

# RECYCLED HARDWOOD *SPAN TABLES*

## SUPPLEMENT 2

### **Wind Classifications N1, N2 and N3**

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

Prepared by:  
Timber Queensland Ltd



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**Forest and Wood Products Australia**  
Level 4, 10–16 Queen Street  
Melbourne, Vic 3000  
Web: [www.fwpa.com.au](http://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](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                     | 3500 | 2500 | 1700 | 2400 | 2200 | 2000 | 1600 | 1700 | 1600 | 1500 | 1400 |
| 90x90               | 4800                     | 4800 | 4000 | 2800 | 4000 | 3600 | 3300 | 2600 | 2800 | 2700 | 2500 | 2300 |
| 120x120             | 4800                     | 4800 | 4800 | 4800 | 4800 | 4800 | 4800 | 4700 | 4800 | 4700 | 4500 | 4100 |
| 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                     | 2700 | 1900 | 1300 | 2400 | 2000 | 1700 | 1200 | 1700 | 1500 | 1300 | NS   |
| 90x90               | 4800                     | 4500 | 3200 | 2200 | 4000 | 3200 | 2700 | 2100 | 2800 | 2500 | 2300 | 1900 |
| 120x120             | 4800                     | 4800 | 4800 | 4000 | 4800 | 4800 | 4800 | 3800 | 4800 | 4400 | 4000 | 3400 |
| 140x140             | 4800                     | 4800 | 4800 | 4800 | 4800 | 4800 | 4800 | 4800 | 4800 | 4800 | 4800 | 4700 |
| 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<br>(mm) | Mullion Height<br>(mm) | Roof Load Width (mm) |      |      |      |           |      |      |      |
|------------------|------------------------|----------------------|------|------|------|-----------|------|------|------|
|                  |                        | 3000                 | 4500 | 6000 | 7500 | 3000      | 4500 | 6000 | 7500 |
|                  |                        | Mullion Spacing (mm) |      |      |      |           |      |      |      |
|                  |                        | Sheet Roof           |      |      |      | Tile Roof |      |      |      |
| 70x70            | 2400                   | 1300                 | 1100 | 900  | NS   | 1000      | NS   | NS   | NS   |
|                  | 2700                   | 1200                 | 1100 | NS   | NS   | 1000      | NS   | NS   | NS   |
| 70x120           | 2400                   | 2200                 | 1900 | 1700 | 1500 | 1800      | 1500 | 1300 | 1100 |
|                  | 2700                   | 1600                 | 1500 | 1300 | 1200 | 1400      | 1200 | NS   | NS   |
|                  | 3000                   | 1200                 | 1100 | 1000 | NS   | 1100      | NS   | NS   | NS   |
| 70x140           | 2400                   | 2600                 | 2200 | 2000 | 1800 | 2100      | 1700 | 1500 | 1300 |
|                  | 2700                   | 2000                 | 1700 | 1600 | 1400 | 1600      | 1400 | 1200 | 900  |
|                  | 3000                   | 1400                 | 1300 | 1200 | 1100 | 1300      | 1000 | NS   | NS   |
| 90x70            | 2400                   | 2400                 | 2100 | 1900 | 1700 | 2100      | 1700 | 1500 | 1400 |
|                  | 2700                   | 1800                 | 1700 | 1500 | 1400 | 1600      | 1400 | 1200 | 1000 |
|                  | 3000                   | 1400                 | 1300 | 1200 | 1100 | 1300      | 1000 | NS   | NS   |
| 90x90            | 2400                   | 3000                 | 2700 | 2400 | 2200 | 2600      | 2200 | 1900 | 1700 |
|                  | 2700                   | 2300                 | 2100 | 1900 | 1700 | 2000      | 1700 | 1500 | 1300 |
|                  | 3000                   | 1800                 | 1600 | 1500 | 1400 | 1600      | 1400 | 1200 | 1000 |
| 90x120           | 2400                   | 4000                 | 3600 | 3200 | 2900 | 3500      | 2900 | 2500 | 2200 |
|                  | 2700                   | 3100                 | 2800 | 2500 | 2300 | 2700      | 2300 | 2000 | 1700 |
|                  | 3000                   | 2500                 | 2200 | 2000 | 1800 | 2100      | 1800 | 1600 | 1400 |
|                  | 3600                   | 1300                 | 1300 | 1200 | 1200 | 1200      | 1200 | 1000 | NS   |
| 90x140           | 2400                   | 4800                 | 4200 | 3800 | 3500 | 4100      | 3500 | 3000 | 2600 |
|                  | 2700                   | 3700                 | 3300 | 3000 | 2700 | 3200      | 2700 | 2300 | 2000 |
|                  | 3000                   | 3000                 | 2600 | 2400 | 2200 | 2500      | 2100 | 1800 | 1600 |
|                  | 3600                   | 1600                 | 1600 | 1500 | 1400 | 1600      | 1400 | 1300 | 1100 |
| 120x70           | 2400                   | 4800                 | 4400 | 4000 | 3700 | 4200      | 3700 | 3300 | 2900 |
|                  | 2700                   | 3700                 | 3400 | 3100 | 2900 | 3300      | 2900 | 2500 | 2300 |
|                  | 3000                   | 3000                 | 2700 | 2500 | 2300 | 2600      | 2300 | 2000 | 1800 |
|                  | 3600                   | 1800                 | 1800 | 1600 | 1500 | 1700      | 1500 | 1400 | 1200 |
| 120x90           | 2400                   | 4800                 | 4800 | 4800 | 4600 | 4800      | 4600 | 4100 | 3700 |
|                  | 2700                   | 4700                 | 4200 | 3900 | 3600 | 4100      | 3600 | 3200 | 2800 |
|                  | 3000                   | 3700                 | 3400 | 3100 | 2900 | 3300      | 2900 | 2500 | 2300 |
|                  | 3600                   | 2500                 | 2200 | 2100 | 1900 | 2200      | 1900 | 1700 | 1600 |
|                  | 4200                   | 1300                 | 1300 | 1300 | 1200 | 1300      | 1200 | 1100 | 1100 |

## 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 20 kN.
- iv) Mullion Spacing is half the width of opening either side of mullion or for mullions/studs at side of opening, half opening width.

Table 7 (cont)

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

| Size DxB<br>(mm) | Mullion Height<br>(mm) | Roof Load Width (mm) |      |      |      |           |      |      |      |
|------------------|------------------------|----------------------|------|------|------|-----------|------|------|------|
|                  |                        | 3000                 | 4500 | 6000 | 7500 | 3000      | 4500 | 6000 | 7500 |
|                  |                        | Mullion Spacing (mm) |      |      |      |           |      |      |      |
|                  |                        | Sheet Roof           |      |      |      | Tile Roof |      |      |      |
| 120x120          | 2400                   | 4800                 | 4800 | 4800 | 4800 | 4800      | 4800 | 4800 | 4800 |
|                  | 2700                   | 4800                 | 4800 | 4800 | 4800 | 4800      | 4800 | 4200 | 3800 |
|                  | 3000                   | 4800                 | 4500 | 4100 | 3800 | 4400      | 3800 | 3400 | 3000 |
|                  | 3600                   | 3300                 | 3100 | 2800 | 2600 | 3000      | 2600 | 2300 | 2100 |
|                  | 4200                   | 1700                 | 1700 | 1700 | 1700 | 1700      | 1700 | 1600 | 1400 |
| 120x140          | 2400                   | 4800                 | 4800 | 4800 | 4800 | 4800      | 4800 | 4800 | 4800 |
|                  | 2700                   | 4800                 | 4800 | 4800 | 4800 | 4800      | 4800 | 4800 | 4500 |
|                  | 3000                   | 4800                 | 4800 | 4800 | 4500 | 4800      | 4500 | 4000 | 3600 |
|                  | 3600                   | 3900                 | 3600 | 3300 | 3100 | 3500      | 3100 | 2700 | 2400 |
|                  | 4200                   | 2100                 | 2100 | 2100 | 2000 | 2100      | 2000 | 1900 | 1700 |
|                  | 4800                   | 900                  | 900  | 900  | 900  | 900       | 900  | 900  | 900  |
| 140x70           | 2400                   | 4800                 | 4800 | 4800 | 4800 | 4800      | 4800 | 4800 | 4300 |
|                  | 2700                   | 4800                 | 4800 | 4600 | 4200 | 4800      | 4200 | 3800 | 3400 |
|                  | 3000                   | 4300                 | 4000 | 3600 | 3400 | 3800      | 3400 | 3000 | 2700 |
|                  | 3600                   | 2900                 | 2700 | 2500 | 2300 | 2600      | 2300 | 2000 | 1800 |
|                  | 4200                   | 1600                 | 1600 | 1600 | 1500 | 1600      | 1500 | 1400 | 1300 |
| 140x90           | 2400                   | 4800                 | 4800 | 4800 | 4800 | 4800      | 4800 | 4800 | 4800 |
|                  | 2700                   | 4800                 | 4800 | 4800 | 4800 | 4800      | 4800 | 4700 | 4300 |
|                  | 3000                   | 4800                 | 4800 | 4500 | 4200 | 4800      | 4200 | 3800 | 3400 |
|                  | 3600                   | 3600                 | 3300 | 3100 | 2900 | 3300      | 2900 | 2600 | 2300 |
|                  | 4200                   | 2100                 | 2100 | 2100 | 2000 | 2100      | 2000 | 1800 | 1600 |
|                  | 4800                   | 900                  | 900  | 900  | 900  | 900       | 900  | 900  | 900  |
| 140x120          | 2700                   | 4800                 | 4800 | 4800 | 4800 | 4800      | 4800 | 4800 | 4800 |
|                  | 3000                   | 4800                 | 4800 | 4800 | 4800 | 4800      | 4800 | 4800 | 4600 |
|                  | 3600                   | 4800                 | 4500 | 4100 | 3900 | 4400      | 3900 | 3400 | 3100 |
|                  | 4200                   | 2900                 | 2900 | 2900 | 2700 | 2900      | 2700 | 2500 | 2200 |
|                  | 4800                   | 900                  | 900  | 900  | 900  | 900       | 900  | 900  | 900  |
| 140x140          | 3000                   | 4800                 | 4800 | 4800 | 4800 | 4800      | 4800 | 4800 | 4800 |
|                  | 3600                   | 4800                 | 4800 | 4800 | 4500 | 4800      | 4500 | 4100 | 3700 |
|                  | 4200                   | 3500                 | 3500 | 3400 | 3300 | 3500      | 3300 | 2900 | 2600 |
|                  | 4800                   | 1800                 | 1800 | 1800 | 1800 | 1800      | 1800 | 1800 | 1800 |

