

# RECYCLED HARDWOOD *SPAN TABLES*

## SUPPLEMENT 6

### **Wind Classifications C1 and C2**

### **Recycled Species Group B Recycled Grade, RG1**

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## **1.0 INTRODUCTION**

This Supplement was prepared under a project supported by Forest and Wood Products Australia and provides span tables for some common applications and uses for recycled structural hardwood timber. The span tables provided include some commercial as well as some domestic construction uses. The span tables are specific to recycled timber which will include recycled timber features.

## **2.0 APPLICATION**

The span tables included in this Supplement are only applicable for use with timber graded in accordance with 'Interim Industry Standard, Recycled Timber – Visually Stress Graded Recycled Timber for Structural Purposes' available from [www.timber.org.au](http://www.timber.org.au) for the Wind Classifications designated in this Supplement.

The Tables in this Supplement apply to Recycled Timber Species Group B - Recycled Grade, RG1.

For domestic applications, the requirements of AS 1684 are also applicable for use in conjunction with the Tables in this Supplement.

## **3.0 ALTERNATIVE GRADE**

In addition to Species Group B, RG1, the tables in this Supplement apply to Recycled Timber Species Group A - Recycled Grade, RG2.

## **4.0 TOLERANCES**

The depth (D) and breadth (B) shall not be more than 2mm under the sizes given.

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**Table 1****Decking Boards - Commercial Applications  
Supporting 5.0 kPa Uniform Live Load**

Size DxB (mm)	Point Live Load (kN)			
	3	5	9	13
	Span			
35x70	720	540	300	NS
35x90	780	660	360	NS
35x120	860	840	480	340
35x140	900	880	560	380
45x70	940	920	500	340
45x90	1020	1000	620	440
45x120	1120	1100	820	560
45x140	1180	1160	960	660

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable.
- ii) The above table was based on a maximum DL of 60 (kg/m<sup>2</sup>), Floor Live Load of 5 (kPa).
- iii) End bearing lengths = 20 mm at end supports and 20 mm at internal supports for continuous members.
- iv) Point loads are assumed to be shared by two deck boards.
- v) Live load deflection limit = span/150 or 4 mm.
- vi) Decking shall be two or more continuous span.

Table 2

### Deck Bearers - Domestic Applications May Support Decks Greater than 1000mm above the Ground

Size DxB (mm)	Floor Load Width (mm)											
	1200		2400		4800		1200		2400		4800	
	Bearer Span (mm)											
	Span	O/H	Span	O/H	Span	O/H	Span	O/H	Span	O/H	Span	O/H
	Single Span						Continuous Span					
90x45	1600	400	1100	300	NS	NS	1600	400	1100	300	NS	NS
90x70	1900	500	1400	400	NS	NS	2000	600	1400	400	NS	NS
90x90	2100	600	1500	400	1100	300	2200	600	1500	400	1100	300
120x45	2100	600	1500	400	1000	300	2100	600	1500	400	1000	300
120x70	2600	700	1900	500	1300	300	2600	700	1900	500	1300	300
120x90	2800	800	2100	600	1400	400	2900	800	2100	600	1400	400
140x45	2500	700	1800	500	1200	300	2500	700	1800	500	1200	300
140x70	3000	900	2200	600	1500	400	3100	900	2200	600	1500	400
140x90	3300	900	2400	700	1700	500	3400	1000	2400	700	1700	500
170x45	3100	900	2200	600	1500	400	3100	900	2200	600	1500	400
170x70	3600	1000	2700	800	1800	500	3800	1100	2700	800	1800	500
170x90	3800	1100	3000	900	2100	600	4200	1200	3000	900	2100	600
190x45	3400	1000	2400	700	1700	500	3400	1000	2400	700	1700 <sub>10</sub>	500 <sub>10</sub>
190x70	3900	1100	3000	900	2100	600	4200	1200	3000	900	2100	600
190x90	4100	1200	3300	900	2300	600	4700	1400	3300	900	2300	600
240x45	4100	1200	3100	900	2100 <sub>10</sub>	600 <sub>10</sub>	4300	1200	3100	900	2100 <sub>45</sub>	600 <sub>45</sub>
240x70	4600	1300	3800	1100	2600	700	5300	1500	3800	1100	2600 <sub>10</sub>	700
240x90	5000	1500	4200	1200	2900	800	5900	1700	4200	1200	2900	800
290x45	4800	1400	3700	1100	2600 <sub>25</sub>	700 <sub>25</sub>	5300	1500	3700 <sub>20</sub>	1100 <sub>20</sub>	2500 <sub>75</sub>	700 <sub>75</sub>
290x70	5400	1600	4500	1300	3200 <sub>10</sub>	900 <sub>10</sub>	6400	1900	4600	1300	3200 <sub>45</sub>	900 <sub>45</sub>
290x90	5700	1700	4800	1400	3500 <sub>5</sub>	1000 <sub>5</sub>	7100	2100	5000	1500	3500 <sub>25</sub>	1000 <sub>25</sub>

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable, O/H = Cantilever (mm).
- ii) The above table was based on a maximum DL of 30 (kg/m<sup>2</sup>), Floor Point Load of 1.8 (kN), Balcony Live Load of 3 (kPa).
- iii) Minimum BackSpan = 200 % of Overhang.
- iv) Maximum Overhang = 30 % of Backspan.
- v) End bearing lengths = 50 mm at end supports and 100 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 50 mm at end supports and 100 mm at internal supports.

Table 3

**Deck Joists - Domestic Applications**  
**May Support Decks greater than 1000mm above the Ground**

Size DxB (mm)	Joist Spacing (mm)											
	300		450		600		300		450		600	
	Max Joist Span (mm)											
	Span	C'lever	Span	C'lever	Span	C'lever	Span	C'lever	Span	C'lever	Span	C'lever
Single Span						Continuous Span						
90x35	1600	400	1500	400	1500	400	1900	500	1800	500	1700	500
90x45	1800	500	1700	500	1700	500	2200	600	2100	600	2000	600
120x35	2500	700	2400	700	2300	600	3100	900	2900	800	2700	750
120x45	2900	800	2700	800	2600	700	3400	1000	3300	900	3100	800
140x35	3200	900	3100	900	2900	850	3700	1100	3500	950	3200	850
140x45	3600	1000	3400	1000	3300	950	4000	1200	3800	1050	3600	950
170x35	4000	1200	3800	1100	3500	1050	4500	1300	4300	1150	3900	1050
170x45	4300	1200	4100	1200	3800	1100	4900	1450	4700	1250	4400	1150
190x35	4400	1300	4100	1200	3800	1100	5000	1450	4800	1300	4300	1200
190x45	4900	1400	4400	1300	4100	1200	5500	1600	5200	1400	4900	1300
240x35	5500	1600	5000	1500	4600	1300	6400	1850	6100	1600	5500	1500
240x45	5900	1700	5300	1500	4900	1400	7000	2000	6600	1750	6100	1600
290x45	6800	2000	6100	1800	5700	1700	7200	2100	7200	2150	7100	1950

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable, C'lever = Cantilever (mm).
- ii) The above table was based on a maximum Deck Mass of 30 (kg/m<sup>2</sup>), Floor Point Load of 1.8 (kN), Balcony Live Load of 3 (kPa).
- iii) Minimum BackSpan = 200 % of Overhang.
- iv) Maximum Overhang = 30 % of Backspan.
- v) End bearing lengths = 35 mm at end supports and 70 mm at internal supports for continuous members.

