

RECYCLED HARDWOOD *SPAN TABLES*

SUPPLEMENT 4

Wind Classifications N1, N2 and N3

Recycled Species Group D Recycled Grade, RG1

Prepared by:
Timber Queensland Ltd



© 2008 Forest and Wood Products Australia Limited. All rights reserved

Forest and Wood Products Australia Limited ("FWPA") makes no warranties or assurances with respect to this publication including merchantability, fitness for purpose or otherwise. FWPA and all persons associated with it exclude all liability (including liability for negligence) in relation to any opinion, advice or information contained in this publication or for any consequences arising from the use of such opinion, advice or information.

This work is copyright and protected under the Copyright Act 1968 (Cth). All material except the FWPA logo may be reproduced in whole or in part, provided that it is not sold or used for commercial benefit and its source (Forest and Wood Products Australia Limited) is acknowledged. Reproduction or copying for other purposes, which is strictly reserved only for the owner or licensee of copyright under the Copyright Act, is prohibited without the prior written consent of Forest and Wood Products Australia Limited.

Forest and Wood Products Australia
Level 4, 10–16 Queen Street
Melbourne, Vic 3000
Web: www.fwpa.com.au

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 for the Wind Classifications designated in this Supplement.

The Tables in this Supplement apply to Recycled Timber Species Group D - 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 D, RG1, the tables in this Supplement apply to Recycled Timber Species Group C - Recycled Grade, RG2.

4.0 TOLERANCES

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

5.0 CONTENTS

Table 1	Decking Boards – Commercial Applications
Table 2	Deck Bearers – Domestic Applications
Table 3	Deck Joists – Domestic Applications
Table 4	Stair Stringers
Table 5	Stair Treads (with open flights)
Table 6	Posts – Supporting Roof and/or Floor Loads
Table 7	Window or Door Mullions
Table 8	Lintels (Window Heads) – Sheet Roof
Table 9	Lintels (Window Heads) – Tile Roof
Table 10	Rafters or Purlins
Table 11	Roof Beams

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	560	340	NS	NS
35x90	680	420	NS	NS
35x120	780	540	300	NS
35x140	820	640	360	NS
45x70	840	580	320	NS
45x90	920	700	380	NS
45x120	1020	920	520	360
45x140	1080	1060	600	420

NOTES :

- i) D = member depth, B = member breadth, NS = not suitable.
- ii) The above table was based on a maximum DL of 60 (kg/m²), 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	1200	300	NS	NS	NS	NS	1200	300	NS	NS	NS	NS
90x70	1500	400	1100	300	NS	NS	1500	400	1100	300	NS	NS
90x90	1700	500	1200	300	NS	NS	1700	500	1200	300	NS	NS
120x45	1700	500	1200	300	NS	NS	1700	500	1200	300	NS	NS
120x70	2100	600	1500	400	1000	300	2100	600	1500	400	1000	300
120x90	2300	600	1600	400	1100	300	2300	600	1600	400	1100	300
140x45	2000	600	1400	400	NS	NS	2000	600	1400	400	NS	NS
140x70	2400	700	1700	500	1200	300	2400	700	1700	500	1200	300
140x90	2700	800	1900	500	1300	300	2700	800	1900	500	1300	300
170x45	2400	700	1700	500	1200 ₅	300 ₅	2400	700	1700	500	1100 ₂₀	300 ₂₀
170x70	3000	900	2100	600	1400	400	3000	900	2100	600	1400	400
170x90	3300	900	2300	600	1600	400	3300	900	2300	600	1600	400
190x45	2700	800	1900	500	1300 ₁₀	300 ₁₀	2700	800	1900	500	1300 ₃₅	300 ₃₅
190x70	3300	900	2300	600	1600	400	3300	900	2300	600	1600 ₁₀	400 ₁₀
190x90	3700	1100	2600	700	1800	500	3700	1100	2600	700	1800	500
240x45	3400	1000	2400 ₅	700 ₅	1700 ₂₅	500 ₂₅	3400	1000	2400 ₂₀	700 ₂₀	1600 ₇₅	400 ₇₅
240x70	4200	1200	3000	900	2100 ₁₀	600 ₁₀	4200	1200	3000	900	2100 ₅₀	600 ₅₀
240x90	4600	1300	3300	900	2300 ₅	600 ₅	4700	1400	3300	900	2300 ₃₀	600 ₃₀
290x45	4200	1200	2900 ₁₅	800 ₁₅	2000 ₄₀	600 ₄₀	4200	1200	2900 ₅₅	800 ₅₅	1900 ₁₁₀	500 ₁₁₀
290x70	5000	1500	3600	1000	2500 ₂₅	700 ₂₅	5100	1500	3600 ₂₀	1000 ₂₀	2500 ₈₀	700 ₈₀
290x90	5300	1500	4000	1200	2800 ₁₅	800 ₁₅	5600	1600	4000 ₅	1200	2800 ₆₅	800 ₆₅

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/m²), 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	1300	300	1300	300	1300	300	1600	400	1500	400	1500	400
90x45	1600	400	1500	400	1400	400	1900	500	1800	500	1700	500
120x35	2200	600	2000	600	2000	600	2700	800	2500	750	2100	600
120x45	2500	700	2300	600	2300	600	3100	900	2800	800	2400	700
140x35	2800	800	2600	700	2500	700	3300	900	2900	850	2500	700
140x45	3200	900	3000	900	2800	800	3700	1100	3300	950	2800	800
170x35	3600	1000	3400	1000	3100	900	4100	1200	3500	1050	3100	900
170x45	3900	1100	3800	1100	3400	1000	4500	1300	4000	1150	3400	1000
190x35	4000	1200	3800	1100	3400	1000	4600	1350	3900	1100	3400	1000
190x45	4400	1300	4100	1200	3800	1100	5000	1450	4400	1300	3800	1100
240x35	5100	1500	4600	1300	4300	1200	5800	1700	5000	1500	4300	1200
240x45	5500	1600	4900	1400	4600	1300	6300	1850	5600	1600	4800	1400
290x45	6300	1800	5700	1700	5300	1500	7200	2100	6700	1950	5800	1700

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/m²), 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	3300	3300	3100	2800	2600	2400
190x45	3600	3600	3300	3100	2900	2600
240x35	4100	4100	3800	3600	3300	3000
240x45	4500	4300	4000	3800	3600	3300
290x45	5100	4900	4600	4400	4200	3900

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/m²), 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	NS
35x290	NS
40x240	800
40x290	900
45x240	1000
45x290	1100
50x240	1200
50x290	1300
60x240	1600
60x290	1800