## 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 20 kN.
- iv) Mullion Spacing is half the width of opening either side of mullion or for mullions/studs at side of opening, half opening width.

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                     | 2600 | 2000 | 1900 | 1700 | 1700 | 1500               | 1400               | 1400               | 1300               |
| 140x45                    | 2700                     | 2700 | 2100 | 2100 | 1900 | 1900 | 1700               | 1600               | 1600               | 1500               |
| 140x70                    | 3100                     | 3000 | 2500 | 2600 | 2200 | 2200 | 2000               | 2000               | 1800               | 1800               |
| 140x90                    | 3200                     | 3200 | 2700 | 2700 | 2400 | 2400 | 2200               | 2200               | 2000               | 2000               |
| 170x35                    | 3000                     | 3000 | 2400 | 2400 | 2100 | 2100 | 1900               | 1900               | 1800               | 1700               |
| 170x45                    | 3200                     | 3200 | 2600 | 2700 | 2300 | 2300 | 2100               | 2100               | 1900               | 1900               |
| 170x70                    | 3500                     | 3500 | 3000 | 3000 | 2700 | 2700 | 2400               | 2500               | 2200               | 2200               |
| 170x90                    | 3700                     | 3700 | 3200 | 3200 | 2900 | 2900 | 2600               | 2700               | 2500               | 2500               |
| 190x35                    | 3300                     | 3200 | 2700 | 2700 | 2400 | 2400 | 2100               | 2100               | 2000               | 2000               |
| 190x45                    | 3500                     | 3400 | 2900 | 2900 | 2600 | 2600 | 2300               | 2300               | 2200               | 2100               |
| 190x70                    | 3800                     | 3800 | 3300 | 3300 | 3000 | 3000 | 2700               | 2800               | 2500               | 2600               |
| 190x90                    | 4000                     | 4000 | 3500 | 3500 | 3200 | 3100 | 3000               | 3000               | 2800               | 2800               |
| 240x35                    | 3900                     | 3900 | 3300 | 3300 | 3000 | 3000 | 2700               | 2800               | 2500               | 2500               |
| 240x45                    | 4100                     | 4100 | 3500 | 3500 | 3200 | 3200 | 3000               | 3000               | 2800               | 2800               |
| 240x70                    | 4600                     | 4500 | 3900 | 3900 | 3600 | 3500 | 3300               | 3300               | 3100               | 3100               |
| 240x90                    | 4800                     | 4800 | 4100 | 4100 | 3800 | 3700 | 3500               | 3500               | 3400               | 3300               |
| 290x45                    | 4700                     | 4700 | 4000 | 4000 | 3700 | 3600 | 3400               | 3400               | 3200               | 3200               |
| 290x70                    | 5200                     | 5200 | 4500 | 4500 | 4100 | 4100 | 3800               | 3800               | 3600               | 3600               |
| 290x90                    | 5500                     | 5500 | 4800 | 4700 | 4300 | 4300 | 4100               | 4100               | 3900               | 3800               |
|                           | Continuous Span          |      |      |      |      |      |                    |                    |                    |                    |
| 140x35                    | 3200                     | 3200 | 2700 | 2600 | 2200 | 2200 | 1900               | 1600               | 1600               | 1400               |
| 140x45                    | 3400                     | 3400 | 2900 | 2900 | 2500 | 2500 | 2200               | 2100               | 1900               | 1600               |
| 140x70                    | 3800                     | 3800 | 3300 | 3200 | 3000 | 3000 | 2700               | 2700               | 2400               | 2500               |
| 140x90                    | 4100                     | 4100 | 3500 | 3400 | 3100 | 3100 | 2900               | 2900               | 2700               | 2700               |
| 170x35                    | 3700                     | 3700 | 3200 | 3100 | 2700 | 2800 | 2300               | 2200               | 2100               | 1700               |
| 170x45                    | 4000                     | 4000 | 3400 | 3300 | 3100 | 3000 | 2700               | 2700               | 2400               | 2400               |
| 170x70                    | 4400                     | 4400 | 3800 | 3800 | 3400 | 3400 | 3200               | 3100               | 2900               | 2900               |
| 170x90                    | 4700                     | 4700 | 4000 | 4000 | 3600 | 3600 | 3400               | 3400               | 3200               | 3200               |
| 190x35                    | 4100                     | 4100 | 3400 | 3400 | 3000 | 3000 | 2600               | 2700               | 2300               | 2100               |
| 190x45                    | 4300                     | 4300 | 3700 | 3700 | 3300 | 3300 | 3000               | 3000               | 2700               | 2700               |
| 190x70                    | 4800                     | 4800 | 4100 | 4100 | 3700 | 3700 | 3500               | 3500               | 3300               | 3200               |
| 190x90                    | 5100                     | 5100 | 4400 | 4300 | 4000 | 3900 | 3700               | 3700               | 3500               | 3500               |
| 240x35                    | 4800                     | 4900 | 4100 | 4100 | 3700 | 3700 | 3400 <sub>15</sub> | 3300 <sub>15</sub> | 3000 <sub>25</sub> | 3000 <sub>25</sub> |
| 240x45                    | 5100                     | 5200 | 4400 | 4400 | 4000 | 4000 | 3700               | 3700               | 3400 <sub>15</sub> | 3300 <sub>10</sub> |
| 240x70                    | 5700                     | 5700 | 4900 | 4900 | 4400 | 4400 | 4200               | 4200               | 3900               | 3900               |
| 240x90                    | 6000                     | 6000 | 5200 | 5200 | 4700 | 4700 | 4400               | 4400               | 4200               | 4200               |
| 290x45                    | 5900                     | 5900 | 5100 | 5100 | 4600 | 4600 | 4300 <sub>15</sub> | 4300 <sub>15</sub> | 4100 <sub>35</sub> | 4000 <sub>35</sub> |
| 290x70                    | 6500                     | 6500 | 5600 | 5600 | 5100 | 5100 | 4800               | 4800               | 4500 <sub>5</sub>  | 4500               |
| 290x90                    | 6700                     | 6800 | 5900 | 5900 | 5400 | 5400 | 5100               | 5100               | 4800               | 4800               |