Table 4

## Stair Stringers

Size DxB (mm)	Stair Width (mm)					
	750	900	1200	1500	1800	2400
	Maximum Stringer Span (mm)					
190x35	3600	3600	3400	3100	2900	2600
190x45	3900	3900	3600	3400	3200	2900
240x35	4500	4400	4100	3800	3700	3300
240x45	4800	4600	4300	4100	3900	3600
290x45	5500	5300	4900	4700	4500	4100

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable.
- ii) The above table was based on a maximum Floor Mass of 40 (kg/m<sup>2</sup>), Floor Live Load of 2.0 (kPa), Floor Point Load of 2.7 (kN).
- iii) Minimum bearing length = 50 mm at end supports.
- iv) Maximum trench depth to accommodate treads - 10 mm.

**Table 5****Stair Treads (with open flights)**

Size DxB (mm)	Max Tread Span (mm)
35x240	800
35x290	900
40x240	1000
40x290	1100
45x240	1200
45x290	1300
50x240	1400
50x290	1600
60x240	1900
60x290	2000

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable.
- ii) The above table was based on a maximum Deck Mass of 40 (kg/m<sup>2</sup>), Floor Point Load of 2.7 (kN).
- iii) Minimum bearing length = 35 mm at end supports.

Table 6

**Posts**  
**Supporting Roof and/or Floor Loads**

	Floor Load Area (m2)											
	0				10				20			
Roof Load Area (m2)	0	10	20	40	0	10	20	40	0	10	20	40
Size DxB (mm)	Maximum Post Height (mm)											
<b>Sheet Roof</b>												
70x70	4800	2900	2000	NS	2400	2200	1800	NS	1700	1600	1500	NS
90x90	4800	4700	3300	2300	4000	3600	3000	2200	2800	2700	2500	2100
120x120	4800	4800	4800	4100	4800	4800	4800	3900	4800	4700	4500	3800
140x140	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800
170x170	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800
190x190	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800
<b>Tile Roof</b>												
70x70	4800	2400	1700	NS	2400	2000	1600	NS	1700	1500	1300	NS
90x90	4800	4000	2800	1900	4000	3200	2600	1900	2800	2500	2300	1800
120x120	4800	4800	4800	3500	4800	4800	4600	3400	4800	4400	4000	3300
140x140	4800	4800	4800	4800	4800	4800	4800	4600	4800	4800	4800	4500
170x170	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800
190x190	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800	4800

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable.
- ii) The above table was based on a maximum Sheet Roof Mass of 40 (kg/m<sup>2</sup>), Tile Roof Mass of 90 (kg/m<sup>2</sup>), Total Upper Floor Mass of 50 (kg/m<sup>2</sup>), Floor Live Load of 1.5 (kPa).
- iii) Posts are free standing, i.e. not supporting lateral wind loads from walls etc.



Table 7

**Window or Door Mullions  
Single or Upper Storey Load Bearing Walls**

Size DxB (mm)	Mullion Height (mm)	Roof Load Width (mm)							
		3000	4500	6000	7500	3000	4500	6000	7500
		Mullion Spacing (mm)							
		Sheet Roof				Tile Roof			
70x120	2400	1100	900	NS	NS	900	NS	NS	NS
70x140	2400	1300	1200	1100	900	1200	1000	NS	NS
90x70	2400	1200	1100	1000	NS	1100	900	NS	NS
90x90	2400	1600	1400	1300	1200	1400	1300	1100	1000
	2700	1200	1100	900	NS	1100	NS	NS	NS
90x120	2400	2000	1800	1700	1600	1900	1700	1500	1400
	2700	1600	1500	1400	1300	1500	1300	1200	1000
	3000	1200	1100	1000	900	1200	1000	NS	NS
90x140	2400	2400	2200	2000	1900	2200	2000	1800	1600
	2700	1900	1700	1600	1500	1700	1600	1400	1300
	3000	1400	1300	1300	1200	1300	1200	1100	900
120x70	2400	2400	2200	2100	1900	2200	2000	1800	1700
	2700	1800	1700	1600	1600	1700	1600	1500	1400
	3000	1500	1400	1300	1200	1400	1300	1200	1000
120x90	2400	3000	2800	2600	2400	2800	2600	2300	2200
	2700	2300	2200	2000	1900	2200	2000	1800	1700
	3000	1800	1700	1600	1600	1700	1600	1500	1400
	3600	1100	1000	1000	1000	1000	1000	NS	NS
120x120	2400	4000	3700	3500	3300	3800	3400	3100	2900
	2700	3100	2900	2700	2600	2900	2700	2400	2200
	3000	2500	2300	2200	2000	2300	2100	1900	1800
	3600	1600	1500	1400	1300	1500	1400	1300	1200
120x140	2400	4800	4400	4100	3900	4500	4100	3700	3400
	2700	3700	3400	3200	3000	3500	3200	2900	2700
	3000	2900	2700	2600	2400	2800	2500	2300	2100
	3600	1900	1800	1700	1600	1800	1600	1500	1400
140x70	2400	3400	3200	3000	2800	3200	2900	2700	2500
	2700	2700	2500	2300	2200	2500	2300	2100	2000
	3000	2100	2000	1800	1800	2000	1800	1700	1600
	3600	1300	1300	1200	1200	1300	1200	1100	1000
140x90	2400	4200	4000	3700	3500	4000	3700	3400	3100
	2700	3300	3100	2900	2800	3200	2900	2700	2500
	3000	2700	2500	2300	2200	2500	2300	2100	2000
	3600	1700	1600	1500	1500	1600	1500	1500	1400
	4200	900	900	900	900	900	900	900	NS
140x120	2400	4800	4800	4800	4700	4800	4800	4500	4200
	2700	4500	4200	3900	3700	4200	3900	3600	3300
	3000	3600	3400	3100	3000	3400	3100	2900	2700
	3600	2400	2200	2100	2000	2300	2100	1900	1800
	4200	1400	1400	1300	1300	1400	1300	1200	1200
140x140	2400	4800	4800	4800	4800	4800	4800	4800	4800
	2700	4800	4800	4600	4400	4800	4600	4200	3900
	3000	4200	4000	3700	3500	4000	3700	3400	3100
	3600	2800	2700	2500	2400	2700	2500	2300	2100
	4200	1600	1600	1600	1600	1600	1600	1500	1400

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable.
- ii) The above table was based on a maximum Sheet Roof Mass of 40 (kg/m<sup>2</sup>), Tile Roof Mass of 90 (kg/m<sup>2</sup>).
- iii) Maximum tension load in mullion not to exceed 60 kN.
- iv) Mullion Spacing is half the width of opening either side of mullion or for mullions/studs at sides of openings, half the width of opening.