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/m²), 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)											
Sheet Roof												
70x70	4800	3000	2100	NS	2100	1900	1700	NS	1300	1200	NS	NS
90x90	4800	4800	3400	2400	3400	3100	2800	2200	2400	2300	2100	1900
120x120	4800	4800	4800	4300	4800	4800	4800	4000	4200	4000	3800	3500
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
Tile Roof												
70x70	4800	2300	1600	NS	2100	1700	1400	NS	1300	NS	NS	NS
90x90	4800	3800	2700	1900	3400	2700	2300	1700	2400	2100	1900	1400
120x120	4800	4800	4800	3400	4800	4800	4100	3200	4200	3800	3400	2900
140x140	4800	4800	4800	4600	4800	4800	4800	4400	4800	4800	4700	4000
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/m²), Tile Roof Mass of 90 (kg/m²), Total Upper Floor Mass of 50 (kg/m²), 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			
70x90	2400	900	NS	NS	NS	NS	NS	NS	NS
70x120	2400	1400	1200	1100	900	1100	NS	NS	NS
	2700	1000	NS	NS	NS	NS	NS	NS	NS
70x140	2400	1600	1500	1300	1200	1400	1100	NS	NS
	2700	1300	1100	900	NS	1000	NS	NS	NS
	3000	900	NS	NS	NS	NS	NS	NS	NS
90x70	2400	1500	1400	1300	1100	1300	1100	NS	NS
	2700	1200	1000	NS	NS	900	NS	NS	NS
90x90	2400	1800	1700	1600	1500	1600	1400	1200	1100
	2700	1500	1300	1200	1100	1300	1100	NS	NS
	3000	1200	1000	NS	NS	900	NS	NS	NS
90x120	2400	2500	2300	2100	1900	2200	1900	1700	1500
	2700	1900	1700	1600	1500	1700	1500	1300	1100
	3000	1500	1400	1300	1200	1400	1200	900	NS
90x140	2400	3000	2700	2400	2200	2600	2200	1900	1700
	2700	2300	2100	1900	1700	2000	1700	1500	1400
	3000	1800	1700	1500	1400	1600	1400	1200	1000
	3600	1000	1000	1000	NS	1000	NS	NS	NS
120x70	2400	3000	2700	2500	2300	2700	2300	2100	1900
	2700	2300	2100	2000	1800	2100	1800	1600	1500
	3000	1800	1700	1600	1500	1700	1500	1300	1200
	3600	1200	1100	1000	900	1100	NS	NS	NS
120x90	2400	3700	3400	3200	3000	3400	3000	2600	2400
	2700	2900	2700	2400	2300	2600	2300	2000	1800
	3000	2300	2100	2000	1800	2100	1800	1600	1500
	3600	1500	1400	1400	1300	1400	1200	1100	900
120x120	2400	4800	4600	4200	3900	4500	4000	3500	3200
	2700	3900	3600	3300	3100	3500	3100	2800	2500
	3000	3100	2900	2600	2400	2800	2400	2200	2000
	3600	2100	1900	1800	1700	1800	1600	1500	1400
	4200	1300	1200	1200	1100	1200	1100	1000	NS

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/m²), Tile Roof Mass of 90 (kg/m²).
- iii) Maximum tension load in mullion not to exceed 20 kN.
- iv) Mullion Spacing is half the width of opening either side of mullion, or for mullions/studs at sides of opening, half width of opening.

Table 7 (cont)

**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			
120x140	2400	4800	4800	4800	4600	4800	4700	4200	3800
	2700	4600	4200	3900	3600	4100	3600	3300	2900
	3000	3700	3400	3100	2900	3300	2900	2600	2300
	3600	2500	2300	2100	2000	2200	1900	1700	1600
	4200	1500	1500	1400	1300	1400	1300	1200	1100
140x70	2400	4200	3900	3600	3400	3900	3400	3100	2800
	2700	3300	3100	2900	2700	3000	2700	2400	2200
	3000	2700	2400	2300	2200	2400	2100	1900	1800
	3600	1700	1600	1600	1500	1600	1500	1300	1200
	4200	1100	1100	1000	1000	1000	1000	NS	NS
140x90	2400	4800	4800	4500	4200	4800	4300	3900	3500
	2700	4100	3900	3600	3400	3800	3400	3000	2800
	3000	3300	3100	2900	2700	3000	2700	2400	2200
	3600	2200	2100	1900	1800	2000	1800	1600	1500
	4200	1500	1400	1300	1300	1400	1300	1200	1000
140x120	2400	4800	4800	4800	4800	4800	4800	4800	4700
	2700	4800	4800	4800	4500	4800	4500	4100	3700
	3000	4500	4100	3900	3600	4000	3600	3300	3000
	3600	3000	2800	2600	2400	2700	2400	2200	2000
	4200	2000	2000	1800	1700	1900	1700	1500	1400
140x140	2400	4800	4800	4800	4800	4800	4800	4800	4800
	2700	4800	4800	4800	4800	4800	4800	4800	4400
	3000	4800	4800	4500	4300	4800	4300	3900	3500
	3600	3600	3300	3100	2900	3200	2900	2600	2400
	4200	2500	2300	2200	2100	2300	2100	1800	1600
140x140	2400	4800	4800	4800	4800	4800	4800	4800	4800
	2700	4800	4800	4800	4800	4800	4800	4800	4400
	3000	4800	4800	4500	4300	4800	4300	3900	3500
	3600	3600	3300	3100	2900	3200	2900	2600	2400
	4200	2500	2300	2200	2100	2300	2100	1800	1600
140x140	2400	4800	4800	4800	4800	4800	4800	4800	4800
	2700	4800	4800	4800	4800	4800	4800	4800	4400
	3000	4800	4800	4500	4300	4800	4300	3900	3500
	3600	3600	3300	3100	2900	3200	2900	2600	2400
	4200	2500	2300	2200	2100	2300	2100	1800	1600
140x140	2400	4800	4800	4800	4800	4800	4800	4800	4800
	2700	4800	4800	4800	4800	4800	4800	4800	4400
	3000	4800	4800	4500	4300	4800	4300	3900	3500
	3600	3600	3300	3100	2900	3200	2900	2600	2400
	4200	2500	2300	2200	2100	2300	2100	1800	1600
140x140	2400	4800	4800	4800	4800	4800	4800	4800	4800
	2700	4800	4800	4800	4800	4800	4800	4800	4400
	3000	4800	4800	4500	4300	4800	4300	3900	3500
	3600	3600	3300	3100	2900	3200	2900	2600	2400
	4200	2500	2300	2200	2100	2300	2100	1800	1600
140x140	2400	4800	4800	4800	4800	4800	4800	4800	4800
	2700	4800	4800	4800	4800	4800	4800	4800	4400
	3000	4800	4800	4500	4300	4800	4300	3900	3500
	3600	3600	3300	3100	2900	3200	2900	2600	2400
	4200	2500	2300	2200	2100	2300	2100	1800	1600
140x140	2400	4800	4800	4800	4800	4800	4800	4800	4800
	2700	4800	4800	4800	4800	4800	4800	4800	4400
	3000	4800	4800	4500	4300	4800	4300	3900	3500
	3600	3600	3300	3100	2900	3200	2900	2600	2400
	4200	2500	2300	2200	2100	2300	2100	1800	1600
140x140	2400	4800	4800	4800	4800	4800	4800	4800	4800
	2700	4800	4800	4800	4800	4800	4800	4800	4400
	3000	4800	4800	4500	4300	4800	4300	3900	3500
	3600	3600	3300	3100	2900	3200	2900	2600	2400
	4200	2500	2300	2200	2100	2300	2100	1800	1600
140x140	2400	4800	4800	4800	4800	4800	4800	4800	4800
	2700	4800	4800	4800	4800	4800	4800	4800	4400
	3000	4800	4800	4500	4300	4800	4300	3900	3500
	3600	3600	3300	3100	2900	3200	2900	2600	2400
	4200	2500	2300	2200	2100	2300	2100	1800	1600
140x140	2400	4800	4800	4800	4800	4800	4800	4800	4800
	2700	4800	4800	4800	4800	4800	4800	4800	4400
	3000	4800	4800	4500	4300	4800	4300	3900	3500
	3600	3600	3300	3100	2900	3200	2900	2600	2400
	4200	2500	2300	2200	2100	2300	2100	1800	1600
140x140	2400	4800	4800	4800	4800	4800	4800	4800	4800
	2700	4800	4800	4800	4800	4800	4800	4800	4400
	3000	4800	4800	4500	4300	4800	4300	3900	3500
	3600	3600	3300	3100	2900	3200	2900	2600	2400
	4200	2500	2300	2200	2100	2300	2100	1800	1600

