SmartLam GL17S
(non pre-cambered)

Design Guide

Edition 1 2018

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SmartFrame Product Warranty

Tilling Timber warrants that its SmartFrame Engineered Wood products will be free from manufacturing defects in workmanship and material.

In addition, provided the product is correctly installed and used, Tilling Timber warrants the adequacy of its design for the normal and expected life of the structure.

This warranty is backed by the full resources of Tilling Timber and by underwritten product liability insurance.

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Scope of this publication

This Design Guide and Load Tables assist in the selection of SmartLam GL 17S for some of the common structural elements in domestic construction.

Methods of developing lateral restraint and providing adequate support, adequate anchorage against wind uplift, and overall structural stability are outside the scope of this publication.

Information on the above matters can be obtained from AS 1684 Residential timber-framed construction or from a structural engineer experienced in timber construction.

Tilling Timber have structural engineers within the SmartFrame Design Centre who can be contacted for advice on matters concerning the use of its SmartFrame engineered timber products in timber construction via the technical support Helpline on 1300 668 690 or e-mail at techsupport@tilling.com.au.

Substitution of other products

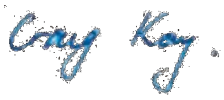
All load tables in this document are designed using the characteristic properties of GL 17S defined in table 7.1 of AS 1720.1, manufactured to AS/NZS 1328 by quality producers and distributed by Tilling Timber.

Copyright

Certification

As a professional engineer, qualified and experienced in timber engineering, I certify that the use of the SmartLam GL 17S members as shown in these tables, and installed in accordance with the provisions of this Design Guide, complies to the Building Code of Australia. These Span Tables have been prepared in accordance with standard engineering principles, the relevant test reports and Australian standards, ie:

- AS 1720.3 Timber structures – Design criteria for timber-framed residential buildings
- AS 1720.1 Timber structures - design methods
- AS 4055 wind loads for houses
- AS/NZS 4063 Characterisation of structural timber
- AS/NZS 1328 Glue laminated structural tmber - performance requirements and minimum production requirements.
- GLTAA Unified design criteria



CRAIG KAY RPEng, RPEQ-5100, EC-1961, PB0730, CC56335 C NER
National Product Engineer

SmartLam® GL 17S

Introduction

Tilling Timber offer multiple GL 17S options, with both softwood and hardwood based glulam beams available.

SmartLam GL 17S beams are manufactured for Tilling Timber by 3rd party audited quality glulam manufacturers to AS/NZS 1328. SmartLam GL 17S Glulam beams are engineered timber products with high strength, dimensional stability, great load carrying capacity and superior fire resistance.

All timber used for laminating is carefully selected from production and graded according to specification. After trimming to the desired size, all stock is kiln dried to 12% average moisture content, to ensure efficient bonding in the gluing operations. The laminations are finger jointed by machine, with glue being cured by cold press system and controlled temperature.

Benefits of SmartLam GL 17S

Cost Effectiveness - SmartLam GL 17S beams high strength to weight ratio allows you to design for maximum loads over large spans with the smallest possible end sections.

Product Quality - All SmartLam GL 17S beams are manufactures in accordance with AS 1328 Glue Laminated Structural Timber and the Glued Laminated Timber Association (GLTAA) Industry standard GLTAA-4-91.

Fire safety - Extensive fire test data shows that large end section timber performs well in fire situations due to the formation of a protective layer of char which usually occurs at a temperature around 250° C. This charred area inhibits the effects of the fire on the inner portion of the timber component, hence it maintains structural load support for measurable periods of time as the fire progresses.

Conversely, steel loses its strength rapidly as the temperature is raised. At about 550°C, it has lost about 50% of its original bending strength, and by 750°C it has lost 90%. Timber does not loose strength in the same way, with the loss of section size through charring the major reason for any strength reduction.

Fast easy erection - Timber is a user friendly building material, requiring no special tools other than those a normal builder would use, and with SmartLam GL 17S beams, installation is fast, easy and efficient.

Environmental responsibility - SmartLam GL 17S beams are made from timber from sustainable managed forests, a natural resource that is friendly to the environment.

Low maintenance - In most applications, SmartLam GL 17S beams will require little or no maintenance other than that which you would ordinarily carry out to any structural material.

Natural beauty - The natural beauty of timber is desired and highly appropriate in many architectural applications. Appearance Grade B SmartLam GL 17S beams allow you to build timber's natural warmth and beauty into your designs.

Serviceability Criteria

The deflection limits (serviceability) applied in these tables and reproduced in Table 1 below, are in accordance the Glued Laminated Timber Association of Australia (GLTAA) Unified Design Criteria and in some circumstances, differ for those listed in AS 1720.3 -2016.

Table 1: GLTAA Serviceability Criteria

Member type	Long term		Short term	
	j_2 x DL	j_2 x (DL+0.5 kPa)	LL	Serviceability WL
Bearers (floor loads only)		L/300 or 12 mm	L/360 or 18 mm	
Bearers (with roof loads)		L/300 or 12 mm	L/360 or 18 mm	L/150
Joists		L/300 or 15 mm	L/360 or 9 mm	
Lintels (with roof loads only)	L/300 or 9 mm		L/250 or 9 mm	L/150
Lintels (with roof and floor)		L/300 or 9 mm	L/360 or 9 mm	L/200
Strutting, hanging, and counter beams	L/300 or 15 mm		L/270 or 15 mm	L/150
Hanging/Strutting, Counter/Strutting beams	L/300 or 12 mm		L/300 or 12 mm	L/150
Roof beams, rafters, hips	L/300 or 20 mm		L/250	L/150
Patio or verandah beams	L/400 or 10 mm		L/250 or 12 mm	L/200

Where:

1. DL = Dead load, LL = Live load, WL = Wind load,
2. j_2 = Creep modification factor Clause 2.4.1.2 AS 1720.1

Ordering SmartLam GL 17S

SmartLam GL 17S glulam can be purchased in multiple appearance grades.

AS/NZS 1328.2 defines 3 appearance grades:

- Appearance Grade A - Sanded with any voids filled - intended for applications where appearance is important and clear or painted finishes are used
- Appearance Grade B - intended for applications where appearance is important but where a planed finish is acceptable
- Appearance Grade C - intended for applications where appearance is unimportant

SmartLam GL 17S B grade

"C" indicates pre-camber
"S" indicates no-pre-camber (straight)

Appearance grade

Stock SmartLam GL 17S will be supplied without camber (straight) in B grade finish unless otherwise specifically requested.

Protection and handling

Care should be taken during delivery to avoid marking and to avoid damage. Unloading of trucks should be done by hand or with a crane, do not drop or dump members. During unloading with lifting equipment, use fabric or plastic belts or other slings which will not mark the wood. If chains or cables are used, provide protective blocking or padding. Guard against soiling, dirt, footprints, abrasions, or injury to sharp edges or corners.

Installation

Preparatory work

Carefully unload and handle the laminated members at job site to prevent surface marking and damage. If laminated timber is to be stored before erection, place it on blocks well off the ground with individual members separated by strips so that air may circulate around all four sides. The top and the sides of storage pile shall be covered with moisture resistant covering. Wrapping shall be left intact, but individual wrappings shall be slit or punctured on the lower side to permit the drainage of water that may have accumulated. Before erection, the assembly should be checked for any damage from water or handling, prescribed camber, and accuracy of anchorage connections.

Laminated beams can be nailed into place in the same way as solid timber beams. Alternatively, a range of plates are available for end fixing. For larger beams, special purpose, engineer designed end fixing should be used.

Deflection

All structural members deflect downwards when dead loads are applied, and therefore it is important to allow for this deflection structurally and/or aesthetically in the selection of the beam sizes.

The "Deflection Limits" table on page 1 details deflection limits for various applications

Verticality

SmartLam GL 17S members must not be installed out of plumb more than height/500.

Notches

Large notches and holes in Glulam beams should normally be avoided as they cause abrupt changes in cross section and disrupt the stress flow in the structure. This gives rise to tension perpendicular to the grain and shear stresses around the holes and notches. For this reason, notches seriously reduce the strength of a beam, particularly if located in the tension zone of a beam. Unless specific allowance has been made in the design, no notches shall be made without first obtaining the advice of an engineer. Design rules are set out in AS 1720.1 Timber Engineering Code and should be followed closely when considering notching anywhere in a Glulam beam.

Holes for services

Horizontal Holes - Like notches, holes in a Glulam beam remove wood fibre, reduce the net area of the beam at the hole location, and introduce stress concentrations. For this reason, horizontal holes in Glulam beams are limited in size and location to maintain the structural integrity of the beam. Figure 2 below shows the zones of a uniformly loaded, simply supported beam where field drilling of holes may be considered.

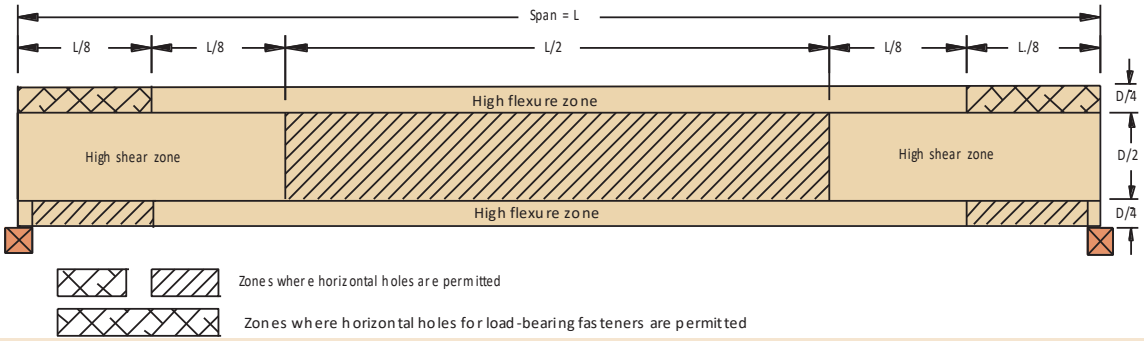
Field drilled horizontal holes should be for access only and should not be used as attachment points for brackets or other load bearing hardware unless specifically designed as such by the Engineer/ Designer.

Regardless of the hole location, the net section of the beam remaining should be checked for flexure and horizontal shear.

Vertical holes - As a rule of thumb, vertical holes drilled through the depth of a Glulam beam cause a reduction in capacity at that location directly proportional to the ratio of 1½ times the diameter of the hole. For example, a 25 mm hole drilled in a 150 mm wide beam would reduce the capacity of the beam at that section by ¼. For this reason, where it is necessary to drill vertical holes through a Glulam member, the holes should be positioned in areas of the member that are stressed to less than 50% of the design in bending.

Holes for support of heavy equipment - Heavy equipment or piping suspended from Glulam should be attached so that the load is applied to the top of the member to avoid tension perpendicular to the grain stresses. Any horizontal holes required for support of significant weight, such as suspended heating and cooling units or main water lines, must be located above the neutral axis of the member and in a zone stressed to less than 50% of the design flexural stresses.

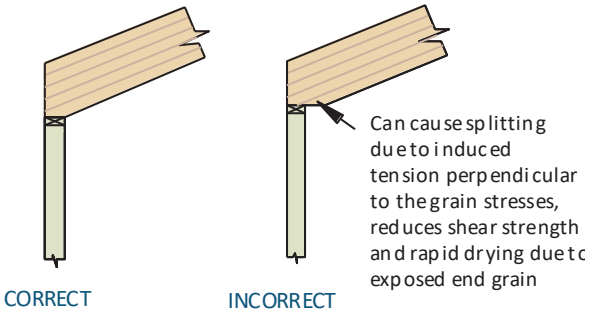
Figure 2 - Zones where horizontal holes are permitted in a uniformly loaded simply supported beam



Installation

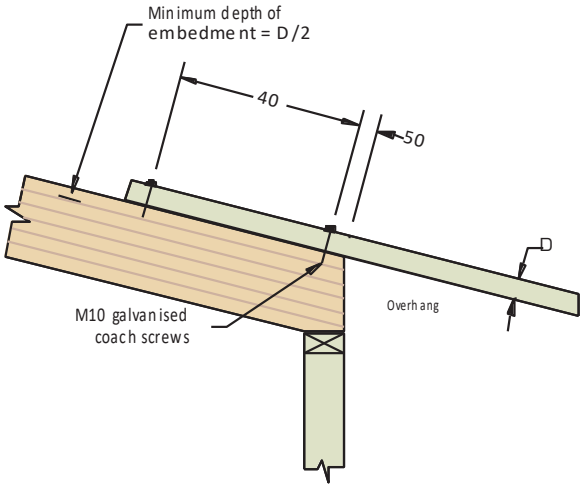
Birdsmouthing

Figure 3 - Birds mouthing details for SmartLam GL17S



Eaves overhang

Figure 4 - Eaves over hang details for SmartLam GL17S



Note:
Refer to AS 1684 Residential timber-framed construction code for overhang member size.

Allowable Eaves overhangs

1. Non Cyclonic Areas

a. Beams for flat or similar roofs - Not Birds mouthed: Eaves overhang shall not exceed 40% of the actual beam span.

b. Beams with conventional pitched roofs - Birds mouthed to one third their depth:

i. Sheet roof - 20% of actual beam span

ii. Tiled roof - 30% of actual beam span

2. Cyclonic Areas

Recommendations as per above, but reduced as follows:

i. Non Birds mouthed - 25% of actual beam span

ii. Birds mouthed-

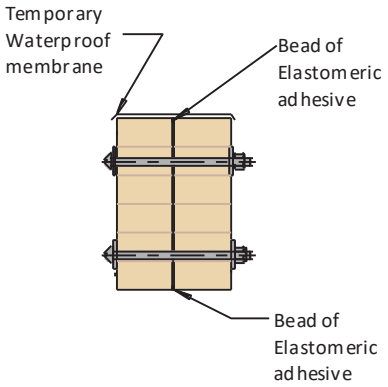
iii. Sheet roof - 10% of actual beam span

iv. Tiled roof - 20% of actual beam span

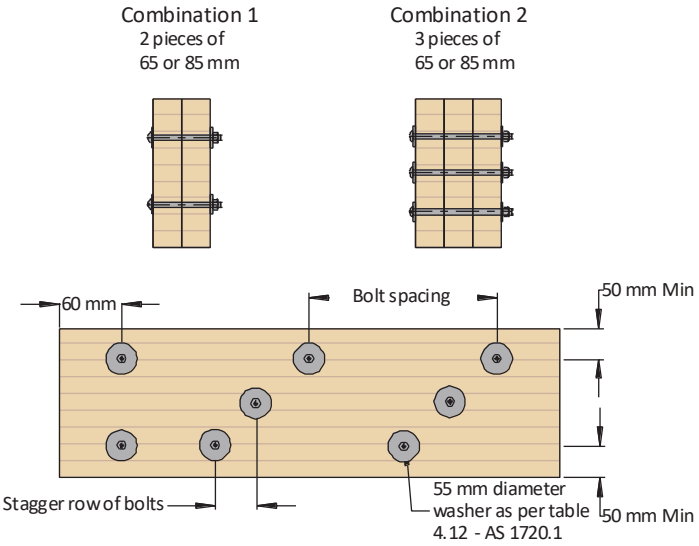
Multiple SmartLam GL17S section beams

Vertical laminations may be achieved by adopting the principle described in clause 2.3 of AS 1684, however, due to the thickness of SmartLam GL17S, nails are NOT suitable for combining SmartLam GL17S beams.

Experience with Glulam beams indicates that multiple member laminations individual components may cup as a result of the ingress of moisture between laminates during construction. The suggested method of vertical lamination shown below provides a greater level of fixity between individual components, and combined with the use of a temporary waterproof membrane and elastomeric adhesive, prevents moisture penetration between the laminates.



Recommended "during construction" protection from weather for multiple SmartLams.



Top loaded beams
(Symmetrical loading)

The edges of the individual sections must be carefully aligned to each other so that the composite beam is flat, allowing the applied loads to be equally shared. It is recommended that there be 2 rows of galvanised M12 bolts at 600 mm centres.

Side loaded beams
(Non – symmetrical loading)

When a load is applied to one side of a built-up SmartLam GL17S or an unbalanced load is applied to both sides, the elements of the built up beam shall be attached such that the applied load is distributed equally to all elements. Like the minimum connection

Installation (cont'd)

shown above, the connection is made with bolts, with the allowable floor load width supported by either outside member shown in the table below.

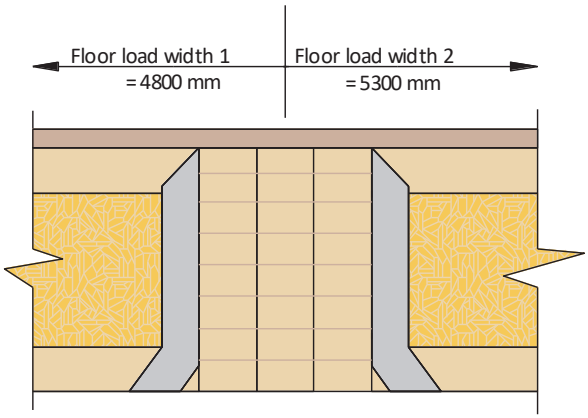
Maximum floor load width supported by either outside member (mm)

Combination (see details below)	12 mm Φ bolts	
	2 rows at 600 ctrs	2 rows at 300 ctrs
Combination 1	10100	10400
Combination 2	15000	20200

Notes:

1. Table values are for 40 kg/m^2 floors.
2. Bolts are to be grade 4.6 commercial bolts conforming to AS 1111. Bolt holes are to be a maximum of 13 mm diameter and are to be located NOT less than 50 mm from either edge.
3. All bolts shall be fitted with a washer at each end, of a size NOT less than that given in AS 1720.1 table 4.12.