## 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               | 1300               | 1300               | NS                 | 1200               | NS                 |
| 140x70                    | 2400                     | 2500 | 1900 | 1900 | 1700               | 1600               | 1500               | 1400               | 1400               | 1200               |
| 140x90                    | 2600                     | 2700 | 2100 | 2100 | 1800               | 1800               | 1600               | 1600               | 1500               | 1400               |
| 170x35                    | 2300                     | 2300 | 1800 | 1800 | 1600               | 1500               | 1400               | 1300               | 1400               | NS                 |
| 170x45                    | 2500                     | 2600 | 2000 | 2000 | 1700               | 1700               | 1600               | 1500               | 1500               | 1300               |
| 170x70                    | 2900                     | 2900 | 2300 | 2300 | 2000               | 2000               | 1800               | 1800               | 1700               | 1700               |
| 170x90                    | 3100                     | 3100 | 2600 | 2600 | 2200               | 2200               | 2000               | 2000               | 1900               | 1900               |
| 190x35                    | 2600                     | 2700 | 2100 | 2000 | 1800               | 1800               | 1600               | 1500               | 1500               | 1400               |
| 190x45                    | 2800                     | 2800 | 2200 | 2200 | 2000               | 1900               | 1800               | 1800               | 1600               | 1600               |
| 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               | 2000               | 1900               | 1900               |
| 240x45                    | 3400                     | 3400 | 2900 | 2900 | 2500               | 2500               | 2300               | 2200               | 2100               | 2100               |
| 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 | 2000 | 2000 | 1800               | 1600               | 1600               | 1200               | 1400               | NS                 |
| 140x45                    | 2800                     | 2800 | 2200 | 2100 | 1900               | 1800               | 1700               | 1600               | 1600               | 1200               |
| 140x70                    | 3200                     | 3100 | 2600 | 2600 | 2300               | 2200               | 2100               | 2000               | 1900               | 1600               |
| 140x90                    | 3400                     | 3300 | 2800 | 2800 | 2500               | 2500               | 2200               | 2200               | 2100               | 2000               |
| 170x35                    | 3100                     | 3100 | 2500 | 2500 | 2100               | 2100               | 1700               | 1500               | 1600               | 1200               |
| 170x45                    | 3300                     | 3200 | 2700 | 2700 | 2400               | 2400               | 2100               | 2100               | 1700               | 1500               |
| 170x70                    | 3700                     | 3700 | 3100 | 3100 | 2800               | 2700               | 2500               | 2500               | 2300               | 2200               |
| 170x90                    | 3900                     | 3900 | 3300 | 3300 | 3000               | 3000               | 2800               | 2700               | 2600               | 2500               |
| 190x35                    | 3300                     | 3300 | 2800 | 2800 | 2400               | 2400 <sub>5</sub>  | 2200 <sub>10</sub> | 1600 <sub>5</sub>  | 1600 <sub>5</sub>  | 1300 <sub>15</sub> |
| 190x45                    | 3600                     | 3600 | 3000 | 3000 | 2700               | 2600               | 2400               | 2400 <sub>5</sub>  | 2200 <sub>10</sub> | 1700               |
| 190x70                    | 4000                     | 4000 | 3400 | 3300 | 3100               | 3000               | 2800               | 2800               | 2600               | 2600               |
| 190x90                    | 4200                     | 4200 | 3600 | 3600 | 3300               | 3200               | 3000               | 3000               | 2900               | 2800               |
| 240x35                    | 4000                     | 4000 | 3400 | 3400 | 3100 <sub>15</sub> | 3100 <sub>15</sub> | 2700 <sub>30</sub> | 2800 <sub>35</sub> | 2200 <sub>40</sub> | 1900 <sub>20</sub> |
| 240x45                    | 4300                     | 4300 | 3600 | 3600 | 3300               | 3200               | 3100 <sub>20</sub> | 3000 <sub>20</sub> | 2700 <sub>30</sub> | 2800 <sub>35</sub> |
| 240x70                    | 4700                     | 4700 | 4000 | 4000 | 3700               | 3600               | 3400               | 3400               | 3200 <sub>10</sub> | 3200 <sub>5</sub>  |
| 240x90                    | 5000                     | 5100 | 4300 | 4300 | 3900               | 3900               | 3600               | 3600               | 3400               | 3400               |
| 290x45                    | 4900                     | 4900 | 4200 | 4200 | 3800 <sub>15</sub> | 3700 <sub>15</sub> | 3500 <sub>35</sub> | 3500 <sub>35</sub> | 3300 <sub>60</sub> | 3200 <sub>60</sub> |
| 290x70                    | 5500                     | 5500 | 4700 | 4600 | 4200               | 4200               | 3900 <sub>5</sub>  | 3900 <sub>5</sub>  | 3700 <sub>20</sub> | 3700 <sub>20</sub> |
| 290x90                    | 5800                     | 5800 | 4900 | 5000 | 4500               | 4500               | 4200               | 4200               | 4000 <sub>5</sub>  | 3900 <sub>10</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/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 10

### Rafters or Purlins Supporting Roof and Ceiling Loads

| Size Dx B<br>(mm) | Roof &<br>Ceiling<br>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                                | 550  | 2400 | 450 | 2300 | 400 | 2100 | 300 |
|                   | 20   | 2400                                | 550  | 2200 | 450 | 2000 | 400 | 1800 | 300 |
|                   | 40   | 2000                                | 550  | 1800 | 450 | 1600 | 400 | 1400 | 300 |
|                   | 60   | 1800                                | 550  | 1500 | 450 | 1400 | 400 | 1200 | 300 |
|                   | 90   | 1500                                | 500  | 1300 | 450 | 1200 | 400 | 1100 | 350 |
| 90x45             | 10   | 3100                                | 600  | 2800 | 500 | 2600 | 450 | 2300 | 350 |
|                   | 20   | 2600                                | 650  | 2300 | 500 | 2200 | 450 | 1900 | 350 |
|                   | 40   | 2200                                | 650  | 1900 | 500 | 1700 | 450 | 1500 | 350 |
|                   | 60   | 1900                                | 650  | 1700 | 550 | 1500 | 450 | 1300 | 350 |
|                   | 90   | 1700                                | 600  | 1500 | 550 | 1300 | 500 | 1200 | 400 |
| 90x70             | 10   | 3400                                | 800  | 3200 | 650 | 3000 | 550 | 2700 | 450 |
|                   | 20   | 3000                                | 800  | 2700 | 650 | 2500 | 550 | 2200 | 450 |
|                   | 40   | 2500                                | 800  | 2200 | 650 | 2000 | 550 | 1800 | 450 |
|                   | 60   | 2200                                | 850  | 1900 | 650 | 1800 | 550 | 1500 | 450 |
|                   | 90   | 1900                                | 850  | 1700 | 700 | 1500 | 600 | 1400 | 500 |
| 90x90             | 10   | 3600                                | 850  | 3300 | 700 | 3100 | 600 | 2900 | 500 |
|                   | 20   | 3100                                | 900  | 2900 | 700 | 2600 | 600 | 2400 | 500 |
|                   | 40   | 2600                                | 900  | 2400 | 750 | 2200 | 600 | 1900 | 500 |
|                   | 60   | 2400                                | 950  | 2100 | 750 | 1900 | 650 | 1700 | 500 |
|                   | 90   | 2100                                | 950  | 1800 | 800 | 1700 | 650 | 1500 | 550 |
| 120x35            | 10   | 3800                                | 700  | 3500 | 550 | 3200 | 450 | 2800 | 400 |
|                   | 20   | 3200                                | 700  | 2900 | 550 | 2700 | 500 | 2300 | 400 |
|                   | 40   | 2700                                | 700  | 2300 | 600 | 2100 | 500 | 1900 | 400 |
|                   | 60   | 2300                                | 750  | 2100 | 600 | 1900 | 500 | 1600 | 400 |
|                   | 90   | 2100                                | 800  | 1800 | 600 | 1600 | 550 | 1400 | 400 |
| 120x45            | 10   | 4000                                | 800  | 3700 | 650 | 3500 | 550 | 3100 | 450 |
|                   | 20   | 3500                                | 800  | 3100 | 650 | 2900 | 550 | 2500 | 450 |
|                   | 40   | 2900                                | 800  | 2500 | 650 | 2300 | 550 | 2000 | 450 |
|                   | 60   | 2500                                | 850  | 2200 | 700 | 2000 | 600 | 1800 | 450 |
|                   | 90   | 2200                                | 900  | 2000 | 700 | 1800 | 600 | 1600 | 500 |
| 120x70            | 10   | 4400                                | 1000 | 4100 | 800 | 3900 | 700 | 3500 | 550 |
|                   | 20   | 3900                                | 1000 | 3500 | 800 | 3300 | 700 | 2900 | 550 |
|                   | 40   | 3300                                | 1050 | 2900 | 850 | 2700 | 700 | 2400 | 550 |
|                   | 60   | 2900                                | 1050 | 2600 | 850 | 2400 | 750 | 2100 | 600 |
|                   | 90   | 2600                                | 1100 | 2300 | 900 | 2100 | 750 | 1800 | 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<br>(mm) | Roof &<br>Ceiling<br>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      |  |                                     |      |      |      |      |     |      |     |  |  |
| 120x90           | 10   | 4600                                | 1100 | 4300 | 900  | 4100 | 750 | 3700 | 600 |  |  |
|                  | 20   | 4100                                | 1100 | 3700 | 900  | 3500 | 800 | 3100 | 600 |  |  |
|                  | 40   | 3500                                | 1150 | 3100 | 950  | 2900 | 800 | 2600 | 650 |  |  |
|                  | 60   | 3100                                | 1200 | 2800 | 950  | 2600 | 800 | 2300 | 650 |  |  |
|                  | 90   | 2800                                | 1250 | 2500 | 1000 | 2300 | 850 | 2000 | 700 |  |  |
| 140x35           | 10   | 4400                                | 800  | 4000 | 650  | 3700 | 550 | 3300 | 450 |  |  |
|                  | 20   | 3700                                | 800  | 3400 | 650  | 3100 | 550 | 2700 | 450 |  |  |
|                  | 40   | 3100                                | 800  | 2700 | 650  | 2500 | 550 | 2200 | 450 |  |  |
|                  | 60   | 2700                                | 850  | 2400 | 700  | 2200 | 600 | 1900 | 450 |  |  |
|                  | 90   | 2400                                | 900  | 2100 | 700  | 1900 | 600 | 1700 | 500 |  |  |
| 140x45           | 10   | 4600                                | 900  | 4300 | 700  | 4000 | 600 | 3600 | 500 |  |  |
|                  | 20   | 4000                                | 900  | 3600 | 750  | 3300 | 600 | 3000 | 500 |  |  |
|                  | 40   | 3300                                | 950  | 3000 | 750  | 2700 | 650 | 2400 | 500 |  |  |
|                  | 60   | 3000                                | 950  | 2600 | 750  | 2400 | 650 | 2100 | 500 |  |  |
|                  | 90   | 2600                                | 1000 | 2300 | 800  | 2100 | 700 | 1800 | 550 |  |  |
| 140x70           | 10   | 5000                                | 1150 | 4700 | 900  | 4400 | 800 | 4100 | 600 |  |  |
|                  | 20   | 4400                                | 1150 | 4100 | 900  | 3800 | 800 | 3400 | 650 |  |  |
|                  | 40   | 3800                                | 1150 | 3400 | 950  | 3100 | 800 | 2800 | 650 |  |  |
|                  | 60   | 3400                                | 1200 | 3000 | 950  | 2800 | 850 | 2400 | 650 |  |  |
|                  | 90   | 3000                                | 1250 | 2700 | 1000 | 2400 | 850 | 2100 | 700 |  |  |
| 140x90           | 10   | 5200                                | 1250 | 4900 | 1000 | 4700 | 850 | 4300 | 700 |  |  |
|                  | 20   | 4700                                | 1300 | 4300 | 1000 | 4000 | 900 | 3600 | 700 |  |  |
|                  | 40   | 4000                                | 1300 | 3600 | 1050 | 3400 | 900 | 3000 | 700 |  |  |
|                  | 60   | 3600                                | 1350 | 3300 | 1100 | 3000 | 950 | 2600 | 750 |  |  |
|                  | 90   | 3300                                | 1400 | 2900 | 1150 | 2600 | 950 | 2300 | 800 |  |  |
| 170x35           | 10   | 5200                                | 950  | 4800 | 750  | 4500 | 650 | 4100 | 500 |  |  |
|                  | 20   | 4500                                | 950  | 4100 | 750  | 3700 | 650 | 3300 | 500 |  |  |
|                  | 40   | 3700                                | 950  | 3300 | 750  | 3000 | 650 | 2700 | 500 |  |  |
|                  | 60   | 3300                                | 1000 | 2900 | 800  | 2700 | 650 | 2400 | 550 |  |  |
|                  | 90   | 2900                                | 1050 | 2600 | 850  | 2400 | 700 | 2100 | 550 |  |  |
| 170x45           | 10   | 5500                                | 1050 | 5100 | 850  | 4800 | 700 | 4300 | 550 |  |  |
|                  | 20   | 4800                                | 1050 | 4300 | 850  | 4000 | 750 | 3600 | 600 |  |  |
|                  | 40   | 4000                                | 1100 | 3600 | 900  | 3300 | 750 | 2900 | 600 |  |  |
|                  | 60   | 3600                                | 1150 | 3200 | 900  | 2900 | 750 | 2600 | 600 |  |  |
|                  | 90   | 3200                                | 1150 | 2800 | 950  | 2600 | 800 | 2200 | 650 |  |  |