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/m²), Tile Roof Mass of 90 (kg/m²).
- iii) Maximum tension load in mullion not to exceed 20 kN.
- iv) Mullion Spacing is half the width of opening either side of mullion, or for mullions/studs at sides of opening, half 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	2200	2300	1800	1800	1500	1300	1400	NS	1300	NS	
140x45	2400	2500	1900	1900	1700	1600	1500	1300	1400	NS	
140x70	2800	2800	2300	2300	2000	2000	1800	1800	1700	1500	
140x90	3000	3000	2500	2500	2200	2200	2000	1900	1800	1800	
170x35	2700	2800	2200	2200	1900	1900	1700	1500	1600	NS	
170x45	3000	3000	2400	2400	2100	2100	1900	1900	1700	1500	
170x70	3300	3300	2800	2800	2400	2500	2200	2200	2100	2000	
170x90	3500	3400	3000	3000	2600	2700	2400	2400	2200	2200	
190x35	3000	3000	2400	2500	2100	2100	1900	1700	1800	1400	
190x45	3200	3200	2700	2700	2300	2300	2100	2100	2000	1900	
190x70	3600	3500	3000	3000	2700	2700	2500	2500	2300	2300	
190x90	3800	3700	3200	3200	2900	2900	2700	2700	2500	2500	
240x35	3600	3600	3100	3000	2700	2700	2500	2500	2300	2200	
240x45	3800	3800	3300	3200	3000	3000	2700	2700	2500	2500	
240x70	4200	4200	3600	3600	3300	3300	3100	3100	2900	2900	
240x90	4500	4400	3900	3800	3500	3500	3300	3300	3100	3100	
290x45	4400	4400	3800	3700	3400	3400	3200	3200	3000	3000	
290x70	4800	4800	4200	4200	3800	3800	3600	3500	3400	3300	
290x90	5100	5100	4400	4400	4000	4000	3800	3800	3600	3600	
	Continuous Span										
140x35	3000	3000	2200	2100	1700	1600	1500	1200	1400	NS	
140x45	3200	3200	2400	2600	2000	1900	1600	1600	1500	1200	
140x70	3600	3500	3000	3000	2500	2600	2100	2000	1900	1600	
140x90	3800	3800	3200	3200	2700	2700	2300	2300	2100	2000	
170x35	3500	3500	2600	2700	2200	2000	1700	1500	1500 ₅	1200	
170x45	3700	3700	2900	2900	2400	2500	2100	2000	1700	1500	
170x70	4100	4100	3500	3500	3000	3000	2600	2600	2300	2200	
170x90	4300	4300	3700	3700	3300	3200	2900	2900	2600	2600	
190x35	3800	3800	2900	2900	2400	2400 ₁₀	2100 ₁₀	1600 ₁₀	1600 ₁₀	1300 ₅	
190x45	4000	4000	3300	3300	2700	2700	2300	2200	2100 ₁₀	1600 ₁₀	
190x70	4500	4400	3800	3800	3300	3300	2900	2900	2600	2700	
190x90	4700	4700	4100	4000	3700	3600	3200	3200	2900	2900	
240x35	4500	4500	3700	3700	3000 ₂₀	3000 ₂₀	2600 ₄₀	2700 ₄₀	2200 ₄₅	1900 ₂₅	
240x45	4800	4800	4100	4100	3500 ₁₀	3400 ₁₀	3000 ₂₅	3000 ₂₅	2700 ₄₀	2700 ₄₀	
240x70	5300	5300	4500	4500	4100	4100	3700 ₅	3600	3300 ₁₅	3200 ₁₀	
240x90	5600	5600	4800	4800	4400	4400	4100	4000	3600 ₅	3600 ₅	
290x45	5500	5500	4700	4700	4200 ₃₀	4100 ₃₀	3600 ₅₀	3500 ₄₅	3200 ₇₀	3200 ₆₅	
290x70	6000	6000	5200	5200	4800 ₅	4700 ₅	4400 ₂₀	4400 ₂₀	4000 ₃₅	4000 ₃₅	
290x90	6300	6300	5500	5500	5000	5100	4700 ₁₀	4700 ₁₀	4400 ₂₅	4400 ₂₅	