How to use the maximum uniform side load table



Example:

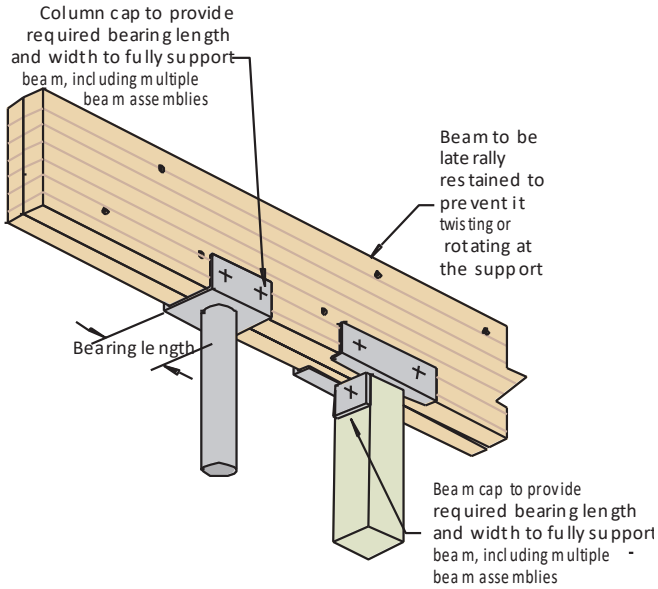
Beam of 2 SmartLam GL17S loaded on both side (Combination 1)

FLW 1 = 4800 mm, FLW 2 = 5300 mm

Total FLW = 4800 + 5300 = 10100 mm.

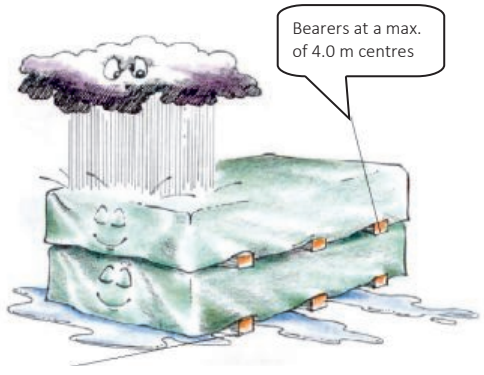
1. Use SmartFrame software or these SmartLam GL17S safe load tables to size the two member section to support the FLW of 5100 mm.
2. Choose the larger of the side FLW's carried by the beam, in this case 5300 mm.
3. Enter the table at the "Combination 1" row and scan across to a table value greater than 5300 mm. The first value in the row at 10200 mm is greater than the 5300 mm required.
4. Thus adopt 2 rows of 12 mmΦ x bolts at 600 mm centres

Steel and Timber fixing to SmartLam GL17S



Storage and handling of SmartLam GL 17S

1. Store SmartLam GL 17S flat on a hard, dry surface
2. If surface isn't paved, the ground should be covered with a polythene film
3. Keep covered with waterproof material that allows bundles to "breathe"
4. Use bearers (bolsters) between the ground and the first bundle (4 metre max spacing)
5. Use 100 x 50 timber flat between bundles at same spacing as bolsters
6. Take great care to rewrap remaining material after opening bundles
7. Timber "grows" in thickness and depth when allowed to get wet....KEEP DRY!
8. Timber products with high MC has short term reduction in Characteristic Strengths .... KEEP DRY!
9. Under NO circumstances is stored SmartLam GL 17S to be in contact with the ground.



Use bearers to keep stacked material away from damp surfaces.
Align bearers vertically.

SmartLam GL17S Design /Effective span

Normal structural analysis uses the centreline representation of the member. The term “span” can be defined in a number of ways and these are defined as follows:

Clear span. This is the distance between the faces of any support. It is generally the one easiest to measure and read from the drawings

Nominal span/centre-line span. This is the distance between the centre of the supports. This span is used to determine bending moments and deflections for continuous spaning members

Design span/Effective span. This is the span used for single span members to determine the bending moment, the slenderness of bending members and the deflections. In NZS 3603 this is the dimension referred to as “L”, and is defined below.

Design span/Effective span is the distance between -

- The centre of the bearing at each end of a beam where the bearing lengths have NOT been conservatively sized
- The centre of notional bearing that have been sized appropriately, where the size of the bearing IS conservative.

Diagram (a) shows beam where bearings have been designed appropriately. The effective span is taken as the distance between the centre of each bearing area

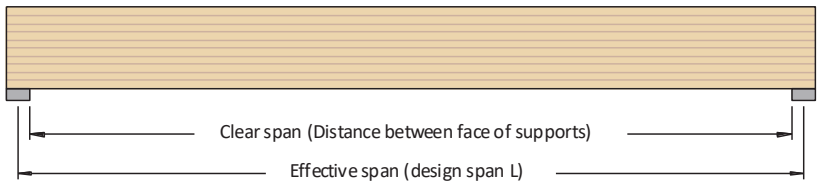
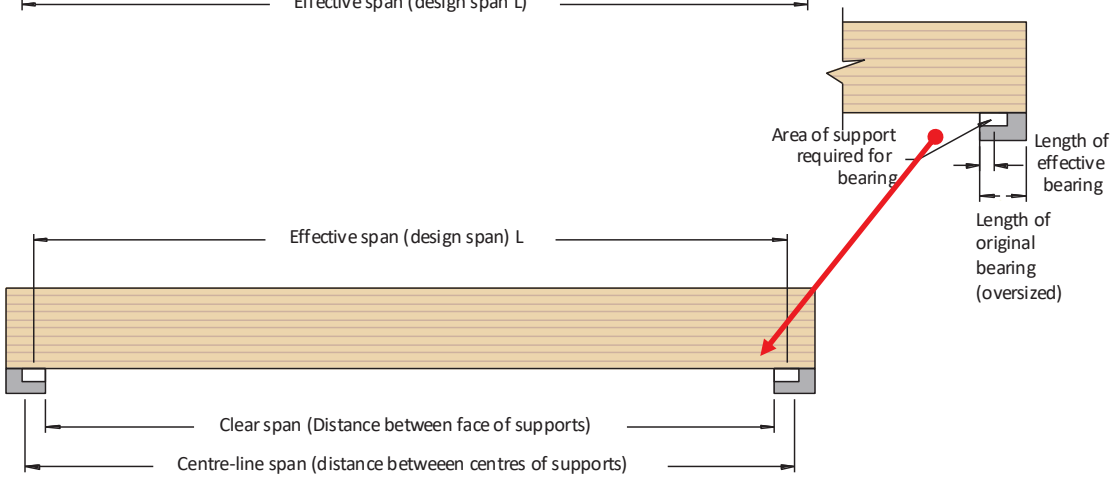


Diagram (b) shows beam where bearings at each end have been oversized. (This is frequently the case for beams that bear onto brickwork or concrete walls where the thickness of the wall is in excess of the area required to give the beam bearing capacity). To find the correct effective span:

1. Calculate the minimum bearing required to carry the loads satisfactorily
2. Add minimum bearing length to “clear span” distance

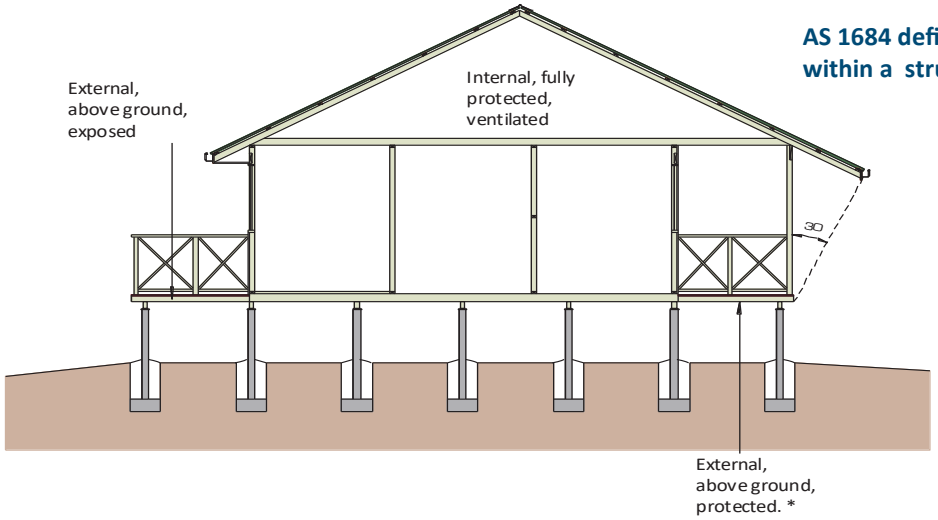


span difference	effective span	resultant span description
10% Max	main span	continuous
10 – 30%	1.1 x main span	continuous
Above 30% difference	main span	single

$$\text{span difference} = \frac{(\text{major span} - \text{minor span})}{(\text{major span} + \text{minor span})} \times 100$$

The span to use in the case of unequal continuous spans is the "resultant span description " as shown in the table above.
(Note: It is recommended for the most accurate designs, that the SmartFrame software be used.)

SmartLam durability and weather exposure



AS 1684 definitions of exposure zones within a structure

* External timbers are regarded as protected in AS 1684 if they are covered by a roof projection (or similar) at 30° to the vertical and they are well detailed and maintained (painted and kept well ventilated).

SmartLam durability and weather exposure

SmartLam GL 17S are manufactured from kiln dried timber (MC less than 15%), and therefore need to be protected from moisture cycling that can occur from:

- Exposure to direct sun and rain (including during construction)
- Contact or close exposure with moisture laden porous material (e.g. Concrete blocks)
- Exposure to extreme environments such as dry heating systems (e.g. slow combustion wood heaters), air conditioning, large north or west facing windows or moisture laden environments such as pool enclosures.

SmartLam GL 17S protection methods

1. During Construction (pre-water proof roof)

SmartLam GL 17S is supplied WITHOUT any short term construction sealer. However if SmartLam GL 17S is expected to be exposed for an extended period or become wet, it is recommended that the beam be sealed with a construction sealer that is compatible with the final paint or varnish finish, or wrapped in plastic to provide protection (plastic must allow for drainage and air circulation to breath).

Examples:

i. If the SmartLam GL 17S is installed inside a building without direct exposure to air-conditioning such as in wall cavity, NO protection to the beam is required.

ii. If the SmartLam GL 17S is installed inside a building with direct exposure to air conditioning or dry heat then a sealer is required.

iii. If the SmartLam GL 17S is under the eaves and protected from direct rain and sun, it is recommended that the construction sealer be lightly sanded and a finish coat of compatible premium quality paint be applied. (In accordance with paint manufacturer's specifications).

iv. If the SmartLam GL 17S is exposed to the sun or weather refer to "Exterior Applications" below.

Treatment options

SmartLam GL17S may be ordered untreated or with preservative treatment to the H2 and H3 hazard class for protection against insect attack and biological decay respectively. (All Pine based SmartLam GL17S is preservative treated against the European House borer Beetle)

Treatment for a service at a higher hazard class satisfies all requirements for service at a lower hazard class. Products treated to H3 therefore meet or exceed the requirements for H1 and H2 applications.

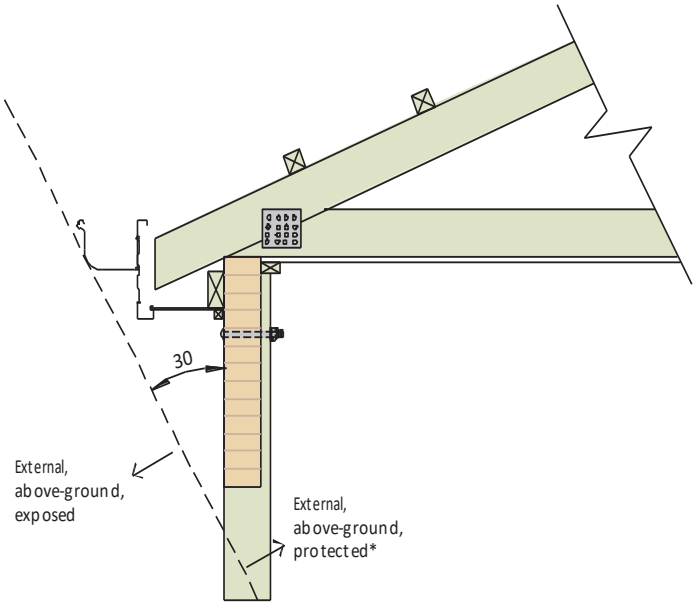
Table 1 of Appendix A in AS/NZS 1604.5 is a guide to hazard classifications for various end-use applications. This table is for guidance only, and only lists limited application.

Example applications

1. Covered alfresco and garage beams

Alfresco beams constructed to comply with the diagram adjacent are classified in AS 1684 as ***External, above-ground, protected*** and can be an untreated Class 4 durability timber.

SmartLam GL 17S beams treated to H2 or above are ideal for alfresco and garage beam applications



*member must also be well detailed and maintained (painted or stained and kept well ventilated)

A SmartLam GL17S in this application must be correctly painted with a premium quality protective finish See **3. Painting treated SmartLam GL17S** below.

2. External, above ground, EXPOSED

Untreated SmartLam GL 17S beams must NOT be used in ***external, above ground , EXPOSED applications*** without the following:

i. H3 treated to AS/NZS 1604.5

ii. Correctly detailed (e.g. End caps, good drainage and ventilation). See "Design & Construction detailing tips" below

iii. Correctly painted as per covered alfresco beam example above

It is important that an inspection and maintenance programme, based on exposure level and the paint manufacturer's recommendations be prepared.

3. Painting treated SmartLam GL17S

(a) General

To provide the longest service life of the SmartLam GL17S, it is recommended the SmartLam GL 17S are painted with an exterior paint with a Light Reflectance Value (LRV) greater than 30%. Heat reduction exterior paints should be used where the desired colour is dark or has a LRV of less than 30% The heat reflective paints colours should be limited to a Total Solar Reflectance (TSR) value greater than 29%.

Any paint or stain must be recommended by the manufacturer as being suitable for the proposed application and must be applied in a manner in strict compliance to the manufacturer's recommendations

1. The wood must be dry and clean prior to applying any

Durability and weather exposure (Cont'd)

finish coating. If initial cleaning of the treated wood is needed, it is recommended that the project be cleaned with a deck cleaning product and allow to fully dry

2. At this time, a clear water repellent can be added to the project. If applied, allow 8 weeks prior to the application of a semi-transparent stain or paint
3. If no water repellent is added, an oil based stain can be applied to the clean, dry wood in 30-60 days from treatment date.
4. A water based stain can be applied to the clean, dry wood in 45-70 days from treatment date.
5. Depending on the treatment method used, if the wood is left uncoated and without UV protection:

   i. The typical brown colour of the Copper Quat treated wood will naturally weather to a grey colour over long-term exposure to the sun

   ii. The Azole treated wood has no colouration so it will naturally weather to a grey colour over long-term exposure to the sun

Users must always conduct their own tests on coatings in inconspicuous areas of the project to determine acceptability of colour, adhesion and appearance.

3. Design & Construction detailing tips

i. The use of building overhangs and other structures which protect the beams from excessive moisture movement and sun exposure.

ii. Shielding of the beam from free moisture or direct sun. The use of metal, fibro or plastic shields on the exposed faces or ends of beams is highly recommended to help maintain the beam in an unstressed dry condition.

iii. All beams should be provided with adequate ventilation so that moisture content within beams will not exceed 15% and moisture gradients across the beam will not occur.

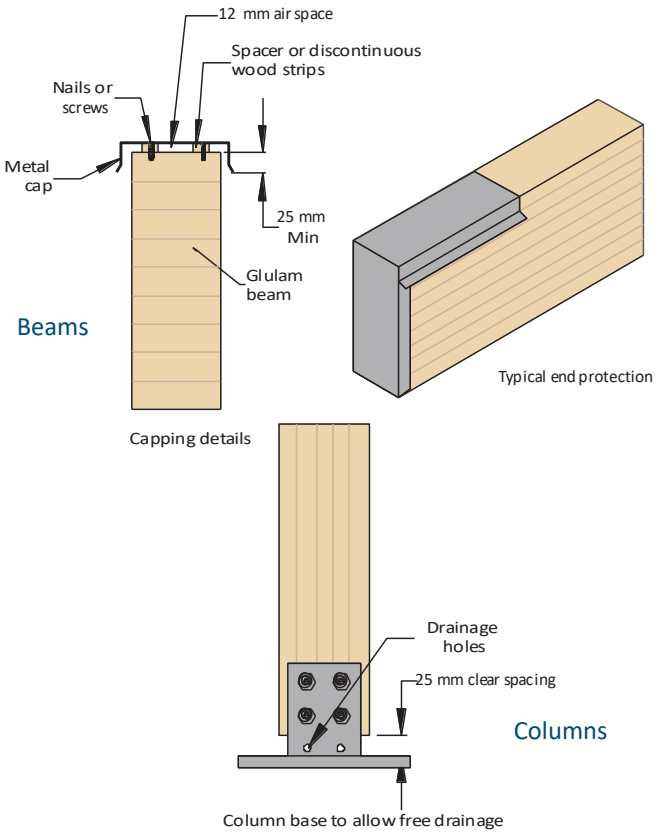
iv. The use of arrised or round edges on beams to reduce the likelihood of coating failures on sharp edges.

v. The use of drip edges or other devices which provide a path for free moisture flow away from the timber beam. Refer to detail below opposite.

vi. Joint detailing should, wherever possible, comply with the following:

- Keep horizontal contact areas to a minimum, In favour of self draining vertical surfaces.
- Ventilate joint surfaces by using spacers, wherever possible.
- Always use compatible fasteners which have adequate corrosion protection and do not cause splitting during installation e.g. Hot dipped galvanic coatings or stainless steel.
- Ensure any moisture entering a joint is not trapped but can adequately drain away from the joint.

vii. Allow for thermal expansion/contraction in the joint design.