## 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<br>(mm) | Roof &<br>Ceiling<br>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                                | 1350 | 5500 | 1050 | 5300 | 900  | 4800 | 700  |      |     |
|                  | 20   | 5300                                | 1350 | 4800 | 1100 | 4500 | 900  | 4100 | 750  |      |     |
|                  | 40   | 4500                                | 1400 | 4100 | 1100 | 3800 | 950  | 3400 | 750  |      |     |
|                  | 60   | 4100                                | 1400 | 3600 | 1150 | 3400 | 950  | 3000 | 750  |      |     |
|                  | 90   | 3600                                | 1500 | 3200 | 1200 | 3000 | 1000 | 2600 | 800  |      |     |
| 170x90           | 10   | 6000                                | 1500 | 5700 | 1200 | 5500 | 1000 | 5100 | 800  |      |     |
|                  | 20   | 5500                                | 1500 | 5100 | 1200 | 4800 | 1050 | 4400 | 850  |      |     |
|                  | 40   | 4800                                | 1550 | 4400 | 1250 | 4100 | 1050 | 3600 | 850  |      |     |
|                  | 60   | 4400                                | 1600 | 3900 | 1250 | 3600 | 1100 | 3200 | 850  |      |     |
|                  | 90   | 3900                                | 1650 | 3500 | 1350 | 3200 | 1150 | 2800 | 900  |      |     |
| 190x35           | 10   | 5700                                | 1000 | 5300 | 800  | 5000 | 700  | 4500 | 550  |      |     |
|                  | 20   | 5000                                | 1050 | 4500 | 800  | 4200 | 700  | 3700 | 550  |      |     |
|                  | 40   | 4200                                | 1050 | 3700 | 850  | 3400 | 700  | 3000 | 550  |      |     |
|                  | 60   | 3700                                | 1100 | 3300 | 850  | 3000 | 750  | 2600 | 600  |      |     |
|                  | 90   | 3300                                | 1150 | 2900 | 900  | 2600 | 750  | 2300 | 600  |      |     |
| 190x45           | 10   | 6000                                | 1150 | 5600 | 950  | 5300 | 800  | 4800 | 650  |      |     |
|                  | 20   | 5300                                | 1150 | 4800 | 950  | 4500 | 800  | 4000 | 650  |      |     |
|                  | 40   | 4500                                | 1200 | 4000 | 950  | 3700 | 800  | 3300 | 650  |      |     |
|                  | 60   | 4000                                | 1250 | 3600 | 1000 | 3300 | 850  | 2900 | 650  |      |     |
|                  | 90   | 3600                                | 1300 | 3100 | 1050 | 2900 | 900  | 2500 | 700  |      |     |
| 190x70           | 10   | 6400                                | 1450 | 6100 | 1150 | 5800 | 1000 | 5300 | 800  |      |     |
|                  | 20   | 5800                                | 1500 | 5300 | 1200 | 5000 | 1000 | 4500 | 800  |      |     |
|                  | 40   | 5000                                | 1500 | 4500 | 1200 | 4200 | 1050 | 3700 | 850  |      |     |
|                  | 60   | 4500                                | 1550 | 4100 | 1250 | 3700 | 1050 | 3300 | 850  |      |     |
|                  | 90   | 4100                                | 1650 | 3600 | 1300 | 3300 | 1100 | 2900 | 900  |      |     |
| 190x90           | 10   | 6600                                | 1650 | 6300 | 1300 | 6000 | 1100 | 5600 | 900  |      |     |
|                  | 20   | 6000                                | 1650 | 5600 | 1350 | 5300 | 1150 | 4800 | 900  |      |     |
|                  | 40   | 5300                                | 1700 | 4800 | 1350 | 4500 | 1150 | 4000 | 950  |      |     |
|                  | 60   | 4800                                | 1750 | 4400 | 1400 | 4000 | 1200 | 3600 | 950  |      |     |
|                  | 90   | 4400                                | 1850 | 3900 | 1450 | 3600 | 1250 | 3200 | 1000 |      |     |
| 240x35           | 10   | 7000                                | 1250 | 6500 | 1000 | 6100 | 850  | 5600 | 650  |      |     |
|                  | 20   | 6100                                | 1250 | 5600 | 1000 | 5200 | 850  | 4700 | 650  |      |     |
|                  | 40   | 5200                                | 1300 | 4700 | 1000 | 4300 | 850  | 3800 | 700  |      |     |
|                  | 60   | 4700                                | 1300 | 4100 | 1050 | 3800 | 900  | 3300 | 700  |      |     |
|                  | 90   | 4100                                | 1350 | 3600 | 1100 | 3300 | 950  | 2900 | 750  |      |     |

## 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<br>(mm) | Roof &<br>Ceiling<br>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  |
| 240x45           | 10   | 7200                                | 1400 | 6800 | 1100 | 6500 | 950  | 6000 | 750  |
|                  | 20   | 6500                                | 1450 | 6000 | 1150 | 5600 | 950  | 5000 | 750  |
|                  | 40   | 5600                                | 1450 | 5000 | 1150 | 4600 | 1000 | 4100 | 800  |
|                  | 60   | 5000                                | 1500 | 4500 | 1200 | 4100 | 1000 | 3600 | 800  |
|                  | 90   | 4500                                | 1550 | 4000 | 1250 | 3600 | 1050 | 3200 | 850  |
| 240x70           | 10   | 7200                                | 1800 | 7200 | 1400 | 7000 | 1200 | 6600 | 950  |
|                  | 20   | 7000                                | 1800 | 6600 | 1450 | 6200 | 1200 | 5600 | 1000 |
|                  | 40   | 6200                                | 1850 | 5600 | 1500 | 5200 | 1250 | 4700 | 1000 |
|                  | 60   | 5600                                | 1900 | 5100 | 1500 | 4700 | 1300 | 4200 | 1000 |
|                  | 90   | 5100                                | 2000 | 4500 | 1600 | 4200 | 1350 | 3700 | 1050 |
| 240x90           | 10   | 7200                                | 2000 | 7200 | 1600 | 7200 | 1350 | 6900 | 1100 |
|                  | 20   | 7200                                | 2050 | 6900 | 1600 | 6500 | 1400 | 6000 | 1100 |
|                  | 40   | 6500                                | 2100 | 6000 | 1650 | 5600 | 1400 | 5000 | 1100 |
|                  | 60   | 6000                                | 2150 | 5400 | 1700 | 5000 | 1450 | 4500 | 1150 |
|                  | 90   | 5400                                | 2250 | 4900 | 1800 | 4500 | 1500 | 4000 | 1200 |
| 290x45           | 10   | 7200                                | 1650 | 7200 | 1300 | 7200 | 1100 | 7100 | 900  |
|                  | 20   | 7200                                | 1650 | 7100 | 1350 | 6600 | 1100 | 6000 | 900  |
|                  | 40   | 6600                                | 1700 | 6000 | 1350 | 5500 | 1150 | 4900 | 900  |
|                  | 60   | 6000                                | 1750 | 5400 | 1400 | 4900 | 1200 | 4400 | 950  |
|                  | 90   | 5400                                | 1850 | 4800 | 1450 | 4400 | 1250 | 3900 | 1000 |
| 290x70           | 10   | 7200                                | 2100 | 7200 | 1650 | 7200 | 1400 | 7200 | 1100 |
|                  | 20   | 7200                                | 2150 | 7200 | 1700 | 7200 | 1450 | 6700 | 1150 |
|                  | 40   | 7200                                | 2200 | 6700 | 1750 | 6300 | 1450 | 5600 | 1150 |
|                  | 60   | 6700                                | 2250 | 6100 | 1750 | 5600 | 1500 | 5000 | 1200 |
|                  | 90   | 6100                                | 2350 | 5400 | 1850 | 5000 | 1550 | 4400 | 1250 |
| 290x90           | 10   | 7200                                | 2400 | 7200 | 1900 | 7200 | 1600 | 7200 | 1250 |
|                  | 20   | 7200                                | 2400 | 7200 | 1900 | 7200 | 1600 | 7100 | 1300 |
|                  | 40   | 7200                                | 2450 | 7100 | 1950 | 6700 | 1650 | 6000 | 1300 |
|                  | 60   | 7100                                | 2550 | 6500 | 2000 | 6000 | 1700 | 5400 | 1350 |
|                  | 90   | 6500                                | 2650 | 5800 | 2100 | 5400 | 1750 | 4800 | 1400 |

