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# E-BEAM SPAN TABLES

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ENGINEERED TO LOAD  
ENGINEERED TO LENGTH  
ENGINEERED TO LAST

END OF STORY

e-beam is the premier laminated veneer lumber (LVL) product available in Australia. LVL has many advantages over traditional building products, including its uniformity of engineering properties, its high strength to weight ratio and its availability in longer lengths.

Available in a range of thicknesses including 35mm, 45mm, 63mm and 75mm with depths from 90mm to 450mm, e-beam is manufactured from plantation timbers, making it an environmentally sustainable resource.

**About e-beam**

e-beam conforms with the requirements of AS/NZS4357 - Structural laminated veneer lumber. It is manufactured by laminating plantation timber veneers, using phenolic adhesive, in a continuous assembly in which the grain direction of all veneers runs longitudinally. It is pressed as a 1.2m nominal width continuous billet in various standard thicknesses, cut to standard widths and any specified length for use as structural beams and other framing components.

**Use of e-beam Data**

The Tables and other technical data provided in this publication are only applicable to e-beam LVL manufactured by Wesbeam. This data should not be used for lookalike or substitute products. Use of the e-beam data for look-alike or substitute products can result in unsafe or unsatisfactory performance.

**Basis for Design**

The design criteria used to develop the Span Tables contained in this brochure are based on the assumptions listed in AS1720.3:2016 - Timber structures, Part 3: Design criteria for timber-framed residential buildings.

**Design Loads**

The design loads used to determine member sizes listed in the Span Tables are as per AS1720.3:2016 - Timber structures, Part 3: Design criteria for timber-framed residential buildings. The design loads include:-

- Permanent loads
- Imposed loads
- Wind loads
- Snow loads
- Earthquake loads, and
- Load Combinations of the above loads

Design load limitations for each of the above load or load combination cases are also as per AS1720.3:2016 - Timber structures, Part 3: Design criteria for timber-framed residential buildings.

**Design Capacity Factor ( $\phi$ )**

The capacity factor ( $\phi$ ) used to calculate the design capacity of a structural framing member listed in the Span Tables is taken from Table 2.5 in AS1720.1:2010 - Timber structures, Part 1: Design methods, where for all LVL structural elements used in residential houses  $\phi = 0.95$ .

**Terminology, Definitions and Notations Used in these Tables**

The terminology, definitions and notations used in this brochure are similar to and consistent with those used and listed in AS1720.3:2016 - Timber structures, Part 3: Design criteria for timber-framed residential buildings, as well as AS1684.2:2010 - Residential timber-framed construction, Part 2: Non-cyclonic areas.

**Using Multiple Sections**

The use of multiple sections where called for in the Span Tables is permitted using vertically nail laminated LVL. Multiple LVL members are to be fixed in accordance with Cl 2.3 of AS1684.2:2010 - Residential timber-framed construction, Part 2: Non-cyclonic areas.

**Characteristic Design Values**

The characteristic Design Values for Wesbeam e-beam LVL are available on request from Wesbeam's Technical Department. This service is available for professional design practitioners.

The spans listed in this brochure for e-beam LVL manufactured by Wesbeam apply only when the moisture content of the LVL is below 15% in service and are for "on edge" orientation of the LVL section.



## RAFTERS

## WIND CLASSIFICATION N1, N2, N3

| e-beam<br>Section<br>D X B<br>(mm) | Roof<br>Mass<br>kg/m <sup>2</sup> | Single Span                                |     |      |     |      |     |      |     | Continuous Span |     |      |     |      |     |      |     |
|------------------------------------|-----------------------------------|--|-----|------|-----|------|-----|------|-----|-----------------|-----|------|-----|------|-----|------|-----|
|                                    |                                   | Maximum Rafter Spacing (mm)                |     |      |     |      |     |      |     |                 |     |      |     |      |     |      |     |
|                                    |                                   | 450  |     | 600  |     | 900  |     | 1200 |     | 450             |     | 600  |     | 900  |     | 1200 |     |
|                                    |                                   | Maximum Rafter Span and Overhang 'O/H' (m) |     |      |     |      |     |      |     |                 |     |      |     |      |     |      |     |
|                                    |                                   | SPAN                                       | O/H | SPAN | O/H | SPAN | O/H | SPAN | O/H | SPAN            | O/H | SPAN | O/H | SPAN | O/H | SPAN | O/H |
| 90 x 35                            | 10                                | 2.9  | 0.7 | 2.7  | 0.5 | 2.5  | 0.6 | 2.3  | 0.4 | 3.7             | 0.6 | 3.3  | 0.5 | 3.0  | 0.6 | 2.8  | 0.4 |
|                                    | 20                                | 2.9  | 0.7 | 2.7  | 0.6 | 2.5  | 0.5 | 2.5  | 0.6 | 3.7             | 0.6 | 3.3  | 0.5 | 3.0  | 0.6 | 2.8  | 0.5 |
|                                    | 30                                | 3.0  | 0.7 | 2.6  | 0.6 | 2.3  | 0.7 | 2.2  | 0.5 | 3.7             | 0.6 | 3.3  | 0.5 | 3.0  | 0.6 | 2.8  | 0.5 |
|                                    | 40                                | 2.6  | 0.8 | 2.5  | 0.6 | 2.2  | 0.7 | 2.1  | 0.5 | 3.5             | 0.7 | 3.4  | 0.5 | 3.0  | 0.6 | 2.6  | 0.5 |
|                                    | 60                                | 2.3  | 0.8 | 2.2  | 0.7 | 2.0  | 0.6 | 1.8  | 0.5 | 3.1             | 0.7 | 3.0  | 0.6 | 2.6  | 0.7 | 2.4  | 0.5 |
|                                    | 75                                | 2.3  | 0.8 | 2.1  | 0.7 | 1.8  | 0.6 | 1.7  | 0.5 | 2.9             | 0.7 | 2.8  | 0.6 | 2.5  | 0.7 | 2.2  | 0.5 |
| 90 x 45                            | 10                                | 2.2  | 0.8 | 2.0  | 0.7 | 1.7  | 0.8 | 1.6  | 0.6 | 2.9             | 0.7 | 2.6  | 0.6 | 2.3  | 0.7 | 2.1  | 0.6 |
|                                    | 20                                | 3.3  | 0.7 | 3.1  | 0.6 | 2.8  | 0.7 | 2.7  | 0.5 | 4.2             | 0.6 | 3.9  | 0.5 | 3.4  | 0.6 | 3.2  | 0.5 |
|                                    | 30                                | 3.3  | 0.8 | 3.1  | 0.6 | 2.8  | 0.7 | 2.7  | 0.5 | 4.2             | 0.6 | 3.9  | 0.5 | 3.4  | 0.6 | 3.2  | 0.5 |
|                                    | 40                                | 3.2  | 0.8 | 3.0  | 0.6 | 2.6  | 0.7 | 2.4  | 0.5 | 4.3             | 0.7 | 3.8  | 0.5 | 3.5  | 0.6 | 3.2  | 0.5 |
|                                    | 60                                | 3.0  | 0.8 | 2.7  | 0.7 | 2.4  | 0.7 | 2.2  | 0.6 | 3.8             | 0.7 | 3.5  | 0.6 | 3.2  | 0.7 | 2.8  | 0.5 |
|                                    | 75                                | 2.6  | 0.9 | 2.4  | 0.7 | 2.1  | 0.8 | 1.9  | 0.6 | 3.5             | 0.8 | 3.2  | 0.6 | 2.8  | 0.7 | 2.6  | 0.6 |
| 130 x 35                           | 10                                | 2.3  | 0.9 | 2.1  | 0.8 | 1.9  | 0.7 | 1.7  | 0.6 | 3.1             | 0.8 | 2.8  | 0.7 | 2.5  | 0.6 | 2.3  | 0.7 |
|                                    | 20                                | 5.3  | 0.9 | 4.8  | 0.7 | 4.2  | 0.8 | 3.8  | 0.6 | 6.7             | 0.8 | 5.9  | 0.6 | 4.9  | 0.8 | 4.3  | 0.6 |
|                                    | 30                                | 4.5  | 1.0 | 4.2  | 0.8 | 3.8  | 0.7 | 3.5  | 0.6 | 6.1             | 0.8 | 5.6  | 0.6 | 5.0  | 0.8 | 4.4  | 0.6 |
|                                    | 40                                | 4.1  | 1.0 | 3.8  | 0.8 | 3.3  | 0.7 | 3.1  | 0.6 | 5.4             | 0.9 | 5.0  | 0.7 | 4.5  | 0.6 | 4.1  | 0.8 |
|                                    | 60                                | 3.8  | 1.0 | 3.5  | 0.8 | 3.1  | 0.9 | 2.8  | 0.6 | 5.0             | 0.9 | 4.6  | 0.7 | 4.1  | 0.8 | 3.7  | 0.6 |
|                                    | 75                                | 3.3  | 1.1 | 3.1  | 0.9 | 2.7  | 0.8 | 2.5  | 0.7 | 4.5             | 1.0 | 4.1  | 0.8 | 3.6  | 0.7 | 3.3  | 0.9 |
| 130 x 45                           | 10                                | 3.1  | 1.1 | 2.9  | 0.9 | 2.5  | 0.8 | 2.3  | 0.7 | 4.2             | 1.0 | 3.8  | 0.8 | 3.4  | 0.9 | 3.1  | 0.7 |
|                                    | 20                                | 2.9  | 1.2 | 2.7  | 1.0 | 2.4  | 0.9 | 2.2  | 0.7 | 3.9             | 1.0 | 3.6  | 0.8 | 3.2  | 0.9 | 2.9  | 0.7 |
|                                    | 30                                | 5.5  | 1.0 | 5.2  | 0.8 | 4.5  | 0.7 | 4.1  | 0.9 | 7.1             | 0.8 | 6.5  | 0.6 | 5.7  | 0.8 | 4.9  | 0.7 |
|                                    | 40                                | 4.8  | 1.0 | 4.4  | 0.8 | 4.0  | 0.9 | 3.7  | 0.7 | 6.4             | 0.9 | 6.0  | 0.7 | 5.4  | 0.8 | 4.9  | 0.7 |
|                                    | 60                                | 4.3  | 1.1 | 4.0  | 0.9 | 3.6  | 0.8 | 3.3  | 0.7 | 5.8             | 0.9 | 5.4  | 0.7 | 4.8  | 0.9 | 4.4  | 0.7 |
|                                    | 75                                | 4.0  | 1.1 | 3.7  | 0.9 | 3.3  | 1.0 | 3.0  | 0.7 | 5.4             | 1.0 | 4.9  | 0.8 | 4.4  | 0.9 | 4.0  | 0.7 |
| 150 x 35                           | 10                                | 3.6  | 1.2 | 3.3  | 1.0 | 2.9  | 0.9 | 2.6  | 0.8 | 4.8             | 1.0 | 4.4  | 0.8 | 3.9  | 0.9 | 3.5  | 0.8 |
|                                    | 20                                | 3.3  | 1.2 | 3.1  | 1.0 | 2.7  | 1.1 | 2.5  | 0.8 | 4.5             | 1.1 | 4.1  | 0.9 | 3.6  | 0.8 | 3.3  | 1.0 |
|                                    | 30                                | 3.2  | 1.2 | 2.9  | 1.0 | 2.5  | 1.1 | 2.3  | 0.8 | 4.2             | 1.1 | 3.9  | 0.9 | 3.4  | 1.0 | 3.1  | 0.8 |
|                                    | 40                                | 6.0  | 0.8 | 5.5  | 1.0 | 4.8  | 0.8 | 4.4  | 0.7 | 7.4             | 0.9 | 6.5  | 0.7 | 5.5  | 0.9 | 4.9  | 0.7 |
|                                    | 60                                | 5.1  | 1.1 | 4.8  | 0.9 | 4.3  | 0.8 | 4.0  | 0.7 | 6.7             | 0.9 | 6.3  | 0.7 | 5.7  | 0.9 | 5.0  | 0.7 |
|                                    | 75                                | 4.6  | 1.2 | 4.3  | 0.9 | 3.8  | 0.8 | 3.5  | 0.7 | 6.2             | 1.0 | 5.8  | 0.8 | 5.1  | 0.7 | 4.7  | 0.9 |
| 150 x 45                           | 10                                | 4.3  | 1.2 | 4.0  | 1.0 | 3.5  | 0.9 | 3.2  | 0.7 | 5.8             | 1.0 | 5.3  | 0.8 | 4.7  | 1.0 | 4.3  | 0.7 |
|                                    | 20                                | 3.8  | 1.3 | 3.5  | 1.0 | 3.1  | 0.9 | 2.8  | 0.8 | 5.1             | 1.1 | 4.7  | 0.9 | 4.2  | 0.8 | 3.8  | 1.0 |
|                                    | 30                                | 3.6  | 1.3 | 3.3  | 1.1 | 2.9  | 1.0 | 2.6  | 0.8 | 4.8             | 1.1 | 4.4  | 0.9 | 3.9  | 1.0 | 3.5  | 0.8 |
|                                    | 40                                | 3.4  | 1.3 | 3.1  | 1.1 | 2.7  | 1.0 | 2.5  | 0.8 | 4.5             | 1.2 | 4.2  | 0.9 | 3.7  | 1.1 | 3.3  | 0.8 |
|                                    | 60                                | 6.2  | 1.1 | 5.9  | 0.9 | 5.2  | 1.0 | 4.7  | 0.8 | 7.7             | 1.0 | 7.5  | 0.7 | 6.5  | 0.9 | 5.6  | 0.8 |
|                                    | 75                                | 5.4  | 1.2 | 5.1  | 1.0 | 4.6  | 0.9 | 4.2  | 0.8 | 7.0             | 1.0 | 6.6  | 0.8 | 6.1  | 0.9 | 5.7  | 0.7 |
| 170 x 35                           | 10                                | 4.9  | 1.3 | 4.6  | 1.0 | 4.1  | 1.1 | 3.8  | 0.8 | 6.5             | 1.1 | 6.1  | 0.9 | 5.5  | 0.8 | 5.0  | 1.0 |
|                                    | 20                                | 4.6  | 1.3 | 4.2  | 1.1 | 3.8  | 1.0 | 3.4  | 0.8 | 6.1             | 1.1 | 5.7  | 0.9 | 5.0  | 1.0 | 4.6  | 0.8 |
|                                    | 30                                | 4.1  | 1.4 | 3.8  | 1.1 | 3.3  | 1.0 | 3.0  | 0.9 | 5.5             | 1.2 | 5.0  | 1.0 | 4.4  | 0.9 | 4.1  | 1.1 |
|                                    | 40                                | 3.8  | 1.4 | 3.5  | 1.2 | 3.1  | 1.1 | 2.8  | 0.9 | 5.1             | 1.2 | 4.7  | 1.0 | 4.2  | 1.1 | 3.8  | 0.9 |
|                                    | 60                                | 3.6  | 1.4 | 3.3  | 1.2 | 2.9  | 1.1 | 2.7  | 1.0 | 4.9             | 1.3 | 4.4  | 1.0 | 3.9  | 1.2 | 3.6  | 1.0 |
|                                    | 75                                | 3.4  | 1.3 | 3.1  | 1.1 | 2.7  | 1.0 | 2.5  | 0.8 | 4.5             | 1.2 | 4.2  | 0.9 | 3.7  | 1.1 | 3.3  | 0.8 |
| 170 x 45                           | 10                                | 6.5  | 1.2 | 6.2  | 0.9 | 5.5  | 1.1 | 5.0  | 0.8 | NS              | NS  | 7.2  | 0.8 | 6.0  | 1.0 | 5.3  | 0.8 |
|                                    | 20                                | 5.8  | 1.2 | 5.4  | 1.0 | 4.8  | 0.9 | 4.5  | 0.8 | 7.3             | 1.1 | 6.9  | 0.8 | 6.4  | 1.0 | 5.5  | 0.8 |
|                                    | 30                                | 5.2  | 1.3 | 4.8  | 1.1 | 4.3  | 0.9 | 4.0  | 0.8 | 6.7             | 0.9 | 6.4  | 1.1 | 5.8  | 0.8 | 5.3  | 1.0 |
|                                    | 40                                | 4.8  | 1.4 | 4.5  | 1.1 | 4.0  | 1.0 | 3.6  | 0.8 | 6.7             | 1.2 | 6.0  | 0.9 | 5.3  | 1.1 | 4.9  | 0.8 |
|                                    | 60                                | 4.3  | 1.4 | 4.0  | 1.2 | 3.5  | 1.0 | 3.2  | 0.9 | 5.8             | 1.0 | 5.3  | 1.2 | 4.7  | 1.0 | 4.3  | 0.9 |
|                                    | 75                                | 4.0  | 1.5 | 3.7  | 1.2 | 3.3  | 1.1 | 3.0  | 0.9 | 5.4             | 1.3 | 5.0  | 1.0 | 4.4  | 1.2 | 4.0  | 0.9 |
| 170 x 45                           | 10                                | 3.8  | 1.5 | 3.5  | 1.3 | 3.1  | 1.1 | 2.8  | 0.9 | 5.1             | 1.3 | 4.7  | 1.1 | 4.1  | 1.0 | 3.8  | 0.9 |
|                                    | 20                                | 6.7  | 1.3 | 6.5  | 1.0 | 5.9  | 1.2 | 5.4  | 0.9 | NS              | NS  | NS   | NS  | 7.1  | 1.1 | 6.3  | 0.9 |
|                                    | 30                                | 6.1  | 1.4 | 5.7  | 1.1 | 5.1  | 1.0 | 4.7  | 0.9 | 7.6             | 1.2 | 7.2  | 0.9 | 6.7  | 1.1 | 6.3  | 0.8 |
|                                    | 40                                | 5.5  | 1.4 | 5.1  | 1.2 | 4.6  | 1.1 | 4.2  | 0.9 | 7.1             | 1.2 | 6.7  | 1.0 | 6.2  | 0.9 | 5.7  | 1.1 |
|                                    | 60                                | 5.1  | 1.5 | 4.7  | 1.2 | 4.2  | 1.1 | 3.9  | 0.9 | 6.7             | 1.3 | 6.3  | 1.0 | 5.7  | 1.2 | 5.2  | 0.9 |
|                                    | 75                                | 4.6  | 1.5 | 4.2  | 1.3 | 3.7  | 1.2 | 3.4  | 1.0 | 6.2             | 1.3 | 5.7  | 1.1 | 5.0  | 1.2 | 4.6  | 1.0 |
| 90                                 | 4.3                               | 1.6  | 4.0 | 1.3  | 3.5 | 1.2  | 3.2 | 1.0  | 5.8 | 1.4             | 5.3 | 1.1  | 4.7 | 1.3  | 4.3 | 1.0  |     |
| 90                                 | 4.1                               | 1.6  | 3.7 | 1.4  | 3.3 | 1.3  | 3.0 | 1.1  | 5.5 | 1.4             | 5.0 | 1.2  | 4.4 | 1.1  | 4.0 | 1.3  |     |

## RAFTERS CONTINUED

## WIND CLASSIFICATION N1, N2, N3

| e-beam<br>Section<br>D X B<br>(mm) | Roof<br>Mass<br>kg/m <sup>2</sup> | Single Span                                |     |      |     |      |     |      |     | Continuous Span |     |      |     |      |     |      |     |
|------------------------------------|-----------------------------------|--|-----|------|-----|------|-----|------|-----|-----------------|-----|------|-----|------|-----|------|-----|
|                                    |                                   | Maximum Rafter Spacing (mm)                |     |      |     |      |     |      |     |                 |     |      |     |      |     |      |     |
|                                    |                                   | 450  |     | 600  |     | 900  |     | 1200 |     | 450             |     | 600  |     | 900  |     | 1200 |     |
|                                    |                                   | Maximum Rafter Span and Overhang 'O/H' (m) |     |      |     |      |     |      |     |                 |     |      |     |      |     |      |     |
|                                    |                                   | SPAN                                       | O/H | SPAN | O/H | SPAN | O/H | SPAN | O/H | SPAN            | O/H | SPAN | O/H | SPAN | O/H | SPAN | O/H |
| 200 x 35                           | 10                                | 7.2  | 1.4 | 7.0  | 1.1 | 6.4  | 1.0 | 5.7  | 0.9 | NS              | NS  | 7.8  | 1.0 | 6.6  | 1.2 | 6.0  | 0.9 |
|                                    | 20                                | 6.5  | 1.5 | 6.2  | 1.2 | 5.6  | 1.1 | 5.2  | 0.9 | NS              | NS  | 7.7  | 1.0 | 6.8  | 1.2 | 6.1  | 0.9 |
|                                    | 30                                | 6.1  | 1.5 | 5.6  | 1.3 | 5.0  | 1.1 | 4.6  | 0.9 | 7.6             | 1.3 | 7.2  | 1.0 | 6.6  | 1.2 | 6.2  | 0.9 |
|                                    | 40                                | 5.6  | 1.6 | 5.2  | 1.3 | 4.6  | 1.1 | 4.3  | 0.9 | 7.2             | 1.4 | 6.8  | 1.1 | 6.2  | 1.0 | 5.7  | 0.9 |
|                                    | 60                                | 5.0  | 1.7 | 4.6  | 1.4 | 4.1  | 1.2 | 3.8  | 1.0 | 6.6             | 1.5 | 6.2  | 1.2 | 5.5  | 1.1 | 5.0  | 1.0 |
|                                    | 75                                | 4.7  | 1.7 | 4.3  | 1.4 | 3.8  | 1.2 | 3.5  | 1.0 | 6.3             | 1.5 | 5.8  | 1.2 | 5.1  | 1.4 | 4.7  | 1.0 |
|                                    | 90                                | 4.5  | 1.8 | 4.1  | 1.5 | 3.6  | 1.3 | 3.3  | 1.1 | 6.0             | 1.6 | 5.5  | 1.3 | 4.8  | 1.2 | 4.4  | 1.1 |
| 200 x 45                           | 10                                | 7.4  | 1.5 | 7.2  | 1.2 | 6.8  | 1.1 | 6.3  | 1.0 | NS              | NS  | NS   | NS  | 8.0  | 1.3 | 7.0  | 1.0 |
|                                    | 20                                | 6.8  | 1.6 | 6.5  | 1.3 | 6.0  | 1.2 | 5.5  | 1.0 | NS              | NS  | NS   | NS  | 7.5  | 1.0 | 7.1  | 1.3 |
|                                    | 30                                | 6.3  | 1.7 | 6.0  | 1.4 | 5.4  | 1.2 | 4.9  | 1.0 | 7.9             | 1.5 | 7.5  | 1.2 | 7.0  | 1.1 | 6.5  | 1.0 |
|                                    | 40                                | 6.0  | 1.7 | 5.5  | 1.4 | 4.9  | 1.3 | 4.5  | 1.1 | 7.5             | 1.5 | 7.1  | 1.2 | 6.5  | 1.4 | 6.1  | 1.1 |
|                                    | 60                                | 5.4  | 1.8 | 4.9  | 1.5 | 4.4  | 1.3 | 4.0  | 1.1 | 6.9             | 1.6 | 6.5  | 1.3 | 5.9  | 1.2 | 5.4  | 1.1 |
|                                    | 75                                | 5.0  | 1.9 | 4.6  | 1.6 | 4.1  | 1.4 | 3.8  | 1.2 | 6.6             | 1.6 | 6.2  | 1.3 | 5.5  | 1.5 | 5.0  | 1.2 |
|                                    | 90                                | 4.8  | 1.9 | 4.4  | 1.6 | 3.9  | 1.5 | 3.5  | 1.2 | 6.3             | 1.7 | 5.9  | 1.4 | 5.2  | 1.3 | 4.7  | 1.2 |
| 240 x 45                           | 10                                | 8.3  | 1.9 | 8.1  | 1.5 | 7.6  | 1.4 | 7.3  | 1.2 | NS              | NS  | NS   | NS  | 9.3  | 1.5 | 8.0  | 1.2 |
|                                    | 20                                | 7.7  | 2.0 | 7.3  | 1.6 | 6.8  | 1.4 | 6.5  | 1.2 | NS              | NS  | NS   | NS  | NS   | NS  | 8.2  | 1.6 |
|                                    | 30                                | 7.2  | 2.0 | 6.8  | 1.7 | 6.3  | 1.4 | 5.9  | 1.2 | NS              | NS  | NS   | NS  | 7.9  | NS  | 7.4  | 1.2 |
|                                    | 40                                | 6.8  | 2.1 | 6.5  | 1.7 | 5.9  | 1.5 | 5.4  | 1.2 | NS              | NS  | NS   | NS  | 7.5  | 1.4 | 7.0  | 1.2 |
|                                    | 60                                | 6.3  | 2.2 | 5.9  | 1.8 | 5.2  | 1.6 | 4.8  | 1.3 | 7.9             | 1.9 | 7.4  | 1.6 | 6.8  | 1.5 | 6.4  | 1.3 |
|                                    | 75                                | 6.0  | 2.3 | 5.5  | 1.9 | 4.9  | 1.6 | 4.5  | 1.4 | 7.5             | 2.0 | 7.1  | 1.6 | 6.6  | 1.5 | 6.0  | 1.4 |
|                                    | 90                                | 5.7  | 2.3 | 5.2  | 1.9 | 4.6  | 1.7 | 4.2  | 1.4 | 7.3             | 2.0 | 6.8  | 1.7 | 6.2  | 1.6 | 5.7  | 1.4 |
| 240 x 63                           | 10                                | 8.5  | 2.1 | 8.3  | 1.7 | 8.0  | 1.6 | 7.7  | 1.4 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 20                                | 8.0  | 2.3 | 7.7  | 1.9 | 7.2  | 1.7 | 6.9  | 1.4 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 30                                | 7.6  | 2.3 | 7.2  | 1.9 | 6.7  | 1.8 | 6.4  | 1.5 | NS              | NS  | NS   | NS  | NS   | NS  | 8.0  | 1.8 |
|                                    | 40                                | 7.2  | 2.4 | 6.9  | 2.0 | 6.3  | 1.8 | 6.0  | 1.5 | NS              | NS  | NS   | NS  | 8.0  | 1.6 | 7.5  | 1.5 |
|                                    | 60                                | 6.8  | 2.5 | 6.4  | 2.1 | 5.8  | 1.9 | 5.3  | 1.6 | NS              | NS  | 8.0  | 1.8 | 7.3  | 1.7 | 6.9  | 1.6 |
|                                    | 75                                | 6.5  | 2.6 | 6.1  | 2.2 | 5.4  | 2.0 | 5.0  | 1.7 | NS              | NS  | 7.6  | 1.9 | 6.5  | 1.8 | 6.1  | 1.7 |
|                                    | 90                                | 6.2  | 2.6 | 5.8  | 2.2 | 5.1  | 2.1 | 4.7  | 1.8 | 7.8             | 2.3 | 7.3  | 1.9 | 6.7  | 1.8 | 6.3  | 2.0 |
| 300 x 45                           | 10                                | 9.5  | 2.4 | 9.2  | 1.9 | 8.8  | 1.7 | 8.5  | 1.4 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 20                                | 8.8  | 2.5 | 8.5  | 2.0 | 8.0  | 1.7 | 7.6  | 1.4 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 30                                | 8.3  | 2.6 | 8.0  | 2.1 | 7.4  | 1.7 | 7.0  | 1.5 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 40                                | 8.0  | 2.7 | 7.6  | 2.2 | 7.0  | 1.8 | 6.6  | 1.5 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 60                                | 7.4  | 2.8 | 7.0  | 2.3 | 6.4  | 1.9 | 6.0  | 1.6 | NS              | NS  | NS   | NS  | 8.0  | 1.9 | 7.5  | 1.6 |
|                                    | 75                                | 7.1  | 2.8 | 6.7  | 2.4 | 6.1  | 2.0 | 5.6  | 1.7 | NS              | NS  | NS   | NS  | 7.6  | 1.9 | 7.1  | 1.7 |
|                                    | 90                                | 6.8  | 2.9 | 6.4  | 2.4 | 5.8  | 2.1 | 5.3  | 1.8 | NS              | NS  | 8.0  | 2.1 | 7.3  | 2.0 | 6.9  | 1.8 |
| 300 x 63                           | 10                                | 9.7  | 2.8 | 9.5  | 2.2 | 9.2  | 2.0 | 8.9  | 1.7 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 20                                | 9.2  | 2.9 | 8.9  | 2.4 | 8.4  | 2.1 | 8.0  | 1.8 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 30                                | 8.7  | 3.0 | 8.4  | 2.5 | 7.9  | 2.1 | 7.5  | 1.8 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 40                                | 8.4  | 3.0 | 8.0  | 2.5 | 7.5  | 2.2 | 7.1  | 1.8 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 60                                | 7.9  | 3.1 | 7.5  | 2.6 | 6.9  | 2.3 | 6.6  | 2.0 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 75                                | 7.6  | 3.2 | 7.2  | 2.7 | 6.7  | 2.4 | 6.2  | 2.0 | NS              | NS  | NS   | NS  | NS   | NS  | 7.7  | 2.0 |
|                                    | 90                                | 7.3  | 3.3 | 6.9  | 2.8 | 6.4  | 2.5 | 5.8  | 2.1 | NS              | NS  | NS   | NS  | 7.9  | 2.3 | 7.4  | 2.1 |
| 360 x 45                           | 10                                | 10.5                                       | 2.9 | 10.3 | 2.3 | 9.9  | 2.0 | 8.5  | 1.6 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 20                                | 9.9  | 3.0 | 9.5  | 2.4 | 9.0  | 2.0 | 8.6  | 1.7 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 30                                | 9.4  | 3.1 | 9.0  | 2.5 | 8.4  | 2.0 | 7.9  | 1.7 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 40                                | 9.0  | 3.2 | 8.6  | 2.6 | 7.9  | 2.1 | 7.5  | 1.8 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 60                                | 8.4  | 3.3 | 7.9  | 2.8 | 7.3  | 2.2 | 6.9  | 1.9 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 75                                | 8.0  | 3.4 | 7.6  | 2.8 | 7.0  | 2.3 | 6.6  | 2.0 | NS              | NS  | NS   | NS  | NS   | NS  | 7.7  | 2.0 |
|                                    | 90                                | 7.8  | 3.5 | 7.3  | 2.9 | 6.7  | 2.4 | 6.3  | 2.1 | NS              | NS  | NS   | NS  | 7.9  | 2.4 | 7.4  | 2.1 |
| 400 x 63                           | 10                                | 11.4                                       | 3.8 | 11.2 | 3.1 | 10.9 | 2.6 | 10.6 | 2.2 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 20                                | 10.9                                       | 3.9 | 10.6 | 3.2 | 10.1 | 2.7 | 9.7  | 2.3 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 30                                | 10.4                                       | 4.0 | 10.1 | 3.3 | 9.5  | 2.7 | 9.1  | 2.3 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 40                                | 10.1                                       | 4.1 | 9.7  | 3.4 | 9.1  | 2.8 | 8.6  | 2.4 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 60                                | 9.5  | 4.2 | 9.1  | 3.6 | 8.4  | 3.0 | 8.0  | 2.5 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 75                                | 9.2  | 4.3 | 8.7  | 3.7 | 8.1  | 3.1 | 7.6  | 2.6 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |
|                                    | 90                                | 8.9  | 4.4 | 8.4  | 3.7 | 7.8  | 3.3 | 7.3  | 2.8 | NS              | NS  | NS   | NS  | NS   | NS  | NS   | NS  |