Fire ratings (resistance)

The Fire Resistance Level (FRL) of an object is expressed as the number of minutes for which the specimen fulfils the requirements of each of the three criteria, being:

i. Structural adequacy
ii. Integrity; and
iii. Insulation,

and expressed in that order under test conditions.

In a fire, SmartLam GL17S beams have an inherent fire rating. As timber burns, a layer of charcoal forms enclosing a core of timber which is yet unaffected by the fire. This timber core maintains its structural capacity. Hence, dependant upon the loss of material to the charcoal layer, the SmartLam GL17S beam can carry the dead load of the structure for a period of time.

The Structural Adequacy Resistance to fire can be established by reference to AS 1720.4.

Notional charring rate $c = 0.4 + \left(\frac{280}{\delta}\right)^2$

Where d = timber density at a moisture content of 12%, in kg/m$^{3.}$. For Softwood SmartLam GL 17S this equates to a char rate of 0.54 mm per minute, for the Hardwood SmartLam GL 17S, 0.50 mm per hour

The Structural Adequacy Fire resistance period can be determined by performing a series of successive iterations of time. The calculated value is reached when the effective residual section is no longer capable of resisting the design loads.

NOTE: this calculation is for the structural adequacy component of the FRL ONLY. More information on the determination of the FRL go to www.woodsolutions.com.au .

Checking in SmartLam GL 17S

One of the advantages of glued laminated timber construction is that while seasoning checks may occur for the same reasons that they do in sawn members, checking in glued laminated timber will generally occur to a much lesser degree because of careful control of the moisture content of timber used for laminating. Checks in wood are separations along the fibres normally occurring across the rings of annual growth resulting from stresses developed during changes in moisture content. Checks in glued laminate timber may appear as openings parallel to the grain on the sides of members.

As wood loses moisture to the surrounding atmosphere, the outer fibres of the member lose moisture at a more rapid rate than do the inner fibres. As outer fibres try to shrink, they are restrained by the inner portion of the member that has higher moisture content. The more rapid the rate of drying, the greater will be the differential in shrinkage between the outer and inner fibres resulting in higher shrinkage stresses.

These resultant stresses perpendicular to the grain of the wood can cause characteristic wood seasoning checks. The influence of checks on the structural performance of glued laminated timber members is generally minor. Checking can be minimized by careful installation practices that avoid prolonged exposure of the members during construction.

Identification of checking

Checks occur as transverse separations or openings that are nearly parallel to the grain direction in glued laminated timber and generally follow the grain direction around knots and along sloping grain. Differences in the shrinkage rate of individual laminations used is glued laminated timber tend to concentrate shrinkage stresses at or near glue lines, resulting in checks.
Checks are often confused with delamination that occurs when the glue bond is not adequate. The presence of wood fibre separation in these openings is the key distinguishing characteristic of seasoning checks. Openings due to inadequate adhesive bonding may appear as smooth wood surface separations, possibly darkened by the adhesive film, or as glossy surface areas of adhesive with an absence of torn wood fibres.

Checking often occurs along the first glue line adjacent to the outer lamination that may dry more rapidly because a larger surface area of that lamination is exposed to the air. This condition is sometimes aggravated when the outer lamination tends to cup, creating tension perpendicular to grain stresses along or near the first glue line.

Significance of checking

In general, checks have little effect on the strength of glued laminated members. Glued laminated members are made from laminations that are thin enough to season readily in kiln drying schedules without developing checks. Checks usually appear on the wide faces of the timber and do not materially affect the shear strength of the laminations. In cases where members are designed for loading parallel to the wide face of the laminations, checks may affect the shear strength of the beam their effect may be evaluated in the same manner as for sawn timber. Seasoning checks in bending members affect only the horizontal shear capacity.

In establishing allowable horizontal shear values, normal checking due to seasoning has been considered.

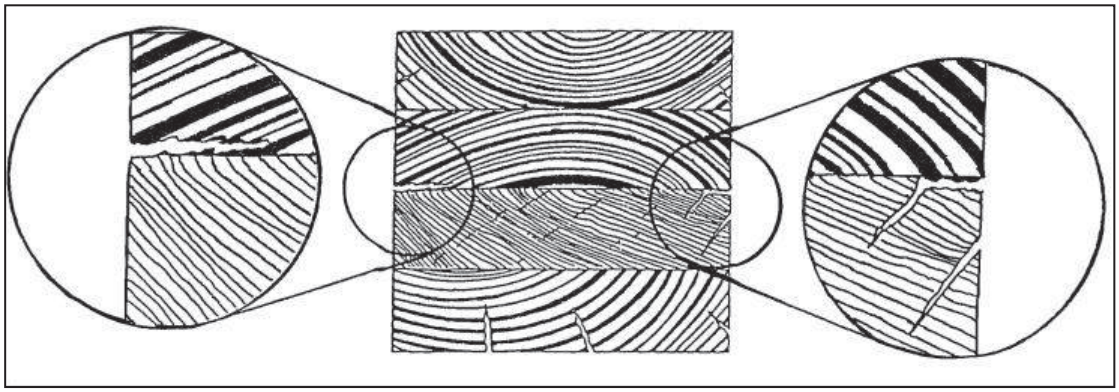
Checks are usually not of structural importance unless they are significant in depth, occur in the mid-height of the member near the supports, and the design of the member is governed by shear. If these conditions exist, the reduction in shear strength is directly proportional to the ratio of the depth of checks to the width of the bending member. Checks in columns are not of structural importance unless the check develops into a split, thereby increasing the l/d ratio of the column.

Additional information

While checking is not considered to be of structural significance, the reason for the checking and the means by which further checking may be minimized should be determined.

If there is concern regarding structural adequacy, advice can be obtained from engineers from the SmartFrame Design Centre or a structural engineer experienced and qualified in glued laminated timber technology should evaluate the significance of the checking.

The SmartFrame **Technical Note - "Evaluation of Checking in Glued Laminated Timber (Glulam)" gives detailed analysis of the modification to structural capacity as a result of severe checking.**



Designing with SmartLam GL 17S

The design information contained within this Design Guide is for the properties of SmartLam GL17S only. Other manufacturers' glulam may have different properties and therefore cannot be designed using this information.

1. Product Specification

Lamella:	Thickness:	30-45 mm
	Species:	Slash pine (Pinus elliottii) Keruing (Dipterocarpus spp)
	Strength Group	Slash SD5, Keruing SD4
	Joints:	Finger joint
Dimensional tolerances:	Length:	± 10 mm
	Depth:	≤ 100 mm ± 1 mm ≥ 100 ≤ 302 mm ± 3 mm ≥ 301 ≤ 600 mm ± 4 mm ≥ 601 ± 6 mm
	Thickness:	- 0, +4 mm at 12% moisture content
Adhesive:	Complies with AS/NZS 4364:2010	
Treatment: options:	Untreated, H2, and H3 treatment to AS 1604.5	

2. Limit State Design Characteristic Properties

Timber Strength Properties:(1)		
Bending	f'_b	40 MPa
Tension Parallel to grain	f'_t	20 MPa
Tension Perpendicular to grain	f'_{tp}	0.5 MPa
Compression Parallel to grain	f'_c	33 MPa
Compression Perpendicular to grain - Edge	f'_p	13 MPa
Shear	f'_s	4.2 MPa
Average Elastic Modulus	E	16,700 MPa
Average Modulus of Rigidity	G	1110 MPa
Average Density	Slash	650 kg/m^3
	Keruing	900 Kg/m^3
Moisture Content		12-15%

(1) Dry conditions

3. Strength reduction factor

The strength reduction factor for calculating the design capacities of structural members shall be taken from the table below, referenced from AS 1720.1 –2010

Application of SmartLam GL 17 as a structural member		
Category 1	**Category 2**	**Category 3**
Structural members for houses for which failure would be unlikely to affect an area greater than 25 m^2; OR secondary members in structures other than houses	Primary structural members in structures other than houses; OR elements in houses for which failure would be likely to affect an area* greater than 25 m^2	Primary structural members in structures intended to fulfil essential services or post disaster function
Strength reduction factor Ø *		
0.95	0.85	0.75

* AS 1720.1:2010 Table 2.1

4. Duration of load

The duration of load factor k_1 for strength is defined within clause 2.4 of AS 1720.1.

Duration	Service class / exposure classification		
	1, 2	3	Severe/ Adverse
Short term <= 1 Day	1.0	1.0	1.0
Long term > 12 months	1.5	2.0	3.0*

Notes:

1. * Any beams to be used in service class 3 are outside the scope of these span tables, therefore specialist design advice should be sought from an engineer.
2. In general, the size of this beam can conservatively be obtained by the following method:
   - i. Obtain the beam size for service class 1 & 2
   - ii. Obtain the EI_{xx} from the "Section Properties" table for this beam
   - iii. Obtain from the "Section Properties" table a beam size with an EI_{xx} => 2/1.5 x EI_{xx} of the original beam
   - iv. Follow the recommendations of the GLTAA Technical Data Sheet No 2: "Glulam in weather exposed applications"
3. Service Classes 1,2 & 3 are defined in AS 1328

5. Partial seasoning factor

SmartLam GL17S is a seasoned timber product, generally k_4 equals 1. Where the glulam is subjected to conditions in which the average moisture content for a 12 month period is expected to exceed 15%, the characteristic capacity shall be decreased. The value of k_4 shall be the greater of:

a. $k_4 = 1 - 0.3\frac{EMC - 15}{10}$;

b. $k_4 = 0.7$

Where EMC is the highest value of the annual moisture content (percent) that the timber will attain in service.

6. Length and position of bearing

The k_7 bearing factor is defined is clause 2.4.4 of AS 1720.1

7. Load sharing

Because of the reduced variability of strength values of glulam compared to solid timber , the load sharing factor k_9 = 1.0 as defined in clause 7.4.3 of AS 1720.1

8. Stability

The stability factor k_{12} is defined within section 7 of AS 1720.1 beams. The methods for calculating k_{12} for solid wood in section 3 of AS 1720.1 shall generally apply except that the material constant (ρ_b or ρ_c) for beams and column shall be as given in Tables 7.2(A) and 7.2(B)

9. Temperature

For covered timber structures under ambient conditions, no modification for strength need be made for the effect of temperature (i.e., k_6 equals 1.0) except that where seasoned timber is used in structures erected in coastal regions of Queensland north of latitude 25°S, and all other regions of Australia north of latitude 16°S, the strength shall be modified by a factor k_6 of 0.9.

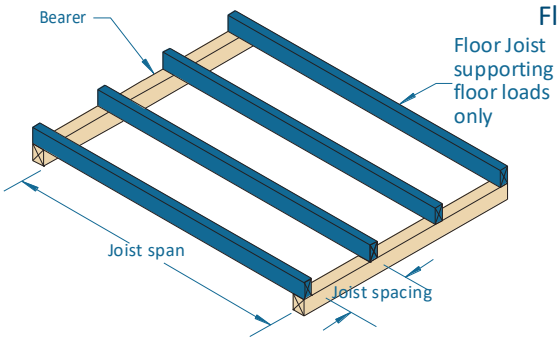
SmartLam GL 17S section properties

Nominal Size DxB mm	Beam mass kg/m	Nominal section area 10^3 mm^2	Major axis			Minor Axis	
			Zxx 10^3 mm^2	Ixx 10^6 mm^4	EIxx 10^9 Nmm^2	Zyy 10^3 mm^2	Iyy 10^6 mm^4
200 x 50	*9.0*	*10.0*	*333*	*33*	*557*	*83.3*	*2.1*
250 x 50	*11.3*	*12.5*	*521*	*65*	*1087*	*104.2*	*2.6*
200 x 60	*10.8*	*12.0*	*400*	*40*	*668*	*120.0*	*3.6*
265 x 60	*14.3*	*15.9*	*702*	*93*	*1554*	*159.0*	*4.8*
300 x 60	*16.2*	*18.0*	*900*	*135*	*2255*	*180.0*	*5.4*
330 x 60	*17.8*	*19.8*	*1089*	*180*	*3001*	*198.0*	*5.9*
130 x 65	4.6	8.5	183	12	199	91.5	3.0
165 x 65	5.9	10.7	295	24	406	116.2	3.8
195 x 65	7.0	12.7	412	40	671	137.3	4.5
230 x 65	8.2	15.0	573	66	1101	162.0	5.3
260 x 65	9.3	16.9	732	95	1590	183.1	6.0
295 x 65	10.5	19.2	943	139	2322	207.7	6.8
300 x 65	10.7	19.5	975	146	2442	211.3	6.9
330 x 65	11.8	21.5	1180	195	3251	232.4	7.6
360 x 65	12.9	23.4	1404	253	4220	253.5	8.2
395 x 65	14.1	25.7	1690	334	5575	278.1	9.0
425 x 65	15.2	27.6	1957	416	6944	299.3	9.7
200 x 80	*14.4*	*16.0*	*533*	*53*	*891*	*213.3*	*8.5*
265 x 80	*19.1*	*21.2*	*936*	*124*	*2072*	*282.7*	*11.3*
300 x 80	*21.6*	*24.0*	*1200*	*180*	*3006*	*320.0*	*12.8*
330 x 80	*23.8*	*26.4*	*1452*	*240*	*4001*	*352.0*	*14.1*
130 x 85	6.1	11.1	239	16	260	156.5	6.7
165 x 85	7.7	14.0	386	32	531	198.7	8.4
195 x 85	9.1	16.6	539	53	877	234.8	10.0
230 x 85	10.8	19.6	749	86	1439	277.0	11.8
295 x 85	13.8	25.1	1233	182	3037	355.2	15.1
330 x 85	15.4	28.1	1543	255	4251	397.4	16.9
360 x 85	16.8	30.6	1836	330	5519	433.5	18.4
395 x 85	18.5	33.6	2210	437	7290	475.6	20.2
425 x 85	19.9	36.1	2559	544	9081	511.8	21.8
460 x 85	21.5	39.1	2998	689	11514	553.9	23.5
495 x 85	23.1	42.1	3471	859	14347	596.1	25.3
525 x 85	24.5	44.6	3905	1025	17117	632.2	26.9
560 x 85	26.2	47.6	4443	1244	20774	674.3	28.7
590 x 85	27.6	50.2	4931	1455	24295	710.5	30.2

Note:

The section properties for larger Smart Lam GL 17S are available on request from the Tech Support Helpline 1300 668 690

Floor joists supporting floor loads only



Floor mass - 40 kg/m^2

EXAMPLE:

single span
joist spacing = 450 mm
joist span = 6000 mm

Enter single span table at 450 mm in joist spacing column, read down to a span equal to or greater than 6000 mm

ADOPT: SmartLam GL 17S - 265 x 60

Loadings: Permanent - Self weight + 40 kg/m^2 +0.5 kPa of the live load, live load - 1.5 kPa or floor point load of 1.8 kN

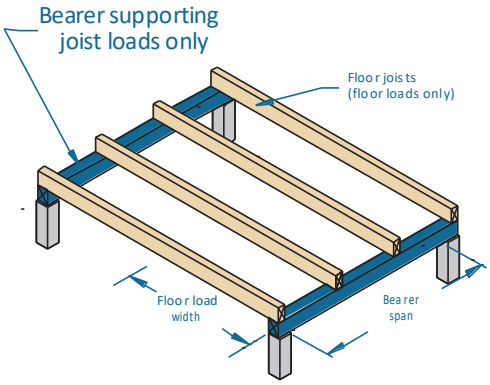
Joist spacing (mm)	300	450	600	300	450	600
Member size (GL17S) DxB (mm)	Maximum recommended joist span (mm)					
	Single span			Continuous span		
200x50	*5200*	*4800*	*4400*	*6300*	*5700*	*5200*
250x50	*6100*	*5600*	*5300*	*7400*	*6700*	*6200*
200x60	*5400*	*5000*	*4700*	*6600*	*5900*	*5500*
265x60	*6600*	*6100*	*5700*	*8100*	*7300*	*6800*
300x60	*7100*	*6600*	*6200*	*8900*	*8100*	*7500*
330x60	*7600*	*7100*	*6700*	*8100*	*8700*	*8100*
130x65	4000	3300	3000	4800	4000	3500
165x65	4900	4400	3900	5800	5200	4600
195x65	5500	5000	4700	6600	5900	5500
230x65	6200	5700	5300	7400	6700	6200
260x65	6800	6200	5800	8100	7400	6900
295x65	7400	6800	6400	9000	8100	7500
300x65	7500	6900	6500	9100	8200	7600
330x65	8000	7400	6900	10300	8800	8200
360x65	8500	7800	7400	8800	9400	8700
395x65	9000	8400	7900	9400	9900	9400
425x65	9400	8800	8300	10500	9900	9900
200x80	*5700*	*5300*	*5000*	*7100*	*6400*	*5900*
265x80	*6900*	*6400*	*6100*	*8700*	*7900*	*7300*
300x80	*7500*	*7000*	*6600*	*9400*	*8700*	*8100*
330x80	*8000*	*7400*	*7100*	*10400*	*9300*	*8600*
130x85	4300	3700	3300	5200	4500	3900
165x85	5200	4700	4300	6200	5600	5100
195x85	5800	5400	5000	7000	6400	5900
230x85	6500	6000	5700	7900	7200	6700
260x85	7100	6600	6200	8700	7900	7300
295x85	7800	7200	6800	8100	8700	8100
300x85	7800	7200	6800	8200	8800	8200
330x85	8300	7700	7300	11000	9400	8800
360x85	8800	8200	7800	9300	10000	9400
395x85	9400	8800	8300	10600	9900	10000
425x85	9900	9200	8700	11200	9900	9900

NOTES:

1. Spans are suitable for solid timber, particle board and ply flooring. floor sheeting glued and nailed to joists will improve floor rigidity. Where heavy overlay material is to be applied, such as a mortar bed tiled or slate floor, the permanent load allowance should be increased to 1.2 kPa. A reduction of joist spacing may be used to accommodate this extra permanent load. A satisfactory result can be achieved by adopting the maximum spans for 600 mm and 450 mm spacing but installing the joists at 450 and 300 mm spacing respectively.
2. For beams which are continuous over two unequal spans, the design span and the 'resultant span description' depend upon the percentage span differences between the two spans as shown on page 5
3. D = member depth, B = member breadth, NS = not suitable.
4. End bearing lengths = 42 mm at end supports and 58 mm at internal supports for continuous members.
5. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
6. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Single span floor bearers supporting floor loads only - Single span

Floor mass - 40 kg/m^2



EXAMPLE:

single span bearer = 4000 mm
floor load width = 5800 mm

Enter single span table at 6000 mm in floor load width column, read down to a span equal to or greater than 4000 mm

ADOPT:

SmartLam GL 17 S- 360 x 85

Loadings: permanent - self weight + 40 kg/m^2 +0.5 kPa of the live load, live load - 1.5 kPa or floor point load of 1.8 kN

Floor load width (mm)	1200	1800	2400	3000	3600	4200	4800	5400	6000	6600
Member size (GL17S) DxB (mm)	Maximum recommended Single span bearer span (mm)									
200x50	*3600*	*3200*	*2900*	*2600*	*2500*	*2300*	*2200*	*2100*	*2000*	*1900*
250x50	*4200*	*3800*	*3600*	*3300*	*3100*	*2900*	*2800*	*2600*	*2400*	*2300*
200x60	*3800*	*3300*	*3000*	*2800*	*2600*	*2500*	*2400*	*2300*	*2100*	*2000*
265x60	*4600*	*4200*	*3900*	*3700*	*3500*	*3300*	*3200*	*3000*	*2800*	*2700*
300x60	*5100*	*4600*	*4300*	*4000*	*3900*	*3700*	*3600*	*3400*	*3200*	*3100*
330x60	*5400*	*4900*	*4600*	*4300*	*4100*	*4000*	*3800*	*3700*	*3600*	*3400*
130x65	2600	2200	2000	1900	1700	1700	1600	1500	1400	1400
165x65	3300	2800	2600	2400	2200	2100	2000	1900	1800	1800
195x65	3800	3400	3000	2800	2600	2500	2400	2300	2200	2100
230x65	4300	3900	3600	3300	3100	3000	2800	2700	2600	2500
260x65	4700	4200	3900	3700	3500	3300	3200	3100	2900	2800
295x65	5100	4700	4300	4100	3900	3700	3600	3500	3300	3200
330x65	5600	5100	4700	4400	4200	4100	3900	3800	3700	3600
360x65	5900	5400	5000	4700	4500	4300	4200	4100	3900	3800
200x80	*4000*	*3600*	*3300*	*3100*	*2900*	*2700*	*2600*	*2500*	*2400*	*2300*
265x80	*4900*	*4500*	*4200*	*3900*	*3800*	*3600*	*3500*	*3300*	*3200*	*3100*
300x80	*5400*	*4900*	*4600*	*4300*	*4100*	*4000*	*3800*	*3700*	*3600*	*3500*
330x80	*5800*	*5300*	*4900*	*4600*	*4400*	*4300*	*4100*	*4000*	*3900*	*3800*
195x85	4000	3600	3300	3100	2900	2700	2600	2500	2400	2300
230x85	4500	4100	3800	3600	3400	3200	3100	2900	2800	2700
260x85	5000	4500	4200	4000	3800	3600	3500	3300	3200	3100
295x85	5500	5000	4600	4400	4200	4000	3800	3700	3600	3500
330x85	5900	5400	5000	4700	4500	4300	4200	4100	3900	3800
360x85	6300	5700	5400	5100	4800	4600	4500	4300	4200	4100
395x85	6800	6200	5700	5400	5200	5000	4800	4600	4500	4400
425x85	7100	6500	6000	5700	5500	5200	5100	4900	4800	4600
295x115	5900	5300	5000	4700	4500	4300	4100	4000	3900	3800
330x115	6300	5800	5400	5100	4900	4700	4500	4400	4200	4100
360x115	6800	6200	5700	5400	5200	5000	4800	4700	4500	4400
395x115	7200	6600	6100	5800	5600	5300	5200	5000	4900	4700
425x115	7600	7000	6500	6100	5900	5600	5500	5300	5100	5000
260x135	5500	5000	4700	4400	4200	4100	3900	3800	3700	3600
295x135	6100	5500	5200	4900	4700	4500	4300	4200	4100	4000
330x135	6600	6000	5600	5300	5100	4900	4700	4500	4400	4300
360x135	7000	6400	6000	5600	5400	5200	5000	4900	4700	4600
395x135	7500	6800	6400	6000	5800	5600	5400	5200	5100	4900
425x135	7800	7200	6700	6400	6100	5900	5700	5500	5300	5200

Continuous span floor bearers supporting floor loads only

Floor mass - 40 kg/m^2

Loadings: permanent - self weight + 40 kg/m^2 +0.5 kPa of the live load, live load - 1.5 kPa or floor point load of 1.8 kN

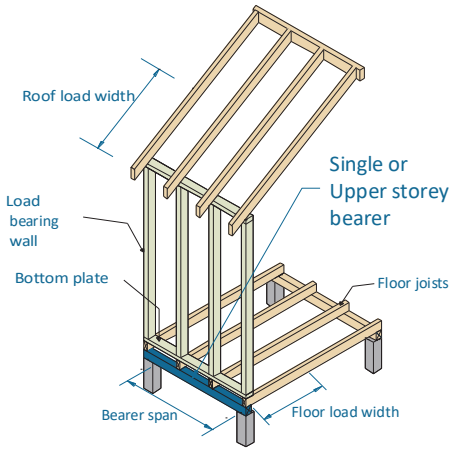
Floor load width (mm)	1200	1800	2400	3000	3600	4200	4800	5400	6000	6600
Member size (GL17S) DxB (mm)	Maximum recommended Continuous span bearer span (mm)									
200x50	*4500*	*3700*	*3200*	*2800*	*2600*	*2400*	*2200*	*2100*	*2000*	*1900*
250x50	*5300*	*4600*	*3900*	*3500*	*3200*	*3000*	*2800*	*2600*	*2400*	*2300$_5$*
200x60	*4700*	*4000*	*3500*	*3100*	*2800*	*2600*	*2400*	*2300*	*2100*	*2000*
265x60	*5800*	*5300*	*4600*	*4100*	*3700*	*3400*	*3200*	*3000*	*2800*	*2700*
300x60	*6400*	*5800*	*5200*	*4600*	*4200*	*3900*	*3600*	*3400$_5$*	*3200$_{10}$*	*3100$_{15}$*
330x60	*6800*	*6200*	*5700*	*5100*	*4600*	*4300*	*4000$_5$*	*3800$_{15}$*	*3600$_{20}$*	*3400$_{25}$*
130x65	3500	3000	2600	2300	2100	1900	1800	1700	1600	1500
165x65	4200	3800	3200	2900	2600	2400	2300	2100	2000	1900
195x65	4800	4300	3800	3400	3100	2900	2700	2500	2400	2300
230x65	5400	4900	4500	4000	3700	3400	3200	3000	2800	2700
260x65	5900	5300	5000	4600	4200	3800	3600	3400	3200	3000
295x65	6500	5900	5400	5100	4700	4300	4100	3800	3600$_5$	3400$_{15}$
330x65	7000	6400	5900	5600	5300	4900	4500$_5$	4300$_{15}$	4000$_{20}$	3800$_{25}$
360x65	7500	6800	6300	6000	5700	5300$_{10}$	4900$_{15}$	4700$_{25}$	4400$_{30}$	4200$_{40}$
200x80	*5100*	*4600*	*4000*	*3600*	*3200*	*3000*	*2800*	*2600*	*2500*	*2400*
265x80	*6200*	*5600*	*5300*	*4700*	*4300*	*4000*	*3700*	*3500*	*3300*	*3100*
300x80	*6800*	*6200*	*5800*	*5300*	*4800*	*4500*	*4200*	*3900*	*3700*	*3500*
330x80	*7300*	*6600*	*6200*	*5800*	*5300*	*4900*	*4600*	*4300*	*4100$_5$*	*3900$_{10}$*
195x85	5100	4600	4300	3900	3600	3300	3100	2900	2700	2600
230x85	5700	5200	4800	4600	4200	3900	3600	3400	3200	3100
260x85	6300	5700	5300	5000	4700	4400	4100	3800	3600	3500
295x85	6900	6200	5800	5500	5200	5000	4600	4400	4100	3900
330x85	7500	6800	6300	6000	5700	5500	5200	4900	4600$_5$	4400$_{10}$
360x85	8000	7200	6700	6400	6100	5800	5600	5300$_{10}$	5000$_{15}$	4800$_{20}$
395x85	8500	7700	7200	6800	6500	6300	6000$_{10}$	5800$_{20}$	5500$_{25}$	5200$_{30}$
425x85	9000	8200	7600	7200	6900	6600$_5$	6400$_{15}$	6200$_{25}$	5900$_{35}$	5600$_{45}$
295x115	7400	6700	6200	5900	5600	5400	5200	5100	4800	4600
330x115	8000	7300	6800	6400	6100	5900	5700	5500	5400	5100
360x115	8500	7800	7200	6800	6500	6300	6100	5900	5700	5600$_5$
395x115	9100	8300	7700	7300	7000	6700	6500	6300	6100$_5$	6000$_{10}$
425x115	9600	8700	8200	7700	7400	7100	6900	6600	6500$_{10}$	6300$_{20}$
295x135	7600	7000	6500	6100	5900	5600	5400	5300	5100	4900
330x135	8300	7600	7000	6700	6400	6100	5900	5700	5600	5400
360x135	8800	8000	7500	7100	6800	6500	6300	6100	5900	5800
395x135	9400	8600	8000	7600	7300	7000	6800	6500	6400	6200
425x135	9900	9100	8500	8000	7700	7400	7100	6900	6700	6600$_5$

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a maximum DL of 40 kg/m^2, floor live load of 1.5 kPa, floor point load of 1.8 kN
3. End bearing lengths = 70 mm at end supports and 90 mm at internal supports for continuous members.Subscript values indicate the minimum additional bearing length where required to be greater than 70 mm at end supports and 90 mm at internal supports.
4. Restraint value for slenderness calculations is 600 mm. (floor joist centers at 600 mm max)
5. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
6. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Floor bearers supporting single storey load bearing wall - sheet and tiled roof
Single span

Floor mass - 40 kg/m^2



EXAMPLE:

sheet roof - 40 kg/m^2
floor load width = 3500 mm
roof load width = 1950 mm
bearer span = 3000 mm (single span)

Enter single span table at 4800 mm in floor load width column, 4500 roof load width column, read down to a span equal to or greater than 3000 mm in the 40 kg/m^2 row.

ADOPT:

SmartLam GL17S - 300 x 60

Floor load width (mm)	Roof mass (kg/m^2)	1200			2400			4800		
Roof load width (mm)		1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size (GL17S) DxB (mm)		Maximum recommended Single span bearer span (mm)								
200x50	*40*	*2900*	*2600*	*2400*	*2600*	*2400*	*2200*	*2100*	*2000*	*1900*
	90	*2700*	*2200*	*2000*	*2400*	*2100*	*1900*	*2000*	*1800*	*1700*
250x50	*40*	*3600*	*3200*	*3000*	*3200*	*3000*	*2800*	*2600*	*2500*	*2400*
	90	*3400*	*2800*	*2500*	*3100*	*2600*	*2400*	*2500*	*2300*	*2100*
200x60	*40*	*3100*	*2700*	*2500*	*2800*	*2500*	*2300*	*2300*	*2200*	*2100*
	90	*2900*	*2400*	*2100*	*2600*	*2200*	*2000*	*2200*	*2000*	*1900*
265x60	*40*	*4000*	*3600*	*3300*	*3600*	*3300*	*3100*	*3000*	*2900*	*2800*
	90	*3700*	*3100*	*2800*	*3400*	*3000*	*2700*	*2900*	*2700*	*2500*
300x60	*40*	*4300*	*4000*	*3700*	*4000*	*3700*	*3500*	*3400*	*3300*	*3100*
	90	*4100*	*3600*	*3200*	*3800*	*3400*	*3000*	*3300*	*3000*	*2800*
330x60	*40*	*4700*	*4300*	*4000*	*4300*	*4000*	*3800*	*3700*	*3600*	*3400*
	90	*4400*	*3800*	*3500*	*4100*	*3700*	*3300*	*3600*	*3300*	*3100*
130x65	40	2100	1800	1700	1800	1700	1600	1500	1500	1400
	90	1900	1600	1400	1700	1500	1300	1500	1300	1200
165x65	40	2600	2300	2100	2300	2100	2000	2000	1900	1800
	90	2400	2000	1800	2200	1900	1700	1900	1700	1600
195x65	40	3100	2800	2500	2800	2500	2400	2300	2200	2100
	90	2900	2400	2100	2600	2200	2000	2200	2000	1900
230x65	40	3600	3300	3000	3300	3000	2800	2800	2600	2500
	90	3400	2800	2500	3100	2600	2400	2700	2400	2200
260x65	40	4000	3700	3400	3700	3400	3100	3100	2900	2800
	90	3800	3200	2800	3500	3000	2700	3000	2700	2500
295x65	40	4400	4000	3800	4000	3800	3600	3500	3300	3200
	90	4100	3600	3200	3900	3400	3100	3400	3100	2800
330x65	40	4800	4400	4100	4400	4100	3900	3900	3700	3600
	90	4500	3900	3600	4200	3700	3400	3800	3400	3200
360x65	40	5100	4700	4400	4700	4400	4200	4100	3900	3800
	90	4800	4200	3800	4500	4000	3700	4000	3700	3500
395x65	40	5500	5000	4700	5000	4700	4500	4400	4200	4100
	90	5200	4500	4100	4800	4300	4000	4300	4000	3700
425x65	40	5800	5300	5000	5300	5000	4700	4700	4500	4300
	90	5400	4700	4300	5100	4500	4200	4500	4200	4000
200x80	*40*	*3400*	*3000*	*2800*	*3000*	*2800*	*2600*	*2600*	*2400*	*2300*
	90	*3100*	*2600*	*2300*	*2900*	*2500*	*2200*	*2500*	*2200*	*2000*
265x80	*40*	*4200*	*3900*	*3600*	*3900*	*3600*	*3400*	*3400*	*3200*	*3100*
	90	*4000*	*3500*	*3100*	*3700*	*3300*	*2900*	*3300*	*2900*	*2700*
300x80	*40*	*4700*	*4300*	*4000*	*4300*	*4000*	*3800*	*3800*	*3600*	*3500*
	90	*4400*	*3800*	*3500*	*4100*	*3700*	*3300*	*3700*	*3300*	*3100*
330x80	*40*	*5000*	*4600*	*4300*	*4600*	*4300*	*4100*	*4000*	*3900*	*3700*
	90	*4700*	*4100*	*3800*	*4400*	*3900*	*3600*	*3900*	*3600*	*3400*

Floor bearers supporting single storey load bearing wall - sheet and tiled roof
Single span (cont'd)

Floor load width (mm)	Roof mass (kg/m^2)	1200			2400			4800		
Roof load width (mm)		1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size (GL17S) DxB (mm)		Maximum recommended single span bearer span (mm)								
130x85	40	2300	2000	1800	2000	1800	1700	1700	1600	1500
	90	2100	1700	1500	1900	1600	1500	1600	1500	1300
165x85	40	2900	2500	2300	2600	2300	2200	2200	2000	1900
	90	2700	2200	1900	2400	2100	1900	2100	1900	1700
195x85	40	3400	3000	2800	3000	2800	2600	2500	2400	2300
	90	3100	2600	2300	2800	2400	2200	2500	2200	2000
230x85	40	3900	3600	3300	3600	3300	3000	3000	2800	2700
	90	3700	3100	2700	3400	2900	2600	2900	2600	2400
260x85	40	4300	3900	3700	3900	3700	3400	3400	3200	3100
	90	4000	3500	3100	3700	3300	2900	3300	3000	2700
295x85	40	4700	4300	4000	4300	4000	3800	3800	3600	3500
	90	4400	3800	3500	4100	3700	3300	3700	3400	3100
330x85	40	5100	4700	4400	4700	4400	4200	4100	4000	3800
	90	4800	4200	3800	4500	4000	3700	4000	3700	3500
360x85	40	5400	5000	4700	5000	4700	4400	4400	4200	4100
	90	5100	4500	4100	4800	4300	4000	4300	4000	3700
395x85	40	5800	5300	5000	5300	5000	4800	4700	4500	4400
	90	5500	4800	4400	5100	4600	4200	4600	4200	4000
425x85	40	6100	5600	5300	5600	5300	5000	5000	4800	4600
	90	5800	5100	4600	5400	4800	4500	4900	4500	4200
295x115	40	5000	4600	4300	4600	4300	4100	4100	3900	3800
	90	4800	4100	3800	4400	4000	3700	4000	3700	3400
330x115	40	5500	5000	4700	5000	4700	4500	4400	4300	4100
	90	5200	4500	4100	4800	4300	4000	4300	4000	3800
360x115	40	5800	5400	5000	5400	5000	4800	4700	4500	4400
	90	5500	4800	4400	5100	4600	4300	4600	4300	4000
395x115	40	6300	5700	5400	5700	5400	5100	5100	4900	4700
	90	5900	5100	4700	5500	4900	4600	4900	4600	4300
425x115	40	6600	6100	5700	6100	5700	5400	5400	5200	5000
	90	6200	5400	5000	5800	5200	4800	5200	4800	4600
295x135	40	5200	4800	4500	4800	4500	4300	4200	4100	3900
	90	4900	4300	3900	4600	4100	3800	4100	3800	3600
330x135	40	5700	5200	4900	5200	4900	4700	4600	4400	4300
	90	5400	4700	4300	5000	4500	4100	4500	4200	3900
360x135	40	6100	5600	5200	5600	5200	5000	4900	4700	4600
	90	5700	5000	4600	5300	4800	4400	4800	4400	4200
395x135	40	6500	6000	5600	6000	5600	5300	5300	5100	4900
	90	6100	5300	4900	5700	5100	4800	5100	4800	4500
425x135	40	6800	6300	5900	6300	5900	5600	5600	5400	5200
	90	6500	5600	5200	6000	5400	5000	5400	5000	4700