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/m²).
- 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	1700	1700	1400	1200	NS	NS	NS	NS	NS	NS
140x45	1900	1900	1500	1300	1300	NS	NS	NS	NS	NS
140x70	2200	2200	1700	1700	1500	1400	1400	1200	1300	NS
140x90	2400	2400	1900	1900	1600	1600	1500	1400	1400	1200
170x35	2100	2100	1600	1600	1400	1300	1300	NS	NS	NS
170x45	2300	2300	1800	1800	1600	1500	1400	NS	1300	NS
170x70	2700	2700	2100	2100	1800	1800	1700	1600	1500	1400
170x90	2900	2900	2300	2300	2000	2000	1800	1800	1700	1600
190x35	2300	2300	1900	1800	1600	1500	1500	NS	1400	NS
190x45	2600	2600	2000	2000	1800	1800	1600	1500	1500	NS
190x70	3000	3000	2400	2400	2100	2000	1900	1900	1700	1700
190x90	3100	3100	2600	2600	2300	2200	2100	2000	1900	1900
240x35	3000	3000	2400	2300	2100	2000	1900	1700	1700	NS
240x45	3200	3100	2600	2600	2300	2200	2100	2000	1900	1700
240x70	3500	3500	3000	3000	2600	2700	2400	2400	2200	2200
240x90	3700	3700	3200	3200	2900	2900	2600	2700	2400	2400
290x45	3700	3600	3100	3100	2700	2800	2500	2500	2300	2300
290x70	4100	4100	3500	3400	3100	3100	2900	2900	2700	2700
290x90	4300	4300	3700	3600	3300	3300	3100	3100	2900	2900
	Continuous Span									
140x35	2300	2300	1700	1600	1400	NS	NS	NS	NS	NS
140x45	2600	2500	2000	1900	1600	1400	1400	NS	NS	NS
140x70	3000	2900	2300	2300	2000	1900	1700	1600	1600	1300
140x90	3100	3100	2600	2600	2200	2100	1900	1800	1700	1600
170x35	2900	2800	2200	2100	1600	1300 ₁₀	1400 ₁₅	NS	NS	NS
170x45	3100	3000	2500	2500	2000	1600	1600	1300	1400 ₁₀	NS
170x70	3400	3400	2900	2900	2500	2500	2100	2000	1700	1600
170x90	3600	3600	3100	3100	2700	2700	2300	2300	2100	2000
190x35	3100	3100	2400	2500 ₅	1700 ₅	1500	1500 ₂₀	NS	NS	NS
190x45	3300	3300	2800	2700	2200 ₅	2100	1700 ₅	1400 ₅	1400 ₂₅	1200 ₅
190x70	3700	3700	3100	3100	2800	2800	2400	2400 ₁₀	2100 ₁₀	1600 ₅
190x90	3900	3900	3300	3300	3000	3000	2700	2700	2300	2200
240x35	3700	3700	3100 ₂₀	3100 ₂₀	2500 ₄₅	2600 ₅₀	1900 ₄₅	1900 ₄₅	1900 ₈₅	1200 ₂₅
240x45	4000	3900	3300 ₅	3300 ₅	2800 ₃₀	2800 ₃₀	2400 ₄₅	2400 ₄₅	1900 ₄₅	1900 ₄₅
240x70	4400	4400	3700	3700	3400 ₅	3400 ₅	3000 ₂₅	3000 ₂₀	2700 ₃₅	2700 ₄₀
240x90	4700	4700	4000	4000	3600	3600	3400 ₁₅	3300 ₁₀	3000 ₂₅	3000 ₂₅
290x45	4600	4600	3900 ₂₀	3800 ₂₀	3500 ₅₅	3200 ₅₀	3000 ₈₀	3000 ₈₅	2600 ₁₀₀	2000 ₅₅
290x70	5100	5100	4300	4300	3900 ₂₀	3900 ₂₀	3700 ₄₅	3600 ₄₅	3300 ₆₅	3200 ₆₅
290x90	5400	5400	4600	4600	4200 ₅	4200 ₅	3900 ₃₀	3900 ₂₅	3600 ₄₅	3600 ₄₅

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 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 10