NS indicates that this span is not available due to manufacturing and transport length limitations

## ROOF BEAMS

RIDGE, INTERMEDIATE, EAVE  
AND BRESSUMMER BEAMS

WIND CLASSIFICATION N1, N2, N3

| e-beam<br>Section<br>D X B<br>(mm) | Sheet Roof and Ceiling    |     |     |     |     |     |     |     |     |     |     |     |
|------------------------------------|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                                    | Roof Load Width 'RLW' (m) |     |     |     |     |     |     |     |     |     |     |     |
|                                    | 1.8                       | 2.1 | 2.4 | 2.7 | 3.0 | 3.3 | 3.6 | 3.9 | 4.2 | 4.8 | 5.4 | 6.0 |
| <b>Maximum Single Span (m)</b>     |                           |     |     |     |     |     |     |     |     |     |     |     |
| 150 x 35                           | 2.8                       | 2.6 | 2.5 | 2.4 | 2.3 | 2.2 | 2.1 | 2.1 | 2.0 | 1.9 | 1.8 | 1.8 |
| 150 x 45                           | 3.0                       | 2.8 | 2.7 | 2.6 | 2.5 | 2.4 | 2.3 | 2.2 | 2.2 | 2.1 | 2.0 | 1.9 |
| 170 x 35                           | 3.1                       | 3.0 | 2.8 | 2.7 | 2.6 | 2.5 | 2.4 | 2.4 | 2.3 | 2.2 | 2.1 | 2.0 |
| 170 x 45                           | 3.3                       | 3.2 | 3.0 | 2.9 | 2.8 | 2.7 | 2.6 | 2.5 | 2.5 | 2.3 | 2.2 | 2.1 |
| 200 x 35                           | 3.7                       | 3.5 | 3.3 | 3.2 | 3.1 | 2.9 | 2.9 | 2.8 | 2.7 | 2.6 | 2.4 | 2.3 |
| 200 x 45                           | 3.9                       | 3.7 | 3.5 | 3.4 | 3.3 | 3.2 | 3.1 | 3.0 | 2.9 | 2.7 | 2.6 | 2.5 |
| 200 x 63                           | 4.3                       | 4.1 | 3.9 | 3.8 | 3.6 | 3.5 | 3.4 | 3.3 | 3.2 | 3.1 | 2.9 | 2.8 |
| 240 x 35                           | 4.4                       | 4.1 | 4.0 | 3.8 | 3.7 | 3.5 | 3.4 | 3.3 | 3.2 | 3.1 | 2.8 | 2.7 |
| 240 x 45                           | 4.7                       | 4.4 | 4.2 | 4.1 | 3.9 | 3.8 | 3.7 | 3.6 | 3.5 | 3.3 | 3.1 | 3.0 |
| 240 x 63                           | 5.2                       | 4.9 | 4.7 | 4.5 | 4.4 | 4.2 | 4.1 | 4.0 | 3.9 | 3.7 | 3.5 | 3.4 |
| 300 x 45                           | 5.8                       | 5.5 | 5.3 | 5.1 | 4.9 | 4.7 | 4.6 | 4.4 | 4.3 | 4.1 | 3.9 | 3.8 |
| 300 x 63                           | 6.4                       | 6.1 | 5.8 | 5.6 | 5.4 | 5.2 | 5.1 | 4.9 | 4.8 | 4.6 | 4.4 | 4.2 |
| 300 x 75                           | 6.7                       | 6.4 | 6.2 | 5.9 | 5.7 | 5.5 | 5.4 | 5.2 | 5.1 | 4.8 | 4.6 | 4.4 |
| 360 x 63                           | 7.2                       | 6.9 | 6.7 | 6.5 | 6.3 | 6.3 | 6.1 | 5.9 | 5.7 | 5.5 | 5.2 | 5.0 |
| 400 x 45                           | 7.7                       | 7.3 | 7.0 | 6.7 | 6.4 | 6.1 | 5.9 | 5.7 | 5.5 | 5.1 | 4.8 | 4.6 |
| 400 x 63                           | 7.7                       | 7.5 | 7.2 | 7.0 | 6.9 | 6.7 | 6.5 | 6.5 | 6.4 | 6.1 | 5.8 | 5.6 |
| 400 x 75                           | 8.0                       | 7.8 | 7.5 | 7.3 | 7.1 | 6.9 | 6.8 | 6.7 | 6.5 | 6.4 | 6.1 | 5.9 |
| 450 x 63                           | 8.5                       | 8.2 | 7.9 | 7.7 | 7.5 | 7.3 | 7.2 | 7.0 | 6.9 | 6.8 | 6.5 | 6.3 |
| <b>Maximum Continuous Span (m)</b> |                           |     |     |     |     |     |     |     |     |     |     |     |
| 150 x 35                           | 3.7                       | 3.5 | 3.3 | 3.2 | 3.1 | 3.0 | 2.9 | 2.8 | 2.7 | 2.6 | 2.5 | 2.3 |
| 150 x 45                           | 4.0                       | 3.8 | 3.6 | 3.4 | 3.3 | 3.2 | 3.1 | 3.0 | 2.9 | 2.8 | 2.6 | 2.5 |
| 170 x 35                           | 4.2                       | 4.0 | 3.8 | 3.6 | 3.5 | 3.4 | 3.3 | 3.2 | 3.1 | 2.9 | 2.8 | 2.6 |
| 170 x 45                           | 4.5                       | 4.2 | 4.1 | 3.9 | 3.7 | 3.6 | 3.5 | 3.4 | 3.3 | 3.1 | 3.0 | 2.9 |
| 200 x 35                           | 4.9                       | 4.6 | 4.4 | 4.2 | 4.1 | 3.9 | 3.8 | 3.7 | 3.5 | 3.3 | 3.2 | 3.0 |
| 200 x 45                           | 5.2                       | 5.0 | 4.8 | 4.6 | 4.4 | 4.2 | 4.1 | 4.0 | 3.9 | 3.7 | 3.5 | 3.4 |
| 200 x 63                           | 5.8                       | 5.5 | 5.3 | 5.1 | 4.9 | 4.7 | 4.6 | 4.4 | 4.3 | 4.1 | 3.9 | 3.8 |
| 240 x 35                           | 5.8                       | 5.4 | 5.1 | 4.9 | 4.7 | 4.4 | 4.1 | 4.0 | 3.8 | 3.6 | 3.4 | 3.2 |
| 240 x 45                           | 6.3                       | 6.0 | 5.7 | 5.5 | 5.3 | 5.1 | 4.9 | 4.8 | 4.6 | 4.4 | 4.2 | 4.0 |
| 240 x 63                           | 6.7                       | 6.5 | 6.3 | 6.1 | 5.8 | 5.7 | 5.5 | 5.3 | 5.2 | 4.9 | 4.7 | 4.5 |
| 300 x 45                           | 7.3                       | 7.1 | 6.8 | 6.6 | 6.3 | 6.1 | 5.9 | 5.7 | 5.5 | 5.2 | 5.0 | 4.7 |
| 300 x 63                           | 7.9                       | 7.6 | 7.4 | 7.2 | 7.0 | 6.8 | 6.6 | 6.5 | 6.4 | 6.1 | 5.9 | 5.6 |
| 300 x 75                           | NS                        | 7.9 | 7.7 | 7.5 | 7.3 | 7.1 | 6.9 | 6.8 | 6.6 | 6.5 | 6.2 | 5.9 |
| 360 x 63                           | NS                        | NS  | NS  | NS  | 8.0 | 7.8 | 7.6 | 7.4 | 7.3 | 7.0 | 6.8 | 6.6 |
| 400 x 45                           | NS                        | NS  | 7.7 | 7.2 | 6.9 | 6.6 | 6.3 | 6.0 | 5.8 | 5.5 | 5.2 | 5.0 |
| 400 x 63                           | NS                        | NS  | NS  | NS  | NS  | NS  | NS  | 8.0 | 7.9 | 7.6 | 7.3 | 7.1 |
| 400 x 75                           | NS                        | NS  | NS  | NS  | NS  | NS  | NS  | NS  | NS  | 7.9 | 7.6 | 7.4 |



## ROOF BEAMS

RIDGE, INTERMEDIATE, EAVE  
AND BRESSUMMER BEAMS

WIND CLASSIFICATION N1, N2, N3

| e-beam<br>Section<br>D X B<br>(mm) | Tile Roof and Ceiling     |     |     |     |     |     |     |     |     |     |     |     |
|------------------------------------|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                                    | Roof Load Width 'RLW' (m) |     |     |     |     |     |     |     |     |     |     |     |
|                                    | 1.8                       | 2.1 | 2.4 | 2.7 | 3.0 | 3.3 | 3.6 | 3.9 | 4.2 | 4.8 | 5.4 | 6.0 |
| <b>Maximum Single Span (m)</b>     |                           |     |     |     |     |     |     |     |     |     |     |     |
| 150 x 35                           | 2.2                       | 2.0 | 1.9 | 1.9 | 1.8 | 1.7 | 1.7 | 1.6 | 1.6 | 1.5 | 1.5 | 1.4 |
| 150 x 45                           | 2.3                       | 2.2 | 2.1 | 2.0 | 1.9 | 1.9 | 1.8 | 1.8 | 1.7 | 1.6 | 1.6 | 1.5 |
| 170 x 35                           | 2.4                       | 2.3 | 2.2 | 2.1 | 2.0 | 2.0 | 1.9 | 1.9 | 1.8 | 1.7 | 1.7 | 1.6 |
| 170 x 45                           | 2.6                       | 2.5 | 2.4 | 2.3 | 2.2 | 2.1 | 2.1 | 2.0 | 2.0 | 1.9 | 1.8 | 1.7 |
| 200 x 35                           | 2.9                       | 2.7 | 2.6 | 2.5 | 2.4 | 2.3 | 2.3 | 2.2 | 2.1 | 2.0 | 1.8 | 1.8 |
| 200 x 45                           | 3.1                       | 2.9 | 2.8 | 2.7 | 2.6 | 2.5 | 2.4 | 2.4 | 2.3 | 2.2 | 2.1 | 2.0 |
| 200 x 63                           | 3.4                       | 3.3 | 3.1 | 3.0 | 2.9 | 2.8 | 2.7 | 2.6 | 2.6 | 2.4 | 2.3 | 2.3 |
| 240 x 35                           | 3.4                       | 3.3 | 3.1 | 3.0 | 2.9 | 2.7 | 2.6 | 2.5 | 2.4 | 2.2 | 2.0 | 1.9 |
| 240 x 45                           | 3.7                       | 3.5 | 3.3 | 3.2 | 3.1 | 3.0 | 2.9 | 2.8 | 2.8 | 2.6 | 2.5 | 2.4 |
| 240 x 63                           | 4.1                       | 3.9 | 3.7 | 3.6 | 3.5 | 3.3 | 3.2 | 3.2 | 3.1 | 2.9 | 2.8 | 2.7 |
| 300 x 45                           | 4.6                       | 4.4 | 4.2 | 4.0 | 3.9 | 3.7 | 3.6 | 3.5 | 3.4 | 3.3 | 3.1 | 3.0 |
| 300 x 63                           | 5.1                       | 4.8 | 4.6 | 4.5 | 4.3 | 4.2 | 4.0 | 3.9 | 3.8 | 3.7 | 3.5 | 3.4 |
| 300 x 75                           | 5.4                       | 5.1 | 4.9 | 4.7 | 4.5 | 4.4 | 4.3 | 4.2 | 4.1 | 3.9 | 3.7 | 3.6 |
| 360 x 63                           | 6.1                       | 5.8 | 5.5 | 5.3 | 5.2 | 5.0 | 4.8 | 4.7 | 4.6 | 4.4 | 4.2 | 4.0 |
| 400 x 45                           | 6.1                       | 5.8 | 5.5 | 5.3 | 5.0 | 4.8 | 4.6 | 4.4 | 4.2 | 4.0 | 3.7 | 3.5 |
| 400 x 63                           | 6.6                       | 6.3 | 6.1 | 5.9 | 5.7 | 5.5 | 5.4 | 5.2 | 5.1 | 4.9 | 4.7 | 4.5 |
| 400 x 75                           | 6.8                       | 6.6 | 6.4 | 6.2 | 6.0 | 5.8 | 5.7 | 5.5 | 5.4 | 5.1 | 4.9 | 4.7 |
| 450 x 63                           | 7.1                       | 6.9 | 6.7 | 6.5 | 6.3 | 6.2 | 6.0 | 5.9 | 5.7 | 5.5 | 5.2 | 5.0 |
| <b>Maximum Continuous Span (m)</b> |                           |     |     |     |     |     |     |     |     |     |     |     |
| 150 x 35                           | 2.9                       | 2.7 | 2.6 | 2.5 | 2.4 | 2.3 | 2.3 | 2.2 | 2.1 | 2.0 | 1.9 | 1.8 |
| 150 x 45                           | 3.1                       | 2.9 | 2.8 | 2.7 | 2.6 | 2.5 | 2.4 | 2.4 | 2.3 | 2.2 | 2.1 | 2.0 |
| 170 x 35                           | 3.3                       | 3.1 | 3.0 | 2.8 | 2.7 | 2.6 | 2.6 | 2.5 | 2.4 | 2.3 | 2.1 | 2.0 |
| 170 x 45                           | 3.5                       | 3.3 | 3.2 | 3.1 | 2.9 | 2.9 | 2.8 | 2.7 | 2.6 | 2.5 | 2.4 | 2.3 |
| 200 x 35                           | 3.8                       | 3.6 | 3.5 | 3.3 | 3.2 | 3.1 | 3.0 | 2.9 | 2.8 | 2.6 | 2.5 | 2.3 |
| 200 x 45                           | 4.1                       | 3.9 | 3.7 | 3.6 | 3.5 | 3.4 | 3.2 | 3.2 | 3.1 | 2.9 | 2.8 | 2.7 |
| 200 x 63                           | 4.6                       | 4.4 | 4.2 | 4.0 | 3.9 | 3.7 | 3.6 | 3.5 | 3.4 | 3.3 | 3.1 | 3.0 |
| 240 x 35                           | 4.6                       | 4.4 | 4.1 | 3.9 | 3.8 | 3.5 | 3.4 | 3.3 | 3.2 | 3.0 | 2.8 | 2.6 |
| 240 x 45                           | 4.9                       | 4.7 | 4.5 | 4.3 | 4.2 | 4.0 | 3.9 | 3.8 | 3.7 | 3.5 | 3.4 | 3.1 |
| 240 x 63                           | 5.5                       | 5.2 | 5.0 | 4.8 | 4.6 | 4.5 | 4.3 | 4.2 | 4.1 | 3.9 | 3.8 | 3.6 |
| 300 x 45                           | 6.1                       | 5.8 | 5.6 | 5.3 | 5.1 | 4.9 | 4.7 | 4.5 | 4.4 | 4.2 | 3.9 | 3.7 |
| 300 x 63                           | 6.7                       | 6.4 | 6.2 | 6.0 | 5.8 | 5.6 | 5.4 | 5.3 | 5.1 | 4.9 | 4.7 | 4.5 |
| 300 x 75                           | 6.9                       | 6.7 | 6.5 | 6.3 | 6.1 | 5.9 | 5.7 | 5.6 | 5.4 | 5.2 | 5.0 | 4.8 |
| 360 x 63                           | 7.6                       | 7.3 | 7.1 | 6.9 | 6.7 | 6.5 | 6.4 | 6.3 | 6.2 | 5.9 | 5.6 | 5.3 |
| 400 x 45                           | 7.0                       | 6.7 | 6.3 | 6.0 | 5.8 | 5.7 | 5.5 | 5.3 | 5.1 | 4.8 | 4.6 | 4.4 |
| 400 x 63                           | NS                        | 7.9 | 7.7 | 7.4 | 7.3 | 7.1 | 6.9 | 6.8 | 6.6 | 6.3 | 5.9 | 5.7 |
| 400 x 75                           | NS                        | NS  | 8.0 | 7.8 | 7.6 | 7.4 | 7.2 | 7.1 | 6.9 | 6.7 | 6.5 | 6.3 |

NS indicates that this span is not available due to manufacturing and transport length limitations

**STRUTTING BEAMS**

SUPPORTING UNDERPURLINS ONLY

WIND CLASSIFICATION N1, N2, N3

| e-beam<br>Section<br>D X B<br>(mm) | Sheet Roof                            |      |      |      |      |     |     |     |     |
|------------------------------------|---------------------------------------|------|------|------|------|-----|-----|-----|-----|
|                                    | Roof Area Supported (m <sup>2</sup> ) |      |      |      |      |     |     |     |     |
|                                    | 2                                     | 3    | 4    | 5    | 6    | 7   | 8   | 10  | 12  |
| <b>Maximum Span (m)</b>            |                                       |      |      |      |      |     |     |     |     |
| 150 x 45                           | 4.0                                   | 3.7  | 3.2  | 2.9  | 2.7  | 2.5 | 2.3 | 2.1 | NS  |
| 150 x 63                           | 4.7                                   | 4.2  | 3.7  | 3.4  | 3.1  | 2.9 | 2.7 | 2.5 | 2.3 |
| 2/150 x 35                         | 5.0                                   | 4.4  | 3.9  | 3.6  | 3.3  | 3.1 | 2.9 | 2.6 | 2.4 |
| 150 x 75                           | 5.1                                   | 4.5  | 4.0  | 3.7  | 3.4  | 3.1 | 3.0 | 2.7 | 2.4 |
| 170 x 45                           | 4.8                                   | 4.3  | 3.8  | 3.5  | 3.2  | 3.0 | 2.8 | 2.5 | 2.2 |
| 170 x 63                           | 5.4                                   | 4.9  | 4.4  | 4.0  | 3.7  | 3.5 | 3.3 | 2.9 | 2.7 |
| 200 x 63                           | 6.4                                   | 6.0  | 5.5  | 5.0  | 4.7  | 4.4 | 4.1 | 3.7 | 3.4 |
| 2/200 x 35                         | 6.7                                   | 6.2  | 5.7  | 5.3  | 4.9  | 4.6 | 4.3 | 3.8 | 3.3 |
| 2/200 x 45                         | 7.0                                   | 6.5  | 6.1  | 5.7  | 5.4  | 5.1 | 4.8 | 4.4 | 4.0 |
| 240 x 63                           | 7.5                                   | 7.0  | 6.6  | 6.2  | 5.9  | 5.6 | 5.3 | 4.8 | 4.4 |
| 2/240 x 45                         | 7.9                                   | 7.5  | 7.1  | 6.8  | 6.5  | 6.3 | 6.1 | 5.6 | 5.2 |
| 300 x 63                           | 8.9                                   | 8.3  | 7.9  | 7.5  | 7.2  | 7.0 | 6.7 | 6.4 | 6.0 |
| 300 x 75                           | 9.1                                   | 8.6  | 8.2  | 7.8  | 7.5  | 7.3 | 7.0 | 6.7 | 6.3 |
| 2/300 x 45                         | 9.2                                   | 8.8  | 8.4  | 8.1  | 7.8  | 7.6 | 7.4 | 6.6 | 6.1 |
| 360 x 63                           | 10.0                                  | 9.5  | 9.1  | 8.7  | 8.4  | 8.2 | 7.9 | 7.5 | 7.1 |
| 400 x 63                           | 10.7                                  | 10.3 | 9.9  | 9.5  | 9.2  | 8.9 | 8.6 | 8.2 | 7.8 |
| 400 x 75                           | 10.9                                  | 10.5 | 10.1 | 9.8  | 9.5  | 9.2 | 9.0 | 8.5 | 8.2 |
| 450 x 63                           | 11.6                                  | 11.1 | 10.7 | 10.4 | 10.1 | 9.8 | 9.5 | 9.1 | 8.4 |

- 1 All sections with depth to breadth ratio exceeding three must be restrained against rollover at supports.
- 2 All sections with a depth to breadth ratio exceeding three must be laterally restrained at each strutting point in accordance with AS1684.2:2010.
- 3 Multiple sections nail laminated as per AS1684.2:2010.
- 4 A minimum initial clearance of 25mm to ceiling framing members shall be provided at mid-span.
- 5 Bearing length at end supports to be not less than 70mm.
- 6 Beam ends may be chamfer cut to a minimum depth of 90mm or D/3, whichever is greater.
- 7 NS signifies section size unlikely to be suitable.