Table 8

### Lintels (Window Heads) - Sheet Roof Supporting Single or Upper Storey Loadbearing Walls

	Roof Load Width (mm)									
	1500		3000		4500		6000		7500	
Rafter/Truss Spacing (mm)	600	1200	600	1200	600	1200	600	1200	600	1200
Size DxB (mm)	Maximum Lintel Span (mm)									
	Single Span									
140x35	2500	2400	1700	1300	1400	NS	NS	NS	NS	NS
140x45	2700	2700	1900	1700	1500	NS	1300	NS	NS	NS
140x70	3100	3000	2400	2300	1900	1700	1600	1200	1400	NS
140x90	3200	3200	2700	2600	2200	2100	1800	1600	1600	1200
170x35	3000	2900	2100	2000	1600	NS	1400	NS	NS	NS
170x45	3200	3200	2400	2300	1900	1500	1600	NS	1400	NS
170x70	3500	3500	2900	2800	2400	2300	2000	1900	1800	1400
170x90	3700	3700	3200	3100	2700	2600	2300	2200	2000	1900
190x35	3300	3200	2400	2300	1900	1400	1600	NS	NS	NS
190x45	3500	3400	2700	2600	2200	2100	1800	1200	1600	NS
190x70	3800	3800	3300	3200	2700	2600	2400	2200	2000	1600
190x90	4000	4000	3500	3500	3000	2900	2600	2500	2300	2200
240x35	3900	3900	3000	2900	2500	2400	2100	1500	1800	NS
240x45	4100	4100	3400	3300	2800	2700	2400	1800	2100	1500
240x70	4600	4500	3900	3900	3500	3300	2900	2800	2600	2600
240x90	4800	4800	4100	4100	3800	3700	3300	3100	2900	2800
290x45	4700	4700	4000	4000	3400	3200	2900	2800	2600	1900
290x70	5200	5200	4500	4500	4100	4100	3600	3400	3200	3100
290x90	5500	5500	4800	4700	4300	4300	4000	3900	3600	3400
	Continuous Span									
140x35	2500	2600	1600	1500	1300	NS	NS	NS	NS	NS
140x45	2800	2800	2000	1900	1600	1200	NS	NS	NS	NS
140x70	3500	3400	2500	2600	2000	1900	1500	1400	1500	NS
140x90	3900	3800	2700	2700	2200	2100	1900	1600	1600	1400
170x35	3000	3000	2100	1700	1600	1200	NS	NS	NS	NS
170x45	3400	3400	2400	2500	1700	1500	1500	NS	NS	NS
170x70	4300	4200	3000	3000	2400	2600	2100	1600	1700	1400
170x90	4700	4700	3300	3300	2700	2700	2300	2200	2100	1600
190x35	3400	3400	2300	2100	1600	1300	1400	NS	NS	NS
190x45	3900	3800	2700	2700	2200	1700	1600	1300	1400	NS
190x70	4800	4800	3400	3300	2700	2700	2300	2100	1800	1600
190x90	5100	5100	3700	3600	3000	3000	2600	2700	2300	1700
240x35	4300	4300	3000	3000	2200	1900	1900 <sub>5</sub>	1800	1900 <sub>25</sub>	NS
240x45	4900	4900	3500	3400	2700	2800	2000	1600	1900 <sub>5</sub>	1900 <sub>5</sub>
240x70	5700	5700	4200	4200	3500	3400	3000	3000	2500	2700
240x90	6000	6000	4700	4700	3900	3800	3300	3100	3000	3000
290x45	5900	5900	4200	4200	3300 <sub>5</sub>	3200 <sub>5</sub>	2600 <sub>10</sub>	2800 <sub>20</sub>	2000 <sub>10</sub>	2000 <sub>10</sub>
290x70	6500	6500	5200	5200	4200	4200	3600 <sub>5</sub>	3200	3200 <sub>15</sub>	3100 <sub>10</sub>
290x90	6700	6800	5700	5700	4700	4600	4000	4000	3600 <sub>5</sub>	3200

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable.
- ii) The above table was based on a maximum Roof Mass of 40 (kg/m<sup>2</sup>).
- iii) End bearing lengths = 35 mm at end supports and 70 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 70 mm at internal supports.

Table 9

**Lintels (Window Heads) - Tile Roof  
Supporting Single or Upper Storey Loadbearing Walls**

	Roof Load Width (mm)									
	1500		3000		4500		6000		7500	
Rafter/Truss Spacing (mm)	600	1200	600	1200	600	1200	600	1200	600	1200
Size DxB (mm)	Maximum Lintel Span (mm)									
	Single Span									
140x35	1900	1900	1500	1400	1300	NS	1200	NS	NS	NS
140x45	2100	2100	1600	1600	1400	1200	1300	NS	1200	NS
140x70	2400	2500	1900	1900	1700	1600	1500	1400	1400	NS
140x90	2600	2700	2100	2100	1800	1800	1600	1600	1500	1400
170x35	2300	2300	1800	1800	1600	1400	1400	NS	NS	NS
170x45	2500	2600	2000	2000	1700	1700	1600	NS	1500	NS
170x70	2900	2900	2300	2300	2000	2000	1800	1800	1700	1600
170x90	3100	3100	2600	2600	2200	2200	2000	2000	1900	1900
190x35	2600	2700	2100	2000	1800	1600	1600	NS	1500	NS
190x45	2800	2800	2200	2200	2000	1900	1800	1500	1600	NS
190x70	3200	3200	2600	2700	2300	2300	2100	2000	1900	1900
190x90	3400	3400	2800	2900	2500	2500	2300	2200	2100	2100
240x35	3200	3200	2600	2700	2300	2200	2100	1700	1900	NS
240x45	3400	3400	2900	2900	2500	2500	2300	2200	2100	1700
240x70	3800	3800	3200	3200	2900	2900	2700	2700	2400	2400
240x90	4000	4000	3400	3400	3100	3100	2900	2900	2700	2700
290x45	3900	3900	3300	3300	3000	3000	2800	2800	2600	2500
290x70	4400	4400	3700	3700	3400	3300	3100	3100	3000	3000
290x90	4600	4600	4000	3900	3600	3600	3400	3300	3200	3100
	Continuous Span									
140x35	2600	2600	1800	1600	1500	NS	NS	NS	NS	NS
140x45	2800	2800	2100	2000	1600	1400	1400	NS	NS	NS
140x70	3200	3100	2600	2600	2100	2000	1800	1600	1600	1300
140x90	3400	3300	2800	2800	2300	2500	2000	2000	1800	1600
170x35	3100	3100	2300	2100	1600	1300 <sub>5</sub>	1400	NS	NS	NS
170x45	3300	3200	2600	2600	2100	1600	1600	1300	1400	NS
170x70	3700	3700	3100	3100	2600	2700	2200	2100	1800	1600 <sub>5</sub>
170x90	3900	3900	3300	3300	2900	2900	2500	2600	2200	2100
190x35	3300	3300	2600	2600	1700	1500	1500 <sub>10</sub>	1200	NS	NS
190x45	3600	3600	2900	2900	2300	1900	1700	1400	1500 <sub>10</sub>	1200
190x70	4000	4000	3400	3300	2900	2900	2500	2600	2200 <sub>5</sub>	1700
190x90	4200	4200	3600	3600	3200	3200	2800	2800	2500	2600 <sub>5</sub>
240x35	4000	4000	3300 <sub>15</sub>	3100 <sub>10</sub>	2600 <sub>25</sub>	2700 <sub>40</sub>	1900 <sub>30</sub>	1900 <sub>30</sub>	1900 <sub>60</sub>	1700 <sub>50</sub>
240x45	4300	4300	3600	3600	3000 <sub>20</sub>	3000 <sub>25</sub>	2500 <sub>35</sub>	2700 <sub>45</sub>	1900 <sub>30</sub>	1900 <sub>30</sub>
240x70	4700	4700	4000	4000	3700	3600	3200 <sub>15</sub>	3100 <sub>15</sub>	2800 <sub>30</sub>	2800 <sub>30</sub>
240x90	5000	5100	4300	4300	3900	3900	3500 <sub>5</sub>	3500 <sub>5</sub>	3200 <sub>15</sub>	3100 <sub>15</sub>
290x45	4900	4900	4200 <sub>15</sub>	4200 <sub>15</sub>	3600 <sub>45</sub>	3200 <sub>35</sub>	3100 <sub>70</sub>	3000 <sub>65</sub>	2400 <sub>65</sub>	2000 <sub>40</sub>
290x70	5500	5500	4700	4600	4200 <sub>15</sub>	4200 <sub>15</sub>	3900 <sub>40</sub>	3700 <sub>35</sub>	3500 <sub>65</sub>	3200 <sub>45</sub>
290x90	5800	5800	4900	5000	4500	4500	4200 <sub>25</sub>	4200 <sub>25</sub>	3900 <sub>40</sub>	3700 <sub>35</sub>

NOTES :

- i) D = member depth, B = member breadth, NS = not suitable.
- ii) The above table was based on a maximum Roof Mass of 90 (kg/m2).
- iii) End bearing lengths = 35 mm at end supports and 70 mm at internal supports for continous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 70 mm at internal supports.