Rafters or Purlins Supporting Roof and Ceiling Loads

Size Dx B (mm)	Roof & Ceiling Mass (kg/m ²)	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											
90x35	10	2200	350	2100	350	2000	300	1600	250		
	20	2200	350	2000	350	1800	300	1600	250		
	40	1800	350	1600	350	1400	350	1300	250		
	60	1600	350	1400	350	1300	350	1100	250		
	90	1400	350	1200	350	1100	300	1000	300		
90x45	10	2600	450	2400	400	2300	350	1900	300		
	20	2400	450	2100	450	2000	350	1700	300		
	40	2000	450	1700	400	1600	400	1400	300		
	60	1700	450	1500	400	1400	400	1200	300		
	90	1500	400	1300	400	1200	400	1000	300		
90x70	10	3100	650	2900	550	2700	450	2300	350		
	20	2700	650	2400	550	2200	450	2000	350		
	40	2200	650	2000	550	1800	450	1600	400		
	60	2000	600	1800	550	1600	500	1400	400		
	90	1800	600	1500	550	1400	500	1200	400		
90x90	10	3300	750	3000	600	2800	500	2600	400		
	20	2800	750	2600	600	2400	500	2100	400		
	40	2400	800	2100	600	2000	550	1700	400		
	60	2100	750	1900	650	1700	550	1500	450		
	90	1900	700	1700	600	1500	550	1300	450		
120x35	10	3500	600	3200	450	2800	400	2200	300		
	20	2900	600	2600	500	2400	400	2100	300		
	40	2400	600	2100	500	1900	400	1700	350		
	60	2100	550	1900	500	1700	450	1500	350		
	90	1900	550	1600	500	1500	450	1300	350		
120x45	10	3700	650	3400	550	3100	450	2500	350		
	20	3100	700	2800	550	2600	450	2300	350		
	40	2600	700	2300	550	2100	500	1900	400		
	60	2300	700	2000	600	1900	500	1600	400		
	90	2000	700	1800	600	1600	500	1400	400		
120x70	10	4000	850	3700	700	3500	600	3100	450		
	20	3500	850	3200	700	3000	600	2600	450		
	40	3000	900	2600	700	2400	600	2100	500		
	60	2600	900	2300	700	2100	600	1900	500		
	90	2300	950	2100	750	1900	650	1700	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 ²)	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											
120x90	10	4100	950	3900	750	3700	650	3400	500		
	20	3700	950	3400	750	3200	650	2800	500		
	40	3200	1000	2800	800	2600	700	2300	550		
	60	2800	1000	2500	800	2300	700	2100	550		
	90	2500	1050	2200	850	2100	700	1800	600		
140x35	10	4000	650	3700	550	3300	450	2600	350		
	20	3400	700	3000	550	2800	450	2500	350		
	40	2800	700	2500	550	2300	450	2000	350		
	60	2500	700	2200	550	2000	500	1700	400		
	90	2200	750	1900	600	1700	500	1500	400		
140x45	10	4200	750	3900	600	3600	500	3000	400		
	20	3600	800	3300	600	3000	500	2700	400		
	40	3000	800	2700	650	2500	550	2200	450		
	60	2700	800	2400	650	2200	550	1900	450		
	90	2400	850	2100	700	1900	600	1700	450		
140x70	10	4500	950	4200	750	4000	650	3700	500		
	20	4000	1000	3700	800	3400	650	3100	550		
	40	3400	1000	3100	800	2800	700	2500	550		
	60	3100	1000	2700	800	2500	700	2200	550		
	90	2700	1050	2400	850	2200	750	1900	600		
140x90	10	4700	1100	4400	850	4200	750	3900	600		
	20	4200	1100	3900	900	3700	750	3300	600		
	40	3700	1100	3300	900	3000	750	2700	600		
	60	3300	1150	2900	950	2700	800	2400	650		
	90	2900	1200	2600	950	2400	800	2100	650		
170x35	10	4700	800	4400	650	4100	550	3200	400		
	20	4100	800	3700	650	3400	550	3000	400		
	40	3400	800	3000	650	2800	550	2400	450		
	60	3000	850	2700	650	2400	550	2100	450		
	90	2700	900	2300	700	2100	600	1900	450		
170x45	10	5000	900	4600	700	4300	600	3600	500		
	20	4300	900	3900	750	3700	600	3300	500		
	40	3700	950	3300	750	3000	650	2600	500		
	60	3300	950	2900	750	2600	650	2300	500		
	90	2900	1000	2500	800	2300	700	2000	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 ²)	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											
170x70	10	5300	1150	5000	900	4800	750	4400	600		
	20	4800	1150	4400	900	4100	800	3700	600		
	40	4100	1200	3700	950	3400	800	3000	650		
	60	3700	1200	3300	950	3000	800	2700	650		
	90	3300	1250	2900	1000	2700	850	2400	700		
170x90	10	5500	1250	5200	1000	5000	850	4600	700		
	20	5000	1300	4600	1050	4400	900	4000	700		
	40	4400	1300	4000	1050	3700	900	3300	700		
	60	4000	1350	3600	1100	3300	950	2900	750		
	90	3600	1400	3200	1150	2900	950	2600	750		
190x35	10	5200	850	4800	700	4500	600	3600	450		
	20	4500	900	4100	700	3800	600	3400	450		
	40	3800	900	3400	700	3100	600	2700	500		
	60	3400	950	3000	750	2700	600	2400	500		
	90	3000	950	2600	750	2400	650	2100	500		
190x45	10	5500	1000	5100	800	4800	650	4100	500		
	20	4800	1000	4400	800	4100	700	3600	550		
	40	4100	1000	3600	800	3300	700	3000	550		
	60	3600	1050	3200	850	3000	700	2600	550		
	90	3200	1100	2800	900	2600	750	2300	600		
190x70	10	5800	1250	5500	1000	5300	850	4900	650		
	20	5200	1250	4900	1000	4600	850	4100	700		
	40	4600	1300	4100	1050	3800	900	3400	700		
	60	4100	1350	3700	1050	3400	900	3000	700		
	90	3700	1400	3300	1100	3000	950	2600	750		
190x90	10	6000	1400	5700	1100	5500	950	5100	750		
	20	5500	1400	5100	1150	4800	950	4400	750		
	40	4800	1450	4400	1150	4100	1000	3700	800		
	60	4400	1500	4000	1200	3700	1000	3200	800		
	90	4000	1550	3500	1250	3200	1050	2900	850		
240x35	10	6400	1050	5900	850	5600	700	4700	550		
	20	5600	1050	5100	850	4700	700	4200	550		
	40	4700	1100	4200	850	3900	750	3400	550		
	60	4200	1100	3800	900	3400	750	3000	600		
	90	3800	1150	3300	950	3000	800	2700	600		

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 ²)	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
240x45	10	6600	1200	6200	950	5900	800	5300	650		
	20	5900	1200	5400	950	5100	800	4500	650		
	40	5100	1250	4500	1000	4200	850	3700	650		
	60	4500	1250	4100	1000	3700	850	3300	700		
	90	4100	1350	3600	1050	3300	900	2900	700		
240x70	10	7000	1500	6700	1200	6400	1000	6000	800		
	20	6400	1550	6000	1200	5600	1050	5100	800		
	40	5600	1600	5100	1250	4800	1050	4300	850		
	60	5100	1600	4600	1300	4300	1100	3800	850		
	90	4600	1700	4100	1350	3800	1150	3300	900		
240x90	10	7200	1700	6900	1350	6600	1150	6200	900		
	20	6600	1750	6200	1400	5900	1150	5400	950		
	40	5900	1800	5400	1400	5100	1200	4600	950		
	60	5400	1850	4900	1450	4600	1250	4100	1000		
	90	4900	1900	4400	1500	4100	1300	3600	1000		
290x45	10	7200	1400	7200	1100	6900	950	6400	750		
	20	6900	1400	6400	1100	6000	950	5400	750		
	40	6000	1450	5400	1150	5000	1000	4500	750		
	60	5400	1500	4900	1200	4500	1000	4000	800		
	90	4900	1550	4300	1250	4000	1050	3500	850		
290x70	10	7200	1800	7200	1400	7200	1200	7000	950		
	20	7200	1800	7000	1450	6600	1200	6100	950		
	40	6600	1850	6100	1450	5700	1250	5100	1000		
	60	6100	1900	5500	1500	5100	1300	4600	1000		
	90	5500	2000	4900	1550	4600	1350	4000	1050		
290x90	10	7200	2000	7200	1600	7200	1350	7200	1050		
	20	7200	2050	7200	1600	7000	1350	6400	1100		
	40	7000	2100	6400	1650	6000	1400	5500	1100		
	60	6400	2150	5900	1700	5500	1450	4900	1150		
	90	5900	2250	5300	1800	4900	1500	4400	1200		

