

TYPE 250 LINTEL

APPENDIX 31 TYPE 2547

JOB INPUT INFORMATION

VARIABLES

SPAN	5.0 m	BEAM DEPTH	250 mm
		SCREED	0 mm
		BOTTOM DIA	5 mm
JACK LOSS	70 % (70 TO 80%)	MIDDLE DIA	5 mm
CREEP ETC LOSS	30 % (10 TO 30 %)	TOP DIA	0 mm
CRACK WIDTH	0.2 (0.1 OR 0.2)	DESIGN CLAS	3 (1,2,3)
UDL kN/sq m		: UDL kN/m i.e. per beam	
		BEAM SW	0.63 kN/m
		TOPPING	0.00 kN/m
FINISHES	0.0 kN/sq m	FINISHES	0.00 kN/m
LIVE	0.0 kN/sq m	LIVE	0.00 kN/m
		TOTAL	0.63 kN/m

DESIGN OF BASS BEAMS AT TRANSFER

BEAM LENGTH 5.0 m

SUMMARY OF LOADS AND FORCES

TOTAL SW 3.2 kN

LEFT SUPPORT 1.6 kN

RIGHT SUPPORT 1.6 kN

Allowable comp stress % -17.5 N/sq mm

Allowable tensile stress 3.5 N/sq mm

After losses

MAIN TOP 3.8 N/sq mm 2.7
SPAN BOTTOM -10.5 N/sq mm -7.4

SPAN	Pf/A	Pfe/Zit	Pfe/Zib	SF*X	M	SW	MOMENT
0.0	-3.2	7.1	-7.3		0.0	0.0	0.0
0.3	-3.2	7.1	-7.3		0.4	-0.0	0.4
0.5	-3.2	7.1	-7.3		0.8	-0.1	0.7
0.8	-3.2	7.1	-7.3		1.2	-0.2	1.0
1.0	-3.2	7.1	-7.3		1.6	-0.3	1.3
1.3	-3.2	7.1	-7.3		2.0	-0.5	1.5
1.5	-3.2	7.1	-7.3		2.4	-0.7	1.7
1.8	-3.2	7.1	-7.3		2.8	-1.0	1.8
2.0	-3.2	7.1	-7.3		3.2	-1.3	1.9
2.3	-3.2	7.1	-7.3		3.5	-1.6	1.9
2.5	-3.2	7.1	-7.3		3.9	-2.0	2.0
2.8	-3.2	7.1	-7.3		4.3	-2.4	1.9
3.0	-3.2	7.1	-7.3		4.7	-2.8	1.9
3.3	-3.2	7.1	-7.3		5.1	-3.3	1.8
3.5	-3.2	7.1	-7.3		5.5	-3.9	1.7
3.8	-3.2	7.1	-7.3		5.9	-4.4	1.5
4.0	-3.2	7.1	-7.3		6.3	-5.0	1.3
4.3	-3.2	7.1	-7.3		6.7	-5.7	1.0
4.5	-3.2	7.1	-7.3		7.1	-6.4	0.7
4.8	-3.2	7.1	-7.3		7.5	-7.1	0.4
5.0	-3.2	7.1	-7.3		7.9	-7.9	0.0

AFTER LOSSES

	M/zit	M/zib	Top	Bott	Top	Bott
	0.0	0.0	3.8	-10.5	2.7	-7.4
	-0.3	0.3	3.5	-10.2	2.3	-7.0
	-0.6	0.7	3.2	-9.9	2.0	-6.7
	-0.9	0.9	2.9	-9.6	1.8	-6.4
	-1.1	1.2	2.7	-9.4	1.5	-6.2
	-1.3	1.4	2.5	-9.2	1.3	-6.0
	-1.5	1.5	2.3	-9.0	1.2	-5.8
	-1.6	1.7	2.2	-8.9	1.1	-5.7
	-1.7	1.8	2.1	-8.8	1.0	-5.6
	-1.8	1.8	2.1	-8.7	0.9	-5.6
	-1.8	1.8	2.0	-8.7	0.9	-5.5
	-1.8	1.8	2.1	-8.7	0.9	-5.6
	-1.7	1.8	2.1	-8.8	1.0	-5.6
	-1.6	1.7	2.2	-8.9	1.1	-5.7
	-1.5	1.5	2.3	-9.0	1.2	-5.8
	-1.3	1.4	2.5	-9.2	1.3	-6.0
	-1.1	1.2	2.7	-9.4	1.5	-6.2
	-0.9	0.9	2.9	-9.6	1.8	-6.4
	-0.6	0.7	3.2	-9.9	2.0	-6.7
	-0.3	0.3	3.5	-10.2	2.3	-7.0
	0.0	0.0	3.8	-10.5	2.7	-7.4