Floor bearers supporting single storey load bearing wall - sheet and tiled roof
Continuous span

Floor load width (mm)	Roof mass (kg/m^2)	1200			2400			4800		
Roof load width (mm)		1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size (GL17S) DxB (mm)		Maximum recommended Continuous span bearer span (mm)								
200x50	*40*	*3600*	*3100*	*2700*	*2800*	*2600*	*2400*	*2100*	*2000*	*1900*
	90	*3300*	*2500*	*2100*	*2600*	*2300*	*1900*	*2000*	*1800*	*1700*
250x50	*40*	*4300*	*3900*	*3400*	*3500*	*3200*	*3000*	*2600*	*2500*	*2400_{5}*
	90	*4100*	*3100*	*2600*	*3300*	*2800*	*2400*	*2500*	*2300_{5}*	*2100_{15}*
200x60	*40*	*3800*	*3400*	*3000*	*3100*	*2800*	*2600*	*2300*	*2200*	*2100*
	90	*3600*	*2700*	*2300*	*2900*	*2500*	*2100*	*2200*	*2000*	*1900*
265x60	*40*	*4700*	*4300*	*4000*	*4000*	*3700*	*3500*	*3000*	*2900*	*2800*
	90	*4400*	*3600*	*3000*	*3800*	*3300*	*2800*	*2900*	*2700_{5}*	*2500_{10}*
300x60	*40*	*5100*	*4800*	*4500*	*4600*	*4200*	*4000*	*3400_{5}*	*3300_{10}*	*3100_{15}*
	90	*4900*	*4100*	*3400_{5}*	*4400*	*3700*	*3200_{10}*	*3300_{5}*	*3000_{15}*	*2800_{25}*
330x60	*40*	*5500*	*5100*	*4800*	*4900*	*4700*	*4400*	*3700_{15}*	*3600_{20}*	*3400_{25}*
	90	*5200*	*4500*	*3700_{15}*	*4800*	*4100_{5}*	*3500_{20}*	*3600_{15}*	*3300_{30}*	*3100_{40}*
130x65	40	2800	2500	2200	2200	2100	1900	1700	1600	1500
	90	2600	2000	1700	2100	1800	1600	1600	1500	1400
165x65	40	3600	3200	2800	2900	2600	2500	2100	2000	1900
	90	3300	2600	2100	2700	2300	2000	2100	1900	1700
195x65	40	4100	3700	3300	3400	3100	2900	2500	2400	2300
	90	3800	3000	2500	3200	2800	2400	2400	2200	2100
230x65	40	4600	4200	3900	4000	3700	3500	3000	2800	2700
	90	4300	3600	3000	3800	3300	2800	2900	2600	2400
260x65	40	5000	4600	4300	4500	4200	3900	3400	3200	3100
	90	4700	4100	3400	4300	3700	3200	3300	3000	2800_{10}
295x65	40	5500	5100	4700	5100	4700	4400	3800	3600_{5}	3500_{10}
	90	5200	4500	3800	4900	4200	3600_{5}	3700_{5}	3400_{15}	3100_{25}
330x65	40	6000	5500	5200	5500	5200	4900	4300_{15}	4100_{20}	3900_{25}
	90	5700	4900	4200_{15}	5300	4700_{5}	4000_{20}	4100_{15}	3800_{30}	3500_{40}
360x65	40	6400	5900	5500	5900	5500	5200_{5}	4600_{25}	4400_{30}	4300_{35}
	90	6100	5300	4600_{25}	5600	5000_{15}	4400_{30}	4500_{30}	4100_{40}	3800_{65}
395x65	40	6900	6300	5900	6300	59005	5600_{10}	5100_{35}	4900_{50}	4700_{60}
	90	6500	5600_{5}	5100_{35}	6000	5400_{20}	4800_{50}	4900_{40}	4500_{65}	4200_{75}
425x65	40	7300	6700	6200	6700	6200_{10}	5900_{20}	5500_{55}	5200_{65}	5000_{70}
	90	6900	6000_{10}	5400_{60}	6400_{5}	5700_{25}	5200_{70}	5300_{65}	4900_{80}	4500_{90}
200x80	*40*	*4000*	*3800*	*3500*	*3500*	*3300*	*3100*	*2600*	*2500*	*2400*
	90	*3900*	*3200*	*2600*	*3400*	*2900*	*2500*	*2500*	*2300*	*2100*
265x80	*40*	*5000*	*4700*	*4400*	*4500*	*4300*	*4000*	*3500*	*3300*	*3200*
	90	*4800*	*4200*	*3500*	*4300*	*3800*	*3300*	*3400*	*3100*	*2900*
300x80	*40*	*5500*	*5100*	*4800*	*4900*	*4700*	*4500*	*3900*	*3800*	*3600*
	90	*5200*	*4700*	*3900*	*4800*	*4300*	*3700*	*3800*	*3500*	*3200_{10}*
330x80	*40*	*5900*	*5500*	*5200*	*5300*	*5000*	*4800*	*4300*	*4100_{5}*	*4000_{10}*
	90	*5600*	*5000*	*4300*	*5100*	*4700*	*4100_{5}*	*4200*	*3800_{10}*	*3600_{20}*
195x85	40	4300	4000	3700	3900	3600	3400	2900	2700	2600
	90	4100	3500	2900	3700	3200	2700	2800	2500	2400
230x85	40	4900	4500	4200	4500	4200	4000	3400	3200	3100
	90	4600	4000	3400	4300	3700	3200	3300	3000	2800
260x85	40	5400	4900	4600	4900	4600	4400	3800	3700	3500
	90	5100	4400	3800	4700	4200	3600	3700	3400	3200
295x85	40	5900	5400	5100	5400	5100	4800	4300	4200	4000
	90	5600	4800	4300	5200	4600	4100	4200	3900	3600_{10}
330x85	40	6400	5900	5500	5900	5500	5200	4900	4700_{5}	4500_{10}
	90	6100	5300	4800	5600	5000	4600_{5}	4700_{5}	4300_{10}	4000_{20}
360x85	40	6900	6300	5900	6300	5900	5600	5300_{10}	5100_{15}	4900_{20}
	90	6500	5600	5100_{5}	6000	5400	5000_{15}	5200_{15}	4700_{20}	4400_{30}
395x85	40	7300	6700	6300	6700	6300	6000	5800_{20}	5600_{25}	5300_{30}
	90	6900	6000	5500_{15}	6400	5800	5300_{25}	5600_{25}	5200_{35}	4800_{50}
425x85	40	7700	7100	6600	7100	6600	6300	6200_{30}	6000_{35}	5700_{40}
	90	7300	6400	5800_{20}	6800	6100_{5}	5600_{30}	6100_{35}	5600_{50}	5200_{70}

Floor bearers supporting single storey load bearing wall - sheet and tiled roof
Continuous span (cont'd)

Floor load width (mm)	Roof mass (kg/m^2)	1200			2400			4800		
Roof load width (mm)		1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size (GL17S) DxB (mm)		Maximum recommended Continuous span bearer span (mm)								
230x115	40	5300	4800	4500	4800	4500	4300	3900	3800	3600
	90	5000	4300	3900	4600	4100	3700	3800	3500	3300
260x115	40	5800	5300	5000	5300	5000	4700	4400	4300	4100
	90	5500	4700	4300	5100	4500	4200	4300	4000	3700
295x115	40	6400	5800	5500	5800	5500	5200	5000	4800	4600
	90	6000	5200	4800	5600	5000	4600	4900	4500	4200
330x115	40	6900	6300	5900	6300	5900	5600	5600	5400	5200
	90	6500	5700	5200	6100	5400	5000	5400	5000	4700_{5}
360x115	40	7400	6700	6300	6800	6300	6000	6000	5700	5500
	90	6900	6100	5500	6500	5800	5400	5800	5400_{5}	5100_{15}
395x115	40	7900	7200	6800	7200	6800	6400	6400	6100_{5}	5900_{5}
	90	7400	6500	5900	6900	6200	5700	6200	5800_{10}	5400_{20}
425x115	40	8300	7600	7100	7600	7100	6800	6800_{5}	6500_{10}	6300_{15}
	90	7900	6800	6300	7300	6600	6100_{5}	6600_{5}	6100_{15}	5700_{30}
230x135	40	5500	5000	4700	5000	4700	4500	4300	4100	3900
	90	5200	4500	4100	4800	4300	4000	4100	3800	3500
260x135	40	6000	5500	5200	5500	5200	4900	4800	4600	4400
	90	5700	4900	4500	5300	4700	4400	4700	4300	4000
295x135	40	6600	6000	5700	6100	5700	5400	5400	5100	5000
	90	6200	5400	5000	5800	5200	4800	5200	4800	4500
330x135	40	7200	6600	6200	6600	6200	5900	5800	5600	5400
	90	6800	5900	5400	6300	5600	5200	5700	5200	4900
360x135	40	7600	7000	6600	7000	6600	6200	6200	6000	5800
	90	7200	6300	5800	6700	6000	5600	6000	5600	5300
395x135	40	8200	7500	7000	7500	7000	6700	6600	6400	6200
	90	7700	6700	6200	7200	6500	6000	6500	6000	5700_{10}
425x135	40	8600	7900	7400	7900	7400	7100	7000	6700	6500
	90	8100	7100	6500	7600	6800	6300	6800	6300_{5}	6000_{15}

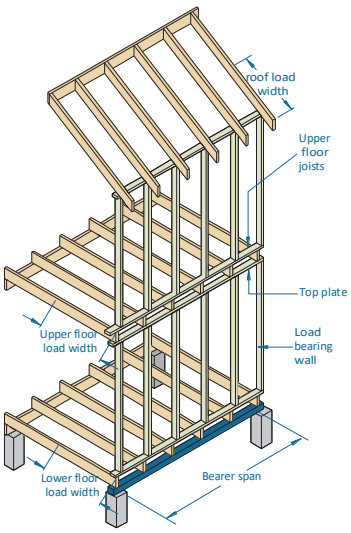
NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a total ground floor mass of 40 (kg/m^2), total wall mass of 37 kg/m^2, floor live load of 1.5 kPa, floor point load of 1.8 kN.
3. The above table was based on a wall height of 2700.
4. End bearing lengths = 70 mm at end supports and 90 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 70 mm at end supports and 90 mm at internal supports.
5. Restraint value for slenderness calculations is 600 mm.
6. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
7. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Floor bearers supporting two floors and roof - sheet and tiled roof

Single span

Floor mass - 40 kg/m^2



EXAMPLE:

sheet roof - 40 kg/m^2
lower floor load width = 3500 mm
upper floor load width = 1500 mm
roof load width = 1950 mm
bearer span = 3100 mm (single span)

Enter single span table at 3600 mm in lower floor load width column, 1800 mm in upper floor width column, 4500 mm roof load width column, read down to a span equal to or greater than 3100 mm in the 40 kg/m^2 row.

ADOPT:

SmartLam GL17S - 330 x 60

Lower floor load width (mm)		1800						3600					
Upper floor load width (mm)		1800			3600			1800			3600		
Roof load width (mm)		1500	4500	7500	1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended single span bearer span (mm)											
200x50	*40*	*2000*	*1900*	*1800*	*1900*	*1800*	*1700*	*1800*	*1800*	*1700*	*1700*	*1600*	*1600*
	90	*2000*	*1800*	*1600*	*1800*	*1700*	*1500*	*1800*	*1600*	*1500*	*1600*	*1500*	*1400*
250x50	*40*	*2600*	*2400*	*2300*	*2300*	*2200*	*2200*	*2300*	*2200*	*2100*	*2100*	*2000*	*2000*
	90	*2500*	*2200*	*2100*	*2300*	*2100*	*1900*	*2300*	*2100*	*1900*	*2100*	*1900*	*1800*
200x60	*40*	*2200*	*2100*	*2000*	*2000*	*1900*	*1800*	*2000*	*1900*	*1800*	*1800*	*1800*	*1700*
	90	*2100*	*1900*	*1700*	*1900*	*1800*	*1700*	*1900*	*1800*	*1600*	*1800*	*1700*	*1500*
265x60	*40*	*2900*	*2700*	*2600*	*2600*	*2500*	*2400*	*2600*	*2500*	*2400*	*2400*	*2300*	*2300*
	90	*2800*	*2500*	*2300*	*2600*	*2400*	*2200*	*2500*	*2300*	*2200*	*2400*	*2200*	*2100*
300x60	*40*	*3300*	*3100*	*3000*	*3000*	*2900*	*2800*	*3000*	*2800*	*2700*	*2800*	*2700*	*2600*
	90	*3200*	*2900*	*2600*	*2900*	*2700*	*2500*	*2900*	*2700*	*2500*	*2700*	*2500*	*2300*
330x60	*40*	*3500*	*3400*	*3200*	*3300*	*3200*	*3000*	*3200*	*3100*	*3000*	*3000*	*2900*	*2800*
	90	*3400*	*3100*	*2900*	*3200*	*2900*	*2800*	*3200*	*2900*	*2700*	*3000*	*2800*	*2600*
165x65	40	1800	1700	1700	1700	1600	1500	1700	1600	1500	1500	1500	1400
	90	1800	1600	1500	1600	1500	1400	1600	1500	1400	1500	1400	1300
195x65	40	2200	2100	2000	2000	1900	1800	2000	1900	1800	1800	1800	1700
	90	2100	1900	1700	1900	1800	1700	1900	1800	1600	1800	1700	1600
230x65	40	2600	2400	2300	2300	2200	2200	2300	2200	2100	2200	2100	2000
	90	2500	2200	2100	2300	2100	2000	2300	2100	1900	2100	2000	1900
260x65	40	2900	2800	2600	2700	2500	2500	2600	2500	2400	2500	2400	2300
	90	2800	2500	2300	2600	2400	2200	2600	2400	2200	2400	2200	2100
295x65	40	3300	3100	3000	3000	2900	2800	3000	2900	2800	2800	2700	2600
	90	3200	2900	2700	2900	2700	2500	2900	2700	2500	2700	2500	2400
330x65	40	3600	3400	3300	3300	3200	3100	3300	3200	3100	3100	3000	2900
	90	3500	3200	3000	3300	3000	2800	3200	3000	2800	3100	2800	2700
360x65	40	3800	3700	3500	3600	3500	3400	3500	3400	3300	3400	3300	3200
	90	3700	3400	3200	3500	3300	3100	3500	3300	3100	3300	3100	2900
395x65	40	4100	3900	3800	3800	3700	3600	3800	3700	3600	3600	3500	3400
	90	4000	3700	3500	3700	3500	3300	3700	3500	3300	3500	3400	3200$_S$
200x80	*40*	*2400*	*2300*	*2200*	*2200*	*2100*	*2000*	*2200*	*2100*	*2000*	*2000*	*1900*	*1900*
	90	*2300*	*2100*	*1900*	*2100*	*1900*	*1800*	*2100*	*1900*	*1800*	*2000*	*1800*	*1700*
265x80	*40*	*3200*	*3000*	*2900*	*2900*	*2800*	*2700*	*2900*	*2800*	*2700*	*2700*	*2600*	*2500*
	90	*3100*	*2800*	*2600*	*2800*	*2600*	*2400*	*2800*	*2600*	*2400*	*2600*	*2400*	*2300*
300x80	*40*	*3500*	*3400*	*3200*	*3300*	*3100*	*3000*	*3200*	*3100*	*3000*	*3000*	*2900*	*2800*
	90	*3400*	*3100*	*2900*	*3200*	*2900*	*2800*	*3200*	*2900*	*2700*	*3000*	*2800*	*2600*
330x80	*40*	*3800*	*3600*	*3500*	*3500*	*3400*	*3300*	*3500*	*3400*	*3300*	*3300*	*3200*	*3100*
	90	*3700*	*3400*	*3200*	*3400*	*3200*	*3000*	*3400*	*3200*	*3000*	*3200*	*3100*	*2900*

Floor bearers supporting two floors and roof - sheet and tiled roof
Single span (Cont'd)