**STRUTTING BEAMS**

SUPPORTING UNDERPURLINS ONLY

WIND CLASSIFICATION N1, N2, N3

| e-beam<br>Section<br>D X B<br>(mm) | Tile Roof                             |     |     |     |     |     |     |     |     |
|------------------------------------|---------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
|                                    | Roof Area Supported (m <sup>2</sup> ) |     |     |     |     |     |     |     |     |
|                                    | 2                                     | 3   | 4   | 5   | 6   | 7   | 8   | 10  | 12  |
| <b>Maximum Span (m)</b>            |                                       |     |     |     |     |     |     |     |     |
| 150 x 45                           | 3.0                                   | 2.5 | 2.2 | NS  | NS  | NS  | NS  | NS  | NS  |
| 150 x 63                           | 3.5                                   | 2.9 | 2.5 | 2.3 | 2.1 | NS  | NS  | NS  | NS  |
| 2/150 x 35                         | 3.7                                   | 3.1 | 2.7 | 2.4 | 2.2 | 2.1 | NS  | NS  | NS  |
| 150 x 75                           | 3.8                                   | 3.1 | 2.8 | 2.5 | 2.3 | 2.1 | 2.0 | NS  | NS  |
| 170 x 45                           | 3.6                                   | 3.0 | 2.6 | 2.3 | 2.1 | 2.0 | 1.9 | NS  | NS  |
| 170 x 63                           | 4.1                                   | 3.5 | 3.0 | 2.7 | 2.5 | 2.3 | 2.2 | 2.0 | NS  |
| 200 x 63                           | 5.2                                   | 4.4 | 3.8 | 3.5 | 3.2 | 3.0 | 2.8 | 2.5 | 2.3 |
| 2/200 x 35                         | 5.4                                   | 4.6 | 4.1 | 3.7 | 3.4 | 3.2 | 3.0 | 2.7 | 2.4 |
| 2/200 x 45                         | 5.9                                   | 5.1 | 4.5 | 4.1 | 3.8 | 3.5 | 3.3 | 3.0 | 2.7 |
| 240 x 63                           | 6.3                                   | 5.6 | 5.0 | 4.5 | 4.1 | 3.9 | 3.6 | 3.3 | 3.0 |
| 2/240 x 45                         | 6.9                                   | 6.3 | 5.7 | 5.3 | 4.9 | 4.5 | 4.3 | 3.9 | 3.5 |
| 300 x 63                           | 7.7                                   | 7.0 | 6.5 | 6.1 | 5.7 | 5.3 | 5.0 | 4.5 | 4.1 |
| 300 x 75                           | 7.9                                   | 7.3 | 6.8 | 6.4 | 6.1 | 5.7 | 5.4 | 4.9 | 4.5 |
| 2/300 x 45                         | 8.2                                   | 7.6 | 7.1 | 6.7 | 6.4 | 6.1 | 5.8 | 5.3 | 4.9 |
| 360 x 63                           | 8.9                                   | 8.2 | 7.6 | 7.2 | 6.8 | 6.6 | 6.3 | 5.9 | 5.4 |
| 400 x 63                           | 9.6                                   | 8.9 | 8.3 | 7.9 | 7.5 | 7.2 | 7.0 | 6.5 | 6.2 |
| 400 x 75                           | 9.9                                   | 9.2 | 8.7 | 8.2 | 7.9 | 7.6 | 7.3 | 6.9 | 6.5 |
| 450 x 63                           | 10.5                                  | 9.8 | 9.2 | 8.8 | 8.4 | 8.0 | 7.8 | 7.3 | 6.9 |

- 1 All sections with depth to breadth ratio exceeding three must be restrained against rollover at supports.
- 2 All sections with a depth to breadth ratio exceeding three must be laterally restrained at each strutting point in accordance with AS1684.2:2010.
- 3 Multiple sections nail laminated as per AS1684.2:2010.
- 4 A minimum initial clearance of 25mm to ceiling framing members shall be provided at mid-span.
- 5 Bearing length at end supports to be not less than 70mm.
- 6 Beam ends may be chamfer cut to a minimum depth of 90mm or D/3, whichever is greater.
- 7 NS signifies section size unlikely to be suitable.

**STRUTTING – COUNTER BEAMS**SUPPORTING UNDERPURLINS  
AND HANGING BEAMS

WIND CLASSIFICATION N1, N2, N3

| e-beam<br>Section<br>D X B<br>(mm)                   | Average Hanging Beam Span (m)         |     |     |     |     |     |     |     |     |     |     |     |
|--|---------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|  | 2.4                                   |     |     |     |     |     | 4.2 |     |     |     |     |     |
|  | Roof Area Supported (m <sup>2</sup> ) |     |     |     |     |     |     |     |     |     |     |     |
|  | 2                                     | 4   | 6   | 8   | 10  | 12  | 2   | 4   | 6   | 8   | 10  | 12  |
| <b>Maximum Span for Sheet Roof &amp; Ceiling (m)</b> |                                       |     |     |     |     |     |     |     |     |     |     |     |
| 170 x 63   | 4.0                                   | 3.6 | 3.3 | 3.0 | 2.7 | 2.6 | 3.7 | 3.3 | 3.1 | 2.8 | 2.6 | 2.5 |
| 2/170 x 35   | 4.1                                   | 3.8 | 3.5 | 3.2 | 2.9 | 2.7 | 3.8 | 3.5 | 3.2 | 3.0 | 2.8 | 2.6 |
| 2/170 x 45   | 4.3                                   | 4.0 | 3.7 | 3.5 | 3.2 | 3.0 | 4.0 | 3.7 | 3.5 | 3.3 | 3.1 | 2.9 |
| 200 x 63   | 4.5                                   | 4.2 | 3.9 | 3.7 | 3.4 | 3.2 | 4.2 | 3.9 | 3.7 | 3.5 | 3.2 | 3.1 |
| 2/200 x 35   | 4.7                                   | 4.3 | 4.0 | 3.8 | 3.6 | 3.4 | 4.3 | 4.0 | 3.8 | 3.6 | 3.4 | 3.2 |
| 2/200 x 45   | 4.9                                   | 4.5 | 4.3 | 4.0 | 3.8 | 3.7 | 4.5 | 4.3 | 4.0 | 3.9 | 3.7 | 3.6 |
| 240 x 63   | 5.2                                   | 4.8 | 4.5 | 4.3 | 4.1 | 3.9 | 4.8 | 4.5 | 4.3 | 4.1 | 3.9 | 3.8 |
| 2/240 x 45   | 5.6                                   | 5.2 | 5.0 | 4.7 | 4.5 | 4.3 | 5.1 | 4.9 | 4.7 | 4.5 | 4.3 | 4.2 |
| 300 x 63   | 6.1                                   | 5.7 | 5.4 | 5.2 | 5.0 | 4.8 | 5.6 | 5.3 | 5.1 | 4.9 | 4.7 | 4.6 |
| 300 x 75   | 6.3                                   | 6.0 | 5.7 | 5.4 | 5.2 | 5.0 | 5.8 | 5.5 | 5.3 | 5.1 | 5.0 | 4.8 |
| 2/300 x 45   | 6.5                                   | 6.2 | 5.9 | 5.7 | 5.5 | 5.3 | 6.0 | 5.8 | 5.6 | 5.4 | 5.2 | 5.1 |
| 360 x 63   | 6.9                                   | 6.6 | 6.3 | 6.0 | 5.8 | 5.6 | 6.3 | 6.1 | 5.9 | 5.7 | 5.5 | 5.4 |
| 400 x 63   | 7.4                                   | 7.1 | 6.8 | 6.6 | 6.3 | 6.1 | 6.8 | 6.6 | 6.4 | 6.2 | 6.0 | 5.8 |
| 400 x 75   | 7.7                                   | 7.4 | 7.1 | 6.8 | 6.6 | 6.4 | 7.1 | 6.8 | 6.6 | 6.4 | 6.3 | 6.1 |
| 2/400 x 45   | 7.9                                   | 7.6 | 7.3 | 7.1 | 6.9 | 6.7 | 7.3 | 7.1 | 6.9 | 6.7 | 6.5 | 6.4 |
| 450 x 63   | 8.1                                   | 7.7 | 7.4 | 7.2 | 7.0 | 6.8 | 7.4 | 7.2 | 7.0 | 6.8 | 6.6 | 6.4 |
| 2/450 x 63   | 9.0                                   | 8.8 | 8.5 | 8.3 | 8.1 | 7.9 | 8.4 | 8.2 | 8.0 | 7.9 | 7.7 | 7.5 |
| <b>Maximum Span for Tile Roof and Ceiling (m)</b>    |                                       |     |     |     |     |     |     |     |     |     |     |     |
| 170 x 63   | 3.5                                   | 2.8 | 2.4 | 2.1 | 1.9 | NS  | 3.2 | 2.7 | 2.3 | 2.1 | 1.9 | NS  |
| 2/170 x 35   | 3.7                                   | 3.0 | 2.6 | 2.3 | 2.0 | 1.9 | 3.4 | 2.8 | 2.5 | 2.2 | 2.0 | 1.9 |
| 2/170 x 45   | 3.9                                   | 3.3 | 2.8 | 2.5 | 2.3 | 2.1 | 3.7 | 3.1 | 2.7 | 2.4 | 2.2 | 2.1 |
| 200 x 63   | 4.1                                   | 3.5 | 3.0 | 2.7 | 2.4 | 2.2 | 3.8 | 3.3 | 2.9 | 2.6 | 2.4 | 2.2 |
| 2/200 x 35   | 4.2                                   | 3.7 | 3.2 | 2.8 | 2.6 | 2.4 | 4.0 | 3.5 | 3.1 | 2.8 | 2.5 | 2.3 |
| 2/200 x 45   | 4.4                                   | 3.9 | 3.5 | 3.1 | 2.9 | 2.6 | 4.2 | 3.8 | 3.4 | 3.1 | 2.8 | 2.6 |
| 240 x 63   | 4.7                                   | 4.1 | 3.8 | 3.4 | 3.1 | 2.9 | 4.4 | 4.0 | 3.7 | 3.3 | 3.1 | 2.8 |
| 2/240 x 45   | 5.1                                   | 4.6 | 4.2 | 3.9 | 3.7 | 3.4 | 4.8 | 4.4 | 4.1 | 3.8 | 3.6 | 3.3 |
| 300 x 63   | 5.6                                   | 5.0 | 4.6 | 4.3 | 4.1 | 3.9 | 5.3 | 4.8 | 4.5 | 4.2 | 4.0 | 3.8 |
| 300 x 75   | 5.9                                   | 5.3 | 4.8 | 4.5 | 4.3 | 4.1 | 5.5 | 5.0 | 4.7 | 4.4 | 4.2 | 4.0 |
| 2/300 x 45   | 6.1                                   | 5.5 | 5.1 | 4.8 | 4.5 | 4.3 | 5.7 | 5.3 | 4.9 | 4.6 | 4.4 | 4.2 |
| 360 x 63   | 6.5                                   | 5.9 | 5.4 | 5.1 | 4.8 | 4.6 | 6.0 | 5.6 | 5.2 | 4.9 | 4.7 | 4.5 |
| 400 x 63   | 7.0                                   | 6.4 | 5.9 | 5.6 | 5.3 | 5.0 | 6.5 | 6.1 | 5.7 | 5.4 | 5.1 | 4.9 |
| 400 x 75   | 7.3                                   | 6.7 | 6.2 | 5.9 | 5.6 | 5.3 | 6.8 | 6.3 | 6.0 | 5.7 | 5.4 | 5.2 |
| 2/400 x 45   | 7.5                                   | 7.0 | 6.5 | 6.1 | 5.8 | 4.8 | 7.0 | 6.6 | 6.2 | 5.9 | 5.0 | 4.7 |
| 450 x 63   | 7.6                                   | 7.0 | 6.6 | 6.2 | 5.9 | 5.6 | 7.1 | 6.7 | 6.3 | 6.0 | 5.7 | 5.5 |
| 2/450 x 63   | 8.7                                   | 8.2 | 7.7 | 7.4 | 7.1 | 6.8 | 8.1 | 7.7 | 7.4 | 7.1 | 6.9 | 6.6 |

- 1 Average hanging beam span =  $(H1 + H2) / 2$ , where H1 and H2 are the spans of the hanging beams on each side of the Strutting – Counter Beam.
- 2 All sections with depth to breadth ratio exceeding three must be restrained against rollover at supports.
- 3 Multiple sections nail laminated as per AS1684.2:2010.
- 4 Bearing length at end supports to be not less than 70mm.
- 5 Beam ends may be chamfer cut to a minimum depth of 90mm or D/3, whichever is greater.
- 6 NS signifies section size unlikely to be suitable.

## STRUTTING - HANGING BEAMS

### SUPPORTING UNDERPURLINS AND CEILING JOISTS

WIND CLASSIFICATION N1, N2, N3

| e-beam<br>Section<br>D X B<br>(mm)                   | Ceiling Load Width (CLW) (m)              |     |     |     |     |     |     |     |     |     |     |     |     |
|--|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|  | 2.4                                       |     |     |     | 3.0 |     |     |     | 3.6 |     |     |     |     |
|  | Roof Load Width (RLW) for Underpurlin (m) |     |     |     |     |     |     |     |     |     |     |     |     |
|  | 1.8                                       | 2.4 | 3.0 | 3.6 | 1.8 | 2.4 | 3.0 | 3.6 | 1.8 | 2.4 | 3.0 | 3.6 | 4.2 |
| <b>Maximum Span for Sheet Roof &amp; Ceiling (m)</b> |   |     |     |     |     |     |     |     |     |     |     |     |     |
| 170 x 63   | 3.6                                       | 3.5 | 3.3 | 3.2 | 3.5 | 3.3 | 3.2 | 3.1 | 3.3 | 3.2 | 3.1 | 3.0 | 2.9 |
| 2/170 x 35   | 3.7                                       | 3.6 | 3.5 | 3.3 | 3.6 | 3.5 | 3.3 | 3.2 | 3.5 | 3.3 | 3.2 | 3.1 | 3.0 |
| 2/170 x 45   | 3.9                                       | 3.8 | 3.7 | 3.6 | 3.8 | 3.7 | 3.6 | 3.5 | 3.7 | 3.6 | 3.5 | 3.3 | 3.3 |
| 200 x 63   | 4.1                                       | 3.9 | 3.8 | 3.7 | 3.9 | 3.8 | 3.7 | 3.6 | 3.8 | 3.7 | 3.6 | 3.5 | 3.4 |
| 2/200 x 35   | 4.2                                       | 4.1 | 3.9 | 3.8 | 4.1 | 3.9 | 3.8 | 3.7 | 3.9 | 3.8 | 3.7 | 3.6 | 3.6 |
| 2/200 x 45   | 4.4                                       | 4.3 | 4.1 | 4.0 | 4.3 | 4.1 | 4.0 | 3.9 | 4.1 | 4.0 | 3.9 | 3.8 | 3.8 |
| 240 x 63   | 4.7                                       | 4.5 | 4.4 | 4.2 | 4.5 | 4.4 | 4.2 | 4.1 | 4.4 | 4.2 | 4.1 | 4.0 | 4.0 |
| 2/240 x 45   | 5.0                                       | 4.9 | 4.7 | 4.6 | 4.9 | 4.7 | 4.6 | 4.5 | 4.7 | 4.6 | 4.5 | 4.4 | 4.3 |
| 300 x 63   | 5.5                                       | 5.3 | 5.1 | 5.0 | 5.3 | 5.1 | 5.0 | 4.9 | 5.1 | 5.0 | 4.9 | 4.8 | 4.7 |
| 300 x 75   | 5.7                                       | 5.5 | 5.3 | 5.2 | 5.5 | 5.3 | 5.2 | 5.1 | 5.3 | 5.2 | 5.1 | 5.0 | 4.9 |
| 2/300 x 45   | 5.9                                       | 5.7 | 5.5 | 5.4 | 5.7 | 5.6 | 5.4 | 5.3 | 5.5 | 5.4 | 5.3 | 5.2 | 5.1 |
| 360 x 63   | 6.2                                       | 6.0 | 5.8 | 5.7 | 6.0 | 5.9 | 5.7 | 5.6 | 5.8 | 5.7 | 5.6 | 5.4 | 5.3 |
| 400 x 63   | 6.7                                       | 6.5 | 6.3 | 6.1 | 6.5 | 6.3 | 6.2 | 6.0 | 6.3 | 6.1 | 6.0 | 5.9 | 5.8 |
| 400 x 75   | 7.0                                       | 6.7 | 6.6 | 6.4 | 6.8 | 6.6 | 6.4 | 6.2 | 6.6 | 6.4 | 6.2 | 6.1 | 6.0 |
| 2/400 x 45   | 7.2                                       | 7.0 | 6.8 | 6.6 | 7.0 | 6.8 | 6.6 | 6.5 | 6.8 | 6.6 | 6.5 | 6.4 | 6.2 |
| 450 x 63   | 7.3                                       | 7.1 | 6.9 | 6.7 | 7.1 | 6.9 | 6.7 | 6.5 | 6.9 | 6.7 | 6.5 | 6.4 | 6.3 |
| 2/450 x 63   | 8.3                                       | 8.1 | 7.9 | 7.7 | 8.1 | 7.9 | 7.7 | 7.6 | 7.9 | 7.7 | 7.6 | 7.4 | 7.3 |
| <b>Maximum Span for Tile Roof &amp; Ceiling (m)</b>  |   |     |     |     |     |     |     |     |     |     |     |     |     |
| 170 x 63   | 3.1                                       | 2.9 | 2.7 | 2.6 | 3.0 | 2.8 | 2.7 | 2.6 | 2.9 | 2.7 | 2.6 | 2.5 | 2.4 |
| 2/170 x 35   | 3.2                                       | 3.0 | 2.8 | 2.7 | 3.1 | 2.9 | 2.8 | 2.7 | 3.0 | 2.9 | 2.7 | 2.6 | 2.5 |
| 2/170 x 45   | 3.5                                       | 3.2 | 3.1 | 2.9 | 3.4 | 3.2 | 3.0 | 2.9 | 3.3 | 3.1 | 2.9 | 2.8 | 2.7 |
| 200 x 63   | 3.6                                       | 3.4 | 3.2 | 3.0 | 3.5 | 3.3 | 3.1 | 3.0 | 3.4 | 3.2 | 3.1 | 2.9 | 2.8 |
| 2/200 x 35   | 3.7                                       | 3.5 | 3.3 | 3.2 | 3.7 | 3.4 | 3.3 | 3.1 | 3.6 | 3.4 | 3.2 | 3.1 | 3.0 |
| 2/200 x 45   | 3.9                                       | 3.7 | 3.6 | 3.4 | 3.8 | 3.7 | 3.5 | 3.4 | 3.8 | 3.6 | 3.4 | 3.3 | 3.2 |
| 240 x 63   | 4.1                                       | 3.9 | 3.8 | 3.6 | 4.0 | 3.9 | 3.7 | 3.6 | 4.0 | 3.8 | 3.7 | 3.5 | 3.4 |
| 2/240 x 45   | 4.5                                       | 4.3 | 4.1 | 4.0 | 4.4 | 4.2 | 4.0 | 3.9 | 4.3 | 4.1 | 4.0 | 3.9 | 3.8 |
| 300 x 63   | 4.9                                       | 4.6 | 4.4 | 4.3 | 4.8 | 4.6 | 4.4 | 4.2 | 4.7 | 4.5 | 4.3 | 4.2 | 4.1 |
| 300 x 75   | 5.1                                       | 4.8 | 4.6 | 4.5 | 5.0 | 4.7 | 4.6 | 4.4 | 4.9 | 4.7 | 4.5 | 4.4 | 4.2 |
| 2/300 x 45   | 5.3                                       | 5.0 | 4.8 | 4.7 | 5.2 | 4.9 | 4.8 | 4.6 | 5.1 | 4.9 | 4.7 | 4.5 | 4.4 |
| 360 x 63   | 5.6                                       | 5.3 | 5.1 | 4.9 | 5.4 | 5.2 | 5.0 | 4.8 | 5.3 | 5.1 | 4.9 | 4.8 | 4.6 |
| 400 x 63   | 6.0                                       | 5.7 | 5.5 | 5.3 | 5.9 | 5.6 | 5.4 | 5.2 | 5.8 | 5.5 | 5.3 | 5.2 | 5.0 |
| 400 x 75   | 6.2                                       | 5.9 | 5.7 | 5.5 | 6.1 | 5.8 | 5.6 | 5.5 | 6.0 | 5.7 | 5.5 | 5.4 | 5.2 |
| 2/400 x 45   | 6.5                                       | 6.2 | 6.0 | 5.8 | 6.4 | 6.1 | 5.9 | 5.7 | 6.2 | 6.0 | 5.8 | 5.6 | 5.5 |
| 450 x 63   | 6.5                                       | 6.2 | 6.0 | 5.8 | 6.4 | 6.1 | 5.9 | 5.7 | 6.3 | 6.0 | 5.8 | 5.6 | 5.5 |
| 2/450 x 63   | 7.6                                       | 7.2 | 7.0 | 6.8 | 7.4 | 7.1 | 6.9 | 6.7 | 7.3 | 7.0 | 6.8 | 6.6 | 6.4 |

- All sections with depth to breadth ratio exceeding three must be restrained against rollover at supports.
- All sections with a depth to breadth ratio exceeding three must be laterally restrained at each strutting point in accordance with AS1684.2:2010.
- RLW for underpurlin is the average of the rafter spans on each side of the underpurlin supported by the Strutting – Hanging Beam.
- Underpurlin span assumed to be one-half the Strutting – Hanging Beam span.
- CLW is the average of the ceiling joist spans on each side of the Strutting – Hanging Beam.
- Multiple sections nail laminated as per AS1684.2:2010.
- Bearing length at end supports to be not less than 70mm.
- Beam ends may be chamfer cut to a minimum depth of 90mm or D/3, whichever is greater.

## COUNTER BEAMS

### SUPPORTING HANGING BEAMS

| e-beam<br>Section<br>D X B<br>(mm) | Ceiling Load Width 'CLW' (m) |     |     |     |     |     |     |     |
|------------------------------------|------------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                    | 2.4                          | 3.0 | 3.6 | 4.2 | 4.8 | 5.4 | 6.0 | 6.6 |
|                                    | Maximum Span (m)             |     |     |     |     |     |     |     |
| 150 x 35                           | 3.4                          | 3.2 | 3.0 | 2.9 | 2.8 | 2.7 | 2.6 | 2.5 |
| 150 x 45                           | 3.7                          | 3.4 | 3.3 | 3.1 | 3.0 | 2.9 | 2.8 | 2.7 |
| 170 x 35                           | 3.9                          | 3.6 | 3.4 | 3.3 | 3.1 | 3.0 | 2.8 | 2.7 |
| 170 x 45                           | 4.2                          | 3.9 | 3.7 | 3.5 | 3.4 | 3.2 | 3.1 | 3.0 |
| 200 x 35                           | 4.4                          | 4.1 | 3.8 | 3.6 | 3.5 | 3.2 | 3.1 | 3.0 |
| 200 x 45                           | 4.8                          | 4.5 | 4.3 | 4.1 | 3.9 | 3.8 | 3.7 | 3.6 |
| 200 x 63                           | 5.1                          | 4.9 | 4.7 | 4.5 | 4.4 | 4.2 | 4.1 | 4.0 |
| 240 x 35                           | 4.8                          | 4.4 | 4.1 | 4.0 | 3.8 | 3.6 | 3.5 | 3.4 |
| 240 x 45                           | 5.4                          | 5.2 | 5.0 | 4.8 | 4.6 | 4.3 | 4.2 | 4.1 |
| 240 x 63                           | 5.8                          | 5.6 | 5.3 | 5.2 | 5.0 | 4.9 | 4.8 | 4.7 |
| 300 x 45                           | 6.4                          | 6.0 | 5.6 | 5.3 | 5.1 | 4.8 | 4.7 | 4.6 |
| 300 x 63                           | 6.8                          | 6.5 | 6.3 | 6.1 | 5.9 | 5.7 | 5.6 | 5.5 |
| 300 x 75                           | 7.0                          | 6.7 | 6.5 | 6.3 | 6.1 | 6.0 | 5.8 | 5.7 |
| 360 x 63                           | 7.7                          | 7.4 | 7.1 | 6.9 | 6.7 | 6.5 | 6.4 | 6.3 |
| 400 x 45                           | 6.9                          | 6.4 | 6.1 | 5.7 | 5.5 | 5.3 | 5.1 | 5.0 |
| 400 x 63                           | 8.3                          | 7.9 | 7.7 | 7.4 | 7.2 | 7.1 | 6.9 | 6.8 |
| 400 x 75                           | 8.5                          | 8.2 | 7.9 | 7.7 | 7.5 | 7.3 | 7.2 | 7.0 |
| 450 x 63                           | 8.9                          | 8.6 | 8.3 | 8.1 | 7.9 | 7.7 | 7.4 | 7.2 |

- 1 Counter beams to support ceiling loads only – via hanging beams.
- 2 Bearing length at end supports to be not less than 70mm.
- 3 Beam ends may be chamfer cut to a minimum depth of 90mm or D/3, whichever is greater.