APPENDIX 32 TYPE 2547

JOB INPUT INFORMATION

VARIABLES

SPAN	5.0 m	BEAM DEPTH	250 mm
		SCREED	0 mm
		BOTTOM DIA	7 mm
JACK LOSS	70 % (70 TO 80%)	MIDDLE DIA	7 mm
CREEP ETC LOSS	30 % (10 TO 30 %)	TOP DIA	0 mm
CRACK WIDTH	0.2 (0.1 OR 0.2)	DESIGN CLAS	3 (1,2,3)
UDL kN/sq m		: UDL kN/m i.e. per beam	
		BEAM SW	0.63 kN/m
		TOPPING	0.00 kN/m

FINISHES	0.0 kN/sq m	:	FINISHES	0.00 kN/m
		:		
LIVE	0.0 kN/sq m	:	LIVE	0.00 kN/m
		:	TOTAL	0.63 kN/m

DESIGN OF BASS BEAMS AT TRANSFER

BEAM LENGTH 5.0 m

SUMMARY OF LOADS AND FORCES

TOTAL SW	3.2 kN
LEFT SUPPORT	1.6 kN
RIGHT SUPPORT	1.6 kN

Allowable comp stress % -17.5 N/sq mm

Allowable tensile stress 3.5 N/sq mm

After losses

MAIN	TOP	7.2 N/sq mm	5.0
SPAN	BOTTOM	-20.3 N/sq mm	-14.2

SPAN Pf/A Pfe/Zit Pfe/Zib SF*X M SW MOMENT

0.0	-6.4	13.5	-14.0	0.0	0.0	0.0
0.3	-6.4	13.5	-14.0	0.4	-0.0	0.4
0.5	-6.4	13.5	-14.0	0.8	-0.1	0.7
0.8	-6.4	13.5	-14.0	1.2	-0.2	1.0
1.0	-6.4	13.5	-14.0	1.6	-0.3	1.3
1.3	-6.4	13.5	-14.0	2.0	-0.5	1.5
1.5	-6.4	13.5	-14.0	2.4	-0.7	1.7
1.8	-6.4	13.5	-14.0	2.8	-1.0	1.8
2.0	-6.4	13.5	-14.0	3.2	-1.3	1.9
2.3	-6.4	13.5	-14.0	3.5	-1.6	1.9
2.5	-6.4	13.5	-14.0	3.9	-2.0	2.0
2.8	-6.4	13.5	-14.0	4.3	-2.4	1.9
3.0	-6.4	13.5	-14.0	4.7	-2.8	1.9
3.3	-6.4	13.5	-14.0	5.1	-3.3	1.8
3.5	-6.4	13.5	-14.0	5.5	-3.9	1.7
3.8	-6.4	13.5	-14.0	5.9	-4.4	1.5
4.0	-6.4	13.5	-14.0	6.3	-5.0	1.3
4.3	-6.4	13.5	-14.0	6.7	-5.7	1.0
4.5	-6.4	13.5	-14.0	7.1	-6.4	0.7
4.8	-6.4	13.5	-14.0	7.5	-7.1	0.4
5.0	-6.4	13.5	-14.0	7.9	-7.9	0.0

AFTER LOSSES

	M/zit	M/zib	Top	Bott	Top	Bott
	0.0	0.0	7.2	-20.3	5.0	-14.2
	-0.3	0.3	6.8	-20.0	4.7	-13.9
	-0.6	0.7	6.5	-19.7	4.4	-13.6
	-0.9	0.9	6.3	-19.4	4.1	-13.3
	-1.1	1.2	6.0	-19.2	3.9	-13.1
	-1.3	1.4	5.8	-19.0	3.7	-12.9
	-1.5	1.5	5.7	-18.8	3.5	-12.7
	-1.6	1.7	5.6	-18.7	3.4	-12.6
	-1.7	1.8	5.5	-18.6	3.3	-12.5
	-1.8	1.8	5.4	-18.5	3.3	-12.4
	-1.8	1.8	5.4	-18.5	3.2	-12.4
	-1.8	1.8	5.4	-18.5	3.3	-12.4
	-1.7	1.8	5.5	-18.6	3.3	-12.5
	-1.6	1.7	5.6	-18.7	3.4	-12.6
	-1.5	1.5	5.7	-18.8	3.5	-12.7
	-1.3	1.4	5.8	-19.0	3.7	-12.9
	-1.1	1.2	6.0	-19.2	3.9	-13.1
	-0.9	0.9	6.3	-19.4	4.1	-13.3
	-0.6	0.7	6.5	-19.7	4.4	-13.6
	-0.3	0.3	6.8	-20.0	4.7	-13.9
	0.0	0.0	7.2	-20.3	5.0	-14.2