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 ²)	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	2900	350	2400	350	2000	300	1600	250
	20	2900	350	2500	350	2100	300	1700	250
	40	2500	350	2200	350	2000	350	1700	250
	60	2200	350	1900	350	1700	350	1500	250
	90	1900	350	1700	350	1500	300	1300	300
90x45	10	3400	450	2800	400	2300	350	1900	300
	20	3300	450	2900	450	2400	350	1900	300
	40	2700	450	2400	400	2200	400	1900	300
	60	2400	450	2100	400	1900	400	1700	300
	90	2100	400	1800	400	1700	400	1400	300
90x70	10	4200	650	3500	550	2900	450	2300	350
	20	3700	650	3300	550	3000	450	2400	350
	40	3100	650	2700	550	2500	450	2200	400
	60	2700	600	2400	550	2200	500	1900	400
	90	2400	600	2100	550	1900	500	1700	400
90x90	10	4400	750	3900	600	3300	500	2600	400
	20	3900	750	3500	600	3300	500	2600	400
	40	3300	800	2900	600	2700	550	2400	400
	60	2900	750	2600	650	2400	550	2100	450
	90	2600	700	2300	600	2100	550	1800	450
120x35	10	4300	600	3400	450	2800	400	2200	300
	20	4000	600	3500	500	2900	400	2300	300
	40	3300	600	2900	500	2700	400	2300	350
	60	2900	550	2600	500	2300	450	2000	350
	90	2600	550	2200	500	2000	450	1800	350
120x45	10	4800	650	3800	550	3200	450	2500	350
	20	4300	700	3900	550	3300	450	2600	350
	40	3600	700	3200	550	2900	500	2500	400
	60	3200	700	2800	600	2500	500	2200	400
	90	2800	700	2400	600	2200	500	1900	400
120x70	10	5400	850	4800	700	4000	600	3100	450
	20	4800	850	4300	700	4000	600	3200	450
	40	4000	900	3600	700	3300	600	2900	500
	60	3600	900	3200	700	2900	600	2600	500
	90	3200	950	2800	750	2600	650	2300	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 ²)	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	950	5300	750	4500	650	3500	500		
	20	5000	950	4600	750	4300	650	3600	500		
	40	4300	1000	3900	800	3600	700	3200	550		
	60	3900	1000	3500	800	3200	700	2800	550		
	90	3500	1050	3100	850	2800	700	2500	600		
140x35	10	5000	650	4000	550	3300	450	2600	350		
	20	4600	700	4100	550	3400	450	2700	350		
	40	3800	700	3400	550	3100	450	2700	350		
	60	3400	700	3000	550	2700	500	2400	400		
	90	3000	750	2600	600	2400	500	2100	400		
140x45	10	5700	750	4500	600	3800	500	3000	400		
	20	4900	800	4500	600	3900	500	3000	400		
	40	4100	800	3700	650	3400	550	3000	450		
	60	3700	800	3200	650	3000	550	2600	450		
	90	3200	850	2900	700	2600	600	2300	450		
140x70	10	6200	950	5700	750	4800	650	3700	500		
	20	5500	1000	5000	800	4700	650	3800	550		
	40	4700	1000	4200	800	3900	700	3400	550		
	60	4200	1000	3700	800	3400	700	3000	550		
	90	3700	1050	3300	850	3000	750	2600	600		
140x90	10	6400	1100	6000	850	5400	750	4100	600		
	20	5700	1100	5300	900	5000	750	4300	600		
	40	5000	1100	4500	900	4200	750	3700	600		
	60	4500	1150	4000	950	3700	800	3300	650		
	90	4000	1200	3600	950	3300	800	2900	650		
170x35	10	6200	800	4900	650	4100	550	3200	400		
	20	5500	800	5000	650	4300	550	3300	400		
	40	4600	800	4100	650	3800	550	3300	450		
	60	4100	850	3600	650	3300	550	2900	450		
	90	3600	900	3200	700	2900	600	2500	450		
170x45	10	6800	900	5600	700	4700	600	3600	500		
	20	5900	900	5400	750	4800	600	3700	500		
	40	5000	950	4400	750	4100	650	3600	500		
	60	4400	950	3900	750	3600	650	3200	500		
	90	3900	1000	3500	800	3200	700	2800	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 ²)	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	1150	6800	900	5900	750	4600	600		
	20	6500	1150	6000	900	5600	800	4700	600		
	40	5600	1200	5000	950	4700	800	4100	650		
	60	5000	1200	4500	950	4100	800	3700	650		
	90	4500	1250	4000	1000	3700	850	3200	700		
170x90	10	7200	1250	7100	1000	6600	850	5200	700		
	20	6800	1300	6300	1050	5900	900	5300	700		
	40	5900	1300	5400	1050	5000	900	4500	700		
	60	5400	1350	4800	1100	4500	950	4000	750		
	90	4800	1400	4300	1150	4000	950	3500	750		
190x35	10	6900	850	5500	700	4700	600	3600	450		
	20	6100	900	5600	700	4800	600	3700	450		
	40	5100	900	4600	700	4200	600	3700	500		
	60	4600	950	4100	750	3700	600	3300	500		
	90	4100	950	3600	750	3300	650	2900 ₅	500		
190x45	10	7200	1000	6300	800	5300	650	4100	500		
	20	6500	1000	5900	800	5500	700	4200	550		
	40	5500	1000	4900	800	4600	700	4000	550		
	60	4900	1050	4400	850	4000	700	3500	550		
	90	4400	1100	3900	900	3500	750	3100	600		
190x70	10	7200	1250	7200	1000	6700	850	5200	650		
	20	7100	1250	6600	1000	6200	850	5400	700		
	40	6200	1300	5600	1050	5200	900	4600	700		
	60	5600	1350	5000	1050	4600	900	4100	700		
	90	5000	1400	4500	1100	4100	950	3600	750		
190x90	10	7200	1400	7200	1100	7200	950	5900	750		
	20	7200	1400	6900	1150	6500	950	6000	750		
	40	6500	1450	6000	1150	5600	1000	5000	800		
	60	6000	1500	5400	1200	5000	1000	4400	800		
	90	5400	1550	4800	1250	4400	1050	3900	850		
240x35	10	7200	1050	7100	850	6000	700	4700	550		
	20	7200	1050	6900	850	6200	700	4800 ₅	550		
	40	6400	1100	5700	850	5300	750	4700 ₁₅	550		
	60	5700	1100	5100	900	4700	750	4100 ₁₅	600		
	90	5100	1150	4500	950	4100 ₅	800	3600 ₂₅	600		