## VERANDAH BEAMS

## WIND CLASSIFICATION N1, N2, N3

| e-beam<br>Section<br>D X B<br>(mm) | Roof<br>Mass<br>kg/m <sup>2</sup> | Single Span               |     |     |     |     |     |     | Continuous Span |     |     |     |     |     |     |
|------------------------------------|-----------------------------------|---------------------------|-----|-----|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|-----|-----|
|                                    |                                   | Roof Load Width 'RLW' (m) |     |     |     |     |     |     |                 |     |     |     |     |     |     |
|                                    |                                   | 0.9                       | 1.2 | 1.5 | 1.8 | 2.1 | 2.4 | 2.7 | 0.9             | 1.2 | 1.5 | 1.8 | 2.1 | 2.4 | 2.7 |
|                                    |                                   | Maximum Span (m)          |     |     |     |     |     |     |                 |     |     |     |     |     |     |
| 130 x 35                           | 10                                | 3.6                       | 3.3 | 3.1 | 2.9 | 2.8 | 2.7 | 2.6 | 4.0             | 3.9 | 3.7 | 3.4 | 3.2 | 3.0 | 2.8 |
|                                    | 20                                | 3.3                       | 3.0 | 2.8 | 2.7 | 2.5 | 2.5 | 2.4 | 4.0             | 3.9 | 3.7 | 3.4 | 3.2 | 3.0 | 2.9 |
|                                    | 40                                | 2.7                       | 2.5 | 2.4 | 2.3 | 2.1 | 1.9 | 1.9 | 3.6             | 3.3 | 3.0 | 2.9 | 2.7 | 2.6 | 2.5 |
|                                    | 75                                | 2.3                       | 2.0 | 1.9 | 1.7 | 1.6 | 1.6 | 1.5 | 3.0             | 2.7 | 2.5 | 2.4 | 2.2 | 2.1 | 2.1 |
|                                    | 90                                | 2.1                       | 1.9 | 1.8 | 1.7 | 1.6 | 1.5 | 1.5 | 2.8             | 2.6 | 2.4 | 2.2 | 2.1 | 2.0 | 1.9 |
| 130 x 45                           | 10                                | 3.9                       | 3.5 | 3.3 | 3.1 | 2.9 | 2.9 | 2.8 | 4.2             | 4.2 | 4.1 | 3.8 | 3.5 | 3.3 | 3.1 |
|                                    | 20                                | 3.5                       | 3.2 | 3.0 | 2.8 | 2.7 | 2.6 | 2.5 | 4.2             | 4.2 | 4.0 | 3.7 | 3.5 | 3.4 | 3.2 |
|                                    | 40                                | 2.9                       | 2.7 | 2.5 | 2.4 | 2.3 | 2.2 | 2.1 | 3.9             | 3.5 | 3.3 | 3.1 | 2.9 | 2.8 | 2.7 |
|                                    | 75                                | 2.4                       | 2.2 | 2.0 | 1.9 | 1.8 | 1.7 | 1.6 | 3.2             | 2.9 | 2.7 | 2.5 | 2.4 | 2.3 | 2.2 |
|                                    | 90                                | 2.3                       | 2.1 | 1.9 | 1.7 | 1.7 | 1.6 | 1.6 | 3.1             | 2.8 | 2.6 | 2.4 | 2.3 | 2.2 | 2.1 |
| 130 x 63                           | 10                                | 4.2                       | 4.0 | 3.7 | 3.4 | 3.3 | 3.2 | 3.0 | 5.1             | 5.0 | 4.8 | 4.4 | 4.2 | 4.0 | 3.7 |
|                                    | 20                                | 3.8                       | 3.5 | 3.3 | 3.1 | 2.9 | 2.8 | 2.7 | 4.9             | 4.5 | 4.3 | 4.1 | 3.9 | 3.7 | 3.6 |
|                                    | 40                                | 3.2                       | 2.9 | 2.8 | 2.6 | 2.5 | 2.4 | 2.4 | 4.2             | 3.9 | 3.7 | 3.4 | 3.2 | 3.1 | 3.0 |
|                                    | 75                                | 2.7                       | 2.4 | 2.3 | 2.1 | 2.0 | 1.9 | 1.8 | 3.6             | 3.2 | 3.0 | 2.8 | 2.7 | 2.6 | 2.5 |
|                                    | 90                                | 2.5                       | 2.3 | 2.1 | 2.0 | 1.9 | 1.8 | 1.7 | 3.4             | 3.1 | 2.9 | 2.7 | 2.5 | 2.4 | 2.4 |
| 150 x 35                           | 10                                | 4.1                       | 3.8 | 3.5 | 3.3 | 3.2 | 3.0 | 2.9 | 5.0             | 4.8 | 4.2 | 3.9 | 3.6 | 3.4 | 3.2 |
|                                    | 20                                | 3.8                       | 3.4 | 3.2 | 3.0 | 2.8 | 2.7 | 2.7 | 4.8             | 4.4 | 4.2 | 4.0 | 3.7 | 3.4 | 3.3 |
|                                    | 40                                | 3.1                       | 2.9 | 2.7 | 2.6 | 2.4 | 2.4 | 2.3 | 4.1             | 3.8 | 3.5 | 3.3 | 3.1 | 3.0 | 2.9 |
|                                    | 75                                | 2.6                       | 2.4 | 2.2 | 2.0 | 1.9 | 1.8 | 1.7 | 3.4             | 3.1 | 2.9 | 2.7 | 2.6 | 2.5 | 2.4 |
|                                    | 90                                | 2.5                       | 2.2 | 2.0 | 1.9 | 1.8 | 1.7 | 1.6 | 3.2             | 3.0 | 2.7 | 2.6 | 2.5 | 2.4 | 2.2 |
| 150 x 45                           | 10                                | 4.4                       | 4.1 | 3.8 | 3.5 | 3.4 | 3.3 | 3.1 | 5.2             | 5.1 | 4.9 | 4.5 | 4.1 | 3.8 | 3.5 |
|                                    | 20                                | 4.0                       | 3.6 | 3.4 | 3.2 | 3.0 | 2.9 | 2.8 | 5.0             | 4.7 | 4.4 | 4.2 | 4.1 | 3.9 | 3.7 |
|                                    | 40                                | 3.3                       | 3.0 | 2.8 | 2.7 | 2.6 | 2.5 | 2.4 | 4.3             | 4.1 | 3.8 | 3.6 | 3.4 | 3.2 | 3.1 |
|                                    | 75                                | 2.8                       | 2.5 | 2.4 | 2.2 | 2.1 | 2.0 | 1.9 | 3.7             | 3.4 | 3.1 | 3.0 | 2.8 | 2.7 | 2.6 |
|                                    | 90                                | 2.6                       | 2.4 | 2.2 | 2.1 | 2.0 | 1.8 | 1.8 | 3.6             | 3.2 | 3.0 | 2.8 | 2.6 | 2.5 | 2.4 |
| 150 x 63                           | 10                                | 4.8                       | 4.6 | 4.3 | 4.0 | 3.8 | 3.6 | 3.5 | 5.7             | 5.5 | 5.3 | 5.1 | 4.9 | 4.7 | 4.3 |
|                                    | 20                                | 4.3                       | 4.0 | 3.8 | 3.5 | 3.3 | 3.2 | 3.0 | 5.3             | 5.0 | 4.8 | 4.5 | 4.4 | 4.2 | 4.1 |
|                                    | 40                                | 3.7                       | 3.3 | 3.1 | 3.0 | 2.8 | 2.7 | 2.6 | 4.7             | 4.4 | 4.2 | 3.9 | 3.7 | 3.6 | 3.4 |
|                                    | 75                                | 3.1                       | 2.8 | 2.6 | 2.5 | 2.3 | 2.2 | 2.2 | 4.1             | 3.7 | 3.5 | 3.3 | 3.1 | 3.0 | 2.9 |
|                                    | 90                                | 2.9                       | 2.6 | 2.5 | 2.4 | 2.2 | 2.1 | 2.0 | 3.9             | 3.6 | 3.3 | 3.1 | 3.0 | 2.8 | 2.7 |
| 170 x 35                           | 10                                | 4.5                       | 4.4 | 4.0 | 3.8 | 3.5 | 3.4 | 3.2 | 5.4             | 5.1 | 4.8 | 4.3 | 4.0 | 3.7 | 3.5 |
|                                    | 20                                | 4.2                       | 3.8 | 3.5 | 3.3 | 3.2 | 3.0 | 2.9 | 5.2             | 4.9 | 4.6 | 4.4 | 4.1 | 3.9 | 3.6 |
|                                    | 40                                | 3.5                       | 3.2 | 3.0 | 2.8 | 2.7 | 2.6 | 2.5 | 4.5             | 4.2 | 4.0 | 3.7 | 3.6 | 3.4 | 3.2 |
|                                    | 75                                | 2.9                       | 2.7 | 2.5 | 2.3 | 2.2 | 2.1 | 2.0 | 3.9             | 3.6 | 3.3 | 3.1 | 3.0 | 2.8 | 2.7 |
|                                    | 90                                | 2.8                       | 2.5 | 2.4 | 2.2 | 2.1 | 1.9 | 1.9 | 3.7             | 3.3 | 3.1 | 2.9 | 2.8 | 2.6 | 2.5 |
| 170 x 45                           | 10                                | 4.9                       | 4.6 | 4.4 | 4.1 | 3.9 | 3.7 | 3.5 | 5.7             | 5.6 | 5.4 | 5.1 | 4.8 | 4.4 | 4.1 |
|                                    | 20                                | 4.4                       | 4.1 | 3.8 | 3.6 | 3.4 | 3.2 | 3.1 | 5.5             | 5.1 | 4.9 | 4.6 | 4.4 | 4.3 | 4.1 |
|                                    | 40                                | 3.7                       | 3.4 | 3.1 | 3.0 | 2.9 | 2.7 | 2.6 | 4.8             | 4.4 | 4.2 | 4.0 | 3.8 | 3.6 | 3.5 |
|                                    | 75                                | 3.1                       | 2.9 | 2.7 | 2.5 | 2.4 | 2.3 | 2.2 | 4.1             | 3.8 | 3.6 | 3.3 | 3.2 | 3.0 | 2.9 |
|                                    | 90                                | 3.0                       | 2.7 | 2.5 | 2.4 | 2.2 | 2.1 | 2.0 | 4.0             | 3.6 | 3.3 | 3.2 | 3.0 | 2.9 | 2.7 |

## VERANDAH BEAMS CONTINUED

## WIND CLASSIFICATION N1, N2, N3

| e-beam Section<br>D X B<br>(mm) | Roof Mass<br>kg/m <sup>2</sup> | Single Span               |     |     |     |     |     |     | Continuous Span |     |     |     |     |     |     |
|---------------------------------|--------------------------------|---------------------------|-----|-----|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|-----|-----|
|                                 |                                | Roof Load Width 'RLW' (m) |     |     |     |     |     |     |                 |     |     |     |     |     |     |
|                                 |                                | 0.9                       | 1.2 | 1.5 | 1.8 | 2.1 | 2.4 | 2.7 | 0.9             | 1.2 | 1.5 | 1.8 | 2.1 | 2.4 | 2.7 |
| Maximum Span (m)                |                                |                           |     |     |     |     |     |     |                 |     |     |     |     |     |     |
| 170 x 63                        | 10                             | 5.2                       | 4.9 | 4.7 | 4.5 | 4.3 | 4.1 | 4.0 | 6.2             | 6.1 | 5.8 | 5.6 | 5.4 | 5.2 | 5.0 |
|                                 | 20                             | 4.7                       | 4.4 | 4.2 | 4.0 | 3.8 | 3.6 | 3.4 | 5.8             | 5.5 | 5.2 | 5.0 | 4.8 | 4.6 | 4.5 |
|                                 | 40                             | 4.1                       | 3.8 | 3.5 | 3.3 | 3.1 | 3.0 | 2.9 | 5.1             | 4.8 | 4.5 | 4.3 | 4.2 | 4.0 | 3.9 |
|                                 | 75                             | 3.5                       | 3.2 | 2.9 | 2.7 | 2.7 | 2.5 | 2.4 | 4.5             | 4.2 | 4.0 | 3.7 | 3.6 | 3.4 | 3.2 |
|                                 | 90                             | 3.3                       | 3.0 | 2.8 | 2.6 | 2.5 | 2.4 | 2.3 | 4.3             | 4.0 | 3.7 | 3.6 | 3.3 | 3.2 | 3.1 |
| 200 x 35                        | 10                             | 5.3                       | 5.0 | 4.7 | 4.4 | 3.9 | 3.6 | 3.4 | 6.1             | 5.7 | 5.2 | 4.9 | 4.6 | 4.3 | 4.1 |
|                                 | 20                             | 4.8                       | 4.4 | 4.2 | 4.0 | 3.7 | 3.6 | 3.4 | 5.9             | 5.5 | 5.2 | 5.0 | 4.8 | 4.4 | 4.2 |
|                                 | 40                             | 4.1                       | 3.7 | 3.5 | 3.3 | 3.1 | 3.0 | 2.8 | 5.1             | 4.8 | 4.5 | 4.3 | 4.1 | 4.0 | 3.8 |
|                                 | 75                             | 3.4                       | 3.1 | 2.9 | 2.7 | 2.6 | 2.5 | 2.4 | 4.4             | 4.1 | 3.9 | 3.7 | 3.5 | 3.3 | 3.2 |
|                                 | 90                             | 3.2                       | 2.9 | 2.7 | 2.6 | 2.5 | 2.3 | 2.3 | 4.2             | 4.0 | 3.7 | 3.4 | 3.3 | 3.1 | 3.0 |
| 200 x 45                        | 10                             | 5.4                       | 5.2 | 4.9 | 4.8 | 4.5 | 4.3 | 4.2 | 6.5             | 6.3 | 6.0 | 5.7 | 5.3 | 5.1 | 4.9 |
|                                 | 20                             | 4.9                       | 4.6 | 4.4 | 4.2 | 4.0 | 3.8 | 3.6 | 6.1             | 5.7 | 5.5 | 5.2 | 5.0 | 4.9 | 4.7 |
|                                 | 40                             | 4.3                       | 4.0 | 3.7 | 3.5 | 3.3 | 3.1 | 3.0 | 5.3             | 5.0 | 4.8 | 4.5 | 4.3 | 4.2 | 4.1 |
|                                 | 75                             | 3.7                       | 3.4 | 3.1 | 2.9 | 2.8 | 2.6 | 2.5 | 4.7             | 4.4 | 4.1 | 3.9 | 3.7 | 3.6 | 3.4 |
|                                 | 90                             | 3.5                       | 3.2 | 2.9 | 2.8 | 2.6 | 2.5 | 2.4 | 4.5             | 4.2 | 4.0 | 3.7 | 3.6 | 3.3 | 3.2 |
| 200 x 63                        | 10                             | 5.8                       | 5.5 | 5.2 | 5.0 | 4.9 | 4.7 | 4.6 | 7.2             | 6.8 | 6.5 | 6.3 | 6.0 | 5.8 | 5.6 |
|                                 | 20                             | 5.2                       | 5.0 | 4.8 | 4.5 | 4.3 | 4.2 | 4.0 | 6.5             | 6.2 | 5.9 | 5.6 | 5.4 | 5.2 | 5.1 |
|                                 | 40                             | 4.6                       | 4.4 | 4.1 | 3.9 | 3.7 | 3.5 | 3.4 | 5.7             | 5.4 | 5.1 | 4.9 | 4.8 | 4.5 | 4.4 |
|                                 | 75                             | 4.0                       | 3.7 | 3.5 | 3.2 | 3.1 | 2.9 | 2.8 | 5.0             | 4.7 | 4.4 | 4.3 | 4.1 | 4.0 | 3.8 |
|                                 | 90                             | 3.9                       | 3.5 | 3.3 | 3.0 | 2.9 | 2.8 | 2.7 | 4.8             | 4.5 | 4.3 | 4.1 | 3.9 | 3.7 | 3.6 |
| 240 x 45                        | 10                             | 6.2                       | 5.8 | 5.6 | 5.3 | 5.1 | 5.0 | 4.8 | 7.7             | 7.3 | 6.9 | 6.5 | 6.0 | 5.7 | 5.5 |
|                                 | 20                             | 5.5                       | 5.2 | 5.0 | 4.8 | 4.6 | 4.5 | 4.3 | 6.9             | 6.5 | 6.2 | 6.0 | 5.7 | 5.5 | 5.3 |
|                                 | 40                             | 4.9                       | 4.6 | 4.3 | 4.2 | 4.0 | 3.8 | 3.6 | 6.1             | 5.7 | 5.4 | 5.2 | 5.0 | 4.8 | 4.7 |
|                                 | 75                             | 4.3                       | 4.0 | 3.8 | 3.5 | 3.3 | 3.2 | 3.1 | 5.3             | 5.0 | 4.7 | 4.5 | 4.3 | 4.2 | 4.1 |
|                                 | 90                             | 4.1                       | 3.8 | 3.5 | 3.3 | 3.1 | 3.0 | 2.9 | 5.1             | 4.8 | 4.5 | 4.3 | 4.2 | 4.0 | 3.9 |
| 240 x 63                        | 10                             | 6.5                       | 6.1 | 5.9 | 5.7 | 5.5 | 5.3 | 5.2 | NS              | 7.7 | 7.4 | 7.2 | 6.8 | 6.6 | 6.4 |
|                                 | 20                             | 5.9                       | 5.6 | 5.4 | 5.1 | 5.0 | 4.8 | 4.6 | 7.4             | 7.0 | 6.6 | 6.4 | 6.2 | 6.0 | 5.8 |
|                                 | 40                             | 5.3                       | 5.0 | 4.7 | 4.5 | 4.3 | 4.2 | 4.1 | 6.5             | 6.2 | 5.8 | 5.6 | 5.4 | 5.2 | 5.1 |
|                                 | 75                             | 4.6                       | 4.3 | 4.1 | 3.9 | 3.7 | 3.6 | 3.4 | 5.7             | 5.4 | 5.1 | 4.9 | 4.7 | 4.5 | 4.4 |
|                                 | 90                             | 4.4                       | 4.2 | 3.9 | 3.7 | 3.5 | 3.3 | 3.2 | 5.5             | 5.2 | 4.9 | 4.7 | 4.5 | 4.4 | 4.2 |
| 300 x 45                        | 10                             | 7.2                       | 6.8 | 6.5 | 6.2 | 6.0 | 5.8 | 5.6 | NS              | NS  | 8.0 | 7.5 | 7.1 | 6.7 | 6.3 |
|                                 | 20                             | 6.5                       | 6.1 | 5.8 | 5.6 | 5.4 | 5.2 | 5.0 | NS              | 7.6 | 7.3 | 7.0 | 6.7 | 6.5 | 6.3 |
|                                 | 40                             | 5.7                       | 5.4 | 5.1 | 4.9 | 4.7 | 4.6 | 4.4 | 7.2             | 6.7 | 6.4 | 6.1 | 5.9 | 5.7 | 5.5 |
|                                 | 75                             | 5.0                       | 4.7 | 4.5 | 4.2 | 4.1 | 4.0 | 3.8 | 6.3             | 5.9 | 5.5 | 5.3 | 5.1 | 4.9 | 4.8 |
|                                 | 90                             | 4.8                       | 4.5 | 4.3 | 4.1 | 3.9 | 3.7 | 3.6 | 6.0             | 5.6 | 5.3 | 5.1 | 4.9 | 4.8 | 4.6 |
| 300 x 63                        | 10                             | 7.5                       | 7.2 | 6.9 | 6.6 | 6.4 | 6.2 | 6.0 | NS              | NS  | NS  | NS  | 8.0 | 7.7 | 7.5 |
|                                 | 20                             | 6.9                       | 6.5 | 6.2 | 6.0 | 5.8 | 5.6 | 5.4 | NS              | NS  | 7.7 | 7.4 | 7.2 | 7.0 | 6.7 |
|                                 | 40                             | 6.1                       | 5.8 | 5.5 | 5.3 | 5.1 | 5.0 | 4.8 | 7.6             | 7.2 | 6.8 | 6.6 | 6.4 | 6.2 | 6.0 |
|                                 | 75                             | 5.4                       | 5.1 | 4.8 | 4.6 | 4.4 | 4.3 | 4.2 | 6.7             | 6.3 | 6.0 | 5.7 | 5.5 | 5.3 | 5.2 |
|                                 | 90                             | 5.2                       | 4.9 | 4.6 | 4.5 | 4.2 | 4.1 | 4.0 | 6.5             | 6.1 | 5.8 | 5.5 | 5.3 | 5.1 | 5.0 |

NS indicates that this span is not available due to manufacturing and transport length limitations.

1 Bearing length at end supports to be not less than 30mm and at intermediate supports for continuous span at least 65mm.

**LINTELS**

IN SINGLE OR UPPER STOREY  
LOAD BEARING EXTERNAL WALLS

WIND CLASSIFICATION N1, N2, N3

| e-beam<br>Section<br>D X B<br>(mm) | Sheet Roof and Ceiling    |     |     |     |     |     |                     |                     |                     |                     |
|------------------------------------|---------------------------|-----|-----|-----|-----|-----|---------------------|---------------------|---------------------|---------------------|
|                                    | Roof Load Width 'RLW' (m) |     |     |     |     |     |                     |                     |                     |                     |
|                                    | 1.8                       | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 | 5.4                 | 6.0                 | 6.6                 | 7.2                 |
|                                    | Maximum Span (m)          |     |     |     |     |     |                     |                     |                     |                     |
| 150 x 35                           | 2.9                       | 2.7 | 2.6 | 2.5 | 2.4 | 2.3 | 2.1                 | 2.0                 | 1.9                 | 1.8                 |
| 150 x 45                           | 3.1                       | 2.9 | 2.7 | 2.6 | 2.5 | 2.4 | 2.4                 | 2.2                 | 2.1                 | 2.1                 |
| 170 x 35                           | 3.2                       | 3.0 | 2.8 | 2.7 | 2.6 | 2.5 | 2.4                 | 2.4                 | 2.3                 | 2.2                 |
| 170 x 45                           | 3.3                       | 3.1 | 3.0 | 2.8 | 2.7 | 2.6 | 2.5                 | 2.5                 | 2.4                 | 2.4                 |
| 200 x 35                           | 3.6                       | 3.3 | 3.1 | 3.0 | 2.9 | 2.8 | 2.7                 | 2.7                 | 2.6                 | 2.5                 |
| 200 x 45                           | 3.7                       | 3.5 | 3.3 | 3.2 | 3.0 | 2.9 | 2.9                 | 2.8                 | 2.7                 | 2.7                 |
| 200 x 63                           | 4.0                       | 3.8 | 3.6 | 3.4 | 3.3 | 3.2 | 3.1                 | 3.0                 | 3.0                 | 2.9                 |
| 240 x 35                           | 4.0                       | 3.8 | 3.6 | 3.4 | 3.3 | 3.2 | 3.1                 | 3.0                 | 2.9                 | 2.9                 |
| 240 x 45                           | 4.3                       | 4.0 | 3.8 | 3.6 | 3.5 | 3.4 | 3.3                 | 3.2                 | 3.1                 | 3.0                 |
| 240 x 63                           | 4.6                       | 4.3 | 4.1 | 3.9 | 3.8 | 3.6 | 3.5                 | 3.5                 | 3.4                 | 3.3                 |
| 300 x 45                           | 5.0                       | 4.8 | 4.5 | 4.2 | 4.1 | 4.0 | 3.9                 | 3.8                 | 3.7                 | 3.6                 |
| 300 x 63                           | 5.4                       | 5.1 | 4.8 | 4.6 | 4.5 | 4.3 | 4.2                 | 4.1                 | 4.0                 | 3.9                 |
| 300 x 75                           | 5.6                       | 5.3 | 5.0 | 4.8 | 4.7 | 4.5 | 4.4                 | 4.2                 | 4.1                 | 4.1                 |
| 2/300 x 45                         | 5.8                       | 5.5 | 5.3 | 5.1 | 4.9 | 4.8 | 4.6                 | 4.5                 | 4.4                 | 4.3                 |
| 360 x 63                           | 6.1                       | 5.7 | 5.5 | 5.3 | 5.1 | 5.0 | 4.8                 | 4.8                 | 4.6                 | 4.5                 |
| 400 x 45                           | 6.1                       | 5.8 | 5.5 | 5.3 | 5.1 | 5.0 | 4.8 <sub>(45)</sub> | 4.7 <sub>(45)</sub> | 4.6 <sub>(45)</sub> | 4.3 <sub>(45)</sub> |
| 400 x 63                           | 6.6                       | 6.2 | 5.9 | 5.7 | 5.5 | 5.3 | 5.2                 | 5.1                 | 5.0 <sub>(45)</sub> | 4.9 <sub>(45)</sub> |
| 400 x 75                           | 6.9                       | 6.4 | 6.1 | 5.9 | 5.7 | 5.5 | 5.4                 | 5.3                 | 5.2                 | 5.1 <sub>(45)</sub> |
| 2/400 x 45                         | 7.1                       | 6.7 | 6.4 | 6.1 | 5.9 | 5.8 | 5.6                 | 5.5                 | 5.4                 | 5.3                 |
| 450 x 63                           | 7.2                       | 6.8 | 6.4 | 6.2 | 6.0 | 5.8 | 5.6                 | 5.5 <sub>(45)</sub> | 5.4 <sub>(45)</sub> | 5.3 <sub>(70)</sub> |

| e-beam<br>Section<br>D X B<br>(mm) | Tile Roof and Ceiling     |     |     |     |     |                     |                     |                     |                     |                     |
|------------------------------------|---------------------------|-----|-----|-----|-----|---------------------|---------------------|---------------------|---------------------|---------------------|
|                                    | Roof Load Width 'RLW' (m) |     |     |     |     |                     |                     |                     |                     |                     |
|                                    | 1.8                       | 2.4 | 3.0 | 3.6 | 4.2 | 4.8                 | 5.4                 | 6.0                 | 6.6                 | 7.2                 |
|                                    | Maximum Span (m)          |     |     |     |     |                     |                     |                     |                     |                     |
| 150 x 35                           | 2.3                       | 2.0 | 1.9 | 1.8 | 1.7 | 1.6                 | 1.5                 | 1.5                 | 1.4                 | 1.4                 |
| 150 x 45                           | 2.4                       | 2.2 | 2.0 | 1.9 | 1.8 | 1.7                 | 1.7                 | 1.6                 | 1.5                 | 1.5                 |
| 170 x 35                           | 2.6                       | 2.3 | 2.2 | 2.0 | 1.9 | 1.8                 | 1.7                 | 1.7                 | 1.6                 | 1.6                 |
| 170 x 45                           | 2.7                       | 2.5 | 2.3 | 2.2 | 2.0 | 1.9                 | 1.9                 | 1.8                 | 1.7                 | 1.7                 |
| 200 x 35                           | 2.9                       | 2.6 | 2.5 | 2.4 | 2.2 | 2.1                 | 2.0                 | 1.9                 | 1.9                 | 1.8                 |
| 200 x 45                           | 3.1                       | 2.8 | 2.6 | 2.5 | 2.4 | 2.3                 | 2.2                 | 2.1                 | 2.0                 | 2.0                 |
| 200 x 63                           | 3.4                       | 3.1 | 2.9 | 2.8 | 2.6 | 2.6                 | 2.5                 | 2.4                 | 2.3                 | 2.2                 |
| 240 x 35                           | 3.4                       | 3.1 | 2.9 | 2.8 | 2.6 | 2.6                 | 2.5                 | 2.4                 | 2.3                 | 2.2                 |
| 240 x 45                           | 3.6                       | 3.3 | 3.1 | 3.0 | 2.8 | 2.7                 | 2.6                 | 2.5                 | 2.5                 | 2.4                 |
| 240 x 63                           | 3.8                       | 3.6 | 3.4 | 3.2 | 3.1 | 3.0                 | 2.9                 | 2.8                 | 2.7                 | 2.6                 |
| 300 x 45                           | 4.1                       | 3.9 | 3.7 | 3.5 | 3.4 | 3.2                 | 3.2                 | 3.1                 | 3.0                 | 2.9                 |
| 300 x 63                           | 4.5                       | 4.2 | 4.0 | 3.8 | 3.7 | 3.6                 | 3.5                 | 3.4                 | 3.3                 | 3.2                 |
| 300 x 75                           | 4.7                       | 4.3 | 4.1 | 3.9 | 3.9 | 3.7                 | 3.6                 | 3.5                 | 3.5                 | 3.4                 |
| 2/300 x 45                         | 4.9                       | 4.6 | 4.3 | 4.1 | 4.0 | 3.9                 | 3.8                 | 3.7                 | 3.6                 | 3.6                 |
| 360 x 63                           | 5.1                       | 4.8 | 4.6 | 4.3 | 4.2 | 4.0                 | 3.9                 | 3.8                 | 3.8                 | 3.7                 |
| 400 x 45                           | 5.1                       | 4.8 | 4.6 | 4.3 | 4.2 | 4.0                 | 3.9                 | 3.8 <sub>(45)</sub> | 3.8 <sub>(45)</sub> | 3.7 <sub>(45)</sub> |
| 400 x 63                           | 5.5                       | 5.2 | 4.9 | 4.7 | 4.6 | 4.4                 | 4.2                 | 4.1                 | 4.0                 | 4.0                 |
| 400 x 75                           | 5.8                       | 5.4 | 5.1 | 4.9 | 4.8 | 4.6                 | 4.4                 | 4.3                 | 4.2                 | 4.1 <sub>(45)</sub> |
| 2/400 x 45                         | 6.0                       | 5.6 | 5.3 | 5.1 | 5.0 | 4.8                 | 4.7                 | 4.6                 | 4.4                 | 4.3                 |
| 450 x 63                           | 6.1                       | 5.6 | 5.3 | 5.1 | 5.0 | 4.8 <sub>(45)</sub> | 4.7 <sub>(45)</sub> | 4.6 <sub>(45)</sub> | 4.4 <sub>(45)</sub> | 4.3 <sub>(70)</sub> |

- 1 Bearing length to be not less than 35mm unless indicated otherwise by inclusion of a subscript.
- 2 Subscript values indicate the required minimum bearing length in millimetres.
- 3 Multiple sections to be nail laminated in accordance with AS1684.2:2010.
- 4 Lintels to be used in conjunction with top plates, ledgers and head trimmers.
- 5 It is recommended that a clearance of at least 15mm is allowed over non-loadbearing window or door framing.

