

Technical Guidance

Steel beams - parallel connections

Question

When steel beams are positioned side by side is it necessary to join them together with bolts and sleeves?

Considerations

- NHBC Standards clause 6.5 – D2 states, 'steelwork shall be designed to support and transmit loads to the supporting structure without undue movement or deflection'.
- To avoid the need for one very deep beam, or in order to produce a 'wide' support eg. to carry a cavity wall, two steel beams rather than one are often used. The two beams will be required to act together. Design will need to take account of the loading to the beams and to the relative magnitudes of the loads across the combined beam which could result in twisting in addition to bending and shear.

Answer

It is normal for steel beams located side by side to be connected together. This may be achieved in a number of ways including bolts and sleeves or welded flange plates. To ensure the adequacy of the combined beam design should be carried out by a suitable qualified person in accordance with NHBC Technical Requirement R5.