



**sps|envirowall**  
TOTAL RENDERING SOLUTIONS

# System Built **Housing**

Clasp 5m

3rd Edition, 2010

## System Built Housing



### Clasp 5M

The CLASP 5M house was developed as a cost effective and quick build solution to increasing housing requirements. The factory supplied components were designed to be supplied as a 'flat pack' system for swift on site construction by low skilled labour. Originally flat roofed these properties are usually found in terraces of four to six properties, with both two storey and bungalow variations, often with outhouse/porches.

The structure of the CLASP 5M is a composite timber and steel frame, consisting of four vertical 80mm steel stanchions fixed into a 100mm concrete slab sub structure. The steel stanchions are supported by diagonal braces and a heavy perimeter beam at soffit and mid levels (on two storey). Within this basic frame a timber frame was built in the same plane to support windows and external claddings.

Originally the external cladding of the properties consisted of tile hanging on the first floor with a combination of prefabricated light weight concrete panels and boarding on the ground floor. Refurbishment of the properties over the years has seen the concrete panels and boarding replaced on most properties.

The concrete panels are usually replaced by single skin brick work, whilst the boarding has been replaced by a variety of materials, including resin panels and painted cladding board. In most cases the tiling has remained in place, maintained and repaired like for like.

To receive an EWI system the existing external claddings need to be stripped, and any necessary repairs to the internal timber made good. Mineral wool insulation can be friction fitted within the timber frame then a suitable sheathing board should be fixed securely to the outside of the timber frame. Insulation can then be adhesively and mechanically fixed to the sheathing board followed by the application of a reinforced basecoat (Envirorend) and a topcoat as required by the client.

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## Potential Problems

Once the existing cladding is stripped attention should be paid to the condition of the existing timber frame, as in some properties it has been found to have deteriorated, usually due to water penetration. Repairs and extra timber stud work may be required to receive the sheathing board. The frame of the CLASP's sits on a 6 inch concrete plinth which is integral to the concrete floor slab. This was originally designed to stop any water ingress at the base of the properties. Cold bridging is a problem at this point, which is below the DPC, please contact **sps|envirowall** for specification for insulating below DPC. The nature of the construction type used in these properties means that establishing a true line and level can be complicated. Whilst stable the frame construction and floated floor slab mean the construction is not always square. Not noticeable to the naked eye, the application of brick render finishes, or horizontal banding can highlight the discrepancies in the frame over the length of a full terrace.

CLASP houses were originally designed with flat roofs, whilst not integral to the EWI system, many clients have fitted pitched roofs as part of their refurbishment program. The terraced nature of these properties means it is preferable to do whole blocks which can be a problem where there are private owners in residence. Whilst the EWI system can be detailed to stop at privately owned properties this is more complicated to do with a pitched roof system.

## Specification

To achieve 0.35 W/m<sup>2</sup>K,

### ■ Sheathing Board

- Marine Ply
- CP Board

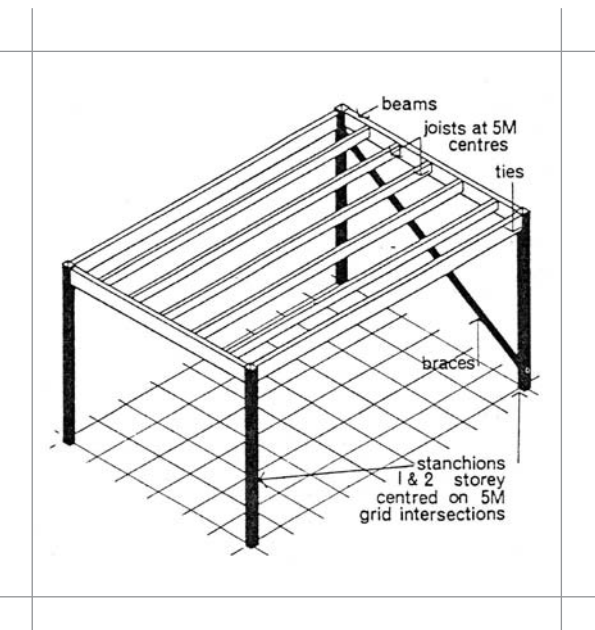
### ■ Adhesive Mortar (5mm)

### ■ Insulation

- EPS – 90mm
- Rockwool -90mm
- Phenolic –60mm

### ■ Fixings

- ETKR90
- Base coat (4mm)
- Reinforcement mesh



### ■ Top Coats (2-15mm)

- Envirodash
- Envirobrick
- Brick Slips
- Eco**rend**/Granicem L Monocouche Renders
- Enviro**sil**/Enviro**cryl** top coat

For a full technical consultation, survey and project specific report and specification please contact **sps|envirowall's** technical department.

■ **sps|envirowall** (Wales Office)  
UNIT C6.3  
Treforest Industrial Estate  
South Wales  
CF37 5UD

■ **sps|envirowall**  
25/26 Rosevale Road  
Parkhouse Ind Est West  
Newcastle under Lyme  
Staffordshire. ST5 7EF

■ **sps|envirowall** (Head Office)  
Orchard House  
Aire Valley Business Centre  
Keighley - Yorkshire  
BD21 3DU  
**T** : 01535 661 633  
**F** : 01535 661 933  
**E** : [info@envirowall.co.uk](mailto:info@envirowall.co.uk)  
**W** : [www.envirowall.co.uk](http://www.envirowall.co.uk)