Lower floor load width (mm)		1800			3600								
Upper floor load width (mm)		1800			3600			1800			3600		
Roof load width (mm)		1500	4500	7500	1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended single span bearer span (mm)											
195x85	40	2400	2300	2200	2200	2100	2000	2200	2100	2000	2000	1900	1900
	90	2300	2100	1900	2100	1900	1800	2100	1900	1800	2000	1800	1700
230x85	40	2800	2700	2500	2600	2500	2400	2500	2400	2300	2400	2300	2200
	90	2700	2500	2300	2500	2300	2100	2500	2300	2100	2300	2200	2000
260x85	40	3200	3000	2900	2900	2800	2700	2900	2800	2700	2700	2600	2500
	90	3100	2800	2600	2800	2600	2400	2800	2600	2400	2600	2400	2300
295x85	40	3500	3400	3300	3300	3200	3000	3300	3100	3000	3000	2900	2900
	90	3400	3200	2900	3200	3000	2800	3200	2900	2700	3000	2800	2600
330x85	40	3800	3700	3500	3600	3500	3400	3500	3400	3300	3400	3300	3200
	90	3700	3400	3200	3500	3300	3100	3500	3300	3100	3300	3100	2900
360x85	40	4100	3900	3800	3800	3700	3600	3800	3700	3600	3600	3500	3400
	90	4000	3700	3500	3700	3500	3300	3700	3500	3300	3500	3400	3200
395x85	40	4400	4200	4100	4100	4000	3800	4100	3900	3800	3800	3700	3700
	90	4300	3900	3700	4000	3800	3600	4000	3700	3600	3800	3600	3400
295x115	40	3800	3600	3500	3500	3400	3300	3500	3400	3300	3300	3200	3200
	90	3700	3400	3200	3500	3300	3100	3400	3200	3000	3300	3100	2900
330x115	40	4100	4000	3800	3800	3700	3600	3800	3700	3600	3600	3500	3400
	90	4000	3700	3500	3800	3500	3400	3700	3500	3400	3600	3400	3200
360x115	40	4400	4200	4100	4100	4000	3900	4100	4000	3800	3900	3800	3700
	90	4300	4000	3700	4000	3800	3600	4000	3800	3600	3800	3600	3500
395x115	40	4700	4500	4400	4400	4300	4100	4400	4200	4100	4100	4000	3900
	90	4600	4300	4000	4300	4100	3900	4300	4000	3800	4100	3900	3700
425x115	40	5000	4800	4600	4700	4500	4400	4600	4500	4400	4400	4300	4200
	90	4900	4500	4200	4600	4300	4100	4500	4300	4100	4300	4100	3900
295x135	40	3900	3800	3600	3700	3600	3500	3600	3500	3400	3500	3400	3300
	90	3800	3600	3300	3600	3400	3200	3600	3400	3200	3400	3200	3100
330x135	40	4300	4100	4000	4000	3900	3800	4000	3800	3700	3800	3700	3600
	90	4200	3900	3600	3900	3700	3500	3900	3700	3500	3700	3500	3400
360x135	40	4600	4400	4200	4300	4100	4000	4200	4100	4000	4000	3900	3800
	90	4500	4100	3900	4200	3900	3700	4200	3900	3700	4000	3800	3600
395x135	40	4900	4700	4500	4600	4400	4300	4500	4400	4300	4300	4200	4100
	90	4800	4400	4200	4500	4200	4000	4500	4200	4000	4200	4000	3900
425x135	40	5200	5000	4800	4800	4700	4600	4800	4700	4500	4600	4400	4300

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on total upper floor mass of 40 kg/m^2 , total ground floor mass of 40 kg/m^2, floor live load of 1.5 kPa, floor point load of 1.8 kN, wall mass of 32 kg/m^2, & permanent floor live load of 0.5 kPa.
3. The above table was based on a wall height of 5400 mm
4. End bearing lengths = 70 mm at end supports and 90 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 70 mm at end supports and 90 mm at internal supports.
5. Not all sizes of SmartLam GL17S in this table are stocked in each state. Please check with your supplier before ordering
6. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Floor bearers supporting two floors and roof - sheet and tiled roof
Continuous span

Lower floor load width (mm)		1800						3600					
Upper floor load width (mm)		1800			3600			1800			3600		
Roof load width (mm)		1500	4500	7500	1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended continuous span bearer span (mm)											
200x50	40	2300	2100	2000	2000	1800	1800	1900	1800	1700	1700	1600	1600
	90	2200	1900	1700	1900	1700	1500	1800	1600	1500_{5}	1600	1500	1400
250x50	40	2800	2600	2500	2500	2300_{5}	2200_{10}	2300_{5}	2200_{10}	2200_{15}	2100_{15}	2000_{20}	2000_{25}
	90	2700	2400_{5}	2100_{15}	2400_{5}	2100_{15}	1900_{25}	2300_{5}	21002_{0}	1900_{30}	2100_{20}	1900_{25}	1700_{35}
200x60	40	2500	2300	2200	2100	2000	1900	2000	2000	1900	1800	1800	1700
	90	2400	2100	1800	2100	1900	1700	2000	1800	1700	1800	1700	1500
265x60	40	3300	3100	2900	2900	2700	2600_{10}	2700	2600_{5}	2500_{10}	2500_{15}	2400_{15}	2300_{20}
	90	3100	2700	2500_{15}	2800	2500_{10}	2300_{25}	2700_{5}	2400_{15}	2200_{25}	2400_{15}	2200_{25}	2100_{35}
300x60	40	3700	3500_{5}	3300_{10}	3200_{10}	3100_{15}	2900_{20}	3100_{15}	3000_{20}	2800_{25}	2800_{25}	2700_{30}	2600_{35}
	90	3600	3100_{15}	2800_{25}	31001_{5}	2800_{25}	2600_{40}	3000_{15}	2700_{30}	2500_{40}	2700_{30}	2500_{40}	2300_{65}
330x60	40	4100_{5}	3800_{10}	3600_{20}	3600_{20}	3400_{30}	3200_{35}	3400_{25}	3300_{30}	3100_{35}	3100_{45}	3000_{50}	2900_{65}
	90	3900_{10}	3400_{25}	3100_{45}	3400_{25}	3100_{40}	2800_{65}	3300_{30}	3000_{45}	2800_{70}	3000_{45}	2800_{65}	2600_{80}
165x65	40	2300	2200	2000	2000	1900	1800	1900	1800	1800	1700	1700	1600
	90	2200	1900	1700	1900	1700	1600	1900	1700	1500	1700	1600	1400
195x65	40	2700	2600	2400	2400	2300	2100	2300	2200	2100	2000	2000	1900
	90	2600	2300	2000	2300	2100	1900	2200	2000	1800	2000	1800	1700
230x65	40	3200	3000	2800	2800	2700	2500	2700	2600	2500	2400	2300	2300_{5}
	90	3100	2700	2400	2700	2400	2200_{5}	2600	2400	2200_{10}	2400	2200_{5}	2000_{15}
260x65	40	3700	3400	3200	3200	3000	2900_{5}	3000	2900_{5}	2800_{5}	2700_{10}	2700_{15}	2600_{20}
	90	3500	3100	2700_{10}	3100	2800_{10}	2500_{20}	3000_{5}	2700_{10}	2500_{20}	2700_{10}	2500_{20}	2300_{30}
295x65	40	4100	3900	3600_{5}	3600_{5}	3400_{15}	3300_{20}	3400_{10}	3300_{15}	3200_{20}	3100_{25}	3000_{30}	2900_{35}
	90	4000	3500_{10}	3100_{25}	3500_{10}	3100_{25}	2900_{35}	3400_{15}	3100_{30}	2800_{40}	3100_{30}	2800_{35}	2600_{55}
330x65	40	4500	4300_{10}	4100_{20}	4000_{20}	3800_{25}	3600_{35}	3800_{25}	3700_{30}	3600_{40}	3500_{40}	3400_{50}	3300_{65}
	90	4400_{10}	3900_{25}	3500_{40}	3900_{25}	3500_{40}	3200_{65}	3800_{30}	3400_{45}	3100_{65}	3400_{45}	3200_{70}	2900_{75}
360x65	40	4800_{10}	4600_{20}	4400_{30}	4400_{30}	4200_{40}	4000_{55}	4200_{35}	4000_{45}	3900_{60}	3800_{65}	3700_{70}	3600_{75}
	90	4700_{15}	4200_{35}	3800_{65}	4300_{35}	3800_{65}	3500_{75}	4100_{45}	3700_{65}	3400_{80}	3700_{65}	3400_{80}	3200_{90}
395x65	40	5200_{15}	5000_{30}	4800_{45}	4800_{45}	4600_{65}	4400_{75}	4600_{65}	4400_{70}	4200_{75}	4200_{80}	4000_{85}	3900_{90}
	90	5000_{25}	4600_{60}	4200_{80}	4700_{60}	4200_{80}	3800_{95}	4500_{65}	4100_{80}	3800_{100}	4100_{80}	3800_{95}	3500_{110}
200x80	40	2900	2700	2500	2500	2300	2200	2400	2300	2200	2100	2100	2000
	90	2700	2400	2100	2400	2100	2000	2300	2100	1900	2100	1900	1800
265x80	40	3800	3500	3300	3300	3100	3000	3100	3000	2900	2800	2800	2600_{5}
	90	3600	3200	2800	3200	2900	2600_{5}	3100	2800	2600_{10}	2800	2600_{10}	2400_{15}
300x80	40	4300	4000	3800	3700	3500	3400_{5}	3600	3400_{5}	3300_{10}	3200_{10}	31001_{5}	3000_{15}
	90	4100	3600	3200_{10}	3600	3200_{10}	3000_{20}	3500_{5}	3200_{15}	2900_{20}	3200_{15}	2900_{20}	2700_{30}
330x80	40	4700	4400	4100_{5}	4100_{5}	3900_{10}	3700_{15}	3900_{10}	3800_{15}	3600_{20}	3500_{20}	3400_{25}	3300_{30}
	90	4500	39001_{0}	3500_{20}	4000_{10}	3600_{20}	3300_{35}	3800_{10}	3500_{25}	3200_{35}	3500_{25}	32003_{5}	3000_{50}
195x85	40	3100	2900	2700	2700	2600	2500	2600	2500	2400	2300	2300	2200
	90	3000	2600	2300	2600	2400	2200	2500	2300	2100	2300	2100	2000
230x85	40	3700	3500	3200	3200	3000	2900	3100	3000	2800	2800	2700	2600
	90	3500	3100	2800	3100	2800	2500	3000	2700	2500	2700	2500	2300
260x85	40	4000	3900	3700	3600	3400	3300	3500	3300	3200	3100	3000	2900_{5}
	90	3900	3500	3100	3500	3200	2900_{5}	3400	3100	2800_{5}	3100	2800_{5}	2600_{15}
295x85	40	4400	4300	4100	4100	3900	3700_{5}	3900	3800_{5}	3600_{5}	3600_{10}	3500_{15}	3300_{15}
	90	4300	4000	3600_{10}	4000	3600_{10}	3300_{20}	3800	3500_{10}	3200_{20}	3500_{10}	3200_{20}	3000_{30}
330x85	40	4800	4600	4500	4500_{5}	4400_{10}	4200_{15}	4400_{10}	4200_{15}	4100_{20}	4000_{20}	3900_{25}	3700_{30}
	90	4700	4300_{10}	4000_{20}	4400_{10}	4000_{20}	3700_{35}	4300_{15}	3900_{25}	3600_{35}	3900_{25}	3600_{35}	3400_{55}

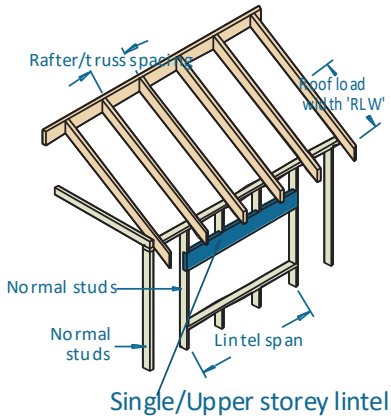
Floor bearers supporting two floors and roof - sheet and tiled roof
Continuous span (Cont'd)

Lower floor load width (mm)		1800						3600					
Upper floor load width (mm)		1800			3600			1800			3600		
Roof load width (mm)		1500	4500	7500	1500	4500	7500	1500	4500	7500	1500	4500	7500
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended continuous span bearer span (mm)											
360x85	40	5200	4900	4800_{10}	4800_{10}	4700_{20}	4500_{25}	4800_{20}	4600_{25}	4400_{30}	4300_{35}	4200_{35}	4100_{50}
	90	5000	4600_{15}	4300_{30}	4700_{15}	4400_{35}	4000_{50}	4700_{25}	4300_{35}	3900_{55}	4300_{35}	3900_{55}	3700_{70}
395x85	40	5500	5300_{5}	5100_{15}	5200_{20}	5000_{25}	4800_{35}	5100_{30}	5000_{35}	4800_{45}	4800_{55}	4600_{65}	4500_{70}
	90	5400	5000_{25}	4700_{50}	5000_{25}	4700_{50}	4400_{70}	5000_{30}	4700_{60}	4300_{75}	4700_{60}	4300_{75}	4000_{85}
425x85	40	5800	5600_{10}	5400_{20}	5400_{25}	5300_{35}	5100_{50}	5400_{35}	5200_{45}	5100_{60}	5100_{70}	5000_{75}	4800_{80}
	90	5700_{10}	5300_{30}	5000_{65}	5300_{30}	5000_{65}	4700_{85}	5300_{40}	5000_{70}	4600_{85}	5000_{70}	4600_{85}	4300_{100}
295x115	40	4800	4600	4400	4500	4300	4200	4400	4300	4200	4100	4000	3900
	90	4700	4300	4100	4400	4100	3800	4300	4100	37005	4100	3700_{5}	3500_{10}
330x115	40	5200	5000	4800	4800	4700	4600	4800	4700	4500	4600_{5}	4400_{10}	4300_{10}
	90	5100	4700	4400	4800	4500	4200_{15}	4700	4400_{5}	4200_{15}	4500_{5}	4200_{15}	3900_{25}
360x115	40	5500	5300	5100	5200	5000	4900	5100	5000	4800_{5}	4900_{10}	4800_{15}	4600_{20}
	90	5400	5000	4700_{10}	5100	4800_{10}	4500_{20}	5000	4700_{10}	4500_{25}	4800_{10}	4600_{25}	4200_{35}
395x115	40	5900	5700	5500	5500	5400	5200_{10}	5500_{5}	5300_{10}	5200_{15}	5200_{20}	5100_{20}	5000_{30}
	90	5800	5400	5100_{15}	5400	5100_{15}	4900_{30}	5400_{5}	5100_{20}	4800_{35}	5100_{20}	4900_{35}	4700_{65}
425x115	40	6300	6000	5800	5900	5700_{10}	5500_{15}	5800_{10}	5600_{15}	5500_{20}	5500_{25}	5400_{30}	5300_{40}
	90	6100	5700_{5}	5300_{20}	5700_{5}	5400_{20}	5100_{40}	5700_{10}	5400_{25}	5100_{50}	5400_{30}	5200_{50}	4900_{75}
295x135	40	5000	4800	4600	4600	4500	4400	4600	4500	4300	4400	4300	4200
	90	4800	4500	4200	4500	4300	4100	4500	4200	4000	4300	4100	3800_{5}
330x135	40	5400	5200	5000	5000	4900	4700	5000	4900	4700	4700	4600	4500
	90	5300	4900	4600	4900	4600	4400	4900	4600	4400_{5}	4700	4400_{5}	4200_{15}
360x135	40	5800	5500	5300	5400	5200	5100	5300	5200	5000	5100	4900_{5}	48005
	90	5600	5200	4900	5300	5000	4700_{10}	5200	4900	4700_{15}	5000	4700_{15}	4500_{25}
395x135	40	6200	5900	5700	5800	5600	5400	5700	5600	5400	5400_{5}	5300_{10}	5200_{15}
	90	6000	5600	5300_{5}	5700	5300_{5}	5100_{15}	5600	5300_{5}	5000_{20}	5300_{10}	5100_{20}	4900_{35}
425x135	40	6500	6300	6000	6100	5900	5700_{5}	6100	5900	5700_{10}	5700_{10}	5600_{15}	5500_{20}
	90	6400	5900	5600_{10}	6000	5600_{10}	5300_{25}	5900	5600_{15}	5300_{30}	5700_{15}	5400_{25}	5200_{45}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on total upper floor mass of 40 kg/m^2 , total ground floor mass of 40 kg/m^2, floor live load of 1.5 kPa, floor point load of 1.8 kN, wall mass of 32 kg/m^2, & permanent floor live load of 0.5 kPa.
3. The above table was based on a wall height of 5400 mm
4. End bearing lengths = 70 mm at end supports and 90 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 70 mm at end supports and 90 mm at internal supports.
5. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
6. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Single span lintels in single/upper storey walls
AS 4055 Classification N1, N2, N3 & N4



Single/Upper storey lintel

EXAMPLE:

wind speed = N3
sheet roof - 40 kg/m^2
roof load width = 3900 mm
rafter/truss spacing = 600 mm
lintel span = 3500 mm

Enter span table at 4500 roof load width column, rafter/truss spacing 600 mm, and read down to a span equal to or greater than 3500 mm

