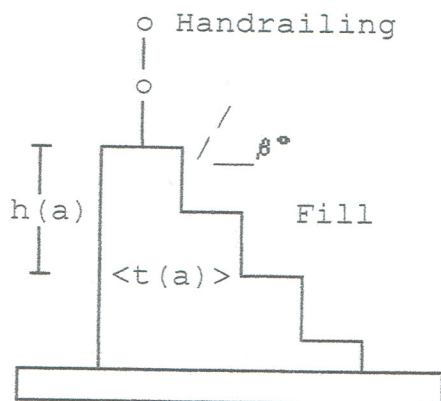


Masonry gravity wall

Designed in accordance with BS5628:Part 1: 1992.
Location: Wall on grid line A/1-2



Steps are numbered down from the top.

$h(a)$ is height at step a (from top)

$t(a)$ is thickness at step a

Soil details

Weight/unit volume of soil & wall $w_e=18 \text{ kN/m}^3$
Internal angle of friction $\phi=35^\circ$
Angle of backfill $\beta=0^\circ$
Active soil pressure is applicable.
Sine angle of internal friction $sp=\sin(\text{RAD}(\phi))=0.5736$
Active pressure coefficient $ce=(1-sp)/(1+sp)$
 $= (1-0.5736)/(1+0.5736)$
 $=0.271$

Masonry details

Mortar designation to Table 1 mortar=3
Masonry type (1=clay 2=cal silicate 3=conc brick 4=block) typ(1)=4
Concrete Blocks Dimensions
Height $hb=215 \text{ mm}$
Least horiz dimension $lhd=100 \text{ mm}$
ratio height/least horiz dim $rb=hb/lhd=215/100=2.15$
Compressive strength of blocks $po=7 \text{ N/mm}^2$