## 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<br>(mm) | Roof &<br>Ceiling<br>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   | 3400                                | 550  | 3100 | 450 | 2600 | 400 | 2100 | 300 |  |  |
|                  | 20   | 3300                                | 550  | 3000 | 450 | 2700 | 400 | 2100 | 300 |  |  |
|                  | 40   | 2700                                | 550  | 2400 | 450 | 2200 | 400 | 1900 | 300 |  |  |
|                  | 60   | 2400                                | 550  | 2100 | 450 | 1900 | 400 | 1700 | 300 |  |  |
|                  | 90   | 2100                                | 500  | 1800 | 450 | 1700 | 400 | 1500 | 350 |  |  |
| 90x45            | 10   | 4100                                | 600  | 3600 | 500 | 3000 | 450 | 2400 | 350 |  |  |
|                  | 20   | 3600                                | 650  | 3200 | 500 | 2900 | 450 | 2400 | 350 |  |  |
|                  | 40   | 2900                                | 650  | 2600 | 500 | 2400 | 450 | 2100 | 350 |  |  |
|                  | 60   | 2600                                | 650  | 2300 | 550 | 2100 | 450 | 1800 | 350 |  |  |
|                  | 90   | 2300                                | 600  | 2000 | 550 | 1800 | 500 | 1600 | 400 |  |  |
| 90x70            | 10   | 4700                                | 800  | 4300 | 650 | 3800 | 550 | 2900 | 450 |  |  |
|                  | 20   | 4000                                | 800  | 3600 | 650 | 3400 | 550 | 3000 | 450 |  |  |
|                  | 40   | 3400                                | 800  | 3000 | 650 | 2700 | 550 | 2400 | 450 |  |  |
|                  | 60   | 3000                                | 850  | 2600 | 650 | 2400 | 550 | 2100 | 450 |  |  |
|                  | 90   | 2600                                | 850  | 2300 | 700 | 2100 | 600 | 1900 | 500 |  |  |
| 90x90            | 10   | 4900                                | 850  | 4500 | 700 | 4200 | 600 | 3300 | 500 |  |  |
|                  | 20   | 4300                                | 900  | 3900 | 700 | 3600 | 600 | 3200 | 500 |  |  |
|                  | 40   | 3600                                | 900  | 3200 | 750 | 3000 | 600 | 2600 | 500 |  |  |
|                  | 60   | 3200                                | 950  | 2900 | 750 | 2600 | 650 | 2300 | 500 |  |  |
|                  | 90   | 2900                                | 950  | 2500 | 800 | 2300 | 650 | 2000 | 550 |  |  |
| 120x35           | 10   | 5200                                | 700  | 4300 | 550 | 3600 | 450 | 2800 | 400 |  |  |
|                  | 20   | 4400                                | 700  | 3900 | 550 | 3600 | 500 | 2900 | 400 |  |  |
|                  | 40   | 3600                                | 700  | 3200 | 600 | 2900 | 500 | 2600 | 400 |  |  |
|                  | 60   | 3200                                | 750  | 2800 | 600 | 2600 | 500 | 2200 | 400 |  |  |
|                  | 90   | 2800                                | 800  | 2500 | 600 | 2200 | 550 | 2000 | 400 |  |  |
| 120x45           | 10   | 5500                                | 800  | 4900 | 650 | 4100 | 550 | 3200 | 450 |  |  |
|                  | 20   | 4700                                | 800  | 4200 | 650 | 3900 | 550 | 3300 | 450 |  |  |
|                  | 40   | 3900                                | 800  | 3500 | 650 | 3200 | 550 | 2800 | 450 |  |  |
|                  | 60   | 3500                                | 850  | 3100 | 700 | 2800 | 600 | 2500 | 450 |  |  |
|                  | 90   | 3100                                | 900  | 2700 | 700 | 2500 | 600 | 2100 | 500 |  |  |
| 120x70           | 10   | 6000                                | 1000 | 5600 | 800 | 5200 | 700 | 4000 | 550 |  |  |
|                  | 20   | 5200                                | 1000 | 4800 | 800 | 4400 | 700 | 4000 | 550 |  |  |
|                  | 40   | 4400                                | 1050 | 4000 | 850 | 3700 | 700 | 3200 | 550 |  |  |
|                  | 60   | 4000                                | 1050 | 3500 | 850 | 3200 | 750 | 2800 | 600 |  |  |
|                  | 90   | 3500                                | 1100 | 3100 | 900 | 2800 | 750 | 2500 | 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<br>(mm) | Roof &<br>Ceiling<br>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   | 6200                                | 1100 | 5800 | 900  | 5500 | 750 | 4500 | 600 |  |  |
|                  | 20   | 5500                                | 1100 | 5100 | 900  | 4700 | 800 | 4300 | 600 |  |  |
|                  | 40   | 4700                                | 1150 | 4300 | 950  | 3900 | 800 | 3500 | 650 |  |  |
|                  | 60   | 4300                                | 1200 | 3800 | 950  | 3500 | 800 | 3100 | 650 |  |  |
|                  | 90   | 3800                                | 1250 | 3400 | 1000 | 3100 | 850 | 2700 | 700 |  |  |
| 140x35           | 10   | 6000                                | 800  | 5100 | 650  | 4300 | 550 | 3300 | 450 |  |  |
|                  | 20   | 5100                                | 800  | 4600 | 650  | 4200 | 550 | 3400 | 450 |  |  |
|                  | 40   | 4200                                | 800  | 3700 | 650  | 3400 | 550 | 3000 | 450 |  |  |
|                  | 60   | 3700                                | 850  | 3300 | 700  | 3000 | 600 | 2600 | 450 |  |  |
|                  | 90   | 3300                                | 900  | 2900 | 700  | 2600 | 600 | 2300 | 500 |  |  |
| 140x45           | 10   | 6300                                | 900  | 5800 | 700  | 4900 | 600 | 3800 | 500 |  |  |
|                  | 20   | 5400                                | 900  | 4900 | 750  | 4500 | 600 | 3900 | 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 | 700 | 2500 | 550 |  |  |
| 140x70           | 10   | 6800                                | 1150 | 6400 | 900  | 6000 | 800 | 4800 | 600 |  |  |
|                  | 20   | 6000                                | 1150 | 5500 | 900  | 5100 | 800 | 4600 | 650 |  |  |
|                  | 40   | 5100                                | 1150 | 4600 | 950  | 4300 | 800 | 3800 | 650 |  |  |
|                  | 60   | 4600                                | 1200 | 4100 | 950  | 3800 | 850 | 3300 | 650 |  |  |
|                  | 90   | 4100                                | 1250 | 3600 | 1000 | 3300 | 850 | 2900 | 700 |  |  |
| 140x90           | 10   | 7000                                | 1250 | 6600 | 1000 | 6300 | 850 | 5400 | 700 |  |  |
|                  | 20   | 6300                                | 1300 | 5800 | 1000 | 5500 | 900 | 4900 | 700 |  |  |
|                  | 40   | 5500                                | 1300 | 4900 | 1050 | 4600 | 900 | 4100 | 700 |  |  |
|                  | 60   | 4900                                | 1350 | 4400 | 1100 | 4100 | 950 | 3600 | 750 |  |  |
|                  | 90   | 4400                                | 1400 | 3900 | 1150 | 3600 | 950 | 3200 | 800 |  |  |
| 170x35           | 10   | 7100                                | 950  | 6300 | 750  | 5300 | 650 | 4100 | 500 |  |  |
|                  | 20   | 6100                                | 950  | 5500 | 750  | 5100 | 650 | 4200 | 500 |  |  |
|                  | 40   | 5100                                | 950  | 4500 | 750  | 4100 | 650 | 3700 | 500 |  |  |
|                  | 60   | 4500                                | 1000 | 4000 | 800  | 3700 | 650 | 3200 | 550 |  |  |
|                  | 90   | 4000                                | 1050 | 3500 | 850  | 3200 | 700 | 2800 | 550 |  |  |
| 170x45           | 10   | 7200                                | 1050 | 6900 | 850  | 6000 | 700 | 4700 | 550 |  |  |
|                  | 20   | 6500                                | 1050 | 5900 | 850  | 5500 | 750 | 4800 | 600 |  |  |
|                  | 40   | 5500                                | 1100 | 4900 | 900  | 4500 | 750 | 4000 | 600 |  |  |
|                  | 60   | 4900                                | 1150 | 4300 | 900  | 4000 | 750 | 3500 | 600 |  |  |
|                  | 90   | 4300                                | 1150 | 3800 | 950  | 3500 | 800 | 3100 | 650 |  |  |

