

- $H = \text{actual height} \times F1$
- $H = 1800 \text{ mm} \times F1$
- $H = 1800 \text{ mm} (1.8 \text{ m})$

Step 2 – Determine floor area to be supported

The column position selected is C4 as shown in [Figure 6.3.6a](#) and the dimensions of L1 and L2 are 2700 mm (2.7 m), LA is 1900 mm (1.9 m) and LB is 2100 mm (2.1 m).

The area supported by the column is determined by the formulae set out in [Table 6.3.6g](#).

Therefore:

- Total area supported (A) is $0.625(L1 + L2) \times 0.625(LA + LB)$
- $A = 0.625(2.7 \text{ m} + 2.7 \text{ m}) \times 0.625 \times (1.9 \text{ m} + 2.1 \text{ m})$
- $A = (0.625 \times 5.4 \text{ m}) \times (0.625 \times 4.0 \text{ m})$
- $A = 3.38 \text{ m} \times 2.5 \text{ m}$
- $A = 8.5 \text{ m}^2$

Step 3 – Select column size from [Tables 6.3.6d](#), [6.3.6e](#) or [6.3.6f](#)

The column with an effective height of 1800 mm supporting a floor area of 8.5 m^2 is selected from the 10 m^2 column in [Table 6.3.6d](#) ("0" roof load area) giving a SHS 350 75 x 75 x 3 size.

It should be noted there is a choice of CHS 250 88.9 x 4 or CHS 350 101.6 x 2.6 should a different section be desired.

6.3.7 Fixings and bearing for structural steel members

[New for 2022]

- (1) All bolts used in connections must be hot dip galvanised 300 g/m².
- (2) Bearer connections must be fixed in accordance with [Figure 6.3.7a](#).
- (3) Joists, bearers and lintels must be restrained from lateral movement or twisting along their length by fixing rafters or joists to the top flange of the member so as to prevent the member from moving laterally.
- (4) End supports for bearers and lintels must transfer loads to the footings and have a bearing distance as follows:
 - (a) For single spans, the bearing distance must be not less than the width of the member.
 - (b) For continuous spans, internal bearing must be not less than two times the width of the member.
- (5) Strutting beams must—
 - (a) be supported and fixed in accordance with [Figure 6.3.7b](#); and
 - (b) where ends are cut to suit roof pitch, be cut in accordance with [Figure 6.3.7c](#).
- (6) Lintels must be fixed in accordance with [Figures 6.3.7d](#), [6.3.7e](#), [6.3.7f](#), [6.3.7g](#) and [6.3.7h](#).

Figure 6.3.7a: Bearer supporting a timber floor and non-loadbearing stud wall

