

Definitions of 'open' and 'closed' panel as applicable to both light steel frame (LSF and timber frame construction

(July 2022) (First issue)



Question

What do NHBC consider to be either an 'open' or 'closed' panel framing wall, as most frequently used in panellised construction?

Considerations

- To meet NHBC's Technical Requirements, timber or light gauge steel open or closed panel framing walls should comply with NHBC Standards Chapter 6.2 'External timber framed walls' or 6.10 'Light steel framed walls' respectively.
- However, it is recognised many panellised systems are manufactured off-site under factory conditions to varying extents with these typically being declared as formed of either 'open' or 'closed' panels. This Guidance therefore looks to clarify NHBC's definitions for each.

Answer

NHBC's definitions for 'open' and 'closed' panel framing walls are as follows: -

(Note: As all components of a closed panel framing wall cannot be inspected on site the assembly should be treated as a proprietary building system as defined under NHBC Standards Chapter 2.1 Technical Requirement R3 and be subject to assessment by an appropriate independent technical approvals authority accepted by NHBC or be assessed under the NHBC Accepts service - see www.nhbc.co.uk/accepts).

Open panel

Assemblies typically include: -

- structural frame, including sheathing board as required
- a fixed breather membrane to external walls

Additionally, may include: -

- insulation (between the studs only)
- a transparent vapour control layer (VCL) in order that the construction/insulation can be viewed on site. Note: - if a non-transparent VCL is used the framing wall will be considered by NHBC as being closed (see below)
- service battens
- temporary weather protection

Closed panel

Assemblies typically include: -

- structural frame, including sheathing board as required
- a fixed breather membrane to external walls
- insulation
- vapour control layer (VCL)
- plasterboard or other internal finish

Additionally, may include: -

- service battens
- conduits/ducts
- services
- claddings or other external finish or finishes
- windows/doors
- temporary weather protection