental Performance:

- BREEAM Green Guide rating: A (with timber cladding)
- Carbon positive (locks up more than is used) and non toxic
- Woodfibre Boards are over 95% waste



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Technical details: Thermal values

89mm Timber Stud

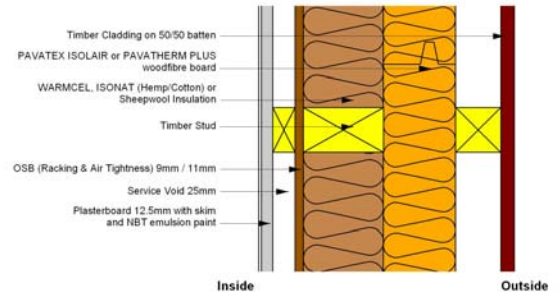
Insulation onto Stud	22mm Isolair	35mm Isolair	60mm Pavatherm Plus	80mm Pavatherm Plus	100mm Pavatherm Plus
Insulation between Stud**	89mm Isonat	89mm Isonat	89mm Isonat	89mm Isonat	89mm Isonat
U-Value* [W/m²K]	0.36	0.33	0.27	0.24	0.22
Decrement Factor	0.82	0.75	0.63	0.50	0.39
Decrement Delay [h]	4.0	5.0	6.4	7.8	9.1
Admittance [W/m²K]	1.47	1.48	1.50	1.50	1.50

140mm Timber Stud

Insulation onto Stud	22mm Isolair	35mm Isolair	60mm Pavatherm Plus	80mm Pavatherm Plus	100mm Pavatherm Plus
Insulation between Stud**	140mm Isonat	140mm Isonat	140mm Isonat	140mm Isonat	140mm Isonat
U-Value* [W/m²K]	0.27	0.25	0.21	0.19	0.18
Decrement Factor	0.75	0.68	0.55	0.42	0.32
Decrement Delay [h]	5.3	6.4	7.8	9.2	10.6
Admittance [W/m²K]	1.51	1.51	1.52	1.52	1.52

*based on JPA calculation with 15% bridging (timber)

**Isonat Hemp Cotton insulation has a k value of 0.039W/mK. Other vapour open insulations can be substituted. Contact NBT for calculations.



Calculation of γ values is available for specific build ups, enabling considerably better thermal performance (New Part L) calculations and/or thinner structures.

Full System Components:

Insulation boards: Interlocking, waterproof Isolair boards (22, 35mm) and Pavatherm Plus boards (60,80,100mm).

Tapes: Pavatape for exposed edges, and a selection of airtightness details for internal junctions.

Fixings: A range of helical, screw and hammer fixings for different boards and claddings

Infill insulation: NBT provide natural insulation materials such as Hemp Cotton, Sheepswool and Cellulose insulation for infill between studs, to provide a fully breathing, environmental construction

Plaster boards and paints: NBT can provide clay boards, plasters and trade environmental paints for internal walls

Timber frames: NBT can provide contacts with partnering timber frame manufacturers if required

NBT Support:

Design support: Full design support including drawings review, assistance with detailing, thermal bridging (New Part L) and interstitial moisture calculations

Training: either at NBT or on site for applicators, site managers etc

Site Support: NBT will assist on site, giving advice on technical, application and quality issues.

Approved Applicators: NBT have a list of trained and approved applicators for the various systems processes.



PAVACLAD - Priory NH Centre, Hastings