## 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 continous 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<br>(mm) | Roof &<br>Ceiling<br>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                                | 1350 | 7200 | 1050 | 7100 | 900  | 5900 | 700  |  |  |
|                  | 20   | 7100                                | 1350 | 6600 | 1100 | 6200 | 900  | 5600 | 750  |  |  |
|                  | 40   | 6200                                | 1400 | 5600 | 1100 | 5100 | 950  | 4600 | 750  |  |  |
|                  | 60   | 5600                                | 1400 | 5000 | 1150 | 4600 | 950  | 4000 | 750  |  |  |
|                  | 90   | 5000                                | 1500 | 4400 | 1200 | 4000 | 1000 | 3600 | 800  |  |  |
| 170x90           | 10   | 7200                                | 1500 | 7200 | 1200 | 7200 | 1000 | 6700 | 800  |  |  |
|                  | 20   | 7200                                | 1500 | 6900 | 1200 | 6500 | 1050 | 5900 | 850  |  |  |
|                  | 40   | 6500                                | 1550 | 5900 | 1250 | 5500 | 1050 | 4900 | 850  |  |  |
|                  | 60   | 5900                                | 1600 | 5300 | 1250 | 4900 | 1100 | 4400 | 850  |  |  |
|                  | 90   | 5300                                | 1650 | 4800 | 1350 | 4400 | 1150 | 3900 | 900  |  |  |
| 190x35           | 10   | 7200                                | 1000 | 7100 | 800  | 6000 | 700  | 4700 | 550  |  |  |
|                  | 20   | 6800                                | 1050 | 6100 | 800  | 5700 | 700  | 4800 | 550  |  |  |
|                  | 40   | 5700                                | 1050 | 5000 | 850  | 4600 | 700  | 4100 | 550  |  |  |
|                  | 60   | 5000                                | 1100 | 4500 | 850  | 4100 | 750  | 3600 | 600  |  |  |
|                  | 90   | 4500                                | 1150 | 3900 | 900  | 3600 | 750  | 3100 | 600  |  |  |
| 190x45           | 10   | 7200                                | 1150 | 7200 | 950  | 6800 | 800  | 5300 | 650  |  |  |
|                  | 20   | 7200                                | 1150 | 6500 | 950  | 6100 | 800  | 5400 | 650  |  |  |
|                  | 40   | 6100                                | 1200 | 5400 | 950  | 5000 | 800  | 4400 | 650  |  |  |
|                  | 60   | 5400                                | 1250 | 4800 | 1000 | 4400 | 850  | 3900 | 650  |  |  |
|                  | 90   | 4800                                | 1300 | 4300 | 1050 | 3900 | 900  | 3400 | 700  |  |  |
| 190x70           | 10   | 7200                                | 1450 | 7200 | 1150 | 7200 | 1000 | 6700 | 800  |  |  |
|                  | 20   | 7200                                | 1500 | 7200 | 1200 | 6800 | 1000 | 6200 | 800  |  |  |
|                  | 40   | 6800                                | 1500 | 6200 | 1200 | 5700 | 1050 | 5100 | 850  |  |  |
|                  | 60   | 6200                                | 1550 | 5500 | 1250 | 5100 | 1050 | 4500 | 850  |  |  |
|                  | 90   | 5500                                | 1650 | 4900 | 1300 | 4500 | 1100 | 4000 | 900  |  |  |
| 190x90           | 10   | 7200                                | 1650 | 7200 | 1300 | 7200 | 1100 | 7200 | 900  |  |  |
|                  | 20   | 7200                                | 1650 | 7200 | 1350 | 7200 | 1150 | 6600 | 900  |  |  |
|                  | 40   | 7200                                | 1700 | 6600 | 1350 | 6100 | 1150 | 5500 | 950  |  |  |
|                  | 60   | 6600                                | 1750 | 5900 | 1400 | 5500 | 1200 | 4900 | 950  |  |  |
|                  | 90   | 5900                                | 1850 | 5300 | 1450 | 4900 | 1250 | 4300 | 1000 |  |  |
| 240x35           | 10   | 7200                                | 1250 | 7200 | 1000 | 7200 | 850  | 6000 | 650  |  |  |
|                  | 20   | 7200                                | 1250 | 7200 | 1000 | 7100 | 850  | 6200 | 650  |  |  |
|                  | 40   | 7100                                | 1300 | 6300 | 1000 | 5800 | 850  | 5200 | 700  |  |  |
|                  | 60   | 6300                                | 1300 | 5600 | 1050 | 5200 | 900  | 4500 | 700  |  |  |
|                  | 90   | 5600                                | 1350 | 5000 | 1100 | 4500 | 950  | 4000 | 750  |  |  |

## 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<br>(mm) | Roof &<br>Ceiling<br>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                                | 1400 | 7200 | 1100 | 7200 | 950  | 6900              | 750  |
|                  | 20   | 7200                                | 1450 | 7200 | 1150 | 7200 | 950  | 6800              | 750  |
|                  | 40   | 7200                                | 1450 | 6800 | 1150 | 6300 | 1000 | 5600              | 800  |
|                  | 60   | 6800                                | 1500 | 6100 | 1200 | 5600 | 1000 | 4900              | 800  |
|                  | 90   | 6100                                | 1550 | 5400 | 1250 | 4900 | 1050 | 4300              | 850  |
| 240x70           | 10   | 7200                                | 1800 | 7200 | 1400 | 7200 | 1200 | 7200              | 950  |
|                  | 20   | 7200                                | 1800 | 7200 | 1450 | 7200 | 1200 | 7200              | 1000 |
|                  | 40   | 7200                                | 1850 | 7200 | 1500 | 7100 | 1250 | 6400              | 1000 |
|                  | 60   | 7200                                | 1900 | 6900 | 1500 | 6400 | 1300 | 5700              | 1000 |
|                  | 90   | 6900                                | 2000 | 6200 | 1600 | 5700 | 1350 | 5000              | 1050 |
| 240x90           | 10   | 7200                                | 2000 | 7200 | 1600 | 7200 | 1350 | 7200              | 1100 |
|                  | 20   | 7200                                | 2050 | 7200 | 1600 | 7200 | 1400 | 7200              | 1100 |
|                  | 40   | 7200                                | 2100 | 7200 | 1650 | 7200 | 1400 | 6800              | 1100 |
|                  | 60   | 7200                                | 2150 | 7200 | 1700 | 6800 | 1450 | 6100              | 1150 |
|                  | 90   | 7200                                | 2250 | 6600 | 1800 | 6100 | 1500 | 5400              | 1200 |
| 290x45           | 10   | 7200                                | 1650 | 7200 | 1300 | 7200 | 1100 | 7200              | 900  |
|                  | 20   | 7200                                | 1650 | 7200 | 1350 | 7200 | 1100 | 7200              | 900  |
|                  | 40   | 7200                                | 1700 | 7200 | 1350 | 7200 | 1150 | 6700              | 900  |
|                  | 60   | 7200                                | 1750 | 7200 | 1400 | 6700 | 1200 | 5900              | 950  |
|                  | 90   | 7200                                | 1850 | 6500 | 1450 | 5900 | 1250 | 5200 <sub>5</sub> | 1000 |
| 290x70           | 10   | 7200                                | 2100 | 7200 | 1650 | 7200 | 1400 | 7200              | 1100 |
|                  | 20   | 7200                                | 2150 | 7200 | 1700 | 7200 | 1450 | 7200              | 1150 |
|                  | 40   | 7200                                | 2200 | 7200 | 1750 | 7200 | 1450 | 7200              | 1150 |
|                  | 60   | 7200                                | 2250 | 7200 | 1750 | 7200 | 1500 | 6800              | 1200 |
|                  | 90   | 7200                                | 2350 | 7200 | 1850 | 6800 | 1550 | 6000              | 1250 |
| 290x90           | 10   | 7200                                | 2400 | 7200 | 1900 | 7200 | 1600 | 7200              | 1250 |
|                  | 20   | 7200                                | 2400 | 7200 | 1900 | 7200 | 1600 | 7200              | 1300 |
|                  | 40   | 7200                                | 2450 | 7200 | 1950 | 7200 | 1650 | 7200              | 1300 |
|                  | 60   | 7200                                | 2550 | 7200 | 2000 | 7200 | 1700 | 7200              | 1350 |
|                  | 90   | 7200                                | 2650 | 7200 | 2100 | 7200 | 1750 | 6500              | 1400 |