APPENDIX 34 TYPE 2547

JOB INPUT INFORMATION

VARIABLES

SPAN	8.0 m	BEAM DEPTH	250 mm
		SCREED	0 mm
		BOTTOM DIA	5 mm
JACK LOSS	70 % (70 TO 80%)	MIDDLE DIA	5 mm
CREEP ETC LOSS	30 % (10 TO 30 %)	TOP DIA	0 mm
CRACK WIDTH	0.2 (0.1 OR 0.2)	DESIGN CLAS	3 (1,2,3)

UDL kN/sq m	:	UDL kN/m i.e. per beam	
	:	BEAM SW	0.63 kN/m
	:	TOPPING	0.00 kN/m
FINISHES	0.0 kN/sq m	FINISHES	0.00 kN/m
	:		
LIVE	1.0 kN/sq m	LIVE	1.00 kN/m
	:	TOTAL	1.63 kN/m

DESIGN OF BASS BEAMS IN POSITION PRIOR TO LOADING

SPAN 8.0 m BEAM LENGTH 8.0 m

CENTROID OF BEAM FROM L 4.00 RATIO L 0.50

CENTROID OF BEAM FROM R 4.00 RATIO R 0.50

SUMMARY OF LOADS AND FORCES

TOTAL W	13.0 kN
LEFT SUPPORT	6.5 kN
RIGHT SUPPORT	6.5 kN

Allowable comp stress % -19.8 N/sq mm

Allowable tensile stress 6.8 N/sq mm Allow max 15

MAIN TOP 2.7 N/sq mm -9.1
SPAN BOTTOM -7.4 N/sq mm 4.7

SPAN	Pf/A	PfE/Zit	PfE/Zib	SF*X	M	SW	MOMENT
0.0	-2.3	4.9	-5.1		0.0	0.0	0.0
0.4	-2.3	4.9	-5.1		2.6	-0.1	2.5
0.8	-2.3	4.9	-5.1		5.2	-0.5	4.7
1.2	-2.3	4.9	-5.1		7.8	-1.2	6.7
1.6	-2.3	4.9	-5.1		10.4	-2.1	8.3
2.0	-2.3	4.9	-5.1		13.0	-3.3	9.8
2.4	-2.3	4.9	-5.1		15.6	-4.7	11.0
2.8	-2.3	4.9	-5.1		18.3	-6.4	11.9
3.2	-2.3	4.9	-5.1		20.9	-8.3	12.5
3.6	-2.3	4.9	-5.1		23.5	-10.6	12.9
4.0	-2.3	4.9	-5.1		26.1	-13.0	13.0
4.4	-2.3	4.9	-5.1		28.7	-15.8	12.9
4.8	-2.3	4.9	-5.1		31.3	-18.8	12.5
5.2	-2.3	4.9	-5.1		33.9	-22.0	11.9
5.6	-2.3	4.9	-5.1		36.5	-25.6	11.0
6.0	-2.3	4.9	-5.1		39.7	-29.3	9.8
6.4	-2.3	4.9	-5.1		41.7	-33.4	8.3
6.8	-2.3	4.9	-5.1		44.3	-37.7	6.7
7.2	-2.3	4.9	-5.1		46.9	-42.2	4.7
7.6	-2.3	4.9	-5.1		49.6	-47.1	2.5
8.0	-2.3	4.9	-5.1		52.2	-52.2	-0.0

AFTER LOSSES

	M/zit	M/zib	Top	Bott
	0.0	0.0	2.7	-7.4
	-2.2	2.3	0.4	-5.1
	-4.2	4.4	-1.6	-3.0
	-6.0	6.2	-3.3	-1.2
	-7.5	7.8	-4.8	0.4
	-8.8	9.1	-6.1	1.7
	-9.9	10.2	-7.2	2.8
	-10.7	11.0	-8.0	3.7
	-11.3	11.6	-8.6	4.3
	-11.6	12.0	-9.0	4.6
	-11.7	12.1	-9.1	4.7
	-11.6	12.0	-9.0	4.6
	-11.3	11.6	-8.6	4.3
	-10.7	11.0	-8.0	3.7
	-9.9	10.2	-7.2	2.8
	-8.8	9.1	-6.1	1.7
	-7.5	7.8	-4.8	0.4
	-6.0	6.2	-3.3	-1.2
	-4.2	4.4	-1.6	-3.0
	-2.2	2.3	0.4	-5.1
	0.0	-0.0	2.7	-7.4

