

H-brackets for gable spandrels to cold roofs

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Question

What alternative gable spandrel support are acceptable to NHBC other than those covered in Technical Guidance Note 7.2/25?

Considerations

- Roofs should act to transfer lateral forces from walls to buttressing walls, piers or chimneys
- Roofs should be secured to the supported wall by appropriate connections which provide adequate resistance to both lateral and uplift forces.
- Where there is a change of material such as use of spandrel panel over masonry, there is a slip plane at the junction between the two materials when considering effect of lateral forces. Lateral movement at the junction can be resisted by laterally supporting the panel and wall independently, as shown in Detail 8 of Technical Guidance note 7.2/25
- The Trussed Rafter Association (TRA) publication titled 'Gable Wall Spandrel Panels' provides guidance of using the H-brackets in the types of application described below.

Answer

- We accept an alternative approach to securing spandrel panels over masonry walls by using proprietary metal 'H' brackets that clip over the top of the masonry wall and around the sides of a timber wallplate, which is bedded onto the masonry and level with the wallplates at eaves.
- Using a number of these H-brackets, together holding-down straps and specific timber-to-timber fixings to join the spandrel panel to the wallplate, the lateral forces on the masonry can be transferred into the spandrel panel. Lateral restraint of the panel back into the roof structure at the ceiling joist level completes the lateral restraint of both the panel and the masonry wall.
- An acceptable variation to the above approach is where the gable masonry finishes level with the top of the ceiling joists and is restrained with common lateral restraint straps and blocking pieces or noggins to the ceiling joists. The lateral forces on the spandrel panel are transferred to the masonry wall using the same metal H-bracket and wallplate arrangement described above.
- With both approaches, the junction details between the masonry, spandrel panel and ceiling joists should be designed by a chartered civil or structural engineer using accepted proprietary products in order to meet NHBC Technical Requirements.
- NHBC currently accepts the following H-brackets: Cullen GRB by ITW Construction Products Ltd, and GPC by Simpson Strong-Tie Ltd.