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 ²)	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	1200	7200	950	6800	800	5300	650		
	20	7200	1200	7200	950	6900	800	5500	650		
	40	6900	1250	6200	1000	5700	850	5100 ₅	650		
	60	6200	1250	5500	1000	5100	850	4500 ₅	700		
	90	5500	1350	4900	1050	4500	900	3900 ₁₅	700		
240x70	10	7200	1500	7200	1200	7200	1000	6700	800		
	20	7200	1550	7200	1200	7200	1050	6900	800		
	40	7200	1600	7000	1250	6500	1050	5800	850		
	60	7000	1600	6300	1300	5800	1100	5200	850		
	90	6300	1700	5600	1350	5200	1150	4600	900		
240x90	10	7200	1700	7200	1350	7200	1150	7200	900		
	20	7200	1750	7200	1400	7200	1150	7200	950		
	40	7200	1800	7200	1400	6900	1200	6200	950		
	60	7200	1850	6700	1450	6200	1250	5600	1000		
	90	6700	1900	6000	1500	5600	1300	4900	1000		
290x45	10	7200	1400	7200	1100	7200	950	6600 ₅	750		
	20	7200	1400	7200	1100	7200	950	6800 ₁₀	750		
	40	7200	1450	7200	1150	6800	1000	6100 ₁₅	750		
	60	7200	1500	6600	1200	6100 ₅	1000	5400 ₂₀	800		
	90	6600	1550	5900	1250	5400 ₁₀	1050	4800 ₃₀	850		
290x70	10	7200	1800	7200	1400	7200	1200	7200	950		
	20	7200	1800	7200	1450	7200	1200	7200	950		
	40	7200	1850	7200	1450	7200	1250	6900	1000		
	60	7200	1900	7200	1500	6900	1300	6200 ₅	1000		
	90	7200	2000	6700	1550	6200	1350	5500 ₁₀	1050		
290x90	10	7200	2000	7200	1600	7200	1350	7200	1050		
	20	7200	2050	7200	1600	7200	1350	7200	1100		
	40	7200	2100	7200	1650	7200	1400	7200	1100		
	60	7200	2150	7200	1700	7200	1450	6700	1150		
	90	7200	2250	7200	1800	6700	1500	5900 ₅	1200		

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 ²)	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	3900	1250	2800	900	2300	750	2000	650	1800	600
	20	3300	1250	2600	950	2200	750	1900	650	1700	600
	40	2700	1250	2100	950	1800	800	1600	700	1500	600
	60	2400	1200	1900	900	1600	800	1500	700	1300	650
	90	2100	1000	1700	800	1400	700	1300	600	1200	600
170x70	10	4300	1450	3400	1150	2900	950	2500	800	2200	750
	20	3700	1450	3000	1150	2500	950	2200	800	2000	750
	40	3100	1450	2500	1200	2100	950	1900	850	1700	750
	60	2800	1400	2200	1100	1900	900	1700	850	1600	800
	90	2500	1200	2000	1000	1700	800	1500	700	1400	700
170x90	10	4600	1600	3700	1250	3100	1050	2700	900	2400	800
	20	4000	1600	3200	1300	2700	1050	2400	900	2200	800
	40	3400	1600	2700	1300	2300	1050	2100	950	1900	850
	60	3000	1500	2400	1200	2100	1000	1900	950	1700	850
	90	2700	1300	2100	1000	1800	900	1700	800	1500	700
190x45	10	4300	1400	3200	1050	2600	850	2300	750	2000	650
	20	3700	1400	2900	1050	2400	850	2200	750	1900	650
	40	3100	1400	2400	1050	2100	900	1800	750	1700	700
	60	2700	1300	2100	1000	1800	900	1600	800	1500	700
	90	2400	1200	1900	900	1600	800	1500	700	1300 _s	600 _s
190x70	10	4800	1650	3800	1250	3200	1050	2800	900	2500	800
	20	4200	1650	3300	1300	2800	1050	2500	900	2300	800
	40	3500	1650	2800	1300	2400	1100	2100	950	1900	850
	60	3100	1500	2500	1200	2100	1000	1900	950	1800	850
	90	2800	1400	2200	1100	1900	900	1700	800	1600	800
190x90	10	5000	1800	4100	1400	3500	1150	3000	1000	2700	900
	20	4400	1800	3600	1450	3100	1150	2700	1000	2500	900
	40	3800	1800	3000	1450	2600	1200	2300	1050	2100	950
	60	3400	1700	2700	1300	2300	1100	2100	1050	1900	950
	90	3000	1500	2400	1200	2100	1000	1900	900	1700	800

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 ²)	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	5300	1800	4000	1300	3300	1050	2900	950	2600 ₅	850
	20	4600	1800	3600	1300	3100	1100	2700 ₅	950	2500 ₁₀	850
	40	3800	1800	3000	1350	2600	1100	2300 ₅	950	2100 ₁₀	850
	60	3400	1700	2700	1300	2300	1150	2100 ₅	1000	1900 ₁₀	900
	90	3000	1500	2400	1200	2100	1000	1900 ₁₀	900	1700 ₁₅	800 ₁₅
240x70	10	5900	2050	4800	1600	4000	1300	3500	1150	3200	1050
	20	5200	2050	4200	1650	3600	1350	3200	1150	2900	1050
	40	4400	2050	3500	1650	3000	1350	2700	1200	2500	1050
	60	3900	1900	3100	1500	2700	1300	2400	1200	2200	1100
	90	3500	1700	2800	1400	2400	1200	2200	1100	2000 ₅	1000
240x90	10	6100	2250	5100	1800	4400	1450	3800	1250	3400	1150
	20	5500	2250	4500	1800	3900	1500	3400	1300	3100	1150
	40	4700	2250	3800	1850	3300	1500	2900	1300	2700	1200
	60	4200	2100	3400	1700	2900	1400	2600	1300	2400	1200
	90	3800	1900	3000	1500	2600	1300	2400	1200	2200	1100
290x45	10	6300	2150	4900	1600	4000	1300	3500 ₁₀	1150	3100 ₁₅	1000
	20	5500	2150	4400	1600	3700	1300	3300 ₁₀	1150	3000 ₁₅	1000
	40	4600	2150	3700	1650	3200 ₅	1350	2800 ₁₀	1150	2600 ₂₀	1050
	60	4100	2000	3300	1600	2800 ₅	1350	2500 ₁₅	1200	2300 ₂₀	1050
	90	3700	1800	2900	1400	2500 ₁₀	1200	2300 ₁₅	1100 ₁₅	2100 ₂₅	1000 ₂₅
290x70	10	6900	2500	5700	1950	4900	1600	4300	1400	3800 ₅	1250
	20	6100	2500	5000	1950	4300	1600	3800	1400	3500 ₅	1250
	40	5300	2500	4200	2000	3700	1650	3300	1450	3000 ₅	1300
	60	4700	2300	3800	1900	3300	1600	2900 ₅	1450	2700 ₁₀	1300
	90	4200	2100	3400	1700	2900	1400	2600 ₅	1300	2400 ₁₀	1200
290x90	10	7200	2700	6000	2150	5200	1750	4600	1550	4200	1400
	20	6500	2700	5400	2200	4600	1800	4100	1550	3800	1400
	40	5600	2700	4600	2250	4000	1850	3600	1600	3300	1450
	60	5100	2500	4100	2000	3600	1800	3200	1600	2900 ₅	1450
	90	4600	2300	3700	1800	3200	1600	2900	1400	2600 ₅	1300

