



**sps|envirowall**  
TOTAL RENDERING SOLUTIONS

# System Built **Housing**

Cornish Units

3rd Edition, 2010

## System Built Housing



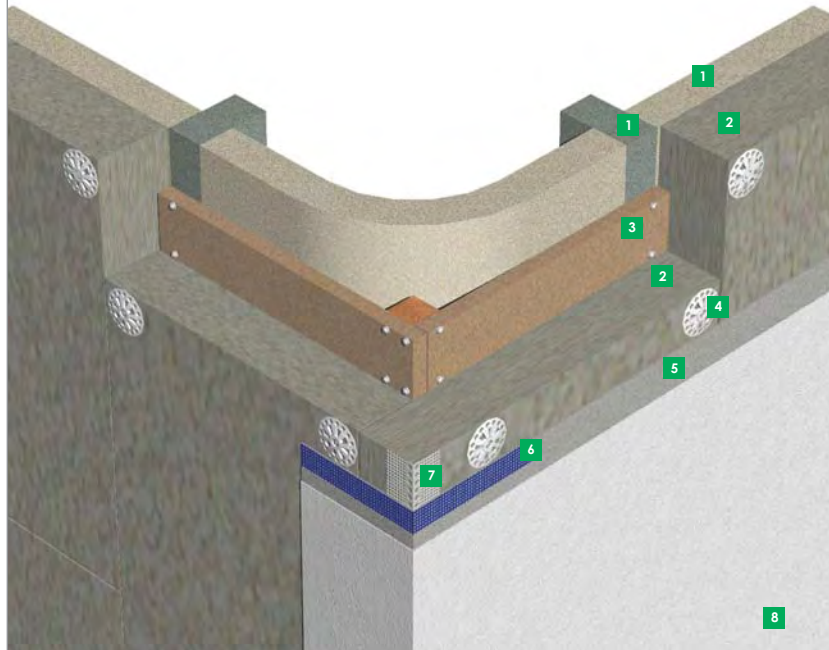
### Cornish Units

There were 30,000 built in the 40's and 50's. Two types, type 1. Reinforced concrete columns with un-reinforced concrete panels slotted between them in pre-formed grooves. First floor and roof a tile hung timber structure. Type 2. Introduced in 1953 quicker and cheaper to build concrete linings replaced by dry lining.

It is extremely unlikely that an overall unsafe condition would arise without considerable visual signs of deterioration. The condition of most Cornish dwellings is good. Deterioration appears to be limited to discrete groups on occasional estates. Minority of columns and other reinforced concrete components are cracked due to corrosion of reinforcement. Cracking caused by carbonation cracked concrete.

Remove concrete in affected area, clean steel and patch repair. If carbonation exists but does not display cracking additional protection may be provided by surface coating formulated to restrict the transmission of carbon dioxide.

## System Built Housing



### Existing Substrate:

- 1. Cornish Unit**  
Consisting of concrete panels between concrete columns.
- 2. Insulation Board**  
100mm and 80mm thickness typically 1200mm\* 600mm 80mm board used over 20mm plywood to give flat surface for render application. Rockwool (illustrated) or Polystyrene.
- 3. 20mm Plywood**  
Fixed directly to concrete columns and used to form a square corner. Fixings to be determined by on site test.
- 4. Insulation Fixings**  
Exact type and length to be determined by system and substrate. Expansion pins to be used into concrete, screw and washer into plywood.
- 5. Base Coat**  
3-5mm Enviroend Basecoat. Applied with 8mm tooth trowel.
- 6. Reinforcement Mesh**  
Overlapped 100mm. Extra patches at doors and windows. Mesh placed on surface of base coat for maximum reinforcement mesh.
- 7. Corner Bead**  
PVC/Aluminum with mesh wing attachment.
- 8. Top Coat**  
1.5mm grain Envirocil/Envirocyl finish. Trowel applied, thickness determined by grain size. Available in different textures.

### Specification

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

- **Adhesive Mortar (5mm) - optional**
- **Insulation**
  - EPS – 90mm
  - Rockwool - 80mm
  - Phenolic – 50mm
- **Nylon Insulation Fixings**
- **Base coat (4mm)**
- **Reinforcement mesh**
- **Top Coats (2-15mm)**
  - Enviro**dash**
  - Enviro**brick**
  - Brick Slips
  - Eco**rend**/Granicem L Monocouche Renders
  - Enviro**sil**/Enviro**cyl** top coat

For a full technical consultation, survey and project specific report and specification please contact [sps|envirowall's](#) technical department.

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