



CBS (Precast) Ltd.

Beam and Block Floor Calculation

Cotham Rd, Bristol

Patio

Beam manufacturer: Cemex
 Beam type: 155 (5 strand)

Floor configuration:	Single narrow
Clear span (m):	3.3
Block density (kg/m ³):	1850
Self weight (kN/m ²):	2.59
Screed thickness (mm.):	50
Finishes weight (kN/m ²):	0
Live load (kN/m ²):	1.5
Other blanket load (kN/m ²):	15
Other linear weight (kN/m):	0
Other linear weight (kN/m):	0
Transverse line load 1 (kN/m):	0
Transverse line load 2 (kN/m):	0
Point load 1 (kN):	0
Point load 2 (kN):	0
Point load 3 (kN):	0
Point load 4 (kN):	0
Point load 5 (kN):	0

Factor	Load applied	
	start	end
1.4	0	3.3
1.4	0	3.3
1.4	0	3.3
1.6	0	3.3
1.4	0	0.8
1.4	0	3.3
1.4	0	3.3
1.4	0	0
1.4	0	0
1.5	0	0
1.5	0	0
1.5	0	0
1.5	0	0
1.4	0	0

Note that the load positions are taken from the start of the clear span, the calculations allow for a 50mm bearing length at each end in addition to these dimensions.

Reactions. Moments and Forces:

End Reactions (Ult.):	8.32 kN	4.43 kN
Maximum bending (ult.)	4.41 kNm	9.79 Ult. Capacity
Max shear (absolute value)	8.32 kN	18.96 Ult. Capacity

