Note that some designers include the above modification factors in the basic equation (5.11) where they appear as a multiplication factor on the right-hand side, e.g. for narrow walls, equation (5.11) could be rewritten

$$\Sigma W = \beta t\,(1.15 f_k)/\gamma_f$$

5.9 EXAMPLES

5.9.1 Example 1: Internal masonry wall (Fig. 5.15)

(a) Using BS 5628

Loading (per metre run of wall)

	Dead load (kN/m)	*Imposed load* (kN/m)
Load from above	105.0	19.0
Self-weight of wall	17.0	–
Load from left slab	4.1	2.2
Load from right slab	4.1	2.2

Safety factors
For material strength, γ_m=3.5
For loading, γ_f (DL)=1.4
γ_f(LL)=1.6

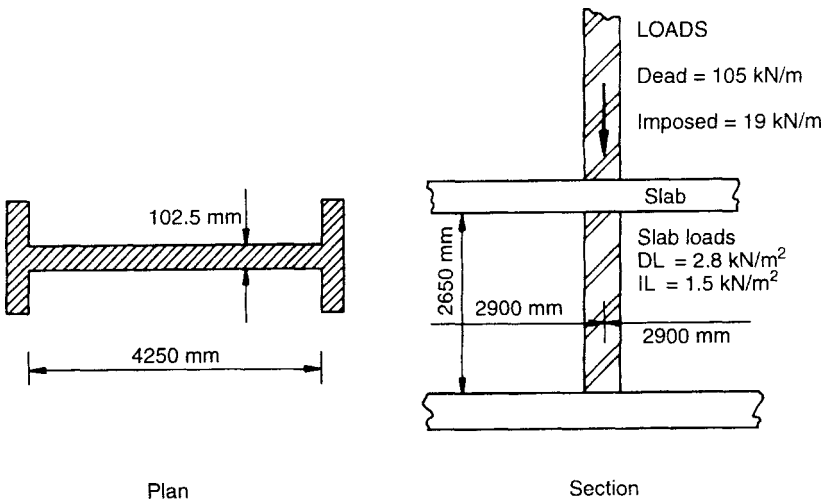

Fig. 5.15 Plan and section details for example 1.

Design vertical loading (Fig. 5.16)
Loading from above (W_1)=1.4×105+1.6×19=177.4 kN/m
Load from left (W_2)

dead load only=1.4×4.1=5.7kN/m

imposed load=5.7+1.6×2.2=9.2 kN/m

Load from right (W_3)

dead load only=1.4×4.1=5.7kN/m

imposed load=5.7+1.6×2.2=9.2kN/m

Wall self-weight=1.4×17=23.8kN/m

Slenderness ratio

Effective height=0.75×2650=1988 mm

Effective thickness=actual thickness=102.5 mm

Slenderness ratio=1988/102.5=19.4

Eccentricity

See section 5.5.1

- With full DL+IL on each slab there will be no eccentricity since W_2=W_3.

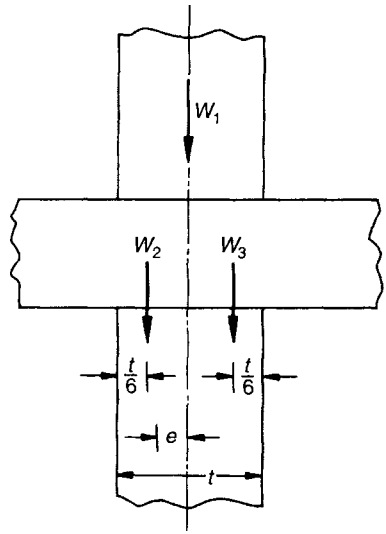

Fig. 5.16 Loading arrangement for eccentricity calculation.