Table 10

### Rafters or Purlins Supporting Roof and Ceiling Loads

Size DxB (mm)	Roof & Ceiling Mass (kg/m <sup>2</sup> )	Rafter Spacing (mm)							
		600		900		1200		1800	
		Maximum Rafter Span + Overhang (mm)							
		Span	O/H	Span	O/H	Span	O/H	Span	O/H
90x35	10	2600	450	2000	350	1700	300	1400	250
	20	2400	450	2000	350	1700	300	1400	250
	40	2000	450	1800	350	1600	300	1400	250
	60	1800	450	1500	350	1400	300	1200	250
	90	1500	450	1300	350	1200	300	1100	250
90x45	10	3000	500	2300	400	1900	350	1600	250
	20	2600	500	2300	400	2000	350	1600	250
	40	2200	500	1900	400	1700	350	1500	300
	60	1900	500	1700	400	1500	350	1300	300
	90	1700	550	1500	400	1300	350	1200	300
90x70	10	3400	600	2900	500	2400	450	1900	350
	20	3000	650	2700	500	2400	450	2000	350
	40	2500	650	2200	500	2000	450	1800	350
	60	2200	650	1900	500	1800	450	1500	350
	90	1900	650	1700	550	1500	450	1400	350
90x90	10	3600	700	3300	550	2700	500	2200	400
	20	3100	700	2900	550	2600	500	2200	400
	40	2600	700	2400	600	2200	500	1900	400
	60	2400	750	2100	600	1900	500	1700	400
	90	2100	750	1800	600	1700	500	1500	400
120x35	10	3600	550	2800	450	2300	350	1900	300
	20	3200	550	2800	450	2300	400	1900	300
	40	2700	550	2300	450	2100	400	1900	300
	60	2300	600	2100	450	1900	400	1600	300
	90	2100	600	1800	450	1600	400	1400	300
120x45	10	4000	650	3200	500	2600	450	2100	350
	20	3500	650	3100	500	2700	450	2100	350
	40	2900	650	2500	500	2300	450	2000	350
	60	2500	650	2200	500	2000	450	1800	350
	90	2200	700	2000	550	1800	450	1600	350
120x70	10	4400	800	4000	650	3400	550	2600	450
	20	3900	800	3500	650	3300	550	2700	450
	40	3300	800	2900	650	2700	550	2400	450
	60	2900	850	2600	650	2400	550	2100	450
	90	2600	850	2300	700	2100	600	1800	450

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable, O/H = Overhang (mm).
- ii) The above table was based on a Batten Spacing of 900.
- iii) Minimum BackSpan = 200 % of Overhang.
- iv) Maximum Overhang = 50 % of Backspan.
- v) Maximum BirdsMouth Depth = 30.00% of depth.
- vi) End bearing lengths = 35 mm at end supports and 35 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 35 mm at internal supports.
- vii) This Table may also be used for pergola or verandah rafters/purlins

Table 10 (cont)

### Rafters or Purlins Supporting Roof and Ceiling Loads

Size DxB (mm)	Roof & Ceiling Mass (kg/m <sup>2</sup> )	Rafter Spacing (mm)									
		600		900		1200		1800			
		Maximum Rafter Span + Overhang (mm)									
		Span	O/H	Span	O/H	Span	O/H	Span	O/H		
120x90	10	4600	900	4300	700	3800	600	2900	500		
	20	4100	900	3700	700	3500	600	3000	500		
	40	3500	900	3100	750	2900	600	2600	500		
	60	3100	950	2800	750	2600	650	2300	500		
	90	2800	950	2500	750	2300	650	2000	500		
140x35	10	4200	650	3300	500	2800	400	2200	350		
	20	3700	650	3400	500	2800	450	2200	350		
	40	3100	650	2700	500	2500	450	2200	350		
	60	2700	650	2400	500	2200	450	1900	350		
	90	2400	700	2100	550	1900	450	1700	350		
140x45	10	4600	700	3800	550	3200	500	2500	400		
	20	4000	700	3600	600	3200	500	2500	400		
	40	3300	750	3000	600	2700	500	2400	400		
	60	3000	750	2600	600	2400	500	2100	400		
	90	2600	750	2300	600	2100	500	1800	400		
140x70	10	5000	900	4700	700	4000	600	3100	500		
	20	4400	900	4100	750	3800	600	3100	500		
	40	3800	950	3400	750	3100	650	2800	500		
	60	3400	950	3000	750	2800	650	2400	500		
	90	3000	950	2700	800	2400	650	2100	500		
140x90	10	5200	1000	4900	800	4500	700	3400	550		
	20	4700	1000	4300	800	4000	700	3500	550		
	40	4000	1050	3600	850	3400	700	3000	550		
	60	3600	1050	3300	850	3000	700	2600	600		
	90	3300	1100	2900	850	2600	750	2300	600		
170x35	10	5200	750	4100	600	3400	500	2700	400		
	20	4500	750	4100	600	3500	500	2700	400		
	40	3700	750	3300	600	3000	500	2700	400		
	60	3300	750	2900	600	2700	500	2400	400		
	90	2900	800	2600	650	2400	550	2100	400		
170x45	10	5500	850	4700	650	3900	550	3000	450		
	20	4800	850	4300	700	4000	550	3100	450		
	40	4000	850	3600	700	3300	600	2900	450		
	60	3600	900	3200	700	2900	600	2600	450		
	90	3200	900	2800	700	2600	600	2200	500		

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable, O/H = Overhang (mm).
- ii) The above table was based on a Batten Spacing of 900.
- iii) Minimum BackSpan = 200 % of Overhang.
- iv) Maximum Overhang = 50 % of Backspan.
- v) Maximum BirdsMouth Depth = 30.00% of depth.
- vi) End bearing lengths = 35 mm at end supports and 35 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 35 mm at internal supports.
- vii) This Table may also be used for pergola or verandah rafters/purlins

Table 10 (cont)

### Rafters or Purlins Supporting Roof and Ceiling Loads

Size DxB (mm)	Roof & Ceiling Mass (kg/m <sup>2</sup> )	Rafter Spacing (mm)									
		600		900		1200		1800			
		Maximum Rafter Span + Overhang (mm)									
		Span	O/H	Span	O/H	Span	O/H	Span	O/H	Span	O/H
170x70	10	5900	1050	5500	850	4900	700	3800	550		
	20	5300	1050	4800	850	4500	750	3800	600		
	40	4500	1100	4100	850	3800	750	3400	600		
	60	4100	1100	3600	900	3400	750	3000	600		
	90	3600	1150	3200	900	3000	750	2600	600		
170x90	10	6000	1200	5700	950	5500	800	4300	650		
	20	5500	1200	5100	950	4800	800	4300	650		
	40	4800	1200	4400	1000	4100	850	3600	650		
	60	4400	1250	3900	1000	3600	850	3200	650		
	90	3900	1250	3500	1000	3200	850	2800	700		
190x35	10	5700	800	4600	650	3900	550	3000	400		
	20	5000	800	4500	650	3900	550	3100	450		
	40	4200	850	3700	650	3400	550	3000	450		
	60	3700	850	3300	650	3000	550	2600	450		
	90	3300	850	2900	700	2600	600	2300	450		
190x45	10	6000	950	5200	750	4400	600	3400	500		
	20	5300	950	4800	750	4500	650	3400	500		
	40	4500	950	4000	750	3700	650	3300	500		
	60	4000	950	3600	750	3300	650	2900	500		
	90	3600	1000	3100	800	2900	650	2500	550		
190x70	10	6400	1150	6100	950	5500	800	4300	650		
	20	5800	1150	5300	950	5000	800	4400	650		
	40	5000	1200	4500	950	4200	800	3700	650		
	60	4500	1200	4100	1000	3700	850	3300	650		
	90	4100	1250	3600	1000	3300	850	2900	650		
190x90	10	6600	1300	6300	1050	6000	900	4800	700		
	20	6000	1300	5600	1050	5300	900	4800	700		
	40	5300	1350	4800	1050	4500	900	4000	750		
	60	4800	1350	4400	1100	4000	950	3600	750		
	90	4400	1400	3900	1100	3600	950	3200	750		
240x35	10	7000	1000	5900	800	5000	650	3900	500		
	20	6100	1000	5600	800	5100	650	3900	500		
	40	5200	1000	4700	800	4300	650	3800	550		
	60	4700	1000	4100	800	3800	700	3300	550		
	90	4100	1050	3600	850	3300	700	2900	550		

