FORTERRA	BEAM FLOORING TO EC2		Version 14.28
	Job title : New House, Chadlington		**By : PTC**
Tel: 01636 832000	**Job ref : 68361**	**Calc ref : 4**	**Date: 26/04/18**

Floor system : Beam & Block , Floor case : RDJ8
Beam ref : RD09. 215 mm wide (165 mm at top) x 150 mm deep. 9 no. wires. No. of beams = 2.
Block type : Aggregate infill block 440 mm wide. Density = 1500 kg/cu.m.
Floor case width = 716 mm. ==II=

Exposure type XC1 for EC2 category : ' Inside enclosed buildings ' gives design class with permissible tension.
Type of floor loading = Domestic.
Effective span = 6.050 m. Clear span = 5.950 m.
Alternative point load checked : 2 kN at mid span

LOADING	kN/m^2		Width (m)		Service (kN/m)		Ultimate 6.10(a) (kN/m)		Ultimate 6.10(b) (kN/m)
							Use maximum of EC1 equation 6.10(a) or (b)		
Self weight of beam, block and infil	2.66	x	0.72	=	1.90	x 1.35	2.57	x 1.25	2.38
Self weight of structural topping	0.00	x	0.72	=	0.00	x 1.35	0.00	x 1.25	0.00
Finishes other than structural topping	2.70	x	0.72	=	1.93	x 1.35	2.61	x 1.25	2.41
Partitions (allow)	0.00	x	0.72	=	0.00	x 1.35	0.00	x 1.25	0.00
Superimposed live	1.50	x	0.72	=	1.07	x 1.05	1.13	x 1.50	1.61
Total	**6.86**				**4.91**		**6.30**		**6.40**

RESULTS	M service (kNm)	M ultimate (kNm)	LHS shear (kN)	RHS shear (kN)	Max V_{Ed} / V_{Rd} (ratio)	Total Deflection (mm)	Movement (mm)
Actual	22.46	29.28	19.36	19.36	0.23	13.4	8.3
Limit	24.90	40.60	82.58	82.58	1	24.2*	17.3**
						*span/250	**span/350

Flexurally cracked shear occurs at x = 1.331 and 4.719 m from LHS
** Finishes = Non-brittle finishes

Shear force **PASS**
Alternative point load **PASS**
Natural frequency = 4.4 (Hz) Minimum value = 4.0 (Hz) **PASS**
Crack width = 0.009 (mm) Limiting value = 0.2 mm **PASS**
Service moment **PASS**
Ultimate moment **PASS**
Deflection **PASS**
Curltailment length
*** * * Design satisfactory * * * (max. ratio actual / limit = 0.91)**