## LINTELS

IN LOWER STOREY LOAD BEARING EXTERNAL WALLS

WIND CLASSIFICATION N1, N2, N3

| Sheet Roof and Ceiling             |                            |     |     |     |     |     |     |     |     |     |     |     |     |     |                     |
|------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------------|
| e-beam<br>Section<br>D X B<br>(mm) | Floor Load Width 'FLW' (m) |     |     |     |     |     |     |     |     |     |     |     |     |     |                     |
|                                    | 1.8                        |     |     |     |     | 2.4 |     |     |     |     | 3.0 |     |     |     |                     |
|                                    | Roof Load Width 'RLW' (m)  |     |     |     |     |     |     |     |     |     |     |     |     |     |                     |
|                                    | 1.8                        | 3.0 | 4.2 | 5.4 | 6.6 | 1.8 | 3.0 | 4.2 | 5.4 | 6.6 | 1.8 | 3.0 | 4.2 | 5.4 | 6.6                 |
| Maximum Span (m)                   |                            |     |     |     |     |     |     |     |     |     |     |     |     |     |                     |
| 150 x 35                           | 1.9                        | 1.8 | 1.7 | 1.7 | 1.6 | 1.8 | 1.7 | 1.6 | 1.6 | 1.5 | 1.7 | 1.6 | 1.6 | 1.5 | 1.5                 |
| 150 x 45                           | 2.0                        | 1.9 | 1.8 | 1.8 | 1.7 | 1.9 | 1.8 | 1.8 | 1.7 | 1.6 | 1.8 | 1.7 | 1.7 | 1.6 | 1.6                 |
| 150 x 75                           | 2.4                        | 2.2 | 2.2 | 2.1 | 2.0 | 2.2 | 2.1 | 2.0 | 2.0 | 1.9 | 2.1 | 2.0 | 2.0 | 1.9 | 1.9                 |
| 170 x 35                           | 2.1                        | 2.0 | 1.9 | 1.9 | 1.8 | 2.0 | 1.9 | 1.8 | 1.8 | 1.7 | 1.9 | 1.8 | 1.8 | 1.7 | 1.7                 |
| 170 x 45                           | 2.3                        | 2.2 | 2.1 | 2.0 | 1.9 | 2.1 | 2.0 | 2.0 | 1.9 | 1.8 | 2.0 | 1.9 | 1.9 | 1.8 | 1.8                 |
| 200 x 35                           | 2.5                        | 2.3 | 2.2 | 2.2 | 2.1 | 2.3 | 2.2 | 2.1 | 2.1 | 2.0 | 2.2 | 2.1 | 2.0 | 2.0 | 1.9                 |
| 200 x 45                           | 2.6                        | 2.5 | 2.4 | 2.3 | 2.2 | 2.5 | 2.4 | 2.3 | 2.2 | 2.1 | 2.4 | 2.3 | 2.2 | 2.1 | 2.1                 |
| 200 x 63                           | 2.9                        | 2.8 | 2.7 | 2.6 | 2.5 | 2.8 | 2.6 | 2.5 | 2.5 | 2.4 | 2.6 | 2.5 | 2.4 | 2.4 | 2.3                 |
| 2/200 x 35                         | 3.1                        | 3.0 | 2.9 | 2.8 | 2.7 | 3.0 | 2.8 | 2.7 | 2.6 | 2.6 | 2.8 | 2.7 | 2.6 | 2.5 | 2.5                 |
| 240 x 35                           | 2.9                        | 2.8 | 2.7 | 2.6 | 2.5 | 2.8 | 2.6 | 2.5 | 2.5 | 2.4 | 2.6 | 2.5 | 2.4 | 2.4 | 2.3                 |
| 240 x 45                           | 3.1                        | 3.0 | 2.9 | 2.8 | 2.7 | 3.0 | 2.8 | 2.7 | 2.6 | 2.6 | 2.8 | 2.7 | 2.6 | 2.5 | 2.5                 |
| 240 x 63                           | 3.4                        | 3.2 | 3.1 | 3.0 | 3.0 | 3.2 | 3.1 | 3.0 | 2.9 | 2.8 | 3.1 | 3.0 | 2.9 | 2.8 | 2.7                 |
| 2/240 x 35                         | 3.5                        | 3.4 | 3.3 | 3.2 | 3.1 | 3.4 | 3.3 | 3.2 | 3.1 | 3.0 | 3.2 | 3.1 | 3.1 | 3.0 | 2.9                 |
| 2/240 x 45                         | 3.7                        | 3.6 | 3.5 | 3.4 | 3.3 | 3.5 | 3.4 | 3.3 | 3.2 | 3.2 | 3.4 | 3.3 | 3.2 | 3.2 | 3.1                 |
| 300 x 45                           | 3.7                        | 3.5 | 3.4 | 3.3 | 3.2 | 3.5 | 3.4 | 3.3 | 3.2 | 3.1 | 3.4 | 3.3 | 3.2 | 3.1 | 3.0                 |
| 300 x 63                           | 4.0                        | 3.8 | 3.7 | 3.6 | 3.5 | 3.8 | 3.7 | 3.6 | 3.5 | 3.4 | 3.6 | 3.5 | 3.4 | 3.4 | 3.3                 |
| 300 x 75                           | 4.1                        | 4.0 | 3.9 | 3.7 | 3.6 | 3.9 | 3.8 | 3.7 | 3.6 | 3.5 | 3.8 | 3.7 | 3.6 | 3.5 | 3.4                 |
| 2/300 x 45                         | 4.3                        | 4.2 | 4.0 | 3.9 | 3.8 | 4.1 | 4.0 | 3.9 | 3.8 | 3.7 | 4.0 | 3.9 | 3.8 | 3.7 | 3.6                 |
| 360 x 63                           | 4.5                        | 4.4 | 4.2 | 4.1 | 4.0 | 4.3 | 4.2 | 4.1 | 4.0 | 3.9 | 4.2 | 4.0 | 3.9 | 3.9 | 3.8                 |
| 400 x 45                           | 4.5                        | 4.4 | 4.2 | 4.1 | 4.0 | 4.3 | 4.2 | 4.1 | 4.0 | 3.9 | 4.1 | 4.0 | 3.9 | 3.8 | 3.8 <sub>(45)</sub> |
| 400 x 63                           | 4.9                        | 4.7 | 4.6 | 4.4 | 4.3 | 4.7 | 4.5 | 4.4 | 4.3 | 4.2 | 4.5 | 4.4 | 4.3 | 4.2 | 4.1                 |
| 400 x 75                           | 5.1                        | 4.9 | 4.8 | 4.6 | 4.5 | 4.9 | 4.7 | 4.6 | 4.5 | 4.4 | 4.7 | 4.6 | 4.4 | 4.4 | 4.3                 |
| 450 x 63                           | 5.3                        | 5.1 | 5.0 | 4.8 | 4.7 | 5.1 | 4.9 | 4.8 | 4.7 | 4.6 | 4.9 | 4.8 | 4.7 | 4.6 | 4.5                 |

**1** Bearing length to be not less than 35mm unless indicated otherwise by inclusion of a subscript.

**2** Subscript values indicate the required minimum bearing length in millimetres.

**3** Multiple sections to be nail laminated in accordance with AS1684.2:2010.

**4** Lintels to be used in conjunction with top plates, ledgers and head trimmers.

**5** It is recommended that a clearance of at least 15mm is allowed over non-loadbearing window or door framing.

## LINTELS

IN LOWER STOREY LOAD BEARING EXTERNAL WALLS

WIND CLASSIFICATION N1, N2, N3

| Tile Roof and Ceiling              |                            |     |     |                     |                     |     |     |                     |                     |                     |                     |                     |                     |                     |                     |
|------------------------------------|----------------------------|-----|-----|---------------------|---------------------|-----|-----|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| e-beam<br>Section<br>D X B<br>(mm) | Floor Load Width 'FLW' (m) |     |     |                     |                     |     |     |                     |                     |                     |                     |                     |                     |                     |                     |
|                                    | 1.8                        |     |     |                     |                     | 2.4 |     |                     |                     |                     | 3.0                 |                     |                     |                     |                     |
|                                    | Roof Load Width 'RLW' (m)  |     |     |                     |                     |     |     |                     |                     |                     |                     |                     |                     |                     |                     |
|                                    | 1.8                        | 3.0 | 4.2 | 5.4                 | 6.6                 | 1.8 | 3.0 | 4.2                 | 5.4                 | 6.6                 | 1.8                 | 3.0                 | 4.2                 | 5.4                 | 6.6                 |
| Maximum Span (m)                   |                            |     |     |                     |                     |     |     |                     |                     |                     |                     |                     |                     |                     |                     |
| 150 x 35                           | 1.7                        | 1.6 | 1.5 | 1.4                 | 1.3                 | 1.7 | 1.5 | 1.4                 | 1.4                 | 1.3                 | 1.6                 | 1.5                 | 1.4                 | 1.3                 | 1.3                 |
| 150 x 45                           | 1.9                        | 1.7 | 1.6 | 1.5                 | 1.4                 | 1.8 | 1.6 | 1.5                 | 1.5                 | 1.4                 | 1.7                 | 1.6                 | 1.5                 | 1.4                 | 1.4                 |
| 150 x 75                           | 2.2                        | 2   | 1.9 | 1.8                 | 1.7                 | 2.1 | 1.9 | 1.8                 | 1.7                 | 1.6                 | 2.0                 | 1.8                 | 1.7                 | 1.7                 | 1.6                 |
| 170 x 35                           | 1.9                        | 1.8 | 1.7 | 1.6                 | 1.5                 | 1.8 | 1.7 | 1.6                 | 1.5                 | 1.5                 | 1.8                 | 1.7                 | 1.6                 | 1.5                 | 1.4                 |
| 170 x 45                           | 2.1                        | 1.9 | 1.8 | 1.7                 | 1.6                 | 2.0 | 1.8 | 1.7                 | 1.6                 | 1.6                 | 1.9                 | 1.8                 | 1.7                 | 1.6                 | 1.5                 |
| 200 x 35                           | 2.3                        | 2.1 | 1.9 | 1.8                 | 1.7                 | 2.1 | 2.0 | 1.9                 | 1.8                 | 1.7                 | 2.1                 | 1.9                 | 1.8                 | 1.7                 | 1.7                 |
| 200 x 45                           | 2.4                        | 2.2 | 2.1 | 2                   | 1.9                 | 2.3 | 2.1 | 2.0                 | 1.9                 | 1.8                 | 2.2                 | 2.1                 | 2.0                 | 1.9                 | 1.8                 |
| 200 x 63                           | 2.7                        | 2.5 | 2.3 | 2.2                 | 2.1                 | 2.6 | 2.4 | 2.2                 | 2.1                 | 2.0                 | 2.4                 | 2.3                 | 2.2                 | 2.1                 | 2.0                 |
| 2/200 x 35                         | 2.9                        | 2.7 | 2.5 | 2.4                 | 2.2                 | 2.8 | 2.6 | 2.4                 | 2.3                 | 2.2                 | 2.6                 | 2.5                 | 2.3                 | 2.2                 | 2.1                 |
| 240 x 35                           | 2.7                        | 2.5 | 2.3 | 2.2                 | 2.1                 | 2.6 | 2.4 | 2.2                 | 2.1                 | 2.0                 | 2.4                 | 2.3                 | 2.2                 | 2.1                 | 2.0                 |
| 240 x 45                           | 2.9                        | 2.6 | 2.5 | 2.3                 | 2.2                 | 2.7 | 2.5 | 2.4                 | 2.3                 | 2.2                 | 2.6                 | 2.5                 | 2.3                 | 2.2                 | 2.1                 |
| 240 x 63                           | 3.1                        | 2.9 | 2.8 | 2.6                 | 2.5                 | 3.0 | 2.8 | 2.7                 | 2.5                 | 2.4                 | 2.9                 | 2.7                 | 2.6                 | 2.5                 | 2.4                 |
| 2/240 x 35                         | 3.3                        | 3.1 | 2.9 | 2.8                 | 2.6                 | 3.2 | 3.0 | 2.8                 | 2.7                 | 2.6                 | 3.1                 | 2.9                 | 2.8                 | 2.6                 | 2.5                 |
| 2/240 x 45                         | 3.5                        | 3.3 | 3.1 | 3                   | 2.8                 | 3.3 | 3.2 | 3.0                 | 2.9                 | 2.8                 | 3.2                 | 3.1                 | 3.0                 | 2.8                 | 2.7                 |
| 300 x 45                           | 3.4                        | 3.2 | 3.1 | 2.9                 | 2.8                 | 3.3 | 3.1 | 3.0                 | 2.8                 | 2.7                 | 3.2 <sub>(45)</sub> | 3.0                 | 2.9                 | 2.8                 | 2.6 <sub>(45)</sub> |
| 300 x 63                           | 3.7                        | 3.5 | 3.3 | 3.2                 | 3.1                 | 3.6 | 3.4 | 3.2                 | 3.1                 | 3.0                 | 3.5                 | 3.3                 | 3.2                 | 3.1                 | 3.0                 |
| 300 x 75                           | 3.9                        | 3.6 | 3.5 | 3.3                 | 3.2                 | 3.7 | 3.5 | 3.4                 | 3.3                 | 3.1                 | 3.6                 | 3.4                 | 3.3                 | 3.2                 | 3.1                 |
| 2/300 x 45                         | 4.1                        | 3.8 | 3.6 | 3.5                 | 3.4                 | 3.9 | 3.7 | 3.6                 | 3.4                 | 3.3                 | 3.8                 | 3.6                 | 3.5                 | 3.4                 | 3.3                 |
| 360 x 63                           | 4.2                        | 4   | 3.8 | 3.6                 | 3.5                 | 4.1 | 3.9 | 3.7                 | 3.6                 | 3.5 <sub>(45)</sub> | 4.0                 | 3.8                 | 3.6                 | 3.5                 | 3.4 <sub>(45)</sub> |
| 400 x 45                           | 4.2                        | 4   | 3.8 | 3.6 <sub>(45)</sub> | 3.5 <sub>(70)</sub> | 4.1 | 3.9 | 3.7 <sub>(45)</sub> | 3.6 <sub>(70)</sub> | 3.4 <sub>(70)</sub> | 3.9 <sub>(45)</sub> | 3.8 <sub>(45)</sub> | 3.6 <sub>(70)</sub> | 3.5 <sub>(70)</sub> | 3.4 <sub>(70)</sub> |
| 400 x 63                           | 4.6                        | 4.3 | 4.1 | 3.9                 | 3.8 <sub>(45)</sub> | 4.4 | 4.2 | 4.0                 | 3.9                 | 3.7 <sub>(45)</sub> | 4.3                 | 4.1                 | 3.9 <sub>(45)</sub> | 3.8 <sub>(45)</sub> | 3.7 <sub>(45)</sub> |
| 400 x 75                           | 4.8                        | 4.5 | 4.3 | 4.1                 | 4                   | 4.6 | 4.4 | 4.2                 | 4.0                 | 3.9                 | 4.5                 | 4.3                 | 4.1                 | 3.9                 | 3.8 <sub>(45)</sub> |
| 450 x 63                           | 5                          | 4.7 | 4.5 | 4.3 <sub>(45)</sub> | 4.1 <sub>(45)</sub> | 4.8 | 4.6 | 4.4                 | 4.2 <sub>(45)</sub> | 4.1 <sub>(70)</sub> | 4.7                 | 4.4 <sub>(45)</sub> | 4.3 <sub>(45)</sub> | 4.1 <sub>(70)</sub> | 4.0 <sub>(70)</sub> |

**1** Bearing length to be not less than 35mm unless indicated otherwise by inclusion of a subscript.

**2** Subscript values indicate the required minimum bearing length in millimetres.

**3** Multiple sections to be nail laminated in accordance with AS1684.2:2010.

**4** Lintels to be used in conjunction with top plates, ledgers and head trimmers.

**5** It is recommended that a clearance of at least 15mm is allowed over non-loadbearing window or door framing.

## LINTELS

## SUPPORTING TRUNCATED GIRDER TRUSS

## WIND CLASSIFICATION N1, N2, N3

| e-beam<br>Section<br>D X B<br>(mm) | 2400 Setback           |     |     |                       |     |                     |
|------------------------------------|------------------------|-----|-----|-----------------------|-----|---------------------|
|                                    | Sheet Roof and Ceiling |     |     | Tile Roof and Ceiling |     |                     |
|                                    | Truss Span (m)         |     |     | Truss Span (m)        |     |                     |
|                                    | 6.0                    | 7.5 | 9.0 | 6.0                   | 7.5 | 9.0                 |
|                                    | Maximum Span (m)       |     |     |                       |     |                     |
| 130 x 35                           | 1.8                    | 1.7 | 1.6 | 1.3                   | 1.3 | 1.2                 |
| 130 x 45                           | 2.0                    | 1.8 | 1.7 | 1.5                   | 1.3 | 1.3                 |
| 150 x 35                           | 2.2                    | 2.0 | 1.8 | 1.6                   | 1.4 | 1.3                 |
| 150 x 45                           | 2.4                    | 2.2 | 2.0 | 1.6                   | 1.5 | 1.4                 |
| 170 x 35                           | 2.5                    | 2.3 | 2.2 | 1.7                   | 1.6 | 1.5                 |
| 170 x 45                           | 2.6                    | 2.5 | 2.4 | 1.9                   | 1.8 | 1.6                 |
| 200 x 45                           | 3.0                    | 2.9 | 2.8 | 2.3                   | 2.1 | 2.0                 |
| 200 x 63                           | 3.3                    | 3.2 | 3.0 | 2.6                   | 2.4 | 2.3                 |
| 2/200 x 45                         | 3.7                    | 3.5 | 3.4 | 3.0                   | 2.8 | 2.7                 |
| 240 x 45                           | 3.5                    | 3.4 | 3.2 | 2.8                   | 2.6 | 2.5                 |
| 240 x 63                           | 3.8                    | 3.7 | 3.5 | 3.1                   | 2.9 | 2.8                 |
| 2/240 x 45                         | 4.3                    | 4.0 | 3.9 | 3.4                   | 3.3 | 3.2                 |
| 300 x 45                           | 4.2                    | 4.0 | 3.8 | 3.4                   | 3.2 | 3.1 <sup>(45)</sup> |
| 300 x 63                           | 4.6                    | 4.4 | 4.2 | 3.7                   | 3.6 | 3.4                 |
| 300 x 75                           | 4.8                    | 4.6 | 4.4 | 3.9                   | 3.7 | 3.6                 |
| 2/300 x 45                         | 5.0                    | 4.8 | 4.7 | 4.1                   | 3.9 | 3.8                 |
| 360 x 63                           | 5.3                    | 5.1 | 4.9 | 4.3                   | 4.1 | 3.9                 |
| 400 x 63                           | 5.7                    | 5.5 | 5.3 | 4.7                   | 4.5 | 4.3 <sup>(45)</sup> |
| 400 x 75                           | 5.9                    | 5.7 | 5.5 | 4.9                   | 4.7 | 4.5                 |
| 450 x 63                           | 6.2                    | 6.0 | 5.8 | 5.1                   | 4.9 | 4.7 <sup>(45)</sup> |

| e-beam<br>Section<br>D X B<br>(mm) | 3600 Setback           |                     |                     |                       |                     |                     |
|------------------------------------|------------------------|---------------------|---------------------|-----------------------|---------------------|---------------------|
|                                    | Sheet Roof and Ceiling |                     |                     | Tile Roof and Ceiling |                     |                     |
|                                    | Truss Span (m)         |                     |                     | Truss Span (m)        |                     |                     |
|                                    | 9.0                    | 10.5                | 12.0                | 9.0                   | 10.5                | 12.0                |
|                                    | Maximum Span (m)       |                     |                     |                       |                     |                     |
| 130 x 35                           | 1.4                    | 1.2                 | 1.0                 | 1.1                   | 0.9 <sup>(45)</sup> | 0.8 <sup>(70)</sup> |
| 130 x 45                           | 1.5                    | 1.4                 | 1.3                 | 1.2                   | 1.1                 | 1.0                 |
| 150 x 35                           | 1.7                    | 1.5 <sup>(70)</sup> | 1.3                 | 1.2                   | 1.2 <sup>(45)</sup> | 1.0 <sup>(70)</sup> |
| 150 x 45                           | 1.9                    | 1.7 <sup>(45)</sup> | 1.6 <sup>(70)</sup> | 1.3                   | 1.2                 | 1.2                 |
| 170 x 35                           | 2.0                    | 1.8 <sup>(70)</sup> | 1.6 <sup>(70)</sup> | 1.4                   | 1.3                 | 1.1                 |
| 170 x 45                           | 2.2                    | 2.0                 | 1.9 <sup>(45)</sup> | 1.5                   | 1.4                 | 1.3                 |
| 200 x 45                           | 2.6                    | 2.5                 | 2.4 <sup>(45)</sup> | 1.8                   | 1.7 <sup>(45)</sup> | 1.6 <sup>(70)</sup> |
| 200 x 63                           | 2.9                    | 2.7                 | 2.6                 | 2.1                   | 2.0                 | 1.8                 |
| 2/200 x 45                         | 3.3                    | 3.1                 | 3.0                 | 2.5                   | 2.4                 | 2.2                 |
| 240 x 45                           | 3.1                    | 3.0 <sup>(70)</sup> | 2.8 <sup>(70)</sup> | 2.3 <sup>(45)</sup>   | 2.1                 | 2.0 <sup>(45)</sup> |
| 240 x 63                           | 3.4                    | 3.2                 | 3.1 <sup>(45)</sup> | 2.6                   | 2.5                 | 2.4 <sup>(45)</sup> |
| 2/240 x 45                         | 3.8                    | 3.6                 | 3.5                 | 3.0                   | 2.9                 | 2.7                 |
| 300 x 45                           | 3.7                    | 3.6 <sup>(70)</sup> | 3.4 <sup>(70)</sup> | 3.0 <sup>(70)</sup>   | 2.8 <sup>(70)</sup> | 2.7 <sup>(70)</sup> |
| 300 x 63                           | 4.1                    | 3.9                 | 3.8 <sup>(45)</sup> | 3.3                   | 3.1 <sup>(45)</sup> | 3.0 <sup>(70)</sup> |
| 300 x 75                           | 4.2                    | 4.1 <sup>(45)</sup> | 4.0                 | 3.4                   | 3.3                 | 3.2 <sup>(45)</sup> |
| 2/300 x 45                         | 4.5                    | 4.3                 | 4.2 <sup>(45)</sup> | 3.6                   | 3.5                 | 3.3                 |
| 360 x 63                           | 4.7                    | 4.5 <sup>(45)</sup> | 4.4 <sup>(70)</sup> | 3.8 <sup>(45)</sup>   | 3.7 <sup>(70)</sup> | 3.5 <sup>(70)</sup> |
| 400 x 63                           | 5.1                    | 4.9 <sup>(45)</sup> | 4.8 <sup>(70)</sup> | 4.1 <sup>(45)</sup>   | 4.0 <sup>(70)</sup> | 3.9 <sup>(70)</sup> |
| 400 x 75                           | 5.3                    | 5.2                 | 5.0 <sup>(45)</sup> | 4.3 <sup>(45)</sup>   | 4.2 <sup>(45)</sup> | 4.0 <sup>(45)</sup> |
| 450 x 63                           | 5.6                    | 5.4 <sup>(70)</sup> | 5.3 <sup>(70)</sup> | 4.6 <sup>(45)</sup>   | 4.4 <sup>(70)</sup> | 4.3 <sup>(70)</sup> |