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable, O/H = Overhang (mm).
- ii) The above table was based on a Batten Spacing of 900.
- iii) Minimum BackSpan = 200 % of Overhang.
- iv) Maximum Overhang = 50 % of Backspan.
- v) Maximum BirdsMouth Depth = 30.00% of depth.
- vi) End bearing lengths = 35 mm at end supports and 35 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 35 mm at internal supports.
- vii) This Table may also be used for pergola or verandah rafters/purlins

Table 10 (cont)

### Rafters or Purlins Supporting Roof and Ceiling Loads

Size DxB (mm)	Roof & Ceiling Mass (kg/m <sup>2</sup> )	Rafter Spacing (mm)									
		600		900		1200		1800			
		Maximum Rafter Span + Overhang (mm)									
		Span	O/H	Span	O/H	Span	O/H	Span	O/H		
Single Span											
240x45	10	7200	1100	6700	900	5700	750	4400	600		
	20	6500	1150	6000	900	5600	750	4500	600		
	40	5600	1150	5000	900	4600	750	4100	600		
	60	5000	1150	4500	950	4100	800	3600	600		
	90	4500	1200	4000	950	3600	800	3200	650		
240x70	10	7200	1400	7200	1100	7000	950	5600	750		
	20	7000	1450	6600	1150	6200	950	5600	750		
	40	6200	1450	5600	1150	5200	1000	4700	800		
	60	5600	1500	5100	1150	4700	1000	4200	800		
	90	5100	1500	4500	1200	4200	1000	3700	800		
240x90	10	7200	1600	7200	1250	7200	1050	6300	850		
	20	7200	1600	6900	1300	6500	1100	6000	850		
	40	6500	1650	6000	1300	5600	1100	5000	900		
	60	6000	1650	5400	1300	5000	1100	4500	900		
	90	5400	1700	4900	1350	4500	1150	4000	900		
290x45	10	7200	1300	7200	1050	7000	900	5500	700		
	20	7200	1300	7100	1050	6600	900	5500	700		
	40	6600	1350	6000	1050	5500	900	4900	700		
	60	6000	1350	5400	1100	4900	900	4400	700		
	90	5400	1400	4800	1100	4400	950	3900	750		
290x70	10	7200	1650	7200	1300	7200	1100	6900	900		
	20	7200	1650	7200	1350	7200	1100	6700	900		
	40	7200	1700	6700	1350	6300	1150	5600	900		
	60	6700	1750	6100	1350	5600	1150	5000	950		
	90	6100	1800	5400	1400	5000	1200	4400	950		
290x90	10	7200	1850	7200	1500	7200	1250	7200	1000		
	20	7200	1900	7200	1500	7200	1250	7100	1000		
	40	7200	1950	7100	1500	6700	1300	6000	1000		
	60	7100	1950	6500	1550	6000	1300	5400	1050		
	90	6500	2000	5800	1600	5400	1350	4800	1050		

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable, O/H = Overhang (mm).
- ii) The above table was based on a Batten Spacing of 900.
- iii) Minimum BackSpan = 200 % of Overhang.
- iv) Maximum Overhang = 50 % of Backspan.
- v) Maximum BirdsMouth Depth = 30.00% of depth.
- vi) End bearing lengths = 35 mm at end supports and 35 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 35 mm at internal supports.
- vii) This Table may also be used for pergola or verandah rafters/purlins

Table 10 (cont)

### Rafters or Purlins Supporting Roof and Ceiling Loads

Size Dx B (mm)	Roof & Ceiling Mass (kg/m <sup>2</sup> )	Rafter Spacing (mm)									
		600		900		1200		1800			
		Maximum Rafter Span + Overhang (mm)									
		Span	O/H	Span	O/H	Span	O/H	Span	O/H		
Continuous Span											
90x35	10	2600	450	2000	350	1700	300	1400	250		
	20	2600	450	2000	350	1700	300	1400	250		
	40	2700	450	2100	350	1800	300	1400	250		
	60	2400	450	2100	350	1800	300	1500	250		
	90	2100	450	1800	350	1700	300	1500	250		
90x45	10	3000	500	2300	400	1900	350	1600	250		
	20	3000	500	2300	400	2000	350	1600	250		
	40	2900	500	2400	400	2000	350	1600	300		
	60	2600	500	2300	400	2100	350	1700	300		
	90	2300	550	2000	400	1800	350	1600	300		
90x70	10	3700	600	2900	500	2400	450	1900	350		
	20	3800	650	3000	500	2400	450	2000	350		
	40	3400	650	3000	500	2500	450	2000	350		
	60	3000	650	2600	500	2400	450	2100	350		
	90	2600	650	2300	550	2100	450	1900	350		
90x90	10	4100	700	3300	550	2700	500	2200	400		
	20	4200	700	3300	550	2700	500	2200	400		
	40	3600	700	3200	600	2800	500	2200	400		
	60	3200	750	2900	600	2600	500	2300	400		
	90	2900	750	2500	600	2300	500	2000	400		
120x35	10	3600	550	2800	450	2300	350	1900	300		
	20	3600	550	2800	450	2300	400	1900	300		
	40	3600	550	2900	450	2400	400	1900	300		
	60	3200	600	2800	450	2500	400	2000	300		
	90	2800	600	2500	450	2200	400	2000	300		
120x45	10	4000	650	3200	500	2600	450	2100	350		
	20	4100	650	3200	500	2700	450	2100	350		
	40	3900	650	3300	500	2800	450	2200	350		
	60	3500	650	3100	500	2800	450	2300	350		
	90	3100	700	2700	550	2500	450	2100	350		
120x70	10	5000	800	4000	650	3400	550	2600	450		
	20	5100	800	4100	650	3400	550	2700	450		
	40	4400	800	4000	650	3500	550	2700	450		
	60	4000	850	3500	650	3200	550	2800	450		
	90	3500	850	3100	700	2800	600	2500	450		

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable, O/H = Overhang (mm).
- ii) The above table was based on a Batten Spacing of 900.
- iii) Minimum BackSpan = 200 % of Overhang.
- iv) Maximum Overhang = 50 % of Backspan.
- v) Maximum BirdsMouth Depth = 30.00% of depth.
- vi) End bearing lengths = 35 mm at end supports and 35 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 35 mm at internal supports.
- vii) This Table may also be used for pergola or verandah rafters/purlins



Table 10 (cont)

