

Typical Schedule of Contents for System Manual

Timber cassette roofs

1.0 Scope and limitations of the system

- Description of system and the scope of offsite produced elements
- Intended use and limits of application (storey height, dimensions, building type and shape etc.)
- Confirmation of the parties that have responsibility for design and coordination of the system and who has overall responsibility for the delivery of the home.

2.0 Specification of key components

Specification of all key components that are critical to the performance of the system such as the:

- Plasterboard linings
- Breather membrane and VCL
- Sheathing board
- I-joists
- Thermal insulation
- Battens, ridge boards and purlins
- Fixings, including brackets, clips, screws and nails.
- Fire stops and cavity barriers
- Integrated components such as dormers, chimneys and roof lights.

3.0 Design details

- Typical details of vertical steps and horizontal staggers*
- Localised detailing of typical connections including:*
 - Cassette to cassette
 - Cassette to wall plate
 - Cassette to purlin
 - Cassette to ridge
 - Lateral connections of spandrel panels to roof cassettes, and holding down straps, etc.
 - Openings and penetrations through system
 - Typical junctions showing location of cavity barriers and fire stops.

4.0 Evaluation of critical performance

- Structure and stability*
 - Outline design philosophy that demonstrates the structural principles of the system
 - Connection types and fastening methods
 - Design of connections
 - Spacing of fasteners
 - Details of how the system can provide restraint to other elements of the construction (e.g. external walls, spandrel panels or GRP chimneys)
 - Resistance to thrust actions.
- Behaviour in relation to fire, supported by statement of design philosophy and test data*
 - Clear reference to who is responsible for supplying and installing cavity barriers and fire stops in all areas

- Relevant test data
 - Address the risk of party wall spandrel panels being pulled over by cassettes during a fire.
- Resistance to moisture*
 - A method to provide continuous resistance to water vapour through the VCL across all cassette-to-cassette interfaces. Note that a condensation risk analysis may be required if non-standard construction is proposed¹.
 - Resistance to the passage of sound*
 - Clarification on how sound resistance is to be achieved.
 - Energy efficiency*
 - Certification or calculation that demonstrates the thermal performance of the system including thermal transmittance (psi-values) for typical junctions
 - Typical details that show how the continuity of the thermal insulation is achieved, specifically at difficult junctions such as the interface of the wall and roof.
 - Durability of materials*
 - Supporting certification for materials with confirmation that they are designed and installed in full compliance with certification.
 - Compliance with Building Regulations*
 - Demonstrate compliance with the relevant Building Regulations where not covered elsewhere in the manual.

5.0 QMS and FPC measures

- Details of audit of Quality Management and Factory Production Control procedures, including the party carrying out the audit, the scope and frequency of the audit.
- List of onsite checks during delivery and erection of units, including:
 - Details of the pre-start inspection process prior to delivery of system, including checking tolerance/ dimensions of wall plates to receive system
 - Delivery, handling and storage methods
 - Outline process of the installation by manufacturers approved / trained installers
 - Supervision and sign-off process prior to handover back to principal contractor
 - Installation checklist, tolerances, fixings, application of cavity barriers / fire stops, etc.
 - Method of repair to damage caused during erection; including ripped membranes, remediating lifting holes, etc.

¹ Analysis in accordance with BS EN 13788 (Glaser method) using boundary conditions of >60% internal RH at 21°C, and external temperature of -2°C will be acceptable.