1 Bearing length to be not less than 35mm unless indicated otherwise by inclusion of a subscript.

2 Subscript values indicate the required minimum bearing length in millimetres.

3 Multiple sections to be nail laminated in accordance with AS1684.2:2010.

4 Lintels to be used in conjunction with top plates, ledgers and head trimmers.

5 It is recommended that a clearance of at least 15mm is allowed over non-loadbearing window or door framing.

6 Maximum rafter or truss spacing – 600mm for tile roofs, 1200mm for sheet roofs.



## LINTELS SUPPORTING STRUTTING BEAMS

### STRUTTING BEAM SUPPORTING UNDERPURLINS AND HANGING BEAMS

WIND CLASSIFICATION N1, N2, N3

| e-beam<br>Section<br>D X B<br>(mm) | Maximum<br>Hanging<br>Beam and/or<br>Underpurlin<br>Spans (m) | Sheet Roof and Ceiling  |                     |                     |                     |                     | Tile Roof and Ceiling |                     |                     |                     |                     |
|------------------------------------|---|-------------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|
|                                    |   | Strutting Beam Span (m) |                     |                     |                     |                     |                       |                     |                     |                     |                     |
|                                    |   | 3.6                     | 4.2                 | 4.8                 | 5.4                 | 6.0                 | 3.6                   | 4.2                 | 4.8                 | 5.4                 | 6.0                 |
|                                    |   | Maximum Span (m)        |                     |                     |                     |                     |                       |                     |                     |                     |                     |
| 130 x 35                           | 2.4   | 2.1                     | 2.0                 | 1.9                 | 1.8                 | 1.7                 | 1.5                   | 1.4                 | 1.4                 | 1.3                 | 1.3                 |
|                                    | 4.2   | 1.8                     | 1.7                 | 1.6                 | 1.5                 | 1.4                 | 1.3                   | 1.2                 | 1.2                 | 1.1                 | 1.1                 |
| 130 x 45                           | 2.4   | 2.3                     | 2.2                 | 2.1                 | 1.9                 | 1.9                 | 1.6                   | 1.5                 | 1.4                 | 1.4                 | 1.3                 |
|                                    | 4.2   | 2.0                     | 1.9                 | 1.8                 | 1.7                 | 1.6                 | 1.4                   | 1.3                 | 1.3                 | 1.2                 | 1.2                 |
| 150 x 45                           | 2.4   | 2.6                     | 2.5                 | 2.4                 | 2.3                 | 2.2                 | 1.8                   | 1.7                 | 1.7                 | 1.6                 | 1.5                 |
|                                    | 4.2   | 2.4                     | 2.2                 | 2.1                 | 2.0                 | 1.9                 | 1.6                   | 1.5                 | 1.5                 | 1.4                 | 1.3                 |
| 150 x 63                           | 2.4   | 2.8                     | 2.8                 | 2.6                 | 2.6                 | 2.5                 | 2.1                   | 2.0                 | 1.9                 | 1.8                 | 1.7                 |
|                                    | 4.2   | 2.6                     | 2.5                 | 2.4                 | 2.3                 | 2.2                 | 1.9                   | 1.7                 | 1.6                 | 1.6                 | 1.5                 |
| 150 x 75                           | 2.4   | 3.0                     | 2.9                 | 2.8                 | 2.7                 | 2.6                 | 2.2                   | 2.1                 | 2.0                 | 1.9                 | 1.8                 |
|                                    | 4.2   | 2.8                     | 2.7                 | 2.6                 | 2.5                 | 2.4                 | 2.0                   | 1.8                 | 1.8                 | 1.7                 | 1.6                 |
| 170 x 45                           | 2.4   | 2.9                     | 2.8                 | 2.7                 | 2.6                 | 2.5                 | 2.1                   | 2.0                 | 1.9                 | 1.8                 | 1.7                 |
|                                    | 4.2   | 2.7                     | 2.5                 | 2.5                 | 2.4                 | 2.2                 | 1.9                   | 1.7                 | 1.7                 | 1.6                 | 1.5                 |
| 170 x 63                           | 2.4   | 3.1                     | 3.0                 | 3.0                 | 2.9                 | 2.8                 | 2.4                   | 2.3                 | 2.2                 | 2.0                 | 2.0                 |
|                                    | 4.2   | 3.0                     | 2.8                 | 2.7                 | 2.6                 | 2.5                 | 2.2                   | 2.0                 | 1.9                 | 1.8                 | 1.8                 |
| 200 x 35                           | 2.4   | 3.1                     | 3.0                 | 2.9                 | 2.8                 | 2.7                 | 2.4                   | 2.2                 | 2.1                 | 2.0                 | 1.9                 |
|                                    | 4.2   | 2.9                     | 2.8                 | 2.7                 | 2.6                 | 2.5                 | 2.1                   | 2.0                 | 1.9                 | 1.8                 | 1.7                 |
| 200 x 45                           | 2.4   | 3.3                     | 3.2                 | 3.1                 | 3.0                 | 2.9                 | 2.5                   | 2.4                 | 2.3                 | 2.2                 | 2.1                 |
|                                    | 4.2   | 3.1                     | 3.0                 | 2.9                 | 2.8                 | 2.7                 | 2.3                   | 2.1                 | 2.0                 | 1.9                 | 1.8                 |
| 200 x 63                           | 2.4   | 3.5                     | 3.5                 | 3.4                 | 3.3                 | 3.2                 | 2.8                   | 2.7                 | 2.6                 | 2.5                 | 2.4                 |
|                                    | 4.2   | 3.3                     | 3.3                 | 3.2                 | 3.1                 | 3.0                 | 2.6                   | 2.5                 | 2.3                 | 2.2                 | 2.1                 |
| 240 x 45                           | 2.4   | 3.8                     | 3.7                 | 3.6                 | 3.4                 | 3.4                 | 3.0                   | 2.9                 | 2.8                 | 2.7                 | 2.6                 |
|                                    | 4.2   | 3.6                     | 3.5                 | 3.4                 | 3.2                 | 3.2                 | 2.8                   | 2.6                 | 2.5                 | 2.4                 | 2.4                 |
| 240 x 63                           | 2.4   | 4.1                     | 4.0                 | 3.9                 | 3.8                 | 3.7                 | 3.3                   | 3.2                 | 3.1                 | 3.0                 | 2.9                 |
|                                    | 4.2   | 3.9                     | 3.8                 | 3.7                 | 3.5                 | 3.5                 | 3.1                   | 3.0                 | 2.9                 | 2.7                 | 2.7                 |
| 2/240 x 45                         | 2.4   | 4.6                     | 4.4                 | 4.3                 | 4.2                 | 4.1                 | 3.7                   | 3.5                 | 3.5                 | 3.4                 | 3.2                 |
|                                    | 4.2   | 4.4                     | 4.2                 | 4.1                 | 4.0                 | 3.9                 | 3.5                   | 3.3                 | 3.3                 | 3.2                 | 3.0                 |
| 300 x 63                           | 2.4   | 4.9                     | 4.8                 | 4.7                 | 4.6                 | 4.4                 | 3.9                   | 3.8                 | 3.7                 | 3.6                 | 3.6                 |
|                                    | 4.2   | 4.7                     | 4.6                 | 4.4                 | 4.3                 | 4.2                 | 3.7                   | 3.6                 | 3.5                 | 3.4                 | 3.3                 |
| 300 x 75                           | 2.4   | 5.1                     | 5.0                 | 4.9                 | 4.8                 | 4.7                 | 4.1                   | 4.0                 | 3.9                 | 3.8                 | 3.7                 |
|                                    | 4.2   | 4.9                     | 4.8                 | 4.7                 | 4.5                 | 4.4                 | 3.9                   | 3.8                 | 3.7                 | 3.6                 | 3.5                 |
| 2/300 x 45                         | 2.4   | 5.4                     | 5.2                 | 5.1                 | 5.0                 | 4.9                 | 4.3                   | 4.2                 | 4.1                 | 4.0                 | 3.9                 |
|                                    | 4.2   | 5.2                     | 5.0                 | 4.9                 | 4.8                 | 4.7                 | 4.1                   | 4.0                 | 3.9                 | 3.8                 | 3.7                 |
| 360 x 63                           | 2.4   | 5.6 <sub>(45)</sub>     | 5.4 <sub>(45)</sub> | 5.3 <sub>(45)</sub> | 5.2 <sub>(45)</sub> | 5.1 <sub>(45)</sub> | 4.5                   | 4.4                 | 4.3                 | 4.1                 | 4.1                 |
|                                    | 4.2   | 5.4 <sub>(45)</sub>     | 5.2 <sub>(45)</sub> | 5.1 <sub>(45)</sub> | 5.0 <sub>(70)</sub> | 4.9 <sub>(70)</sub> | 4.3                   | 4.2 <sub>(45)</sub> | 4.1 <sub>(45)</sub> | 3.9 <sub>(45)</sub> | 3.9 <sub>(45)</sub> |
| 400 x 63                           | 2.4   | 6.1 <sub>(70)</sub>     | 5.9 <sub>(70)</sub> | 5.8 <sub>(45)</sub> | 5.6 <sub>(45)</sub> | 5.5 <sub>(45)</sub> | 4.9 <sub>(45)</sub>   | 4.8 <sub>(45)</sub> | 4.7 <sub>(45)</sub> | 4.5 <sub>(45)</sub> | 4.4 <sub>(45)</sub> |
|                                    | 4.2   | 5.9 <sub>(70)</sub>     | 5.7 <sub>(70)</sub> | 5.6 <sub>(70)</sub> | 5.4 <sub>(70)</sub> | 5.3 <sub>(70)</sub> | 4.7 <sub>(45)</sub>   | 4.6 <sub>(45)</sub> | 4.4 <sub>(45)</sub> | 4.3 <sub>(70)</sub> | 4.2 <sub>(70)</sub> |
| 400 x 75                           | 2.4   | 6.3 <sub>(70)</sub>     | 6.2 <sub>(70)</sub> | 6.0 <sub>(70)</sub> | 5.9 <sub>(45)</sub> | 5.8 <sub>(45)</sub> | 5.2                   | 5.0                 | 4.9                 | 4.8 <sub>(45)</sub> | 4.6                 |
|                                    | 4.2   | 6.1 <sub>(70)</sub>     | 5.9 <sub>(70)</sub> | 5.8 <sub>(45)</sub> | 5.6 <sub>(45)</sub> | 5.5 <sub>(45)</sub> | 5.0 <sub>(45)</sub>   | 4.8 <sub>(45)</sub> | 4.6 <sub>(45)</sub> | 4.5 <sub>(45)</sub> | 4.4 <sub>(45)</sub> |
| 450 x 63                           | 2.4   | 6.7 <sub>(70)</sub>     | 6.5 <sub>(70)</sub> | 6.3 <sub>(70)</sub> | 6.2 <sub>(70)</sub> | 6.1 <sub>(70)</sub> | 5.4 <sub>(70)</sub>   | 5.3 <sub>(70)</sub> | 5.1 <sub>(70)</sub> | 5.0 <sub>(70)</sub> | 4.9 <sub>(70)</sub> |
|                                    | 4.2   | 6.5 <sub>(70)</sub>     | 6.2 <sub>(70)</sub> | 6.1 <sub>(70)</sub> | 5.9 <sub>(70)</sub> | 5.8 <sub>(70)</sub> | 5.2 <sub>(70)</sub>   | 5.1 <sub>(70)</sub> | 4.9 <sub>(70)</sub> | 4.8 <sub>(70)</sub> | 4.7 <sub>(70)</sub> |

1 Bearing length to be not less than 35mm unless indicated otherwise by inclusion of a subscript.

2 Subscript values indicate the required minimum bearing length in millimetres.

3 Multiple sections to be nail laminated in accordance with AS1684.2:2010.

4 Lintels to be used in conjunction with top plates, ledgers and head trimmers.

5 It is recommended that a clearance of at least 15mm is allowed over non-loadbearing window or door framing.

6 Maximum rafter spacing – 600mm for tile roofs, 1200mm for sheet roofs.

## FLOOR JOISTS

### SUPPORTING FLOOR LOADS ONLY

| e-beam<br>Section<br>D X B<br>(mm)         | Floor Joist Spacing (mm)               |       |      |       |      |       |      |       |      |       |
|--|--|-------|------|-------|------|-------|------|-------|------|-------|
|  | 300                                    |       | 400  |       | 450  |       | 480  |       | 600  |       |
|  | Maximum single span and cantilever (m) |       |      |       |      |       |      |       |      |       |
|  | Span                                   | Cant. | Span | Cant. | Span | Cant. | Span | Cant. | Span | Cant. |
| 90 x 35                                    | 2.0                                    | 0.4   | 1.7  | 0.4   | 1.6  | 0.3   | 1.7  | 0.3   | 1.6  | 0.3   |
| 90 x 45                                    | 2.2                                    | 0.5   | 1.8  | 0.4   | 1.8  | 0.4   | 1.8  | 0.4   | 1.7  | 0.3   |
| 130 x 35                                   | 3.3                                    | 0.8   | 2.6  | 0.8   | 2.4  | 0.7   | 2.5  | 0.7   | 2.3  | 0.6   |
| 130 x 45                                   | 3.6                                    | 0.9   | 2.8  | 0.8   | 2.7  | 0.8   | 2.7  | 0.8   | 2.5  | 0.7   |
| 150 x 35                                   | 3.8                                    | 0.9   | 3.0  | 0.9   | 2.9  | 0.8   | 3.0  | 0.8   | 2.7  | 0.8   |
| 150 x 45                                   | 4.0                                    | 1.0   | 3.3  | 0.9   | 3.1  | 0.9   | 3.2  | 0.9   | 3.0  | 0.8   |
| 170 x 35                                   | 4.2                                    | 1.1   | 3.5  | 1.0   | 3.3  | 1.0   | 3.4  | 0.9   | 3.1  | 0.9   |
| 170 x 45                                   | 4.4                                    | 1.2   | 3.8  | 1.1   | 3.6  | 1.0   | 3.8  | 1.0   | 3.4  | 0.9   |
| 200 x 35                                   | 4.7                                    | 1.3   | 4.3  | 1.1   | 4.0  | 1.1   | 4.2  | 1.1   | 3.8  | 1.0   |
| 200 x 45                                   | 5.0                                    | 1.4   | 4.6  | 1.2   | 4.4  | 1.2   | 4.4  | 1.2   | 4.1  | 1.1   |
| 240 x 35                                   | 5.4                                    | 1.5   | 5.0  | 1.4   | 4.9  | 1.3   | 4.8  | 1.3   | 4.5  | 1.2   |
| 240 x 45                                   | 5.7                                    | 1.6   | 5.3  | 1.5   | 5.1  | 1.4   | 5.1  | 1.4   | 4.8  | 1.3   |
| 300 x 45                                   | 6.7                                    | 1.9   | 6.3  | 1.8   | 6.1  | 1.7   | 6.0  | 1.7   | 5.7  | 1.6   |
| Maximum continuous span and cantilever (m) |  |       |      |       |      |       |      |       |      |       |
| 90 x 35                                    | 2.6                                    | 0.4   | 2.0  | 0.4   | 1.9  | 0.3   | 2.0  | 0.3   | 1.8  | 0.3   |
| 90 x 45                                    | 2.7                                    | 0.5   | 2.3  | 0.4   | 2.1  | 0.4   | 2.2  | 0.4   | 2.0  | 0.3   |
| 130 x 35                                   | 3.9                                    | 0.8   | 3.1  | 0.7   | 2.9  | 0.7   | 3.0  | 0.7   | 2.7  | 0.6   |
| 130 x 45                                   | 4.2                                    | 0.9   | 3.4  | 0.8   | 3.2  | 0.8   | 3.3  | 0.7   | 3.0  | 0.7   |
| 150 x 35                                   | 4.4                                    | 0.9   | 3.8  | 0.9   | 3.4  | 0.8   | 3.6  | 0.8   | 3.2  | 0.7   |
| 150 x 45                                   | 4.6                                    | 1.0   | 4.2  | 0.9   | 3.8  | 0.9   | 4.0  | 0.9   | 3.5  | 0.8   |
| 170 x 35                                   | 4.8                                    | 1.1   | 4.5  | 1.0   | 4.0  | 0.9   | 4.3  | 0.9   | 3.7  | 0.8   |
| 170 x 45                                   | 5.1                                    | 1.1   | 4.8  | 1.0   | 4.4  | 1.0   | 4.5  | 1.0   | 4.0  | 0.9   |
| 200 x 35                                   | 5.5                                    | 1.3   | 5.1  | 1.1   | 4.9  | 1.1   | 4.8  | 1.1   | 4.5  | 1.0   |
| 200 x 45                                   | 5.8                                    | 1.4   | 5.4  | 1.2   | 5.2  | 1.2   | 5.1  | 1.2   | 4.8  | 1.1   |
| 240 x 35                                   | 6.3                                    | 1.5   | 5.8  | 1.4   | 5.7  | 1.3   | 5.6  | 1.3   | 5.3  | 1.2   |
| 240 x 45                                   | 6.6                                    | 1.6   | 6.2  | 1.5   | 6.0  | 1.4   | 5.9  | 1.4   | 5.6  | 1.3   |
| 300 x 45                                   | 7.8                                    | 1.9   | 7.3  | 1.8   | 7.1  | 1.7   | 6.9  | 1.7   | 6.6  | 1.6   |

1 Joists with D/B > 4 should be blocked at supports as per AS1684.2:2010.

2 Cantilever spans should not exceed one half of the installed backspan.

## FLOOR JOISTS

FOR TILED FLOORS OR FLOORS SUPPORTING HEAVY FURNITURE

| e-beam<br>Section<br>D X B<br>(mm) | Floor joist spacing (mm) |     |     |     |     | Floor joist spacing (mm)    |     |     |     |     |
|------------------------------------|--------------------------|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----|
|                                    | 300                      | 400 | 450 | 480 | 600 | 300                         | 400 | 450 | 480 | 600 |
|                                    | Maximum single span (m)  |     |     |     |     | Maximum continuous span (m) |     |     |     |     |
| 90 x 35                            | 2.1                      | 1.8 | 1.7 | 1.8 | 1.7 | 2.4                         | 2.0 | 1.9 | 2.0 | 1.8 |
| 90 x 45                            | 2.2                      | 2.0 | 1.9 | 1.9 | 1.8 | 2.6                         | 2.2 | 2.1 | 2.2 | 2.0 |
| 130 x 35                           | 2.9                      | 2.6 | 2.4 | 2.5 | 2.3 | 3.6                         | 3.1 | 2.9 | 3.0 | 2.7 |
| 130 x 45                           | 3.1                      | 2.8 | 2.7 | 2.6 | 2.5 | 3.8                         | 3.4 | 3.2 | 3.3 | 3.0 |
| 150 x 35                           | 3.3                      | 3.0 | 2.9 | 2.8 | 2.6 | 4.1                         | 3.7 | 3.4 | 3.5 | 3.2 |
| 150 x 45                           | 3.5                      | 3.2 | 3.1 | 3.0 | 2.8 | 4.4                         | 4.0 | 3.8 | 3.8 | 3.5 |
| 170 x 35                           | 3.7                      | 3.4 | 3.3 | 3.2 | 3.0 | 4.6                         | 4.2 | 4.0 | 4.0 | 3.7 |
| 170 x 45                           | 4.0                      | 3.6 | 3.5 | 3.4 | 3.2 | 4.8                         | 4.5 | 4.4 | 4.3 | 4.0 |
| 200 x 35                           | 4.3                      | 4.0 | 3.8 | 3.8 | 3.5 | 5.2                         | 4.8 | 4.7 | 4.6 | 4.4 |
| 200 x 45                           | 4.6                      | 4.3 | 4.1 | 4.0 | 3.8 | 5.5                         | 5.1 | 5.0 | 4.9 | 4.6 |
| 240 x 35                           | 5.0                      | 4.7 | 4.6 | 4.5 | 4.2 | 5.9                         | 5.5 | 5.4 | 5.3 | 5.0 |
| 240 x 45                           | 5.2                      | 4.9 | 4.8 | 4.7 | 4.5 | 6.2                         | 5.8 | 5.7 | 5.6 | 5.3 |
| 300 x 45                           | 6.1                      | 5.8 | 5.6 | 5.6 | 5.3 | 7.3                         | 6.9 | 6.7 | 6.6 | 6.3 |

1 Joists with D/B > 4 should be blocked at supports as per AS1684.2:2010.

2 Tables apply where the imposed load from floor coverings (tiles and mortar) or heavy furniture is between 50 and 100 kilogram per square metre.

## FLOOR JOISTS

### SUPPORTING PARALLEL LOAD BEARING WALLS OVER OPENINGS

| Sheet Roof And Ceiling             |                           |     |     |     |     |     |     |     |     |                 |     |     |     |     |     |     |     |     |
|------------------------------------|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|
| e-beam<br>Section<br>D X B<br>(mm) | Single Span               |     |     |     |     |     |     |     |     | Continuous Span |     |     |     |     |     |     |     |     |
|                                    | Roof Load Width 'RLW' (m) |     |     |     |     |     |     |     |     |                 |     |     |     |     |     |     |     |     |
|                                    | 1.8                       | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 | 5.4 | 6.0 | 6.6 | 1.8             | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 | 5.4 | 6.0 | 6.6 |
|                                    | Maximum Span (m)          |     |     |     |     |     |     |     |     |                 |     |     |     |     |     |     |     |     |
| 2/90 x 35                          | 1.7                       | 1.6 | 1.6 | 1.5 | 1.5 | 1.4 | 1.4 | 1.3 | 1.3 | 2.3             | 2.2 | 2.1 | 2.0 | 2.0 | 1.9 | 1.8 | 1.8 | 1.7 |
| 2/90 x 45                          | 1.9                       | 1.8 | 1.7 | 1.6 | 1.6 | 1.5 | 1.5 | 1.4 | 1.4 | 2.5             | 2.4 | 2.3 | 2.2 | 2.1 | 2.0 | 2.0 | 2.0 | 1.9 |
| 2/130 x 35                         | 2.5                       | 2.4 | 2.3 | 2.2 | 2.1 | 2.0 | 2.0 | 1.9 | 1.9 | 3.3             | 3.2 | 3.0 | 2.9 | 2.8 | 2.7 | 2.6 | 2.6 | 2.5 |
| 2/130 x 45                         | 2.7                       | 2.5 | 2.4 | 2.3 | 2.3 | 2.2 | 2.1 | 2.1 | 2.0 | 3.6             | 3.4 | 3.3 | 3.1 | 3.0 | 2.9 | 2.8 | 2.8 | 2.7 |
| 2/150 x 35                         | 2.9                       | 2.7 | 2.6 | 2.5 | 2.4 | 2.3 | 2.3 | 2.2 | 2.2 | 3.8             | 3.6 | 3.5 | 3.4 | 3.2 | 3.1 | 3.1 | 3.0 | 2.9 |
| 2/150 x 45                         | 3.1                       | 2.9 | 2.8 | 2.7 | 2.6 | 2.5 | 2.4 | 2.4 | 2.3 | 4.1             | 3.9 | 3.7 | 3.6 | 3.5 | 3.4 | 3.3 | 3.2 | 3.1 |
| 2/170 x 35                         | 3.2                       | 3.1 | 2.9 | 2.8 | 2.7 | 2.7 | 2.6 | 2.5 | 2.4 | 4.3             | 4.1 | 3.9 | 3.8 | 3.7 | 3.6 | 3.5 | 3.4 | 3.3 |
| 2/170 x 45                         | 3.5                       | 3.3 | 3.2 | 3.0 | 2.9 | 2.8 | 2.8 | 2.7 | 2.6 | 4.6             | 4.4 | 4.2 | 4.1 | 3.9 | 3.8 | 3.7 | 3.6 | 3.5 |
| 2/200 x 35                         | 3.8                       | 3.6 | 3.5 | 3.3 | 3.2 | 3.1 | 3.0 | 2.9 | 2.9 | 4.9             | 4.8 | 4.6 | 4.5 | 4.3 | 4.2 | 4.1 | 4.0 | 3.9 |
| 2/200 x 45                         | 4.1                       | 3.9 | 3.7 | 3.6 | 3.4 | 3.3 | 3.3 | 3.2 | 3.1 | 5.2             | 5.0 | 4.8 | 4.7 | 4.6 | 4.5 | 4.4 | 4.2 | 4.1 |
| 2/240 x 45                         | 4.8                       | 4.6 | 4.4 | 4.3 | 4.1 | 4.0 | 3.9 | 3.8 | 3.7 | 5.9             | 5.7 | 5.5 | 5.4 | 5.3 | 5.1 | 5.0 | 4.9 | 4.8 |
| 2/300 x 45                         | 5.6                       | 5.4 | 5.2 | 5.1 | 5.0 | 4.9 | 4.8 | 4.7 | 4.6 | 7.0             | 6.7 | 6.5 | 6.3 | 6.2 | 6.1 | 5.9 | 5.8 | 5.7 |
| 2/360 x 45                         | 6.4                       | 6.2 | 6.0 | 5.8 | 5.7 | 5.6 | 5.4 | 5.3 | 5.2 | 8.0             | 7.7 | 7.4 | 7.2 | 7.1 | 6.9 | 6.8 | 6.6 | 6.5 |
| 2/400 x 45                         | 6.9                       | 6.6 | 6.5 | 6.3 | 6.1 | 6.0 | 5.9 | 5.8 | 5.7 | 8.6             | 8.3 | 8.0 | 7.8 | 7.6 | 7.5 | 7.3 | 7.2 | 7.1 |

| Tile Roof And Ceiling              |                           |     |     |     |     |     |     |     |     |                 |     |     |     |     |                     |                     |                     |                     |
|------------------------------------|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|---------------------|---------------------|---------------------|---------------------|
| e-beam<br>Section<br>D X B<br>(mm) | Single Span               |     |     |     |     |     |     |     |     | Continuous Span |     |     |     |     |                     |                     |                     |                     |
|                                    | Roof Load Width 'RLW' (m) |     |     |     |     |     |     |     |     |                 |     |     |     |     |                     |                     |                     |                     |
|                                    | 1.8                       | 2.4 | 3.0 | 3.6 | 4.2 | 4.8 | 5.4 | 6.0 | 6.6 | 1.8             | 2.4 | 3.0 | 3.6 | 4.2 | 4.8                 | 5.4                 | 6.0                 | 6.6                 |
|                                    | Maximum Span (m)          |     |     |     |     |     |     |     |     |                 |     |     |     |     |                     |                     |                     |                     |
| 2/90 x 35                          | 1.5                       | 1.4 | 1.3 | 1.2 | 1.2 | 1.1 | 1.1 | 1.1 | 1.1 | 1.9             | 1.8 | 1.7 | 1.6 | 1.6 | 1.5                 | 1.5                 | 1.4                 | 1.4                 |
| 2/90 x 45                          | 1.6                       | 1.5 | 1.4 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 | 2.1             | 2.0 | 1.9 | 1.8 | 1.6 | 1.7                 | 1.6                 | 1.5                 | 1.5                 |
| 2/130 x 35                         | 2.1                       | 2.0 | 1.9 | 1.8 | 1.7 | 1.6 | 1.6 | 1.5 | 1.5 | 2.8             | 2.6 | 2.5 | 2.4 | 2.3 | 2.2                 | 2.1                 | 2.1                 | 2.0                 |
| 2/130 x 45                         | 2.3                       | 2.1 | 2.0 | 1.9 | 1.8 | 1.8 | 1.7 | 1.7 | 1.6 | 3.0             | 2.8 | 2.7 | 2.6 | 2.5 | 2.4                 | 2.3                 | 2.2                 | 2.2                 |
| 2/150 x 35                         | 2.4                       | 2.3 | 2.2 | 2.0 | 2.0 | 1.9 | 1.8 | 1.8 | 1.7 | 3.3             | 3.1 | 2.9 | 2.7 | 2.6 | 2.5                 | 2.5                 | 2.4                 | 2.3                 |
| 2/150 x 45                         | 2.6                       | 2.4 | 2.3 | 2.2 | 2.1 | 2.0 | 2.0 | 1.9 | 1.9 | 3.5             | 3.3 | 3.1 | 3.0 | 2.8 | 2.7                 | 2.6                 | 2.6                 | 2.5                 |
| 2/170 x 35                         | 2.8                       | 2.6 | 2.4 | 2.3 | 2.2 | 2.1 | 2.1 | 2.0 | 2.0 | 3.7             | 3.5 | 3.3 | 3.1 | 3.0 | 2.9                 | 2.8                 | 2.7                 | 2.6                 |
| 2/170 x 45                         | 3.0                       | 2.8 | 2.6 | 2.5 | 2.4 | 2.3 | 2.2 | 2.2 | 2.1 | 4.0             | 3.7 | 3.5 | 3.3 | 3.2 | 3.1                 | 3.0                 | 2.9                 | 2.8                 |
| 2/200 x 35                         | 3.2                       | 3.0 | 2.9 | 2.7 | 2.6 | 2.5 | 2.4 | 2.4 | 2.3 | 4.3             | 4.1 | 3.8 | 3.7 | 3.5 | 3.4                 | 3.3                 | 3.2                 | 3.1                 |
| 2/200 x 45                         | 3.5                       | 3.3 | 3.1 | 2.9 | 2.8 | 2.7 | 2.6 | 2.5 | 2.5 | 4.6             | 4.4 | 4.1 | 3.9 | 3.8 | 3.6                 | 3.5                 | 3.4                 | 3.3                 |
| 2/240 x 45                         | 4.2                       | 3.9 | 3.7 | 3.5 | 3.4 | 3.2 | 3.1 | 3.0 | 3.0 | 5.3             | 5.0 | 4.8 | 4.7 | 4.5 | 4.3                 | 4.2                 | 4.1                 | 4.0                 |
| 2/300 x 45                         | 5.0                       | 4.8 | 4.6 | 4.4 | 4.2 | 4.0 | 3.9 | 3.8 | 3.7 | 6.2             | 5.9 | 5.7 | 5.5 | 5.3 | 5.2                 | 5.0                 | 4.9                 | 4.8 <sub>(45)</sub> |
| 2/360 x 45                         | 5.7                       | 5.4 | 5.2 | 5.0 | 4.9 | 4.8 | 4.6 | 4.5 | 4.4 | 7.1             | 6.8 | 6.5 | 6.3 | 6.1 | 5.9                 | 5.7 <sub>(90)</sub> | 5.5 <sub>(90)</sub> | 5.3 <sub>(90)</sub> |
| 2/400 x 45                         | 6.2                       | 5.9 | 5.6 | 5.4 | 5.3 | 5.1 | 5.0 | 4.9 | 4.8 | 7.7             | 7.3 | 6.9 | 6.7 | 6.4 | 6.1 <sub>(90)</sub> | 5.9 <sub>(90)</sub> | 5.7 <sub>(90)</sub> | 5.6 <sub>(90)</sub> |

**1** Bearing length to be not less than 30mm at end supports and not less than 65mm at intermediate supports for continuous span joists unless noted otherwise by a subscript.