### Rafters or Purlins Supporting Roof and Ceiling Loads

Size Dx B (mm)	Roof & Ceiling Mass (kg/m <sup>2</sup> )	Rafter Spacing (mm)									
		600		900		1200		1800			
		Maximum Rafter Span + Overhang (mm)									
		Span	O/H	Span	O/H	Span	O/H	Span	O/H		
Continuous Span											
120x90	10	5600	900	4500	700	3800	600	2900	500		
	20	5500	900	4500	700	3800	600	3000	500		
	40	4700	900	4300	750	3900	600	3000	500		
	60	4300	950	3800	750	3500	650	3100	500		
	90	3800	950	3400	750	3100	650	2700	500		
140x35	10	4200	650	3300	500	2800	400	2200	350		
	20	4300	650	3400	500	2800	450	2200	350		
	40	4200	650	3500	500	2900	450	2300	350		
	60	3700	650	3300	500	3000	450	2300	350		
	90	3300	700	2900	550	2600	450	2300	350		
140x45	10	4800	700	3800	550	3200	500	2500	400		
	20	4800	700	3800	600	3200	500	2500	400		
	40	4500	750	3900	600	3300	500	2600	400		
	60	4000	750	3600	600	3300	500	2600	400		
	90	3600	750	3100	600	2900	500	2500	400		
140x70	10	5900	900	4700	700	4000	600	3100	500		
	20	6000	900	4800	750	4000	600	3100	500		
	40	5100	950	4600	750	4100	650	3200	500		
	60	4600	950	4100	750	3800	650	3300	500		
	90	4100	950	3600	800	3300	650	2900	500		
140x90	10	6600	1000	5300	800	4500	700	3400	550		
	20	6300	1000	5400	800	4500	700	3500	550		
	40	5500	1050	4900	850	4600	700	3600	550		
	60	4900	1050	4400	850	4100	700	3600	600		
	90	4400	1100	3900	850	3600	750	3200	600		
170x35	10	5200	750	4100	600	3400	500	2700	400		
	20	5200	750	4200	600	3500	500	2700	400		
	40	5100	750	4300	600	3600	500	2800	400		
	60	4500	750	4000	600	3700	500	2900	400		
	90	4000	800	3500	650	3200	550	2800	400		
170x45	10	5800	850	4700	650	3900	550	3000	450		
	20	5900	850	4700	700	4000	550	3100	450		
	40	5500	850	4800	700	4100	600	3200	450		
	60	4900	900	4300	700	4000	600	3200	450		
	90	4300	900	3800	700	3500	600	3100	500		

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable, O/H = Overhang (mm).
- ii) The above table was based on a Batten Spacing of 900.
- iii) Minimum BackSpan = 200 % of Overhang.
- iv) Maximum Overhang = 50 % of Backspan.
- v) Maximum BirdsMouth Depth = 30.00% of depth.
- vi) End bearing lengths = 35 mm at end supports and 35 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 35 mm at internal supports.
- vii) This Table may also be used for pergola or verandah rafters/purlins

Table 10 (cont)

### Rafters or Purlins Supporting Roof and Ceiling Loads

Size DxB (mm)	Roof & Ceiling Mass (kg/m <sup>2</sup> )	Rafter Spacing (mm)									
		600		900		1200		1800			
		Maximum Rafter Span + Overhang (mm)									
		Span	O/H	Span	O/H	Span	O/H	Span	O/H		
Continuous Span											
170x70	10	7200	1050	5800	850	4900	700	3800	550		
	20	7100	1050	5900	850	5000	750	3800	600		
	40	6200	1100	5600	850	5100	750	3900	600		
	60	5600	1100	5000	900	4600	750	4000	600		
	90	5000	1150	4400	900	4000	750	3600	600		
170x90	10	7200	1200	6500	950	5500	800	4300	650		
	20	7200	1200	6600	950	5600	800	4300	650		
	40	6500	1200	5900	1000	5500	850	4400	650		
	60	5900	1250	5300	1000	4900	850	4400	650		
	90	5300	1250	4800	1000	4400	850	3900	700		
190x35	10	5800	800	4600	650	3900	550	3000	400		
	20	5900	800	4700	650	3900	550	3100	450		
	40	5700	850	4800	650	4000	550	3100	450		
	60	5000	850	4500	650	4100	550	3200	450		
	90	4500	850	3900	700	3600	600	3100 <sub>5</sub>	450		
190x45	10	6600	950	5200	750	4400	600	3400	500		
	20	6600	950	5300	750	4500	650	3400	500		
	40	6100	950	5400	750	4600	650	3500	500		
	60	5400	950	4800	750	4400	650	3600	500		
	90	4800	1000	4300	800	3900	650	3400	550		
190x70	10	7200	1150	6500	950	5500	800	4300	650		
	20	7200	1150	6600	950	5600	800	4400	650		
	40	6800	1200	6200	950	5700	800	4500	650		
	60	6200	1200	5500	1000	5100	850	4500	650		
	90	5500	1250	4900	1000	4500	850	4000	650		
190x90	10	7200	1300	7200	1050	6200	900	4800	700		
	20	7200	1300	7200	1050	6300	900	4900	700		
	40	7200	1350	6600	1050	6100	900	5000	750		
	60	6600	1350	5900	1100	5500	950	4900	750		
	90	5900	1400	5300	1100	4900	950	4300	750		
240x35	10	7200	1000	5900	800	5000	650	3900	500		
	20	7200	1000	6000	800	5100	650	3900	500		
	40	7100	1000	6100	800	5200	650	4000 <sub>5</sub>	550		
	60	6300	1000	5600	800	5200	700	4100 <sub>10</sub>	550		
	90	5600	1050	5000	850	4500 <sub>5</sub>	700	4000 <sub>20</sub>	550		

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable, O/H = Overhang (mm).
- ii) The above table was based on a Batten Spacing of 900.
- iii) Minimum BackSpan = 200 % of Overhang.
- iv) Maximum Overhang = 50 % of Backspan.
- v) Maximum BirdsMouth Depth = 30.00% of depth.
- vi) End bearing lengths = 35 mm at end supports and 35 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 35 mm at internal supports.
- vii) This Table may also be used for pergola or verandah rafters/purlins

Table 10 (cont)

### Rafters or Purlins Supporting Roof and Ceiling Loads

Size DxB (mm)	Roof & Ceiling Mass (kg/m <sup>2</sup> )	Rafter Spacing (mm)									
		600		900		1200		1800			
		Maximum Rafter Span + Overhang (mm)									
		Span	O/H	Span	O/H	Span	O/H	Span	O/H		
Continuous Span											
240x45	10	7200	1100	6700	900	5700	750	4400	600		
	20	7200	1150	6800	900	5800	750	4500	600		
	40	7200	1150	6800	900	5900	750	4600	600		
	60	6800	1150	6100	950	5600	800	4700 <sub>5</sub>	600		
	90	6100	1200	5400	950	4900	800	4300 <sub>10</sub>	650		
240x70	10	7200	1400	7200	1100	7100	950	5600	750		
	20	7200	1450	7200	1150	7200	950	5700	750		
	40	7200	1450	7200	1150	7100	1000	5800	800		
	60	7200	1500	6900	1150	6400	1000	5700	800		
	90	6900	1500	6200	1200	5700	1000	5000	800		
240x90	10	7200	1600	7200	1250	7200	1050	6300	850		
	20	7200	1600	7200	1300	7200	1100	6300	850		
	40	7200	1650	7200	1300	7200	1100	6500	900		
	60	7200	1650	7200	1300	6800	1100	6100	900		
	90	7200	1700	6600	1350	6100	1150	5400	900		
290x45	10	7200	1300	7200	1050	7000	900	5500	700		
	20	7200	1300	7200	1050	7000	900	5500 <sub>5</sub>	700		
	40	7200	1350	7200	1050	7200	900	5700 <sub>10</sub>	700		
	60	7200	1350	7200	1100	6700 <sub>5</sub>	900	5800 <sub>20</sub>	700		
	90	7200	1400	6500	1100	5900 <sub>5</sub>	950	5200 <sub>25</sub>	750		
290x70	10	7200	1650	7200	1300	7200	1100	6900	900		
	20	7200	1650	7200	1350	7200	1100	6900	900		
	40	7200	1700	7200	1350	7200	1150	7100	900		
	60	7200	1750	7200	1350	7200	1150	6800 <sub>5</sub>	950		
	90	7200	1800	7200	1400	6800	1200	6000 <sub>5</sub>	950		
290x90	10	7200	1850	7200	1500	7200	1250	7200	1000		
	20	7200	1900	7200	1500	7200	1250	7200	1000		
	40	7200	1950	7200	1500	7200	1300	7200	1000		
	60	7200	1950	7200	1550	7200	1300	7200	1050		
	90	7200	2000	7200	1600	7200	1350	6500	1050		