## 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<br>(mm) | Roof Mass<br>(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                                | 4200                              | 1400 | 3300 | 1150 | 2800 | 950  | 2400 | 850  | 2100 | 750  |
|                   | 20                                | 3600                              | 1400 | 2800 | 1200 | 2400 | 950  | 2100 | 850  | 1900 | 750  |
|                   | 40                                | 3000                              | 1400 | 2400 | 1200 | 2000 | 1000 | 1800 | 850  | 1600 | 800  |
|                   | 60                                | 2700                              | 1300 | 2100 | 1000 | 1800 | 900  | 1600 | 800  | 1500 | 700  |
|                   | 90                                | 2400                              | 1200 | 1900 | 900  | 1600 | 800  | 1400 | 700  | 1300 | 600  |
| 170x70            | 10                                | 4700                              | 1600 | 3800 | 1450 | 3200 | 1200 | 2800 | 1000 | 2500 | 900  |
|                   | 20                                | 4100                              | 1600 | 3300 | 1450 | 2800 | 1200 | 2500 | 1050 | 2200 | 950  |
|                   | 40                                | 3500                              | 1600 | 2700 | 1300 | 2400 | 1200 | 2100 | 1050 | 1900 | 950  |
|                   | 60                                | 3100                              | 1500 | 2400 | 1200 | 2100 | 1000 | 1900 | 900  | 1700 | 800  |
|                   | 90                                | 2700                              | 1300 | 2200 | 1100 | 1900 | 900  | 1700 | 800  | 1500 | 700  |
| 170x90            | 10                                | 5000                              | 1750 | 4000 | 1600 | 3400 | 1300 | 3000 | 1150 | 2700 | 1000 |
|                   | 20                                | 4400                              | 1750 | 3500 | 1600 | 3000 | 1300 | 2700 | 1150 | 2400 | 1050 |
|                   | 40                                | 3700                              | 1750 | 3000 | 1500 | 2600 | 1300 | 2300 | 1100 | 2100 | 1050 |
|                   | 60                                | 3300                              | 1600 | 2700 | 1300 | 2300 | 1100 | 2100 | 1000 | 1900 | 900  |
|                   | 90                                | 3000                              | 1500 | 2400 | 1200 | 2000 | 1000 | 1800 | 900  | 1700 | 800  |
| 190x45            | 10                                | 4700                              | 1550 | 3700 | 1300 | 3100 | 1050 | 2700 | 950  | 2400 | 850  |
|                   | 20                                | 4000                              | 1550 | 3200 | 1300 | 2700 | 1100 | 2400 | 950  | 2100 | 850  |
|                   | 40                                | 3400                              | 1550 | 2600 | 1300 | 2300 | 1100 | 2000 | 950  | 1800 | 850  |
|                   | 60                                | 3000                              | 1500 | 2400 | 1200 | 2000 | 1000 | 1800 | 900  | 1700 | 800  |
|                   | 90                                | 2600                              | 1300 | 2100 | 1000 | 1800 | 900  | 1600 | 800  | 1500 | 700  |
| 190x70            | 10                                | 5200                              | 1800 | 4200 | 1600 | 3500 | 1300 | 3100 | 1150 | 2800 | 1050 |
|                   | 20                                | 4600                              | 1800 | 3600 | 1600 | 3100 | 1350 | 2800 | 1150 | 2500 | 1050 |
|                   | 40                                | 3900                              | 1800 | 3100 | 1500 | 2600 | 1300 | 2400 | 1200 | 2100 | 1050 |
|                   | 60                                | 3400                              | 1700 | 2700 | 1300 | 2400 | 1200 | 2100 | 1000 | 1900 | 900  |
|                   | 90                                | 3100                              | 1500 | 2400 | 1200 | 2100 | 1000 | 1900 | 900  | 1700 | 800  |
| 190x90            | 10                                | 5500                              | 1950 | 4500 | 1800 | 3800 | 1450 | 3400 | 1250 | 3000 | 1150 |
|                   | 20                                | 4900                              | 1950 | 3900 | 1800 | 3400 | 1500 | 3000 | 1300 | 2700 | 1150 |
|                   | 40                                | 4200                              | 1950 | 3300 | 1600 | 2900 | 1400 | 2600 | 1300 | 2300 | 1100 |
|                   | 60                                | 3700                              | 1800 | 3000 | 1500 | 2600 | 1300 | 2300 | 1100 | 2100 | 1000 |
|                   | 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<br>(mm) | Roof Mass<br>(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                                | 5800                              | 1950 | 4600 | 1650 | 3900 | 1350 | 3400 | 1200 | 3000               | 1050 |
|                  | 20                                | 5100                              | 1950 | 4000 | 1650 | 3400 | 1350 | 3000 | 1200 | 2700               | 1050 |
|                  | 40                                | 4200                              | 1950 | 3400 | 1700 | 2900 | 1400 | 2600 | 1200 | 2300               | 1100 |
|                  | 60                                | 3800                              | 1900 | 3000 | 1500 | 2600 | 1300 | 2300 | 1100 | 2100               | 1000 |
|                  | 90                                | 3300                              | 1600 | 2600 | 1300 | 2300 | 1100 | 2100 | 1000 | 1900               | 900  |
| 240x70           | 10                                | 6400                              | 2250 | 5200 | 2050 | 4500 | 1650 | 3900 | 1450 | 3500               | 1300 |
|                  | 20                                | 5700                              | 2250 | 4600 | 2050 | 3900 | 1700 | 3500 | 1450 | 3200               | 1300 |
|                  | 40                                | 4800                              | 2250 | 3900 | 1900 | 3300 | 1600 | 3000 | 1500 | 2700               | 1350 |
|                  | 60                                | 4300                              | 2100 | 3500 | 1700 | 3000 | 1500 | 2700 | 1300 | 2500               | 1200 |
|                  | 90                                | 3900                              | 1900 | 3100 | 1500 | 2700 | 1300 | 2400 | 1200 | 2200               | 1100 |
| 240x90           | 10                                | 6800                              | 2450 | 5600 | 2250 | 4800 | 1850 | 4200 | 1600 | 3800               | 1450 |
|                  | 20                                | 6000                              | 2450 | 4900 | 2300 | 4200 | 1850 | 3800 | 1600 | 3400               | 1450 |
|                  | 40                                | 5200                              | 2450 | 4200 | 2100 | 3600 | 1800 | 3200 | 1600 | 3000               | 1500 |
|                  | 60                                | 4700                              | 2350 | 3700 | 1800 | 3300 | 1600 | 2900 | 1400 | 2700               | 1300 |
|                  | 90                                | 4200                              | 2100 | 3300 | 1600 | 2900 | 1400 | 2600 | 1300 | 2400               | 1200 |
| 290x45           | 10                                | 6900                              | 2350 | 5500 | 2000 | 4700 | 1650 | 4100 | 1400 | 3700 <sub>5</sub>  | 1300 |
|                  | 20                                | 6000                              | 2350 | 4800 | 2000 | 4100 | 1650 | 3600 | 1450 | 3300               | 1300 |
|                  | 40                                | 5100                              | 2350 | 4000 | 2000 | 3500 | 1700 | 3100 | 1450 | 2800 <sub>5</sub>  | 1300 |
|                  | 60                                | 4600                              | 2300 | 3600 | 1800 | 3100 | 1500 | 2800 | 1400 | 2600 <sub>5</sub>  | 1300 |
|                  | 90                                | 4000                              | 2000 | 3200 | 1600 | 2800 | 1400 | 2500 | 1200 | 2300 <sub>10</sub> | 1100 |
| 290x70           | 10                                | 7200                              | 2750 | 6200 | 2450 | 5400 | 2000 | 4700 | 1750 | 4200               | 1550 |
|                  | 20                                | 6800                              | 2750 | 5500 | 2500 | 4700 | 2050 | 4200 | 1750 | 3800               | 1600 |
|                  | 40                                | 5800                              | 2750 | 4700 | 2300 | 4000 | 2000 | 3600 | 1800 | 3300               | 1650 |
|                  | 60                                | 5200                              | 2550 | 4200 | 2100 | 3600 | 1800 | 3300 | 1600 | 3000               | 1500 |
|                  | 90                                | 4700                              | 2300 | 3700 | 1800 | 3200 | 1600 | 2900 | 1400 | 2700               | 1300 |
| 290x90           | 10                                | 7200                              | 3000 | 6600 | 2750 | 5700 | 2250 | 5100 | 1950 | 4600               | 1750 |
|                  | 20                                | 7100                              | 3000 | 5900 | 2700 | 5100 | 2250 | 4600 | 1950 | 4100               | 1750 |
|                  | 40                                | 6200                              | 2900 | 5000 | 2450 | 4400 | 2200 | 3900 | 1900 | 3600               | 1800 |
|                  | 60                                | 5600                              | 2700 | 4500 | 2200 | 3900 | 1900 | 3500 | 1700 | 3200               | 1600 |
|                  | 90                                | 5000                              | 2500 | 4000 | 2000 | 3500 | 1700 | 3200 | 1600 | 2900               | 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 DxB<br>(mm) | Roof Mass<br>(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                                | 5300                              | 1400 | 3600 | 1150 | 2900 | 950  | 2600 | 850  | 2300               | 750  |
|                  | 20                                | 5000                              | 1400 | 3700 | 1200 | 3000 | 950  | 2600 | 850  | 2400               | 750  |
|                  | 40                                | 4100                              | 1400 | 3200 | 1200 | 2800 | 1000 | 2500 | 850  | 2200               | 800  |
|                  | 60                                | 3600                              | 1400 | 2900 | 1250 | 2500 | 1000 | 2200 | 900  | 2000               | 800  |
|                  | 90                                | 3200                              | 1400 | 2500 | 1150 | 2200 | 1050 | 2000 | 900  | 1800               | 850  |
| 170x70           | 10                                | 6400                              | 1600 | 4400 | 1450 | 3600 | 1200 | 3200 | 1000 | 2800               | 900  |
|                  | 20                                | 5600                              | 1600 | 4500 | 1450 | 3700 | 1200 | 3200 | 1050 | 2900               | 950  |
|                  | 40                                | 4700                              | 1600 | 3700 | 1500 | 3200 | 1200 | 2900 | 1050 | 2600               | 950  |
|                  | 60                                | 4200                              | 1600 | 3300 | 1400 | 2900 | 1250 | 2600 | 1100 | 2400               | 1000 |
|                  | 90                                | 3700                              | 1600 | 2900 | 1300 | 2600 | 1200 | 2300 | 1100 | 2100               | 1000 |
| 170x90           | 10                                | 6800                              | 1750 | 4900 | 1600 | 4000 | 1300 | 3500 | 1150 | 3200               | 1000 |
|                  | 20                                | 6000                              | 1750 | 4800 | 1600 | 4100 | 1300 | 3600 | 1150 | 3300               | 1050 |
|                  | 40                                | 5100                              | 1750 | 4100 | 1600 | 3500 | 1350 | 3100 | 1200 | 2800               | 1050 |
|                  | 60                                | 4500                              | 1750 | 3600 | 1500 | 3100 | 1350 | 2800 | 1200 | 2600               | 1100 |
|                  | 90                                | 4000                              | 1700 | 3200 | 1400 | 2800 | 1250 | 2500 | 1150 | 2300               | 1100 |
| 190x45           | 10                                | 5900                              | 1550 | 4000 | 1300 | 3300 | 1050 | 2900 | 950  | 2600               | 850  |
|                  | 20                                | 5500                              | 1550 | 4100 | 1300 | 3400 | 1100 | 2900 | 950  | 2600               | 850  |
|                  | 40                                | 4600                              | 1550 | 3600 | 1350 | 3100 | 1100 | 2800 | 950  | 2500               | 850  |
|                  | 60                                | 4100                              | 1550 | 3200 | 1350 | 2800 | 1150 | 2500 | 1000 | 2300 <sub>5</sub>  | 900  |
|                  | 90                                | 3600                              | 1550 | 2800 | 1300 | 2500 | 1150 | 2200 | 1050 | 2000 <sub>10</sub> | 900  |
| 190x70           | 10                                | 7100                              | 1800 | 4900 | 1600 | 4100 | 1300 | 3500 | 1150 | 3200               | 1050 |
|                  | 20                                | 6200                              | 1800 | 5000 | 1600 | 4200 | 1350 | 3600 | 1150 | 3300               | 1050 |
|                  | 40                                | 5300                              | 1800 | 4200 | 1650 | 3600 | 1350 | 3200 | 1200 | 2900               | 1050 |
|                  | 60                                | 4700                              | 1800 | 3700 | 1550 | 3200 | 1400 | 2900 | 1200 | 2600               | 1100 |
|                  | 90                                | 4200                              | 1700 | 3300 | 1450 | 2900 | 1300 | 2600 | 1200 | 2400               | 1100 |
| 190x90           | 10                                | 7200                              | 1950 | 5500 | 1800 | 4500 | 1450 | 3900 | 1250 | 3500               | 1150 |
|                  | 20                                | 6600                              | 1950 | 5400 | 1800 | 4600 | 1500 | 4000 | 1300 | 3600               | 1150 |
|                  | 40                                | 5700                              | 1950 | 4500 | 1750 | 3900 | 1500 | 3500 | 1300 | 3200               | 1200 |
|                  | 60                                | 5100                              | 1950 | 4000 | 1650 | 3500 | 1450 | 3100 | 1350 | 2900               | 1200 |
|                  | 90                                | 4500                              | 1850 | 3600 | 1550 | 3100 | 1350 | 2800 | 1250 | 2600               | 1200 |