**2** For single span joists subscript value indicates the required bearing length (in millimetre) for end supports.

**3** For continuous span joists, subscript value indicates the required length (in millimetre) at intermediate supports; the bearing length at end supports should be at least one third the bearing length required at the intermediate support but in any case, is not to be less than 30mm.

## BEARERS

### SUPPORTING FLOOR LOADS ONLY

| e-beam<br>Section<br>D X B<br>(mm) | Floor Load Width 'FLW' (m) |     |     |                      |                      |                      |                      |                      |                      |                      |                      |                      |
|------------------------------------|----------------------------|-----|-----|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                                    | 1.2                        | 1.5 | 1.8 | 2.1                  | 2.4                  | 2.7                  | 3.0                  | 3.6                  | 4.2                  | 4.8                  | 5.4                  | 6.0                  |
|                                    | Maximum single span (m)    |     |     |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 90 x 63                            | 1.8                        | 1.6 | 1.6 | 1.5                  | 1.4                  | 1.4                  | 1.3                  | 1.2                  | 1.2                  | 1.1                  | 1.1                  | 1.0                  |
| 130 x 63                           | 2.6                        | 2.4 | 2.2 | 2.1                  | 2.0                  | 1.9                  | 1.9                  | 1.8                  | 1.7                  | 1.6                  | 1.5                  | 1.5                  |
| 150 x 63                           | 2.9                        | 2.7 | 2.6 | 2.4                  | 2.3                  | 2.2                  | 2.2                  | 2.0                  | 1.9                  | 1.8                  | 1.7                  | 1.7                  |
| 150 x 75                           | 3.1                        | 2.9 | 2.7 | 2.6                  | 2.5                  | 2.4                  | 2.3                  | 2.1                  | 2.0                  | 1.9                  | 1.8                  | 1.8                  |
| 170 x 63                           | 3.3                        | 3.1 | 2.9 | 2.8                  | 2.6                  | 2.5                  | 2.4                  | 2.3                  | 2.2                  | 2.1                  | 2.0                  | 1.9                  |
| 200 x 63                           | 3.8                        | 3.6 | 3.4 | 3.2                  | 3.1                  | 3.0                  | 2.9                  | 2.7                  | 2.5                  | 2.4                  | 2.3                  | 2.2                  |
| 240 x 63                           | 4.4                        | 4.1 | 4.0 | 3.8                  | 3.7                  | 3.6                  | 3.4                  | 3.2                  | 3.1                  | 2.9                  | 2.8                  | 2.7                  |
| 300 x 63                           | 5.1                        | 4.9 | 4.7 | 4.5                  | 4.3                  | 4.2                  | 4.1                  | 3.9                  | 3.8                  | 3.6                  | 3.5 <sub>(70)</sub>  | 3.3 <sub>(70)</sub>  |
| 300 x 75                           | 5.3                        | 5.1 | 4.9 | 4.7                  | 4.5                  | 4.4                  | 4.3                  | 4.1                  | 3.9                  | 3.8                  | 3.7                  | 3.5                  |
| 360 x 63                           | 5.9                        | 5.6 | 5.3 | 5.1                  | 5.0                  | 4.8                  | 4.7                  | 4.5                  | 4.3                  | 4.1 <sub>(70)</sub>  | 4.0 <sub>(70)</sub>  | 3.9 <sub>(70)</sub>  |
| 400 x 63                           | 6.3                        | 6.0 | 5.8 | 5.5                  | 5.4                  | 5.2                  | 5.1                  | 4.8                  | 4.6 <sub>(70)</sub>  | 4.5 <sub>(70)</sub>  | 4.3 <sub>(70)</sub>  | 4.2 <sub>(70)</sub>  |
| 400 x 75                           | 6.6                        | 6.2 | 6.0 | 5.8                  | 5.6                  | 5.4                  | 5.3                  | 5.0                  | 4.8                  | 4.7 <sub>(70)</sub>  | 4.5 <sub>(70)</sub>  | 4.4 <sub>(70)</sub>  |
| 450 x 63                           | 6.9                        | 6.5 | 6.3 | 6.0                  | 5.8                  | 5.7                  | 5.5                  | 5.3 <sub>(70)</sub>  | 5.1 <sub>(70)</sub>  | 4.9 <sub>(70)</sub>  | 4.7 <sub>(70)</sub>  | 4.6 <sub>(70)</sub>  |
| <b>Maximum continuous span</b>     |                            |     |     |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 90 x 63                            | 2.2                        | 2.0 | 1.9 | 1.8                  | 1.7                  | 1.6                  | 1.6                  | 1.5                  | 1.4                  | 1.3                  | 1.3                  | 1.2                  |
| 130 x 63                           | 3.2                        | 3.0 | 2.8 | 2.7                  | 2.5                  | 2.4                  | 2.4                  | 2.2                  | 2.0                  | 1.9                  | 1.7                  | 1.7                  |
| 150 x 63                           | 3.6                        | 3.4 | 3.2 | 3.1                  | 2.9                  | 2.8                  | 2.7                  | 2.6                  | 2.3                  | 2.1                  | 2.0                  | 2.0                  |
| 150 x 75                           | 3.7                        | 3.5 | 3.4 | 3.2                  | 3.1                  | 3.0                  | 2.9                  | 2.7                  | 2.6                  | 2.4                  | 2.2                  | 2.1                  |
| 170 x 63                           | 3.9                        | 3.7 | 3.5 | 3.4                  | 3.3                  | 3.2                  | 3.1                  | 2.9                  | 2.7                  | 2.4                  | 2.3                  | 2.1                  |
| 200 x 63                           | 4.4                        | 4.2 | 4.0 | 3.9                  | 3.7                  | 3.6                  | 3.5                  | 3.4                  | 3.1                  | 2.9                  | 2.7                  | 2.6 <sub>(105)</sub> |
| 240 x 63                           | 5.1                        | 4.8 | 4.6 | 4.4                  | 4.3                  | 4.2                  | 4.0                  | 3.9                  | 3.7 <sub>(105)</sub> | 3.5 <sub>(140)</sub> | 3.3 <sub>(140)</sub> | 3.1 <sub>(140)</sub> |
| 300 x 63                           | 6.0                        | 5.7 | 5.4 | 5.2                  | 5.1                  | 4.9                  | 4.8                  | 4.6 <sub>(105)</sub> | 4.4 <sub>(140)</sub> | 4.3 <sub>(140)</sub> | 4.1 <sub>(140)</sub> | 3.9 <sub>(170)</sub> |
| 300 x 75                           | 6.3                        | 5.9 | 5.7 | 5.5                  | 5.3                  | 5.1                  | 5.0                  | 4.8                  | 4.6 <sub>(105)</sub> | 4.4 <sub>(140)</sub> | 4.3 <sub>(140)</sub> | 4.2 <sub>(140)</sub> |
| 360 x 63                           | 6.9                        | 6.5 | 6.2 | 6.0                  | 5.8                  | 5.6 <sub>(105)</sub> | 5.5 <sub>(105)</sub> | 5.2 <sub>(140)</sub> | 5.0 <sub>(140)</sub> | 4.9 <sub>(170)</sub> | 4.7 <sub>(170)</sub> | 4.6 <sub>(170)</sub> |
| 400 x 63                           | 7.5                        | 7.1 | 6.7 | 6.5                  | 6.3 <sub>(105)</sub> | 6.1 <sub>(105)</sub> | 5.9 <sub>(140)</sub> | 5.7 <sub>(140)</sub> | 5.5 <sub>(170)</sub> | 5.3 <sub>(170)</sub> | 5.1 <sub>(170)</sub> | 4.9 <sub>(170)</sub> |
| 400 x 75                           | 7.8                        | 7.4 | 7.0 | 6.8                  | 6.6                  | 6.4                  | 6.2 <sub>(105)</sub> | 5.9 <sub>(140)</sub> | 5.7 <sub>(140)</sub> | 5.5 <sub>(140)</sub> | 5.3 <sub>(170)</sub> | 5.2 <sub>(170)</sub> |
| 450 x 63                           | 8.1                        | 7.7 | 7.4 | 7.1 <sub>(105)</sub> | 6.9 <sub>(105)</sub> | 6.7 <sub>(140)</sub> | 6.5 <sub>(140)</sub> | 6.2 <sub>(140)</sub> | 6.0 <sub>(170)</sub> | 5.8 <sub>(170)</sub> | 5.6 <sub>(170)</sub> | 5.3 <sub>(170)</sub> |

1 Sections with depth 200mm or greater must be restrained against rollover at supports.

2 Bearing length to be not less than 45mm at end supports or 90mm at intermediate supports for continuous span except where otherwise indicated by a subscript to the maximum span.

3 For single span bearers the subscript value indicates the required bearing length at end supports.

4 For continuous span, the subscript value indicates the minimum bearing length required at intermediate supports; the bearing length at end supports must be at least one third of the bearing length indicated for the intermediate support but not less than 45mm.

**BEARERS**SUPPORTING SINGLE OR UPPER  
STOREY LOAD BEARING WALLS

## WIND CLASSIFICATION N1, N2, N3

| Sheet Roof And Ceiling             |                            |     |     |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
|------------------------------------|----------------------------|-----|-----|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| e-beam<br>Section<br>D X B<br>(mm) | Floor Load Width 'FLW' (m) |     |     |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
|                                    | 1.2                        |     |     |                      |                      | 2.1                  |                      |                      |                      |                      | 3.0                  |                      |                      |                      |                      |
|                                    | Roof Load Width 'RLW' (m)  |     |     |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
|                                    | 1.8                        | 3.0 | 4.2 | 5.4                  | 6.6                  | 1.8                  | 3.0                  | 4.2                  | 5.4                  | 6.6                  | 1.8                  | 3.0                  | 4.2                  | 5.4                  | 6.6                  |
| <b>Maximum single span (m)</b>     |                            |     |     |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 90 x 63                            | 1.4                        | 1.3 | 1.3 | 1.2                  | 1.2                  | 1.3                  | 1.2                  | 1.2                  | 1.1                  | 1.1                  | 1.2                  | 1.1                  | 1.1                  | 1.1                  | 1.0                  |
| 130 x 63                           | 2.0                        | 1.9 | 1.8 | 1.7                  | 1.7                  | 1.8                  | 1.7                  | 1.7                  | 1.6                  | 1.6                  | 1.7                  | 1.6                  | 1.6                  | 1.5                  | 1.5                  |
| 150 x 63                           | 2.4                        | 2.2 | 2.1 | 2.0                  | 1.9                  | 2.1                  | 2.0                  | 1.9                  | 1.9                  | 1.8                  | 1.9                  | 1.9                  | 1.8                  | 1.8                  | 1.7                  |
| 150 x 75                           | 2.5                        | 2.3 | 2.2 | 2.1                  | 2.0                  | 2.2                  | 2.1                  | 2.0                  | 2.0                  | 1.9                  | 2.1                  | 2.0                  | 1.9                  | 1.9                  | 1.8                  |
| 170 x 63                           | 2.7                        | 2.5 | 2.4 | 2.3                  | 2.2                  | 2.4                  | 2.3                  | 2.2                  | 2.1                  | 2.0                  | 2.2                  | 2.1                  | 2.0                  | 2.0                  | 1.9                  |
| 200 x 63                           | 3.1                        | 2.9 | 2.8 | 2.7                  | 2.6                  | 2.8                  | 2.7                  | 2.6                  | 2.5                  | 2.4                  | 2.6                  | 2.5                  | 2.4                  | 2.3                  | 2.3                  |
| 240 x 63                           | 3.7                        | 3.5 | 3.3 | 3.2                  | 3.1                  | 3.4                  | 3.2                  | 3.1                  | 3.0                  | 2.9                  | 3.1                  | 3.0                  | 2.9                  | 2.8                  | 2.7                  |
| 300 x 63                           | 4.4                        | 4.2 | 4.0 | 3.9                  | 3.8                  | 4.0                  | 3.9                  | 3.8                  | 3.7                  | 3.6                  | 3.8                  | 3.7                  | 3.6                  | 3.5                  | 3.4                  |
| 300 x 75                           | 4.6                        | 4.4 | 4.2 | 4.0                  | 3.9                  | 4.2                  | 4.1                  | 3.9                  | 3.8                  | 3.8                  | 4.0                  | 3.8                  | 3.8                  | 3.7                  | 3.6                  |
| 360 x 63                           | 5.0                        | 4.8 | 4.6 | 4.4                  | 4.3                  | 4.6                  | 4.5                  | 4.3                  | 4.2                  | 4.1                  | 4.3                  | 4.2                  | 4.1                  | 4.0                  | 4.0                  |
| 400 x 63                           | 5.4                        | 5.2 | 5.0 | 4.8                  | 4.7                  | 5.0                  | 4.8                  | 4.7                  | 4.6                  | 4.5                  | 4.7                  | 4.6                  | 4.5                  | 4.4                  | 4.3                  |
| 400 x 75                           | 5.6                        | 5.4 | 5.2 | 5.0                  | 4.9                  | 5.2                  | 5.0                  | 4.9                  | 4.8                  | 4.6                  | 4.9                  | 4.8                  | 4.7                  | 4.5                  | 4.5                  |
| 450 x 63                           | 5.9                        | 5.6 | 5.4 | 5.2                  | 5.1                  | 5.4                  | 5.3                  | 5.1                  | 5.0                  | 4.9                  | 5.1                  | 5.0                  | 4.9                  | 4.8                  | 4.7 <sub>(70)</sub>  |
| <b>Maximum continuous span (m)</b> |                            |     |     |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 90 x 63                            | 1.9                        | 1.8 | 1.7 | 1.6                  | 1.6                  | 1.7                  | 1.7                  | 1.6                  | 1.6                  | 1.5                  | 1.6                  | 1.5                  | 1.5                  | 1.4                  | 1.4                  |
| 130 x 63                           | 2.7                        | 2.6 | 2.4 | 2.3                  | 2.2                  | 2.5                  | 2.3                  | 2.2                  | 2.2                  | 2.1                  | 2.3                  | 2.2                  | 2.1                  | 2.0                  | 2.0                  |
| 150 x 63                           | 3.2                        | 3.0 | 2.8 | 2.7                  | 2.6                  | 2.8                  | 2.7                  | 2.6                  | 2.5                  | 2.4                  | 2.6                  | 2.5                  | 2.4                  | 2.4                  | 2.3                  |
| 150 x 75                           | 3.3                        | 3.1 | 3.0 | 2.8                  | 2.7                  | 3.0                  | 2.9                  | 2.7                  | 2.6                  | 2.6                  | 2.8                  | 2.7                  | 2.6                  | 2.5                  | 2.4                  |
| 170 x 63                           | 3.6                        | 3.4 | 3.2 | 3.0                  | 2.9                  | 3.2                  | 3.1                  | 2.9                  | 2.8                  | 2.7                  | 2.9                  | 2.8                  | 2.7                  | 2.7                  | 2.6                  |
| 200 x 63                           | 4.0                        | 3.9 | 3.7 | 3.6                  | 3.4                  | 3.7                  | 3.6                  | 3.4                  | 3.3                  | 3.2                  | 3.5                  | 3.3                  | 3.2                  | 3.1                  | 3.0                  |
| 240 x 63                           | 4.6                        | 4.4 | 4.2 | 4.1                  | 4.0                  | 4.3                  | 4.1                  | 4.0                  | 3.9                  | 3.8                  | 4.0                  | 3.9                  | 3.8                  | 3.7 <sub>(105)</sub> | 3.6 <sub>(105)</sub> |
| 300 x 63                           | 5.4                        | 5.2 | 5.0 | 4.8                  | 4.7                  | 5.0                  | 4.9                  | 4.7                  | 4.6                  | 4.5 <sub>(105)</sub> | 4.7 <sub>(105)</sub> | 4.6 <sub>(140)</sub> | 4.5 <sub>(140)</sub> | 4.4 <sub>(140)</sub> | 4.3 <sub>(140)</sub> |
| 300 x 75                           | 5.7                        | 5.4 | 5.2 | 5.0                  | 4.9                  | 5.2                  | 5.1                  | 4.9                  | 4.8                  | 4.7                  | 4.9                  | 4.8                  | 4.7 <sub>(105)</sub> | 4.6 <sub>(105)</sub> | 4.5 <sub>(105)</sub> |
| 360 x 63                           | 6.2                        | 5.9 | 5.7 | 5.5                  | 5.4                  | 5.8                  | 5.6 <sub>(105)</sub> | 5.4 <sub>(105)</sub> | 5.3 <sub>(140)</sub> | 5.1 <sub>(140)</sub> | 5.4 <sub>(140)</sub> | 5.3 <sub>(140)</sub> | 5.1 <sub>(140)</sub> | 5.0 <sub>(140)</sub> | 4.9 <sub>(140)</sub> |
| 400 x 63                           | 6.7                        | 6.4 | 6.2 | 6.0                  | 5.8 <sub>(105)</sub> | 6.2 <sub>(105)</sub> | 6.0 <sub>(140)</sub> | 5.8 <sub>(140)</sub> | 5.7 <sub>(140)</sub> | 5.5 <sub>(140)</sub> | 5.8 <sub>(140)</sub> | 5.7 <sub>(140)</sub> | 5.6 <sub>(140)</sub> | 5.4 <sub>(140)</sub> | 5.3 <sub>(170)</sub> |
| 400 x 75                           | 7.0                        | 6.7 | 6.4 | 6.2                  | 6.1                  | 6.5                  | 6.3                  | 6.1 <sub>(105)</sub> | 5.9 <sub>(105)</sub> | 5.8 <sub>(105)</sub> | 6.1 <sub>(140)</sub> | 5.9 <sub>(140)</sub> | 5.8 <sub>(140)</sub> | 5.7 <sub>(140)</sub> | 5.6 <sub>(140)</sub> |
| 450 x 63                           | 7.3                        | 7.0 | 6.7 | 6.5 <sub>(105)</sub> | 6.3 <sub>(140)</sub> | 6.8 <sub>(140)</sub> | 6.6 <sub>(140)</sub> | 6.4 <sub>(140)</sub> | 6.2 <sub>(140)</sub> | 6.1 <sub>(140)</sub> | 6.4 <sub>(170)</sub> | 6.2 <sub>(170)</sub> | 6.1 <sub>(170)</sub> | 5.9 <sub>(170)</sub> | 5.8 <sub>(170)</sub> |

1 Sections with depth 200mm or greater must be restrained against rollover at supports.

2 Bearing length to be not less than 45mm at end supports or 90mm at intermediate supports for continuous span except where otherwise indicated by a subscript to the maximum span.

3 For single span bearers the subscript value indicates the required bearing length at end supports.

4 For continuous span, the subscript value indicates the minimum bearing length required at intermediate supports; the bearing length at end supports must be at least one third of the bearing length indicated for the intermediate support but not less than 45mm.