APPENDIX 34 TYPE 2547

JOB INPUT INFORMATION

VARIABLES

SPAN	10.0 m	BEAM DEPTH	250 mm
		SCREED	0 mm
		BOTTOM DIA	7 mm
JACK LOSS	70 % (70 TO 80%)	MIDDLE DIA	7 mm
CREEP ETC LOSS	30 % (10 TO 30 %)	TOP DIA	0 mm
CRACK WIDTH	0.2 (0.1 OR 0.2)	DESIGN CLAS	3 (1,2,3)
UDL kN/sq m	:	UDL kN/m i.e. per beam	
	:	BEAM SW	0.63 kN/m
	:	TOPPING	0.00 kN/m
FINISHES	0.0 kN/sq m	FINISHES	0.00 kN/m
	:		
LIVE	1.00 kN/sq m	LIVE	1.00 kN/m
	:	TOTAL	1.63 kN/m

DESIGN OF BASS BEAMS IN POSITION PRIOR TO LOADING

SPAN 10.0 m BEAM LENGTH 10.0 m
CENTROID OF BEAM FROM L 5.00 RATIO L 0.50
CENTROID OF BEAM FROM R 5.00 RATIO R 0.50
TOTAL W 16.3 kN
LEFT SUPPORT 8.2 kN
RIGHT SUPPORT 8.2 kN
Allowable comp stress % -19.8 N/sq mm
Allowable tensile stress 6.8 N/sq mm Allow max 15

MAIN TOP 5.0 N/sq mm -13.3
SPAN BOTTOM -14.2 N/sq mm 4.7

SPAN	Pf/A	PfE/Zit	PfE/Zib	SF*X	M	SW	MOMENT
0.0	-4.5	9.5	-9.8		0.0	0.0	0.0
0.5	-4.5	9.5	-9.8		4.1	-0.2	3.9
1.0	-4.5	9.5	-9.8		8.2	-0.8	7.3
1.5	-4.5	9.5	-9.8		12.2	-1.8	10.4
2.0	-4.5	9.5	-9.8		16.3	-3.3	13.0
2.5	-4.5	9.5	-9.8		20.4	-5.1	15.3
3.0	-4.5	9.5	-9.8		24.5	-7.3	17.1
3.5	-4.5	9.5	-9.8		28.5	-10.0	18.5
4.0	-4.5	9.5	-9.8		32.6	-13.0	19.6

4.5	-4.5	9.5	-9.8	36.7	-16.5	20.2
5.0	-4.5	9.5	-9.8	40.8	-20.4	20.4
5.5	-4.5	9.5	-9.8	44.8	-24.7	20.2
6.0	-4.5	9.5	-9.8	48.9	-29.3	19.6
6.5	-4.5	9.5	-9.8	53.0	-34.4	18.5
7.0	-4.5	9.5	-9.8	57.1	-39.9	17.1
7.5	-4.5	9.5	-9.8	61.1	-45.8	15.3
8.0	-4.5	9.5	-9.8	65.2	-52.2	13.0
8.5	-4.5	9.5	-9.8	69.3	-58.9	10.4
9.0	-4.5	9.5	-9.8	73.4	-66.0	7.3
9.5	-4.5	9.5	-9.8	77.4	-73.6	3.9
10.0	-4.5	9.5	-9.8	81.5	-81.5	0.0

AFTER LOSSES

	M/zit	M/zib	Top	Bott
	0.0	0.0	5.0	-14.2
	-3.5	3.6	1.5	-10.6
	-6.6	6.8	-1.6	-7.4
	-9.4	9.7	-4.3	-4.6
	-11.7	12.1	-6.7	-2.1
	-13.8	14.2	-8.7	-0.0
	-15.4	15.9	-10.4	1.7
	-16.7	17.2	-11.7	3.0
	-17.6	18.2	-12.6	3.9
	-18.2	18.8	-13.1	4.5
	-18.3	18.9	-13.3	4.7
	-18.2	18.8	-13.1	4.5
	-17.6	18.2	-12.6	3.9
	-16.7	17.2	-11.7	3.0
	-15.4	15.9	-10.4	1.7
	-13.8	14.2	-8.7	-0.0
	-11.7	12.1	-6.7	-2.1
	-9.4	9.7	-4.3	-4.6
	-6.6	6.8	-1.6	-7.4
	-3.5	3.6	1.5	-10.6
	0.0	0.0	5.0	-14.2