## 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 <sub>B</sub><br>(mm) | Roof Mass<br>(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                                | 7200                              | 1950 | 5100 | 1650 | 4200               | 1350 | 3600               | 1200 | 3300               | 1050 |
|                              | 20                                | 6900                              | 1950 | 5200 | 1650 | 4300               | 1350 | 3700               | 1200 | 3400 <sub>10</sub> | 1050 |
|                              | 40                                | 5800                              | 1950 | 4600 | 1700 | 3900               | 1400 | 3500 <sub>5</sub>  | 1200 | 3200 <sub>20</sub> | 1100 |
|                              | 60                                | 5100                              | 1950 | 4100 | 1650 | 3500               | 1450 | 3100 <sub>10</sub> | 1250 | 2900 <sub>25</sub> | 1100 |
|                              | 90                                | 4600                              | 1850 | 3600 | 1550 | 3100               | 1350 | 2800 <sub>20</sub> | 1250 | 2600 <sub>35</sub> | 1150 |
| 240x70                       | 10                                | 7200                              | 2250 | 6300 | 2050 | 5100               | 1650 | 4500               | 1450 | 4000               | 1300 |
|                              | 20                                | 7200                              | 2250 | 6200 | 2050 | 5300               | 1700 | 4600               | 1450 | 4200               | 1300 |
|                              | 40                                | 6600                              | 2250 | 5300 | 2000 | 4500               | 1700 | 4100               | 1500 | 3700               | 1350 |
|                              | 60                                | 5900                              | 2200 | 4700 | 1850 | 4100               | 1650 | 3700               | 1550 | 3400               | 1400 |
|                              | 90                                | 5300                              | 2050 | 4200 | 1750 | 3600               | 1550 | 3300               | 1450 | 3000 <sub>10</sub> | 1350 |
| 240x90                       | 10                                | 7200                              | 2450 | 7100 | 2250 | 5700               | 1850 | 5000               | 1600 | 4500               | 1450 |
|                              | 20                                | 7200                              | 2450 | 6700 | 2300 | 5800               | 1850 | 5100               | 1600 | 4600               | 1450 |
|                              | 40                                | 7000                              | 2450 | 5700 | 2100 | 4900               | 1900 | 4400               | 1650 | 4000               | 1500 |
|                              | 60                                | 6400                              | 2350 | 5100 | 2000 | 4400               | 1750 | 4000               | 1650 | 3700               | 1550 |
|                              | 90                                | 5700                              | 2200 | 4500 | 1850 | 3900               | 1650 | 3600               | 1500 | 3300               | 1450 |
| 290x45                       | 10                                | 7200                              | 2350 | 6200 | 2000 | 5100               | 1650 | 4400               | 1400 | 4000 <sub>15</sub> | 1300 |
|                              | 20                                | 7200                              | 2350 | 6400 | 2000 | 5200               | 1650 | 4500 <sub>15</sub> | 1450 | 4100 <sub>30</sub> | 1300 |
|                              | 40                                | 6900                              | 2350 | 5500 | 2050 | 4700 <sub>5</sub>  | 1700 | 4200 <sub>25</sub> | 1450 | 3800 <sub>45</sub> | 1300 |
|                              | 60                                | 6200                              | 2300 | 4900 | 1900 | 4300 <sub>10</sub> | 1700 | 3800 <sub>30</sub> | 1500 | 3500 <sub>50</sub> | 1350 |
|                              | 90                                | 5500                              | 2150 | 4400 | 1800 | 3800 <sub>20</sub> | 1600 | 3400 <sub>40</sub> | 1450 | 3100 <sub>65</sub> | 1400 |
| 290x70                       | 10                                | 7200                              | 2750 | 7200 | 2450 | 6200               | 2000 | 5400               | 1750 | 4900               | 1550 |
|                              | 20                                | 7200                              | 2750 | 7200 | 2500 | 6400               | 2050 | 5600               | 1750 | 5000 <sub>10</sub> | 1600 |
|                              | 40                                | 7200                              | 2750 | 6300 | 2300 | 5500               | 2050 | 4900               | 1800 | 4500 <sub>15</sub> | 1650 |
|                              | 60                                | 7100                              | 2550 | 5700 | 2150 | 4900               | 1950 | 4400 <sub>5</sub>  | 1800 | 4100 <sub>20</sub> | 1650 |
|                              | 90                                | 6300                              | 2400 | 5100 | 2000 | 4400               | 1800 | 4000 <sub>10</sub> | 1650 | 3600 <sub>30</sub> | 1550 |
| 290x90                       | 10                                | 7200                              | 3000 | 7200 | 2750 | 6900               | 2250 | 6000               | 1950 | 5400               | 1750 |
|                              | 20                                | 7200                              | 3000 | 7200 | 2700 | 6900               | 2250 | 6200               | 1950 | 5600               | 1750 |
|                              | 40                                | 7200                              | 2900 | 6800 | 2450 | 5900               | 2200 | 5300               | 2000 | 4900 <sub>5</sub>  | 1800 |
|                              | 60                                | 7200                              | 2700 | 6100 | 2300 | 5300               | 2050 | 4800               | 1900 | 4400 <sub>10</sub> | 1800 |
|                              | 90                                | 6800                              | 2550 | 5500 | 2150 | 4800               | 1900 | 4300               | 1750 | 4000 <sub>15</sub> | 1650 |

## 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.