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable, O/H = Overhang (mm).
- ii) The above table was based on a Batten Spacing of 900.
- iii) Minimum BackSpan = 200 % of Overhang.
- iv) Maximum Overhang = 50 % of Backspan.
- v) Maximum BirdsMouth Depth = 30.00% of depth.
- vi) End bearing lengths = 35 mm at end supports and 35 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 35 mm at internal supports.
- vii) This Table may also be used for pergola or verandah rafters/purlins

Table 11

### Roof Beams Supporting Roof and Ceiling Loads

Size Dx B (mm)	Roof Mass (kg/m <sup>2</sup> )	Roof Load Width (mm)									
		1500		3000		4500		6000		7500	
		Maximum Beam Span & Overhang (mm)									
		Span	O/H	Span	O/H	Span	O/H	Span	O/H	Span	O/H
170x45	10	3400	1350	2400	950	1900	800	1700	700	1500	600
	20	3400	1350	2400	950	1900	800	1700	700	1500	600
	40	3000	1350	2400	950	2000	800	1700	700	1500	600
	60	2700	1300	2100	1000	1800	800	1600	700	1500	650
	90	2400	1200	1900	900	1600	800	1400	700	1300	650
170x70	10	4300	1600	2900	1150	2400	950	2100	850	1800	750
	20	4100	1600	3000	1200	2400	950	2100	850	1900	750
	40	3500	1600	2700	1200	2400	1000	2100	850	1900	750
	60	3100	1500	2400	1200	2100	1000	1900	850	1700	750
	90	2700	1300	2200	1100	1900	900	1700	800	1500	700
170x90	10	4800	1750	3200	1300	2600	1050	2300	900	2100	850
	20	4400	1750	3300	1300	2700	1050	2300	950	2100	850
	40	3700	1750	3000	1350	2600	1100	2300	950	2100	850
	60	3300	1600	2700	1350	2300	1100	2100	950	1900	850
	90	3000	1500	2400	1200	2000	1000	1800	900	1700	800
190x45	10	3800	1500	2600	1050	2200	850	1900	750	1700	700
	20	3900	1500	2700	1050	2200	900	1900	750	1700	700
	40	3400	1550	2600	1100	2200	900	1900	750	1700	700
	60	3000	1500	2400	1100	2000	900	1800	800	1700 <sub>s</sub>	700
	90	2600	1300	2100	1000	1800	900	1600	800	1500 <sub>s</sub>	700
190x70	10	4800	1800	3300	1300	2700	1050	2300	950	2100	850
	20	4600	1800	3300	1300	2700	1100	2300	950	2100	850
	40	3900	1800	3100	1350	2600	1100	2400	950	2100	850
	60	3400	1700	2700	1350	2400	1100	2100	950	1900	850
	90	3100	1500	2400	1200	2100	1000	1900	900	1700	800
190x90	10	5400	1950	3600	1450	3000	1200	2600	1050	2300	900
	20	4900	1950	3700	1450	3000	1200	2600	1050	2300	950
	40	4200	1950	3300	1500	2900	1200	2600	1050	2300	950
	60	3700	1800	3000	1500	2600	1250	2300	1050	2100	950
	90	3300	1600	2600	1300	2300	1100	2100	1000	1900	900

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable, O/H = Overhang (mm).
- ii) Minimum BackSpan = 200 % of Overhang.
- iii) Maximum Overhang = 50 % of Backspan.
- iv) End bearing lengths = 35 mm at end supports and 70 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 70 mm at internal supports.
- v) Rafter/Purlin Spacing up to 1800mm.
- vi) This Table may also be used for pergola or verandah beams.

Table 11 (cont)

### Roof Beams Supporting Roof and Ceiling Loads

Size DxB (mm)	Roof Mass (kg/m <sup>2</sup> )	Roof Load Width (mm)									
		1500		3000		4500		6000		7500	
		Maximum Beam Span & Overhang (mm)									
		Span	O/H	Span	O/H	Span	O/H	Span	O/H	Span	O/H
240x45	10	4900	1950	3400	1350	2700	1100	2400	950	2100	850
	20	5000	1950	3400	1350	2800	1100	2400	950	2200 <sub>5</sub>	850
	40	4200	1950	3400	1350	2800	1100	2500 <sub>5</sub>	1000	2200 <sub>10</sub>	900
	60	3800	1900	3000	1400	2600	1150	2300 <sub>5</sub>	1000	2100 <sub>10</sub>	900
	90	3300	1600	2600	1300	2300	1150	2100 <sub>5</sub>	1000	1900 <sub>15</sub>	900
240x70	10	6200	2250	4100	1650	3400	1350	2900	1150	2600	1050
	20	5700	2250	4200	1650	3400	1350	3000	1200	2700	1050
	40	4800	2250	3900	1700	3300	1400	3000	1200	2700	1100
	60	4300	2100	3500	1700	3000	1400	2700	1200	2500	1100
	90	3900	1900	3100	1500	2700	1300	2400	1200	2200	1100
240x90	10	6800	2450	4600	1850	3800	1500	3300	1300	2900	1150
	20	6000	2450	4700	1850	3800	1500	3300	1300	3000	1200
	40	5200	2450	4200	1900	3600	1550	3200	1350	3000	1200
	60	4700	2350	3700	1800	3300	1550	2900	1350	2700	1200
	90	4200	2100	3300	1600	2900	1400	2600	1300	2400	1200
290x45	10	6000	2350	4100	1600	3300	1350	2900 <sub>5</sub>	1150	2600 <sub>10</sub>	1050
	20	6000	2350	4100	1650	3400	1350	2900 <sub>5</sub>	1150	2600 <sub>10</sub>	1050
	40	5100	2350	4000	1650	3500 <sub>5</sub>	1350	3000 <sub>10</sub>	1200	2700 <sub>20</sub>	1050
	60	4600	2300	3600	1700	3100 <sub>5</sub>	1400	2800 <sub>15</sub>	1200	2600 <sub>20</sub>	1100
	90	4000	2000	3200	1600	2800 <sub>5</sub>	1400	2500 <sub>15</sub>	1250	2300 <sub>20</sub>	1100
290x70	10	7200	2750	5000	2000	4100	1650	3600	1400	3200	1250
	20	6800	2750	5100	2000	4200	1650	3600	1450	3200 <sub>5</sub>	1300
	40	5800	2750	4700	2050	4000	1650	3600 <sub>5</sub>	1450	3300 <sub>10</sub>	1300
	60	5200	2550	4200	2100	3600	1700	3300 <sub>5</sub>	1500	3000 <sub>10</sub>	1300
	90	4700	2300	3700	1800	3200	1600	2900 <sub>5</sub>	1400	2700 <sub>10</sub>	1350
290x90	10	7200	3000	5600	2200	4600	1800	4000	1600	3600	1400
	20	7100	3000	5700	2250	4600	1850	4000	1600	3600	1400
	40	6200	2900	5000	2250	4400	1850	3900	1600	3600 <sub>5</sub>	1450
	60	5600	2700	4500	2200	3900	1900	3500	1650	3200 <sub>5</sub>	1450
	90	5000	2500	4000	2000	3500	1700	3200	1600	2900 <sub>5</sub>	1400

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable, O/H = Overhang (mm).
- ii) Minimum BackSpan = 200 % of Overhang.
- iii) Maximum Overhang = 50 % of Backspan.
- iv) End bearing lengths = 35 mm at end supports and 70 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 70 mm at internal supports.
- v) Rafter/Purlin Spacing up to 1800mm.
- vi) This Table may also be used for pergola or verandah beams.