ADOPT:
SmartLam GL17S- 265 x 60

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Lintel span (mm)									
		Single span - Wind speed N1, N2, N3 & N4									
200x50	*40*	*4200*	*4200*	*3600*	*3500*	*3200*	*3200*	*2900*	*2800*	*2600*	*2500*
	90	*3500*	*3400*	*2900*	*2900*	*2600*	*2600*	*2300*	*2300*	*2100*	*2100*
250x50	*40*	*4900*	*4900*	*4200*	*4200*	*3800*	*3800*	*3600*	*3500*	*3300*	*3100*
	90	*4100*	*4100*	*3500*	*3400*	*3100*	*3100*	*2900*	*2900*	*2700*	*2700*
200x60	*40*	*4300*	*4300*	*3700*	*3700*	*3400*	*3300*	*3100*	*3100*	*2800*	*2800*
	90	*3600*	*3600*	*3100*	*3000*	*2700*	*2700*	*2500*	*2500*	*2300*	*2300*
265x60	*40*	*5300*	*5300*	*4600*	*4600*	*4200*	*4200*	*3900*	*3900*	*3700*	*3700*
	90	*4500*	*4400*	*3800*	*3800*	*3400*	*3400*	*3200*	*3200*	*3000*	*3000*
300x60	*40*	*5800*	*5800*	*5000*	*5000*	*4600*	*4500*	*4300*	*4300*	*4000*	*4000*
	90	*4900*	*4900*	*4100*	*4100*	*3800*	*3700*	*3500*	*3500*	*3300*	*3300*
330x60	*40*	*6200*	*6200*	*5400*	*5400*	*4900*	*4900*	*4600*	*4600*	*4300*	*4300*
	90	*5200*	*5200*	*4500*	*4400*	*4000*	*4000*	*3800*	*3700*	*3600*	*3500*
130x65	40	3300	3200	2700	2700	2400	2400	2100	2100	2000	1900
	90	2600	2700	2100	2000	1800	1800	1600	1500	1500	1400
165x65	40	3900	3900	3300	3300	3000	3000	2700	2800	2500	2600
	90	3200	3200	2600	2700	2300	2300	2100	2100	1900	1900
195x65	40	4400	4400	3700	3700	3400	3400	3200	3100	3000	3000
	90	3600	3600	3100	3100	2700	2700	2500	2500	2300	2300
230x65	40	5000	5000	4200	4200	3800	3800	3600	3500	3400	3400
	90	4100	4100	3500	3400	3100	3100	2900	2900	2700	2700
260x65	40	5400	5400	4600	4600	4200	4200	3900	3900	3700	3700
	90	4500	4500	3800	3800	3500	3400	3200	3200	3000	3000
295x65	40	6000	5900	5100	5100	4600	4600	4300	4300	4100	4100
	90	5000	5000	4200	4200	3800	3800	3500	3500	3400	3300
330x65	40	6400	6400	5500	5500	5000	5000	4700	4700	4500	4400
	90	5400	5400	4600	4500	4100	4100	3900	3800	3600	3600
360x65	40	6900	6800	5900	5900	5400	5400	5000	5000	4800	4700
	90	5700	5700	4900	4900	4400	4400	4100	4100	3900	3900
395x65	40	7300	7300	6300	6300	5800	5700	5400	5400	5100	5100
	90	6100	6100	5200	5200	4800	4700	4400	4400	4200	4200
425x65	40	7700	7700	6700	6600	6100	6000	5700	5700	5400	5400
	90	6500	6500	5500	5500	5000	5000	4700	4600	4400	4400
200x80	*40*	*4600*	*4600*	*4000*	*4000*	*3600*	*3600*	*3400*	*3300*	*3200*	*3200*
	90	*3900*	*3800*	*3300*	*3300*	*3000*	*3000*	*2700*	*2700*	*2500*	*2600*
265x80	*40*	*5600*	*5600*	*4900*	*4900*	*4500*	*4400*	*4200*	*4200*	*3900*	*3900*
	90	*4800*	*4700*	*4000*	*4000*	*3700*	*3600*	*3400*	*3400*	*3200*	*3200*
300x80	*40*	*6100*	*6100*	*5300*	*5300*	*4900*	*4900*	*4600*	*4500*	*4300*	*4300*
	90	*5200*	*5200*	*4400*	*4400*	*4000*	*4000*	*3800*	*3700*	*3600*	*3500*
330x80	*40*	*6600*	*6500*	*5700*	*5700*	*5200*	*5200*	*4900*	*4900*	*4700*	*4600*
	90	*5600*	*5600*	*4800*	*4700*	*4300*	*4300*	*4000*	*4000*	*3800*	*3800*
130x85	40	3500	3400	2900	2900	2600	2600	2300	2400	2200	2200
	90	2800	2800	2200	2300	2000	2000	1800	1800	1600	1600
165x85	40	4100	4100	3500	3500	3200	3200	3000	3000	2800	2800
	90	3400	3400	2900	2900	2500	2600	2300	2300	2100	2100
195x85	40	4700	4700	4000	4000	3600	3600	3400	3300	3200	3200
	90	3900	3900	3300	3300	3000	3000	2700	2700	2500	2600
230x85	40	5300	5300	4500	4500	4100	4100	3800	3800	3600	3600
	90	4400	4400	3700	3700	3400	3300	3100	3100	3000	3000
260x85	40	5800	5700	4900	4900	4500	4500	4200	4200	4000	4000
	90	4800	4800	4100	4100	3700	3700	3400	3400	3300	3200

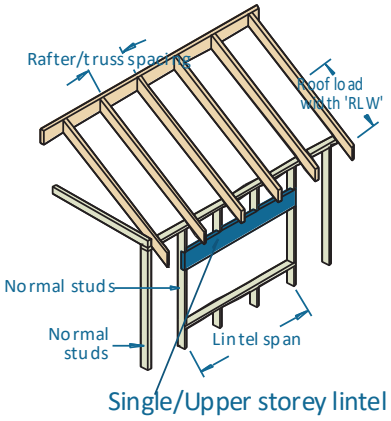
Single span lintels in single/upper storey walls (cont'd)
AS 4055 Classification N1, N2, N3 & N4

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Lintel span (mm)									
		Single span - Wind speed N1, N2, N3 & N4									
295x85	40	6300	6300	5400	5400	4900	4900	4600	4600	4400	4400
	90	5300	5300	4500	4500	4100	4000	3800	3800	3600	3500
330x85	40	6800	6800	5900	5900	5400	5400	5000	5000	4800	4700
	90	5700	5700	4900	4900	4400	4400	4100	4100	3900	3900
360x85	40	7200	7200	6300	6200	5700	5700	5300	5300	5100	5100
	90	6100	6100	5200	5200	4700	4700	4400	4400	4200	4200
395x85	40	7700	7700	6700	6700	6100	6100	5700	5700	5400	5400
	90	6500	6500	5600	5600	5100	5000	4700	4700	4500	4400
425x85	40	8100	8100	7100	7000	6500	6400	6000	6000	5700	5700
	90	6900	6900	5900	5900	5300	5300	5000	5000	4700	4700

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. Minimum bearing length = 75 mm at end supports. Subscript values indicate the minimum additional bearing length where required to be greater than 75 mm.
3. Restraint value for slenderness calculations is 600 mm.
4. Not all sizes of SmartLam GL17S in this table are stocked in each state. Please check with your supplier before ordering
5. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Single span lintels in single/upper storey walls
AS 4055 classification C1, C2 and C3



EXAMPLE:
wind speed = C3
sheet roof - 40 kg/m^2
roof load width = 3900 mm
rafter/truss spacing = 600 mm
lintel span = 3500 mm
Enter span table at 4500 roof load width column, rafter/truss spacing 600 mm, and read down to a span equal to or greater than 3500 mm

ADOPT:
SmartLam GL17S– 300 x 60

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Lintel span (mm)									
		Single Span - Wind speed C1, C2 & C3									
200x50	*40*	*3900*	*3700*	*2700*	*2600*	*2200*	*2100*	*1800*	*1500*	*1600*	*NS*
	90	*3500*	*3400*	*2800*	*2800*	*2300*	*2200*	*1900*	*1600*	*1700*	*1100*
250x50	*40*	*4900*	*4800*	*3400*	*3200*	*2700*	*2700*	*2400*	*2300*	*2100*	*1600*
	90	*4100*	*4100*	*3500*	*3400*	*2900*	*2800*	*2500*	*2400*	*2200*	*1800*
200x60	*40*	*4200*	*4100*	*2900*	*2800*	*2400*	*2300*	*2000*	*1800*	*1800*	*1400*
	90	*3600*	*3600*	*3100*	*3000*	*2500*	*2400*	*2200*	*2100*	*1900*	*1600*
265x60	*40*	*5300*	*5300*	*4000*	*3800*	*3200*	*3100*	*2700*	*2700*	*2500*	*2400*
	90	*4500*	*4400*	*3800*	*3800*	*3400*	*3200*	*2900*	*2800*	*2600*	*2500*
300x60	*40*	*5800*	*5800*	*4500*	*4400*	*3700*	*3500*	*3100*	*3000*	*2800*	*2700*
	90	*4900*	*4900*	*4100*	*4100*	*3800*	*3700*	*3300*	*3200*	*2900*	*2800*
330x60	*40*	*6200*	*6200*	*5000*	*4900*	*4000*	*3900*	*3500*	*3300*	*3100*	*3000*
	90	*5200*	*5200*	*4500*	*4400*	*4000*	*4000*	*3700*	*3500*	*3300*	*3100*
130x65	40	3100	3000	2200	2000	1700	1300	1400	1000	1300	NS
	90	2600	2700	2100	2000	1800	1500	1500	1100	1400	NS
165x65	40	3900	3800	2700	2700	2300	2100	1900	1600	1700	1300
	90	3200	3200	2600	2700	2300	2300	2000	1800	1800	1500
195x65	40	4400	4400	3300	3100	2700	2600	2300	2200	2000	1700
	90	3600	3600	3100	3100	2700	2700	2400	2300	2200	2100
230x65	40	5000	5000	3900	3700	3100	3000	2700	2600	2400	2300
	90	4100	4100	3500	3400	3100	3100	2900	2800	2600	2500
260x65	40	5400	5400	4400	4300	3600	3400	3100	3000	2700	2700
	90	4500	4500	3800	3800	3500	3400	3200	3100	2900	2800
295x65	40	6000	5900	5000	5000	4100	3900	3500	3400	3100	3000
	90	5000	5000	4200	4200	3800	3800	3500	3500	3300	3200
330x65	40	6400	6400	5500	5500	4600	4500	3900	3800	3500	3400
	90	5400	5400	4600	4500	4100	4100	3900	3800	3600	3600
360x65	40	6900	6800	5900	5900	5000	5000	4300	4200	3800	3700
	90	5700	5700	4900	4900	4400	4400	4100	4100	3900	3900
395x65	40	7300	7300	6300	6300	5500	5400	4800	4800	4200	4100
	90	6100	6100	5200	5200	4800	4700	4400	4400	4200	4200_{10}
200x80	*40*	*4600*	*4600*	*3500*	*3300*	*2800*	*2700*	*2400*	*2300*	*2100*	*2000*
	90	*3900*	*3800*	*3300*	*3300*	*2900*	*2800*	*2500*	*2400*	*2300*	*2200*
265x80	*40*	*5600*	*5600*	*4600*	*4600*	*3700*	*3600*	*3200*	*3100*	*2800*	*2800*
	90	*4800*	*4700*	*4000*	*4000*	*3700*	*3600*	*3400*	*3200*	*3000*	*2900*
300x80	*40*	*6100*	*6100*	*5200*	*5200*	*4200*	*4100*	*3700*	*3500*	*3200*	*3100*
	90	*5200*	*5200*	*4400*	*4400*	*4000*	*4000*	*3800*	*3700*	*3400*	*3300*
330x80	*40*	*6600*	*6500*	*5700*	*5600*	*4700*	*4700*	*4000*	*3900*	*3600*	*3400*
	90	*5600*	*5600*	*4800*	*4700*	*4300*	*4300*	*4000*	*4000*	*3800*	*3600*
195x85	40	4700	4700	3800	3600	3000	2900	2600	2600	2400	2200
	90	3900	3900	3300	3300	3000	3000	2700	2700	2500	2400
230x85	40	5300	5300	4500	4400	3600	3500	3100	3000	2800	2700
	90	4400	4400	3700	3700	3400	3300	3100	3100	2900	2800
260x85	40	5800	5700	4900	4900	4100	4000	3600	3400	3100	3000
	90	4800	4800	4100	4100	3700	3700	3400	3400	3300	3200
295x85	40	6300	6300	5400	5400	4700	4700	4000	3900	3600	3400
	90	5300	5300	4500	4500	4100	4000	3800	3800	3600	3500
330x85	40	6800	6800	5900	5900	5200	5200	4500	4500	4000	3900
	90	5700	5700	4900	4900	4400	4400	4100	4100	3900	3900

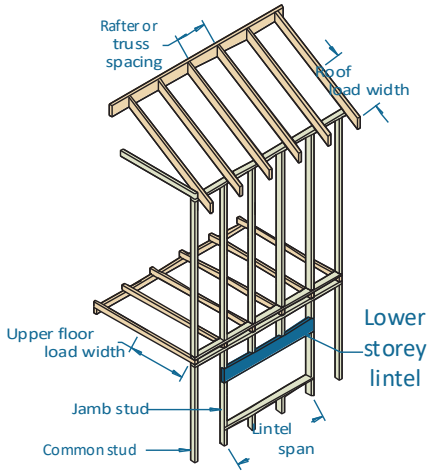
Single span lintels in single/upper storey walls (Cont'd)
AS 4055 classification C1, C2 and C3

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Lintel span (mm)									
		Single Span - Wind speed C1, C2 & C3									
360x85	40	7200	7200	6300	6200	5700	5600	4900	4900	4400	4300
	90	6100	6100	5200	5200	4700	4700	4400	4400	4200	4200
395x85	40	7700	7700	6700	6700	6100	6100	5400	5300	4900	4900
	90	6500	6500	5600	5600	5100	5000	4700	4700	4500	4400
360x65	40	8150	8050	5700	5600_{5}	4650_{5}	4650_{10}	4000_{15}	3850_{15}	3600_{30}	3400_{20}
	90	6700	6700	5400_{10}	5400_{10}	4700_{10}	4700_{15}	4050_{25}	3950_{25}	3650_{40}	3450_{30}
395x65	40	8900	8850	6250_{5}	6200_{5}	5100_{15}	5050_{20}	4400_{20}	4350_{30}	3950_{30}	3800_{25}
	90	7350	7300	5950_{5}	5900_{10}	5150_{25}	5100_{30}	4450_{30}	4400_{40}	4000_{40}	3850_{35}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. Minimum bearing length = 70 mm at end supports. Subscript values indicate the minimum additional bearing length where required to be greater than 70 mm.
3. Restraint value for slenderness calculations is 600 mm.
4. Not all sizes of SmartLam GL17S in this table are stocked in each state. Please check with your supplier before ordering
5. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Single span lintels in lower storey walls
AS 4055 classification N1, N2, N3 & C1



EXAMPLE:

wind speed = N3
sheet roof - 40 kg/m^2
roof load width = 3900 mm
floor load width = 1200 mm
rafter/truss spacing = 600 mm
lintel span = 3500 mm

Enter span table at 4500 roof load width column, floor load width 1200 mm, and read down to a span equal to or greater than 3500 mm

ADOPT: SmartLam GL17S –300 x 60

Roof load width (mm)		1500			3000			4500			6000		
Floor load width (mm)		1200	2400	3600	1200	2400	3600	1200	2400	3600	1200	2400	3600
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended single span lintel span (mm)											
200x50	*40*	*2700*	*2500*	*2300*	*2600*	*2400*	*2200*	*2500*	*2300*	*2100*	*2400*	*2200*	*2100*
	90	*2600*	*2400*	*2200*	*2300*	*2200*	*2100*	*2200*	*2000*	*1900*	*2000*	*1900*	*1800*
250x50	*40*	*3200*	*3000*	*2800*	*3100*	*2900*	*2700*	*3000*	*2800*	*2700*	*2900*	*2700*	*2600*
	90	*3100*	*2900*	*2700*	*2900*	*2700*	*2600*	*2700*	*2600*	*2400*	*2600*	*2400*	*2300*
200x60	*40*	*2900*	*2600*	*2400*	*2700*	*2500*	*2300*	*2600*	*2400*	*2300*	*2500*	*2400*	*2200*
	90	*2700*	*2500*	*2300*	*2500*	*2300*	*2200*	*2300*	*2200*	*2100*	*2200*	*2100*	*2000*
265x60	*40*	*3500*	*3300*	*3100*	*3400*	*3200*	*3000*	*3300*	*3100*	*2900*	*3200*	*3000*	*2900*
	90	*3400*	*3100*	*3000*	*3100*	*3000*	*2800*	*3000*	*2800*	*2700*	*2800*	*2700*	*2600*
300x60	*40*	*3900*	*3600*	*3400*	*3700*	*3500*	*3300*	*3600*	*3400*	*3200*	*3500*	*3300*	*3200*
	90	*3700*	*3500*	*3300*	*3400*	*3300*	*3100*	*3200*	*3100*	*3000*	*3100*	*3000*	*2900*
330x60	*40*	*4200*	*3900*	*3600*	*4000*	*3700*	*3500*	*3900*	*3600*	*3500*	*3700*	*3500*	*3400*
	90	*4000*	*3700*	*3500*	*3700*	*3500*	*3400*	*3500*	*3300*	*3200*	*3300*	*3200*	*3100*
130x65	40	2000	1800	1600	1800	1700	1600	1800	1600	1500	1700	1600	1500
	90	1800	1700	1500	1600	1500	1400	1500	1400	1400	1400	1400	1300
165x65	40	2500	2200	2100	2300	2100	2000	2200	2100	1900	2100	2000	1900
	90	2300	2100	2000	2100	2000	1800	1900	1800	1800	1800	1700	1700
195x65	40	2900	2700	2400	2700	2500	2400	2600	2400	2300	2500	2400	2200
	90	2700	2500	2300	2500	2300	2200	2300	2200	2100	2200	2100	2000
230x65	40	3200	3000	2800	3100	2900	2800	3000	2800	2700	2900	2800	2600
	90	3100	2900	2700	2900	2700	2600	2700	2600	2500	2600	2400	2300
260x65	40	3600	3300	3100	3400	3200	3000	3300	3100	3000	3200	3000	2900
	90	3400	3200	3000	3100	3000	2900	3000	2900	2700	2800	2700	2700
295x65	40	3900	3600	3400	3800	3500	3300	3600	3400	3200	3500	3300	3200
	90	3700	3500	3300	3500	3300	3200	3300	3100	3000	3100	3000	2900
330x65	40	4300	3900	3700	4100	3800	3600	3900	3700	3500	3800	3600	3500
	90	4000	3800	3600	3800	3600	3400	3600	3400	3300	3400	3300	3200
360x65	40	4500	4200	4000	4400	4100	3900	4200	4000	3800	4100	3900	3700
	90	4300	4100	3800	4000	3800	3700	3800	3700	3500	3600	3500	3400
395x65	40	4900	4500	4200	4700	4400	4100	4500	4300	4100	4400	4200	4000
	90	4600	4300	4100	4300	4100	3900	4100	3900	3800	3900	3800	3600
200x80	*40*	*3100*	*2800*	*2700*	*2900*	*2800*	*2600*	*2800*	*2700*	*2500*	*2700*	*2600*	*2400*
	90	*2900*	*2700*	*2600*	*2700*	*2600*	*2400*	*2500*	*2400*	*2300*	*2400*	*2300*	*2200*
265x80	*40*	*3800*	*3500*	*3300*	*3600*	*3400*	*3200*	*3500*	*3300*	*3100*	*3400*	*3200*	*3100*
	90	*3600*	*3400*	*3200*	*3400*	*3200*	*3100*	*3200*	*3000*	*2900*	*3000*	*2900*	*2800*
300x80	*40*	*4200*	*3900*	*3600*	*4000*	*3700*	*3500*	*3800*	*3600*	*3500*	*3700*	*3500*	*3400*
	90	*3900*	*3700*	*3500*	*3700*	*3500*	*3400*	*3500*	*3300*	*3200*	*3300*	*3200*	*3100*
330x80	*40*	*4500*	*4100*	*3900*	*4300*	*4000*	*3800*	*4100*	*3900*	*3700*	*4000*	*3800*	*3600*
	90	*4200*	*4000*	*3800*	*4000*	*3800*	*3600*	*3700*	*3600*	*3500*	*3600*	*3500*	*3300*