APPENDIX 36 TYPE 2547

JOB INPUT INFORMATION

VARIABLES

SPAN	8.0 m	BEAM DEPTH	250 mm
		SCREED	0 mm
		BOTTOM DIA	5 mm
JACK LOSS	70 % (70 TO 80%)	MIDDLE DIA	5 mm
CREEP ETC LOSS	30 % (10 TO 30 %)	TOP DIA	0 mm
CRACK WIDTH	0.2 (0.1 OR 0.2)	DESIGN CLAS	3 (1,2,3)
UDL kN/sq m	:	UDL kN/m i.e. per beam	
	:	BEAM SW	0.63 kN/m
	:	TOPPING	0.00 kN/m
FINISHES	0.0 kN/sq m	FINISHES	0.00 kN/m
	:		
LIVE	1.27 kN/sq m	LIVE	1.27 kN/m
	:	TOTAL	1.90 kN/m

DESIGN OF BASS BEAMS TO OBTAIN GUIDELINE MOM OF RESIST

SPAN 8.0 m	BEAM LENGTH 8.0 m
CENTROID OF BEAM FROM LE 4.00 RATIO L 0.50	
CENTROID OF BEAM FROM R I 4.00 RATIO R 0.50	
TOTAL SW	5.00 kN
TOTAL W	15.2 kN
TOTAL SCREED	0.0 kN
LEFT SUPPORT	7.6 kN
RIGHT SUPPORT	7.6 kN
Allowable comp stress %	-19.8 N/sq mm
Allowable tensile stress	6.8 N/sq mm Allow max 15

MAIN	TOP	2.7 N/sq mm	-11.0
SPAN	BOTTOM	-7.4 N/sq mm	6.8

SPAN	Pf/A	PfE/Zit	PfE/Zib	SF*X	M SW	MOMENT
0.0	-2.3	4.9	-5.1		0.0	0.0
0.4	-2.3	4.9	-5.1		3.0	-0.2
0.8	-2.3	4.9	-5.1		6.1	-0.6
1.2	-2.3	4.9	-5.1		9.1	-1.4
1.6	-2.3	4.9	-5.1		12.2	-2.4
2.0	-2.3	4.9	-5.1		15.2	-3.8
2.4	-2.3	4.9	-5.1		18.2	-5.5
2.8	-2.3	4.9	-5.1		21.3	-7.4
3.2	-2.3	4.9	-5.1		24.3	-9.7
3.6	-2.3	4.9	-5.1		27.4	-12.3
4.0	-2.3	4.9	-5.1		30.4	-15.2
4.4	-2.3	4.9	-5.1		33.4	-18.4
4.8	-2.3	4.9	-5.1		36.5	-21.9
5.2	-2.3	4.9	-5.1		39.5	-25.7
5.6	-2.3	4.9	-5.1		42.6	-29.8
6.0	-2.3	4.9	-5.1		45.6	-34.2
6.4	-2.3	4.9	-5.1		48.6	-38.9
6.8	-2.3	4.9	-5.1		51.7	-43.9
7.2	-2.3	4.9	-5.1		54.7	-49.2
7.6	-2.3	4.9	-5.1		57.8	-54.9
8.0	-2.3	4.9	-5.1		60.8	-60.8

AFTER LOSSES

	M/zit	M/zib	Top	Bott
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0.0	0.0	2.7	-7.4
-2.6	2.7	0.1	-4.7
-4.9	5.1	-2.3	-2.3
-7.0	7.2	-4.3	-0.2
-8.8	9.0	-6.1	1.7
-10.3	10.6	-7.6	3.2
-11.5	11.9	-8.8	4.5
-12.5	12.9	-9.8	5.5
-13.1	13.6	-10.5	6.2
-13.5	14.0	-10.9	6.6
-13.7	14.1	-11.0	6.8
-13.5	14.0	-10.9	6.6
-13.1	13.6	-10.5	6.2
-12.5	12.9	-9.8	5.5
-11.5	11.9	-8.8	4.5
-10.3	10.6	-7.6	3.2
-8.8	9.0	-6.1	1.7
-7.0	7.2	-4.3	-0.2
-4.9	5.1	-2.3	-2.3
-2.6	2.7	0.1	-4.7
0.0	-0.0	2.7	-7.4