Table 11 (cont)

### Roof Beams Supporting Roof and Ceiling Loads

Size Dx B (mm)	Roof Mass (kg/m <sup>2</sup> )	Roof Load Width (mm)									
		1500		3000		4500		6000		7500	
		Maximum Beam Span & Overhang (mm)									
		Span	O/H	Span	O/H	Span	O/H	Span	O/H	Span	O/H
170x45	10	3400	1350	2400	950	1900	800	1700	700	1400	600
	20	3400	1350	2400	950	1900	800	1700	700	1500	600
	40	3500	1350	2400	950	2000	800	1700	700	1500	600
	60	3600	1400	2500	1000	2000	800	1800	700	1600 <sub>5</sub>	650
	90	3200	1400	2500	1000	2100	850	1800 <sub>5</sub>	700	1600 <sub>20</sub>	650
170x70	10	4300	1600	2900	1150	2400	950	2100	850	1800	750
	20	4300	1600	3000	1200	2400	950	2100	850	1900	750
	40	4400	1600	3000	1200	2500	1000	2100	850	1900	750
	60	4200	1600	3100	1200	2500	1000	2200	850	2000	750
	90	3700	1600	2900	1250	2600	1000	2200	900	2000	800
170x90	10	4800	1750	3200	1300	2600	1050	2300	900	2100	850
	20	4800	1750	3300	1300	2700	1050	2300	950	2100	850
	40	5000	1750	3400	1350	2700	1100	2400	950	2100	850
	60	4500	1750	3500	1350	2800	1100	2400	950	2200	850
	90	4000	1700	3200	1400	2800	1150	2500	1000	2200	900
190x45	10	3800	1500	2600	1050	2200	850	1900	750	1600	700
	20	3900	1500	2700	1050	2200	900	1900	750	1600	700
	40	4000	1550	2700	1100	2200	900	1900	750	1700	700
	60	4100	1550	2800	1100	2300	900	2000	800	1800 <sub>15</sub>	700
	90	3600	1550	2800	1150	2400 <sub>5</sub>	900	2000 <sub>15</sub>	800	1800 <sub>30</sub>	700
190x70	10	4800	1800	3300	1300	2700	1050	2300	950	2100	850
	20	4900	1800	3300	1300	2700	1100	2300	950	2100	850
	40	5000	1800	3400	1350	2800	1100	2400	950	2100	850
	60	4700	1800	3500	1350	2800	1100	2500	950	2200	850
	90	4200	1700	3300	1400	2900	1150	2500	1000	2200 <sub>10</sub>	900
190x90	10	5400	1950	3600	1450	3000	1200	2600	1050	2300	900
	20	5400	1950	3700	1450	3000	1200	2600	1050	2300	950
	40	5600	1950	3800	1500	3100	1200	2700	1050	2400	950
	60	5100	1950	3900	1500	3200	1250	2700	1050	2500	950
	90	4500	1850	3600	1550	3100	1250	2800	1100	2500	1000

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable, O/H = Overhang (mm).
- ii) Minimum BackSpan = 200 % of Overhang.
- iii) Maximum Overhang = 50 % of Backspan.
- iv) End bearing lengths = 35 mm at end supports and 70 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 70 mm at internal supports.
- v) Rafter/Purlin Spacing up to 1800mm.
- vi) This Table may also be used for pergola or verandah beams.

Table 11 (cont)

### Roof Beams Supporting Roof and Ceiling Loads

Size DxB (mm)	Roof Mass (kg/m <sup>2</sup> )	Roof Load Width (mm)									
		1500		3000		4500		6000		7500	
		Maximum Beam Span & Overhang (mm)									
		Span	O/H	Span	O/H	Span	O/H	Span	O/H	Span	O/H
240x45	10	4900	1950	3400	1350	2700	1100	2400	950	2000	850
	20	5000	1950	3400	1350	2800	1100	2400	950	2100 <sub>10</sub>	850
	40	5100	1950	3500	1350	2800	1100	2500 <sub>15</sub>	1000	2200 <sub>25</sub>	900
	60	5100	1950	3600	1400	2900 <sub>10</sub>	1150	2500 <sub>25</sub>	1000	2300 <sub>45</sub>	900
	90	4600	1850	3600 <sub>5</sub>	1450	3000 <sub>25</sub>	1150	2600 <sub>45</sub>	1000	2300 <sub>65</sub>	900
240x70	10	6200	2250	4100	1650	3400	1350	2900	1150	2600	1050
	20	6200	2250	4200	1650	3400	1350	3000	1200	2700	1050
	40	6400	2250	4300	1700	3500	1400	3100	1200	2700 <sub>5</sub>	1100
	60	5900	2200	4400	1700	3600	1400	3100 <sub>5</sub>	1200	2800 <sub>20</sub>	1100
	90	5300	2050	4200	1750	3600 <sub>5</sub>	1450	3200 <sub>20</sub>	1250	2800 <sub>35</sub>	1100
240x90	10	6900	2450	4600	1850	3800	1500	3300	1300	2900	1150
	20	7000	2450	4700	1850	3800	1500	3300	1300	3000	1200
	40	7000	2450	4800	1900	3900	1550	3400	1350	3000	1200
	60	6400	2350	4900	1900	4000	1550	3500	1350	3100 <sub>10</sub>	1200
	90	5700	2200	4500	1850	3900	1600	3500 <sub>10</sub>	1400	3100 <sub>20</sub>	1250
290x45	10	6000	2350	4100	1600	3300	1350	2900 <sub>10</sub>	1150	2500 <sub>20</sub>	1050
	20	6100	2350	4100	1650	3400 <sub>5</sub>	1350	2900 <sub>20</sub>	1150	2500 <sub>30</sub>	1050
	40	6300	2350	4200	1650	3500 <sub>15</sub>	1350	3000 <sub>35</sub>	1200	2600 <sub>45</sub>	1050
	60	6200	2300	4300 <sub>10</sub>	1700	3500 <sub>30</sub>	1400	3100 <sub>50</sub>	1200	2700 <sub>70</sub>	1100
	90	5500	2150	4400 <sub>25</sub>	1750	3600 <sub>50</sub>	1400	3100 <sub>80</sub>	1250	2800 <sub>100</sub>	1100
290x70	10	7200	2750	5000	2000	4100	1650	3600	1400	3200 <sub>5</sub>	1250
	20	7200	2750	5100	2000	4200	1650	3600	1450	3200 <sub>10</sub>	1300
	40	7200	2750	5200	2050	4300	1650	3700 <sub>10</sub>	1450	3300 <sub>25</sub>	1300
	60	7100	2550	5300	2100	4400 <sub>10</sub>	1700	3800 <sub>25</sub>	1500	3400 <sub>40</sub>	1300
	90	6300	2400	5100	2000	4400 <sub>25</sub>	1750	3900 <sub>45</sub>	1500	3400 <sub>60</sub>	1350
290x90	10	7200	3000	5600	2200	4600	1800	4000	1600	3600	1400
	20	7200	3000	5700	2250	4600	1850	4000	1600	3600	1400
	40	7200	2900	5800	2250	4700	1850	4100	1600	3700 <sub>15</sub>	1450
	60	7200	2700	5900	2300	4900	1900	4200 <sub>15</sub>	1650	3800 <sub>30</sub>	1450
	90	6800	2550	5500	2150	4800 <sub>10</sub>	1900	4300 <sub>30</sub>	1700	3800 <sub>45</sub>	1500

## NOTES :

- i) D = member depth, B = member breadth, NS = not suitable, O/H = Overhang (mm).
- ii) Minimum BackSpan = 200 % of Overhang.
- iii) Maximum Overhang = 50 % of Backspan.
- iv) End bearing lengths = 35 mm at end supports and 70 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 70 mm at internal supports.
- v) Rafter/Purlin Spacing up to 1800mm.
- vi) This Table may also be used for pergola or verandah beams.