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 ²)	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	4100	1250	2800	900	2300	750	2000	650	1800	600
	20	4200	1250	2900	950	2400	750	2100	650	1900	600
	40	3700	1250	2900	950	2300	800	2000	700	1800 ₁₀	600
	60	3300	1250	2600	1000	2200	800	1800 ₅	700	1600 ₁₅	650
	90	2900	1250	2300	1000	1900	850	1700 ₁₀	750	1500 ₂₅	650 ₂₅
170x70	10	5100	1450	3500	1150	2900	950	2500	800	2200	750
	20	5100	1450	3600	1150	2900	950	2600	800	2300	750
	40	4300	1450	3400	1200	2900	950	2500	850	2200	750
	60	3800	1450	3000	1200	2600	1000	2300	850	2000	800
	90	3400	1450	2700	1200	2300	1050	2100	900	1800 ₅	800
170x90	10	5800	1600	3900	1250	3200	1050	2800	900	2500	800
	20	5400	1600	4000	1300	3300	1050	2800	900	2600	800
	40	4600	1600	3700	1300	3200	1050	2700	950	2400	850
	60	4100	1600	3300	1350	2800	1100	2500	950	2200	850
	90	3700	1550	2900	1300	2500	1150	2300	1000	2000	900
190x45	10	4600	1400	3200	1050	2600	850	2300	750	2000	650
	20	4800	1400	3300	1050	2700	850	2300	750	2100 ₅	650
	40	4200	1400	3200	1050	2600	900	2200 ₅	750	2000 ₂₀	700
	60	3700	1400	2900	1100	2400	900	2100 ₁₅	800	1800 ₂₅	700
	90	3300	1400	2600	1150	2200 ₁₀	950	1900 ₂₅	800	1700 ₄₀	750 ₄₀
190x70	10	5800	1650	3900	1250	3200	1050	2800	900	2500	800
	20	5700	1650	4000	1300	3300	1050	2900	900	2600	800
	40	4800	1650	3800	1300	3200	1100	2800	950	2400	850
	60	4300	1650	3400	1350	2900	1100	2500	950	2300 ₅	850
	90	3800	1600	3000	1350	2600	1150	2300	1000	2000 ₁₅	900
190x90	10	6500	1800	4400	1400	3600	1150	3100	1000	2800	900
	20	6000	1800	4500	1450	3700	1150	3200	1000	2900	900
	40	5100	1800	4100	1450	3500	1200	3100	1050	2700	950
	60	4600	1800	3700	1500	3200	1250	2800	1050	2500	950
	90	4100	1700	3300	1400	2800	1250	2500	1100	2300 ₅	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 Dx B (mm)	Roof Mass (kg/m ²)	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	5900	1800	4000	1300	3300	1050	2900 ₅	950	2600 ₁₅	850
	20	6100	1800	4100	1300	3400	1100	2900 ₁₅	950	2700 ₃₀	850
	40	5200	1800	4100	1350	3300 ₁₅	1100	2800 ₃₀	950	2500 ₄₅	850
	60	4700	1800	3700	1400	3100 ₂₀	1150	2600 ₄₀	1000	2300 ₆₀	900
	90	4100	1700	3300 ₅	1450	2800 ₃₅	1200	2400 ₅₅	1050	2100 ₇₅	900 ₇₅
240x70	10	7200	2050	5000	1600	4100	1300	3500	1150	3200	1050
	20	7000	2050	5100	1650	4200	1350	3600	1150	3300 ₁₀	1050
	40	6000	2050	4800	1650	4100	1350	3500 ₁₀	1200	3100 ₂₀	1050
	60	5400	2050	4300	1700	3700	1400	3200 ₁₅	1200	2900 ₃₀	1100
	90	4800	1900	3800	1600	3300 ₁₀	1450	2900 ₂₅	1250	2600 ₄₀	1150
240x90	10	7200	2250	5500	1800	4500	1450	3900	1250	3600	1150
	20	7200	2250	5700	1800	4700	1500	4100	1300	3700	1150
	40	6400	2250	5200	1850	4500	1500	3900	1300	3400 ₁₀	1200
	60	5800	2200	4600	1850	4000	1550	3600 ₅	1350	3200 ₂₀	1200
	90	5200	2050	4100	1700	3600	1550	3200 ₁₅	1400	2900 ₃₀	1250
290x45	10	7200	2150	4900	1600	4000 ₅	1300	3500 ₂₀	1150	3100 ₄₀	1000
	20	7200	2150	5000	1600	4100 ₁₅	1300	3600 ₄₀	1150	3200 ₆₀	1000
	40	6300	2150	4900 ₁₀	1650	4000 ₃₅	1350	3400 ₅₅	1150	3000 ₈₀	1050
	60	5600	2150	4500 ₂₀	1700	3700 ₄₅	1350	3200 ₇₀	1200	2800 ₉₀	1050
	90	5000	2000	4000 ₂₅	1650	3400 ₆₀	1450	2900 ₉₀	1250 ₉₀	2600 ₁₁₀	1100 ₁₁₀
290x70	10	7200	2500	6000	1950	4900	1600	4300	1400	3900 ₁₅	1250
	20	7200	2500	6200	1950	5100	1600	4400 ₁₅	1400	4000 ₃₀	1250
	40	7100	2500	5800	2000	4900 ₁₅	1650	4200 ₃₀	1450	3700 ₄₅	1300
	60	6400	2400	5200	2000	4500 ₂₀	1700	3900 ₄₀	1450	3500 ₅₅	1300
	90	5700	2200	4600	1850	4000 ₂₅	1650	3600 ₅₅	1550	3200 ₇₅	1350
290x90	10	7200	2700	6800	2150	5500	1750	4800	1550	4300 ₁₀	1400
	20	7200	2700	7000	2200	5600	1800	4900 ₅	1550	4400 ₂₀	1400
	40	7200	2700	6200	2250	5400	1850	4700 ₂₀	1600	4100 ₃₀	1450
	60	6900	2500	5600	2150	4900 ₁₀	1900	4300 ₂₅	1650	3800 ₄₀	1450
	90	6200	2350	5000	2000	4300 ₁₅	1800	3900 ₃₅	1650	3500 ₅₅	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.