**BEARERS**SUPPORTING SINGLE OR UPPER  
STOREY LOAD BEARING WALLS

## WIND CLASSIFICATION N1, N2, N3

| Tile Roof And Ceiling              |                            |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
|------------------------------------|----------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| e-beam<br>Section<br>D X B<br>(mm) | Floor Load Width 'FLW' (m) |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
|                                    | 1.2                        |                      |                      |                      |                      | 2.1                  |                      |                      |                      |                      | 3.0                  |                      |                      |                      |                      |
|                                    | Roof Load Width 'RLW' (m)  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
|                                    | 1.8                        | 3.0                  | 4.2                  | 5.4                  | 6.6                  | 1.8                  | 3.0                  | 4.2                  | 5.4                  | 6.6                  | 1.8                  | 3.0                  | 4.2                  | 5.4                  | 6.6                  |
| <b>Maximum single span (m)</b>     |                            |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 90 x 63                            | 1.3                        | 1.2                  | 1.1                  | 1.0                  | 1.0                  | 1.2                  | 1.1                  | 1.0                  | 1.0                  | 0.9                  | 1.0                  | 1.0                  | 1.0                  | 0.9                  | 0.9                  |
| 130 x 63                           | 1.8                        | 1.7                  | 1.5                  | 1.4                  | 1.4                  | 1.7                  | 1.6                  | 1.5                  | 1.4                  | 1.3                  | 1.6                  | 1.5                  | 1.4                  | 1.3                  | 1.3                  |
| 150 x 63                           | 2.1                        | 1.9                  | 1.8                  | 1.7                  | 1.6                  | 1.9                  | 1.8                  | 1.7                  | 1.6                  | 1.5                  | 1.8                  | 1.7                  | 1.6                  | 1.5                  | 1.5                  |
| 150 x 75                           | 2.2                        | 2.0                  | 1.9                  | 1.8                  | 1.7                  | 2.1                  | 1.9                  | 1.8                  | 1.7                  | 1.6                  | 1.9                  | 1.8                  | 1.7                  | 1.6                  | 1.6                  |
| 170 x 63                           | 2.4                        | 2.2                  | 2.0                  | 1.9                  | 1.8                  | 2.2                  | 2.0                  | 1.9                  | 1.8                  | 1.7                  | 2.1                  | 1.9                  | 1.8                  | 1.7                  | 1.7                  |
| 200 x 63                           | 2.8                        | 2.5                  | 2.4                  | 2.2                  | 2.1                  | 2.6                  | 2.4                  | 2.2                  | 2.1                  | 2.0                  | 2.4                  | 2.3                  | 2.1                  | 2.0                  | 2.0                  |
| 240 x 63                           | 3.4                        | 3.1                  | 2.8                  | 2.7                  | 2.5                  | 3.1                  | 2.9                  | 2.7                  | 2.6                  | 2.4                  | 2.9                  | 2.7                  | 2.6                  | 2.5                  | 2.4                  |
| 300 x 63                           | 4.0                        | 3.8                  | 3.5                  | 3.3                  | 3.2                  | 3.8                  | 3.6                  | 3.4                  | 3.2                  | 3.0                  | 3.6                  | 3.4                  | 3.2                  | 3.1                  | 2.9                  |
| 300 x 75                           | 4.2                        | 3.9                  | 3.7                  | 3.5                  | 3.3                  | 4.0                  | 3.7                  | 3.6                  | 3.4                  | 3.2                  | 3.8                  | 3.6                  | 3.4                  | 3.2                  | 3.1                  |
| 360 x 63                           | 4.6                        | 4.3                  | 4.1                  | 3.9                  | 3.7                  | 4.3                  | 4.1                  | 3.9                  | 3.8                  | 3.6                  | 4.1                  | 3.9                  | 3.8                  | 3.7                  | 3.5                  |
| 400 x 63                           | 5.0                        | 4.6                  | 4.4                  | 4.2                  | 4.0                  | 4.7                  | 4.4                  | 4.2                  | 4.1                  | 3.9 <sub>(70)</sub>  | 4.5                  | 4.3                  | 4.1                  | 4.0                  | 3.8 <sub>(70)</sub>  |
| 400 x 75                           | 5.2                        | 4.8                  | 4.6                  | 4.4                  | 4.2                  | 4.9                  | 4.6                  | 4.4                  | 4.2                  | 4.1                  | 4.7                  | 4.4                  | 4.3                  | 4.1                  | 4.0                  |
| 450 x 63                           | 5.4                        | 5.1                  | 4.8                  | 4.6                  | 4.4 <sub>(70)</sub>  | 5.1                  | 4.8                  | 4.6                  | 4.4 <sub>(70)</sub>  | 4.3 <sub>(70)</sub>  | 4.9 <sub>(70)</sub>  | 4.7 <sub>(70)</sub>  | 4.5 <sub>(70)</sub>  | 4.3 <sub>(70)</sub>  | 4.2 <sub>(70)</sub>  |
| <b>Maximum continuous span (m)</b> |                            |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 90 x 63                            | 1.7                        | 1.6                  | 1.4                  | 1.4                  | 1.3                  | 1.6                  | 1.5                  | 1.4                  | 1.3                  | 1.2                  | 1.5                  | 1.4                  | 1.3                  | 1.2                  | 1.2                  |
| 130 x 63                           | 2.5                        | 2.2                  | 2.1                  | 1.9                  | 1.8                  | 2.3                  | 2.1                  | 2.0                  | 1.9                  | 1.8                  | 2.1                  | 2.0                  | 1.9                  | 1.8                  | 1.6                  |
| 150 x 63                           | 2.8                        | 2.6                  | 2.4                  | 2.2                  | 2.1                  | 2.6                  | 2.4                  | 2.3                  | 2.1                  | 2.0                  | 2.4                  | 2.3                  | 2.2                  | 2.1                  | 1.9                  |
| 150 x 75                           | 3.0                        | 2.7                  | 2.5                  | 2.4                  | 2.3                  | 2.8                  | 2.6                  | 2.4                  | 2.3                  | 2.2                  | 2.6                  | 2.4                  | 2.3                  | 2.2                  | 2.1                  |
| 170 x 63                           | 3.2                        | 2.9                  | 2.7                  | 2.5                  | 2.4                  | 2.9                  | 2.7                  | 2.6                  | 2.4                  | 2.3                  | 2.8                  | 2.6                  | 2.4                  | 2.3                  | 2.1                  |
| 200 x 63                           | 3.7                        | 3.4                  | 3.2                  | 3.0                  | 2.8                  | 3.5                  | 3.2                  | 3.0                  | 2.9                  | 2.7                  | 3.2                  | 3.0                  | 2.9                  | 2.7                  | 2.5 <sub>(105)</sub> |
| 240 x 63                           | 4.3                        | 4.0                  | 3.7                  | 3.6                  | 3.4 <sub>(105)</sub> | 4.0                  | 3.8                  | 3.6                  | 3.4 <sub>(105)</sub> | 3.3 <sub>(140)</sub> | 3.8                  | 3.6 <sub>(105)</sub> | 3.4 <sub>(105)</sub> | 3.3 <sub>(140)</sub> | 3.1 <sub>(140)</sub> |
| 300 x 63                           | 5.0                        | 4.7                  | 4.4                  | 4.2 <sub>(105)</sub> | 4.1 <sub>(140)</sub> | 4.7                  | 4.5 <sub>(105)</sub> | 4.3 <sub>(105)</sub> | 4.1 <sub>(140)</sub> | 4.0 <sub>(140)</sub> | 4.5 <sub>(140)</sub> | 4.3 <sub>(140)</sub> | 4.1 <sub>(140)</sub> | 4.0 <sub>(140)</sub> | 3.9 <sub>(140)</sub> |
| 300 x 75                           | 5.2                        | 4.9                  | 4.6                  | 4.4                  | 4.2 <sub>(105)</sub> | 4.9                  | 4.7                  | 4.4                  | 4.3 <sub>(105)</sub> | 4.1 <sub>(140)</sub> | 4.7 <sub>(105)</sub> | 4.5 <sub>(105)</sub> | 4.3 <sub>(140)</sub> | 4.2 <sub>(140)</sub> | 4.0 <sub>(140)</sub> |
| 360 x 63                           | 5.7                        | 5.4                  | 5.1 <sub>(105)</sub> | 4.8 <sub>(140)</sub> | 4.7 <sub>(140)</sub> | 5.4 <sub>(105)</sub> | 5.1 <sub>(140)</sub> | 4.9 <sub>(140)</sub> | 4.7 <sub>(140)</sub> | 4.5 <sub>(170)</sub> | 5.2 <sub>(140)</sub> | 4.9 <sub>(140)</sub> | 4.7 <sub>(170)</sub> | 4.6 <sub>(170)</sub> | 4.4 <sub>(170)</sub> |
| 400 x 63                           | 6.2                        | 5.8 <sub>(105)</sub> | 5.5 <sub>(140)</sub> | 5.2 <sub>(140)</sub> | 5.0 <sub>(170)</sub> | 5.9 <sub>(140)</sub> | 5.5 <sub>(140)</sub> | 5.3 <sub>(140)</sub> | 5.1 <sub>(170)</sub> | 4.9 <sub>(170)</sub> | 5.6 <sub>(140)</sub> | 5.3 <sub>(170)</sub> | 5.1 <sub>(170)</sub> | 4.9 <sub>(170)</sub> | 4.8 <sub>(170)</sub> |
| 400 x 75                           | 6.5                        | 6.0                  | 5.7 <sub>(105)</sub> | 5.5 <sub>(140)</sub> | 5.3 <sub>(140)</sub> | 6.1 <sub>(105)</sub> | 5.8 <sub>(105)</sub> | 5.5 <sub>(140)</sub> | 5.3 <sub>(140)</sub> | 5.1 <sub>(140)</sub> | 5.8 <sub>(140)</sub> | 5.5 <sub>(140)</sub> | 5.3 <sub>(140)</sub> | 5.1 <sub>(170)</sub> | 5.0 <sub>(170)</sub> |
| 450 x 63                           | 6.8                        | 6.3 <sub>(140)</sub> | 6.0 <sub>(140)</sub> | 5.7 <sub>(170)</sub> | 5.5 <sub>(170)</sub> | 6.4 <sub>(140)</sub> | 6.0 <sub>(170)</sub> | 5.8 <sub>(170)</sub> | 5.5 <sub>(170)</sub> | 5.4 <sub>(170)</sub> | 6.1 <sub>(170)</sub> | 5.8 <sub>(170)</sub> | 5.6 <sub>(170)</sub> | 5.4 <sub>(170)</sub> | 5.1 <sub>(170)</sub> |

1 Sections with depth 200mm or greater must be restrained against rollover at supports.

2 Bearing length to be not less than 45mm at end supports or 90mm at intermediate supports for continuous span except where otherwise indicated by a subscript to the maximum span.

3 For single span bearers the subscript value indicates the required bearing length at end supports.

4 For continuous span, the subscript value indicates the minimum bearing length required at intermediate supports; the bearing length at end supports must be at least one third of the bearing length indicated for the intermediate support but not less than 45mm.

## BEARERS

SUPPORTING TWO STOREY LOAD BEARING WALLS

WIND CLASSIFICATION N1, N2, N3

| Sheet Roof and Ceiling             |                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
|------------------------------------|----------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Ground Floor Load Width 'FLW' (m)  |                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| e-beam<br>Section<br>D X B<br>(mm) | 1.5                              |                      |                      |                      |                      |                      | 3.0                  |                      |                      |                      |                      |                      |
|                                    | First Floor Load Width 'FLW' (m) |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
|                                    | 1.5                              |                      |                      | 3.0                  |                      |                      | 1.5                  |                      |                      | 3.0                  |                      |                      |
|                                    | Roof Load Width 'FLW' (m)        |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
|                                    | 2.4                              | 4.5                  | 6.6                  | 2.4                  | 4.5                  | 6.6                  | 2.4                  | 4.5                  | 6.6                  | 2.4                  | 4.5                  | 6.6                  |
| <b>Maximum single span (m)</b>     |                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 90 x 63                            | 1.1                              | 1.1                  | 1.0                  | 1.0                  | 1.0                  | 0.9                  | 1.0                  | 1.0                  | 0.9                  | 0.9                  | 0.9                  | 0.9                  |
| 2/90 x 45                          | 1.3                              | 1.2                  | 1.1                  | 1.1                  | 1.1                  | 1.1                  | 1.1                  | 1.1                  | 1.1                  | 1.1                  | 1.0                  | 1.0                  |
| 130 x 63                           | 1.6                              | 1.5                  | 1.5                  | 1.5                  | 1.4                  | 1.4                  | 1.5                  | 1.4                  | 1.4                  | 1.4                  | 1.3                  | 1.3                  |
| 2/130 x 45                         | 1.8                              | 1.7                  | 1.6                  | 1.7                  | 1.6                  | 1.5                  | 1.7                  | 1.6                  | 1.5                  | 1.5                  | 1.5                  | 1.4                  |
| 150 x 63                           | 1.9                              | 1.8                  | 1.7                  | 1.7                  | 1.6                  | 1.6                  | 1.7                  | 1.6                  | 1.6                  | 1.6                  | 1.5                  | 1.5                  |
| 150 x 75                           | 2.0                              | 1.9                  | 1.8                  | 1.8                  | 1.7                  | 1.7                  | 1.8                  | 1.7                  | 1.7                  | 1.7                  | 1.6                  | 1.6                  |
| 2/150 x 45                         | 2.1                              | 2.0                  | 1.9                  | 1.9                  | 1.8                  | 1.8                  | 1.9                  | 1.8                  | 1.8                  | 1.8                  | 1.7                  | 1.7                  |
| 170 x 63                           | 2.1                              | 2.0                  | 1.9                  | 1.9                  | 1.8                  | 1.8                  | 1.9                  | 1.8                  | 1.8                  | 1.8                  | 1.7                  | 1.7                  |
| 2/170 x 45                         | 2.4                              | 2.2                  | 2.1                  | 2.2                  | 2.1                  | 2.0                  | 2.2                  | 2.1                  | 2.0                  | 2.0                  | 1.9                  | 1.9                  |
| 200 x 63                           | 2.5                              | 2.3                  | 2.2                  | 2.3                  | 2.2                  | 2.1                  | 2.3                  | 2.2                  | 2.1                  | 2.1                  | 2.0                  | 2.0                  |
| 2/200 x 45                         | 2.8                              | 2.6                  | 2.5                  | 2.5                  | 2.4                  | 2.3                  | 2.5                  | 2.4                  | 2.3                  | 2.4                  | 2.3                  | 2.2                  |
| 240 x 63                           | 3.0                              | 2.8                  | 2.7                  | 2.7                  | 2.6                  | 2.5                  | 2.7                  | 2.6                  | 2.5                  | 2.5                  | 2.4                  | 2.4                  |
| 2/240 x 45                         | 3.3                              | 3.2                  | 3.0                  | 3.0                  | 2.9                  | 2.8                  | 3.0                  | 2.9                  | 2.8                  | 2.8                  | 2.7                  | 2.6                  |
| 300 x 63                           | 3.7                              | 3.5                  | 3.3                  | 3.4                  | 3.2                  | 3.1                  | 3.4                  | 3.2                  | 3.1                  | 3.1                  | 3.0                  | 2.9                  |
| 300 x 75                           | 3.8                              | 3.7                  | 3.5                  | 3.6                  | 3.4                  | 3.3                  | 3.6                  | 3.4                  | 3.3                  | 3.3                  | 3.2                  | 3.1                  |
| <b>Maximum continuous span (m)</b> |                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 90 x 63                            | 1.5                              | 1.4                  | 1.4                  | 1.4                  | 1.3                  | 1.3                  | 1.4                  | 1.3                  | 1.3                  | 1.2                  | 1.2                  | 1.2                  |
| 2/90 x 45                          | 1.7                              | 1.6                  | 1.5                  | 1.5                  | 1.5                  | 1.4                  | 1.5                  | 1.5                  | 1.4                  | 1.4                  | 1.4                  | 1.3                  |
| 130 x 63                           | 2.2                              | 2.0                  | 2.0                  | 2.0                  | 1.9                  | 1.8                  | 2.0                  | 1.9                  | 1.8                  | 1.7                  | 1.7                  | 1.6                  |
| 2/130 x 45                         | 2.4                              | 2.3                  | 2.2                  | 2.2                  | 2.1                  | 2.0                  | 2.2                  | 2.1                  | 2.0                  | 2.1                  | 2.0                  | 1.9                  |
| 150 x 63                           | 2.5                              | 2.4                  | 2.3                  | 2.3                  | 2.2                  | 2.1                  | 2.3                  | 2.2                  | 2.1                  | 2.0                  | 1.9                  | 1.9                  |
| 150 x 75                           | 2.6                              | 2.5                  | 2.4                  | 2.4                  | 2.3                  | 2.2                  | 2.4                  | 2.3                  | 2.2                  | 2.2                  | 2.2                  | 2.1                  |
| 2/150 x 45                         | 2.8                              | 2.7                  | 2.5                  | 2.6                  | 2.4                  | 2.4                  | 2.6                  | 2.4                  | 2.4                  | 2.4                  | 2.3                  | 2.2                  |
| 170 x 63                           | 2.8                              | 2.7                  | 2.6                  | 2.6                  | 2.5                  | 2.4                  | 2.6                  | 2.5                  | 2.4                  | 2.3                  | 2.2                  | 2.1                  |
| 2/170 x 45                         | 3.2                              | 3.0                  | 2.9                  | 2.9                  | 2.8                  | 2.7                  | 2.9                  | 2.8                  | 2.7                  | 2.7                  | 2.6                  | 2.5                  |
| 200 x 63                           | 3.3                              | 3.1                  | 3.0                  | 3.0                  | 2.9                  | 2.8                  | 3.0                  | 2.9                  | 2.8                  | 2.7                  | 2.6 <sub>(105)</sub> | 2.5 <sub>(105)</sub> |
| 2/200 x 45                         | 3.7                              | 3.5                  | 3.4                  | 3.4                  | 3.3                  | 3.1                  | 3.4                  | 3.3                  | 3.1                  | 3.2                  | 3.1                  | 3.0                  |
| 240 x 63                           | 3.9                              | 3.7                  | 3.6                  | 3.6                  | 3.5 <sub>(105)</sub> | 3.3 <sub>(105)</sub> | 3.6 <sub>(105)</sub> | 3.5 <sub>(140)</sub> | 3.3 <sub>(140)</sub> | 3.3 <sub>(140)</sub> | 3.2 <sub>(140)</sub> | 3.1 <sub>(140)</sub> |
| 2/240 x 45                         | 4.2                              | 4.1                  | 3.9                  | 4.0                  | 3.8                  | 3.7                  | 4.0                  | 3.8                  | 3.7                  | 3.7                  | 3.6                  | 3.5 <sub>(105)</sub> |
| 300 x 63                           | 4.6                              | 4.4 <sub>(105)</sub> | 4.2 <sub>(140)</sub> | 4.3 <sub>(140)</sub> | 4.1 <sub>(140)</sub> | 4.0 <sub>(140)</sub> | 4.3 <sub>(140)</sub> | 4.1 <sub>(140)</sub> | 4.0 <sub>(140)</sub> | 4.0 <sub>(140)</sub> | 3.9 <sub>(170)</sub> | 3.9 <sub>(170)</sub> |
| 300 x 75                           | 4.8                              | 4.6                  | 4.4                  | 4.5 <sub>(105)</sub> | 4.3 <sub>(105)</sub> | 4.2 <sub>(140)</sub> | 4.5 <sub>(140)</sub> | 4.3 <sub>(140)</sub> | 4.2 <sub>(140)</sub> | 4.2 <sub>(140)</sub> | 4.1 <sub>(140)</sub> | 4.0 <sub>(140)</sub> |

1 Sections with depth more than three times overall breadth must be restrained against rollover at supports.

2 Bearing length to be not less than 45mm at end supports or 90mm at intermediate supports for continuous span except where otherwise indicated by a subscript to the maximum span.

3 For single span bearers the subscript value indicates the required bearing length at end supports.

4 For continuous span, the subscript value indicates the minimum bearing length required at intermediate supports; the bearing length at end supports must be at least one third of the bearing length indicated for the intermediate support but not less than 45mm.

## BEARERS

SUPPORTING TWO STOREY LOAD BEARING WALLS

WIND CLASSIFICATION N1, N2, N3

| Tile Roof and Ceiling              |                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
|------------------------------------|----------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Ground Floor Load Width 'FLW' (m)  |                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| e-beam<br>Section<br>D X B<br>(mm) | 1.5                              |                      |                      |                      |                      |                      | 3.0                  |                      |                      |                      |                      |                      |
|                                    | First Floor Load Width 'FLW' (m) |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
|                                    | 1.5                              |                      |                      | 3.0                  |                      |                      | 1.5                  |                      |                      | 3.0                  |                      |                      |
|                                    | Roof Load Width 'FLW' (m)        |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Roof Load Width 'FLW' (m)          |                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 2.4                                |                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 4.5                                |                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 6.6                                |                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 2.4                                |                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 4.5                                |                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 6.6                                |                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 2.4                                |                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 4.5                                |                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 6.6                                |                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Maximum single span (m)            |                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 90 x 63                            | 1.0 <sub>(70)</sub>              | 0.9                  | 0.9                  | 1.0                  | 0.9                  | 0.8                  | 1.0                  | 0.9                  | 0.8                  | 0.9                  | 0.8                  | 0.8                  |
| 2/90 x 45                          | 1.2                              | 1.1                  | 1.0                  | 1.1                  | 1.0                  | 0.9                  | 1.1                  | 1.0                  | 0.9                  | 1.0                  | 1.0                  | 0.9                  |
| 130 x 63                           | 1.5                              | 1.4                  | 1.3                  | 1.4                  | 1.3                  | 1.2                  | 1.4                  | 1.3                  | 1.2                  | 1.3                  | 1.2                  | 1.2                  |
| 2/130 x 45                         | 1.7                              | 1.5                  | 1.4                  | 1.6                  | 1.4                  | 1.4                  | 1.6                  | 1.4                  | 1.4                  | 1.5                  | 1.4                  | 1.3                  |
| 150 x 63                           | 1.7                              | 1.6                  | 1.5                  | 1.6                  | 1.5                  | 1.4                  | 1.6                  | 1.5                  | 1.4                  | 1.5                  | 1.4                  | 1.3                  |
| 150 x 75                           | 1.8                              | 1.7                  | 1.5                  | 1.7                  | 1.6                  | 1.5                  | 1.7                  | 1.6                  | 1.5                  | 1.6                  | 1.5                  | 1.4                  |
| 2/150 x 45                         | 1.9                              | 1.8                  | 1.6                  | 1.8                  | 1.7                  | 1.6                  | 1.8                  | 1.7                  | 1.6                  | 1.7                  | 1.6                  | 1.5                  |
| 170 x 63                           | 2.0                              | 1.8                  | 1.7                  | 1.8                  | 1.7                  | 1.6                  | 1.8                  | 1.7                  | 1.6                  | 1.7                  | 1.6                  | 1.5                  |
| 2/170 x 45                         | 2.2                              | 2.0                  | 1.9                  | 2.0                  | 1.9                  | 1.8                  | 2.0                  | 1.9                  | 1.8                  | 1.9                  | 1.8                  | 1.7                  |
| 200 x 63                           | 2.3                              | 2.1                  | 1.9                  | 2.1                  | 2.0                  | 1.9                  | 2.1                  | 2.0                  | 1.9                  | 2.0                  | 1.9                  | 1.8                  |
| 2/200 x 45                         | 2.6                              | 2.4                  | 2.2                  | 2.4                  | 2.2                  | 2.1                  | 2.4                  | 2.2                  | 2.1                  | 2.2                  | 2.1                  | 2.0                  |
| 240 x 63                           | 2.8                              | 2.5                  | 2.3                  | 2.6                  | 2.4                  | 2.2                  | 2.6                  | 2.4                  | 2.2                  | 2.4                  | 2.2                  | 2.1                  |
| 2/240 x 45                         | 3.1                              | 2.8                  | 2.6                  | 2.9                  | 2.7                  | 2.5                  | 2.9                  | 2.7                  | 2.5                  | 2.7                  | 2.5                  | 2.4                  |
| 300 x 63                           | 3.4                              | 3.1                  | 2.9                  | 3.2                  | 3.0                  | 2.8 <sub>(70)</sub>  | 3.2                  | 3.0                  | 2.8 <sub>(70)</sub>  | 3.0                  | 2.8 <sub>(70)</sub>  | 2.7 <sub>(70)</sub>  |
| 300 x 75                           | 3.6                              | 3.3                  | 3.1                  | 3.4                  | 3.1                  | 2.9                  | 3.4                  | 3.1                  | 2.9                  | 3.2                  | 3.0                  | 2.8                  |
| Maximum continuous span (m)        |                                  |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| 90 x 63                            | 1.4                              | 1.3                  | 1.1                  | 1.3                  | 1.2                  | 1.1                  | 1.3                  | 1.2                  | 1.1                  | 1.2                  | 1.1                  | 1.0                  |
| 2/90 x 45                          | 1.6                              | 1.4                  | 1.3                  | 1.4                  | 1.3                  | 1.3                  | 1.4                  | 1.3                  | 1.3                  | 1.4                  | 1.3                  | 1.2                  |
| 130 x 63                           | 2.0                              | 1.8                  | 1.6                  | 1.9                  | 1.6                  | 1.5                  | 1.9                  | 1.6                  | 1.5                  | 1.6                  | 1.5                  | 1.4                  |
| 2/130 x 45                         | 2.3                              | 2.1                  | 1.9                  | 2.1                  | 1.9                  | 1.8                  | 2.1                  | 1.9                  | 1.8                  | 2.0                  | 1.8                  | 1.7                  |
| 150 x 63                           | 2.3                              | 2.1                  | 1.9                  | 2.1                  | 1.9                  | 1.8                  | 2.1                  | 1.9                  | 1.8                  | 1.9                  | 1.8                  | 1.6                  |
| 150 x 75                           | 2.4                              | 2.2                  | 2.1                  | 2.3                  | 2.1                  | 1.9                  | 2.3                  | 2.1                  | 1.9                  | 2.1                  | 1.9                  | 1.8                  |
| 2/150 x 45                         | 2.6                              | 2.4                  | 2.2                  | 2.4                  | 2.2                  | 2.1                  | 2.4                  | 2.2                  | 2.1                  | 2.3                  | 2.1                  | 2.0                  |
| 170 x 63                           | 2.6                              | 2.4                  | 2.1                  | 2.4                  | 2.1                  | 2.0                  | 2.4                  | 2.1                  | 2.0                  | 2.2                  | 2.0                  | 1.8 <sub>(105)</sub> |
| 2/170 x 45                         | 2.9                              | 2.7                  | 2.5                  | 2.7                  | 2.5                  | 2.4                  | 2.7                  | 2.5                  | 2.4                  | 2.6                  | 2.4                  | 2.3                  |
| 200 x 63                           | 3.1                              | 2.8                  | 2.5 <sub>(105)</sub> | 2.9                  | 2.5 <sub>(105)</sub> | 2.4 <sub>(140)</sub> | 2.9                  | 2.5 <sub>(105)</sub> | 2.4 <sub>(140)</sub> | 2.6 <sub>(105)</sub> | 2.4 <sub>(105)</sub> | 2.1 <sub>(140)</sub> |
| 2/200 x 45                         | 3.5                              | 3.2                  | 2.9                  | 3.2                  | 3.0                  | 2.8                  | 3.2                  | 3.0                  | 2.8                  | 3.0                  | 2.8                  | 2.7                  |
| 240 x 63                           | 3.7                              | 3.4 <sub>(105)</sub> | 3.0 <sub>(140)</sub> | 3.4 <sub>(105)</sub> | 3.1 <sub>(140)</sub> | 2.8 <sub>(140)</sub> | 3.4 <sub>(105)</sub> | 3.1 <sub>(140)</sub> | 2.8 <sub>(140)</sub> | 3.1 <sub>(140)</sub> | 2.9 <sub>(140)</sub> | 2.6 <sub>(140)</sub> |
| 2/240 x 45                         | 4.0                              | 3.7                  | 3.5                  | 3.8                  | 3.6                  | 3.4 <sub>(105)</sub> | 3.8                  | 3.6                  | 3.4 <sub>(105)</sub> | 3.6 <sub>(105)</sub> | 3.4 <sub>(105)</sub> | 3.1 <sub>(140)</sub> |
| 300 x 63                           | 4.3 <sub>(105)</sub>             | 4.0 <sub>(140)</sub> | 3.8 <sub>(170)</sub> | 4.1 <sub>(140)</sub> | 3.9 <sub>(170)</sub> | 3.5 <sub>(170)</sub> | 4.1 <sub>(140)</sub> | 3.9 <sub>(170)</sub> | 3.5 <sub>(170)</sub> | 3.9 <sub>(170)</sub> | 3.6 <sub>(170)</sub> | 3.2 <sub>(170)</sub> |
| 300 x 75                           | 4.5                              | 4.2 <sub>(140)</sub> | 4.0 <sub>(140)</sub> | 4.3 <sub>(140)</sub> | 4.0 <sub>(140)</sub> | 3.9 <sub>(170)</sub> | 4.3 <sub>(140)</sub> | 4.0 <sub>(140)</sub> | 3.9 <sub>(170)</sub> | 4.1 <sub>(140)</sub> | 3.9 <sub>(140)</sub> | 3.6 <sub>(170)</sub> |

1 Sections with depth more than three times overall breadth must be restrained against rollover at supports.

2 Bearing length to be not less than 45mm at end supports or 90mm at intermediate supports for continuous span except where otherwise indicated by a subscript to the maximum span.

3 For single span bearers the subscript value indicates the required bearing length at end supports.

4 For continuous span, the subscript value indicates the minimum bearing length required at intermediate supports; the bearing length at end supports must be at least one third of the bearing length indicated for the intermediate support but not less than 45mm.

# SPECIFICATIONS

## Veneer

|           |  |
|-----------|--|
| Thickness | Constant through the product thickness                                     |
| Species   | Plantation timber  |
| Joints    | Outer 2 plies are scarf jointed<br>Inner plies – scarf and/or butt jointed |

## Moisture Content

8% – 15% (at time of dispatch)

## Dimensional Tolerances

Available on request

## Straightness

Available on request

## Density

650 kg/m<sup>3</sup> (approximately)

## Adhesive

Phenolic – AS2754.1:2016 - Adhesives for timber and timber products; Adhesives for manufacture of plywood and laminated veneer lumber (LVL)

## Bond

Type A – AS/NZS2098.2:2012 - Methods of tests for veneer and plywood; Bond quality of plywood (chisel test)

## Joint Group

JD3 – for nails, bolts and screws

## Finish

Unsanded faces, sawn edges and arrised edges

## Branding

Each piece of Wesbeam LVL is branded at least once with the product name for identification and evidence of compliance with manufacturing control standards

## Storage

Store on level bearers at maximum 1800mm centres well clear of the ground, and cover to keep dry but allow ventilation

## Source

Plantation timber certified to AS4707:2014 - Chain of custody for forest products / PEFC

## Condition

Untreated – but can be specified to e2S, H2 and H3 Treatment levels as per AS/NZS1604.4:2004 - Specifications for preservative treatment; Laminated veneer lumber (LVL)

\* e2S is a CodeMark® certified glue-line termite treatment.



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