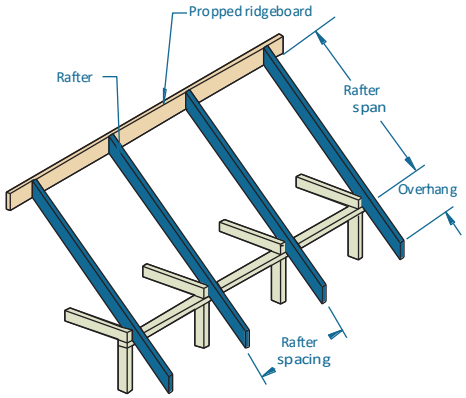
Single span lintels in lower storey walls (Cont'd)
AS 4055 classification N1, N2, N3 & C1

Roof load width (mm)		1500			3000			4500			6000		
Floor load width (mm)		1200	2400	3600	1200	2400	3600	1200	2400	3600	1200	2400	3600
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended single span lintel span (mm)											
260x85	40	3800	3500	3300	3600	3400	3200	3500	3300	3200	3400	3200	3100
	90	3600	3400	3200	3400	3200	3100	3200	3100	2900	3000	2900	2800
295x85	40	4200	3900	3600	4000	3800	3600	3900	3700	3500	3800	3600	3400
	90	4000	3700	3500	3700	3500	3400	3500	3400	3200	3300	3200	3100
330x85	40	4500	4200	4000	4400	4100	3900	4200	4000	3800	4100	3900	3700
	90	4300	4100	3800	4000	3800	3700	3800	3700	3500	3600	3500	3400
360x85	40	4900	4500	4200	4700	4400	4100	4500	4200	4000	4400	4100	4000
	90	4600	4300	4100	4300	4100	3900	4100	3900	3800	3900	3800	3600
395x85	40	5200	4800	4500	5000	4700	4400	4800	4500	4300	4700	4400	4200
	90	4900	4600	4400	4600	4400	4200	4400	4200	4000	4200	4000	3900
425x85	40	5500	5100	4800	5300	4900	4700	5100	4800	4600	4900	4700	4500
	90	5200	4900	4600	4900	4600	4400	4600	4400	4300	4400	4300	4100

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. Total upper floor mass of 40 kg/m^2, floor live load of 1.5 kPa, floor point load of 1.8 kN.
3. Minimum bearing length = 35 mm at end supports. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm.
4. Restraint value for slenderness calculations is 600 mm.
5. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
6. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Single/continuous span roof rafter with ceiling attached - AS 4055 classification N1, N2, N3 & N4



Maximum Birdsmouth = 30% of rafter depth

EXAMPLE:

wind speed = N3
sheet roof - 40 kg/m^2
Rafter spacing = 600
rafter span = 5800 mm

Enter span table at rafter spacing of 600 mm, and read down to a span equal to or greater than 5800 mm for a 40 kg/m^2 roof

ADOPT:
SmartLam GL17S - 200 x 50

Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
200x50	30	6600	6300	5800	5400	8300	7900	7400	7000
	40	6300	6000	5400	5000	8000	7500	7000	6600
	75	5500	5100	4500	4200	7100	6700	6100	5700
	90	5300	4800	4300	3900	6800	6400	5800	5300
250x50	30	7600	7300	6800	6500	9600	9200	8600	8200
	40	7300	7000	6500	6100	9200	8800	8200	7700
	75	6600	6200	5600	5200	8300	7800	7200	6700
	90	6300	6000	5300	4900	8000	7500	6900	6500
200x60	30	6800	6500	6100	5700	8600	8200	7600	7200
	40	6500	6200	5700	5300	8200	7800	7200	6800
	75	5800	5400	4800	4400	7300	6900	6400	6000
	90	5500	5100	4500	4200	7100	6700	6100	5700
265x60	30	8100	7800	7300	7000	10200	9800	9200	8800
	40	7800	7500	7000	6600	9900	9400	8800	8300
	75	7100	6700	6200	5800	8900	8400	7800	7300
	90	6800	6500	5900	5500	8600	8100	7500	7000
300x60	30	8800	8500	8000	7600	11100	10600	10000	9600
	40	8500	8100	7600	7200	10700	10200	9500	9100
	75	7700	7300	6800	6300	9700	9200	8500	8000
	90	7400	7100	6500	6100	9400	8900	8200	7700
330x60	30	9300	9000	8500	8100	11700	11300	10700	10200
	40	9000	8600	8100	7700	11300	10900	10200	9700
	75	8200	7800	7200	6800	10300	9800	9100	8500
	90	7900	7500	7000	6500	10000	9500	8800	8200
130x65	30	5200	4800	4300	4000	6800	6400	5900	5400
	40	4800	4500	4000	3600	6400	6000	5400	4900
	75	4000	3700	3300	3000	5500	5000	4400	4100
	90	3800	3500	3100	2800	5200	4800	4200	3800
165x65	30	6300	6000	5400	5000	7900	7500	7000	6600
	40	6000	5600	5000	4600	7600	7100	6600	6200
	75	5100	4700	4100	3800	6600	6200	5600	5100
	90	4800	4400	3900	3600	6400	6000	5300	4800
195x65	30	7100	6700	6200	5800	8900	8400	7800	7400
	40	6700	6400	5800	5400	8500	8000	7400	6900
	75	5900	5500	4900	4400	7500	7000	6400	6000
	90	5600	5200	4600	4200	7200	6800	6200	5700
230x65	30	7900	7500	7000	6600	9900	9400	8800	8300
	40	7500	7100	6600	6200	9500	9000	8300	7800
	75	6700	6300	5700	5200	8400	7900	7300	6800
	90	6400	6100	5400	4900	8100	7600	7000	6500
260x65	30	8500	8200	7600	7200	10700	10300	9600	9000
	40	8200	7800	7200	6800	10300	9800	9100	8500
	75	7300	6900	6300	5900	9200	8600	7900	7400
	90	7000	6600	6100	5600	8900	8300	7600	7100

Single/continuous span roof rafter with ceiling attached - AS 4055 classification N1, N2, N3 & N4 (Cont'd)

Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
295x65	30	9200	8900	8300	7800	11600	11100	10400	9900
	40	8900	8400	7800	7400	11100	10600	9900	9300
	75	8000	7500	6900	6500	10000	9400	8700	8100
	90	7700	7200	6600	6200	9700	9100	8400	7800
330x65	30	9900	9500	8900	8500	12000	12000	11200	10700
	40	9600	9100	8500	8000	12000	11500	10700	10100
	75	8600	8100	7500	7000	10800	10200	9400	8800
	90	8300	7800	7200	6700	10500	9800	9100	8500
360x65	30	10500	10100	9500	9000	12000	12000	11900	11300
	40	10100	9700	9000	8500	12000	12000	11300	10700
	75	9100	8600	8000	7500	11400	10800	10000	9400
	90	8800	8300	7700	7200	11100	10500	9600	9000
395x65	30	11100	10700	10100	9600	12000	12000	12000	12000
	40	10700	10300	9600	9100	12000	12000	12000	11400
	75	9700	9200	8500	8000	12000	11600	10700	10000
	90	9400	8900	8200	7700	11800	11200	10300	9600
200x80	*30*	*7100*	*6800*	*6400*	*6100*	*8900*	*8500*	*8000*	*7600*
	40	*6800*	*6500*	*6100*	*5700*	*8600*	*8200*	*7600*	*7200*
	75	*6200*	*5800*	*5200*	*4800*	*7700*	*7300*	*6800*	*6400*
	90	*5900*	*5500*	*4900*	*4500*	*7500*	*7100*	*6500*	*6100*
265x80	*30*	*8400*	*8100*	*7700*	*7300*	*10600*	*10200*	*9700*	*9200*
	40	*8100*	*7800*	*7300*	*7000*	*10200*	*9800*	*9200*	*8800*
	75	*7400*	*7100*	*6600*	*6200*	*9400*	*8900*	*8300*	*7800*
	90	*7200*	*6800*	*6300*	*5900*	*9100*	*8600*	*8000*	*7500*
300x80	*30*	*9000*	*8800*	*8300*	*8000*	*11400*	*11000*	*10500*	*10000*
	40	*8800*	*8500*	*8000*	*7600*	*11100*	*10600*	*10000*	*9600*
	75	*8100*	*7700*	*7200*	*6700*	*10200*	*9700*	*9000*	*8500*
	90	*7800*	*7400*	*6900*	*6500*	*9900*	*9400*	*8700*	*8200*
330x80	*30*	*9600*	*9300*	*8800*	*8500*	*12000*	*11700*	*11100*	*10700*
	40	*9300*	*9000*	*8500*	*8100*	*11700*	*11300*	*10700*	*10200*
	75	*8600*	*8200*	*7600*	*7200*	*10800*	*10300*	*9600*	*9100*
	90	*8400*	*7900*	*7400*	*6900*	*10500*	*10000*	*9300*	*8700*
130x85	30	5500	5200	4600	4300	7100	6700	6200	5800
	40	5200	4800	4300	3900	6700	6400	5800	5400
	75	4400	4000	3500	3200	5900	5500	4800	4400
	90	4100	3800	3300	3100	5600	5200	4600	4200
165x85	30	6600	6300	5800	5400	8300	7900	7300	6900
	40	6300	6000	5400	5000	7900	7500	6900	6500
	75	5500	5000	4500	4100	7000	6600	6100	5600
	90	5200	4800	4200	3900	6800	6400	5800	5300
195x85	30	7400	7000	6500	6200	9300	8800	8200	7800
	40	7100	6700	6200	5800	8900	8400	7800	7300
	75	6300	5900	5300	4800	7900	7400	6800	6400
	90	6100	5600	5000	4600	7600	7200	6600	6100
230x85	30	8200	7800	7300	7000	10300	9900	9200	8700
	40	7900	7500	7000	6600	9900	9400	8700	8300
	75	7100	6700	6100	5700	8900	8400	7700	7200
	90	6800	6400	5900	5400	8600	8100	7400	6900
260x85	30	8800	8500	8000	7600	11200	10700	10000	9500
	40	8500	8100	7600	7200	10700	10200	9500	9000
	75	7700	7200	6700	6300	9700	9100	8400	7900
	90	7400	7000	6400	6000	9300	8800	8100	7600
295x85	30	9600	9200	8700	8200	12000	11600	10900	10400
	40	9200	8800	8200	7800	11600	11100	10400	9800
	75	8400	7900	7300	6900	10500	10000	9200	8600
	90	8100	7600	7000	6600	10200	9600	8900	8300

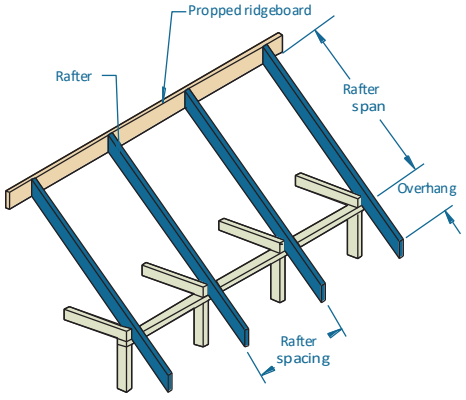
Single/continuous span roof rafter with ceiling attached - AS 4055 classification N1, N2, N3 & N4 (Cont'd)

Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
330x85	30	10300	9900	9300	8900	12000	12000	11800	11200
	40	9900	9500	8900	8400	12000	12000	11200	10600
	75	9000	8500	7900	7400	11300	10700	9900	9400
	90	8700	8300	7600	7200	11000	10400	9600	9000
360x85	30	10800	10500	9900	9400	12000	12000	12000	11900
	40	10500	10100	9400	9000	12000	12000	11900	11300
	75	9600	9100	8400	7900	12000	11400	10600	10000
	90	9300	8800	8100	7600	11600	11000	10200	9600
395x85	30	11500	11100	10500	10000	12000	12000	12000	12000
	40	11100	10700	10000	9600	12000	12000	12000	12000
	75	10200	9700	9000	8500	12000	12000	11300	10600
	90	9800	9300	8600	8100	12000	11800	10900	10200
425x85	30	12000	11600	11000	10500	12000	12000	12000	12000
	40	11600	11200	10500	10000	12000	12000	12000	12000
	75	10700	10200	9400	8900	12000	12000	11900	11200
	90	10400	9800	9100	8600	12000	12000	11400	10800

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a batten spacing of 900 mm
3. Maximum birdsmouth depth = 30 % of rafter depth
4. End bearing lengths = 35 mm at end supports and 35 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 35 mm at internal supports
5. Construction loads shall not be applied to overhangs until a 190 x 19 (minimum) timber fascia or other fascia of equivalent stiffness is rigidly and permanently attached to the end of rafter overhangs
6. rafter spacing up to 1200 mm
7. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
8. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Single/continuous span roof rafter with ceiling attached - AS 4055 classification C1, C2 and C3



Maximum Birdsmouth = 30% of rafter depth

EXAMPLE:

wind speed = C3
sheet roof - 40 kg/m^2
Rafter spacing = 600 mm
rafter span = 5800 mm

Enter span table at rafter spacing of 600 mm, and read down to a span equal to or greater than 5800 mm for a 40 kg/m^2 roof

ADOPT:

SmartLam GL17S - 200 x 50

Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
200x50	*30*	*6600*	*6300*	*5400*	*4600*	*7900*	*6800*	*5400*	*4600*
	40	*6300*	*6000*	*5400*	*4600*	*8000*	*6800*	*5500*	*4600*
	75	*5500*	*5100*	*4500*	*4200*	*7100*	*6700*	*5700*	*4800*
	90	*5300*	*4800*	*4300*	*3900*	*6800*	*6400*	*5700*	*4800*
250x50	*30*	*7600*	*7300*	*6800*	*5800*	*9600*	*8500*	*6800*	*5800*
	40	*7300*	*7000*	*6500*	*5900*	*9200*	*8600*	*6900*	*5900*
	75	*6600*	*6200*	*5600*	*5200*	*8300*	*7800*	*7200*	*6100*
	90	*6300*	*6000*	*5300*	*4900*	*8000*	*7500*	*6900*	*6100$_5$*
200x60	*30*	*6800*	*6500*	*6000*	*5000*	*8600*	*7500*	*6000*	*5000*
	40	*6500*	*6200*	*5700*	*5100*	*8200*	*7500*	*6000*	*5100*
	75	*5800*	*5400*	*4800*	*4400*	*7300*	*6900*	*6300*	*5300*
	90	*5500*	*5100*	*4500*	*4200*	*7100*	*6700*	*6100*	*5300*
265x60	*30*	*8100*	*7800*	*7300*	*6800*	*10200*	*9800*	*8000*	*6800*
	40	*7800*	*7500*	*7000*	*6600*	*9900*	*9400*	*8100*	*6900*
	75	*7100*	*6700*	*6200*	*5800*	*8900*	*8400*	*7800*	*7200*
	90	*6800*	*6500*	*5900*	*5500*	*8600*	*8100*	*7500*	*7000*
300x60	*30*	*8800*	*8500*	*8000*	*7600*	*11100*	*10600*	*9100*	*7800*
	40	*8500*	*8100*	*7600*	*7200*	*10700*	*10200*	*9200*	*7800*
	75	*7700*	*7300*	*6800*	*6300*	*9700*	*9200*	*8500*	*8000$_5$*
	90	*7400*	*7100*	*6500*	*6100*	*9400*	*8900*	*8200*	*7700$_5$*
330x60	*30*	*9300*	*9000*	*8500*	*8100*	*11700*	*11300*	*10000*	*8600*
	40	*9000*	*8600*	*8100*	*7700*	*11300*	*10900*	*10200*	*8700$_5$*
	75	*8200*	*7800*	*7200*	*6800*	*10300*	*9800*	*9100*	*8500$_{10}$*
	90	*7900*	*7500*	*7000*	*6500*	*10000*	*9500*	*8800*	*8200$_{10}$*
130x65	30	5200	4800	4300	3600	6300	5400	4300	3600
	40	4800	4500	4000	3600	6400	5500	4400	3700
	75	4000	3700	3300	3000	5500	5000	4400	3800
	90	3800	3500	3100	2800	5200	4800	4200	3800
165x65	30	6300	6000	5400	4700	8000	6900	5500	4700
	40	6000	5600	5000	4600	7600	7000	5600	4700
	75	5100	4700	4100	3800	6600	6200	5600	4900
	90	4800	4400	3900	3600	6400	6000	5300	4800
195x65	30	7100	6700	6200	5600	8900	8200	6600	5600
	40	6700	6400	5800	5400	8500	8000	6700	5700
	75	5900	5500	4900	4400	7500	7000	6400	5900
	90	5600	5200	4600	4200	7200	6800	6200	5700
230x65	30	7900	7500	7000	6600	9900	9400	7800	6700
	40	7500	7100	6600	6200	9500	9000	7900	6700
	75	6700	6300	5700	5200	8400	7900	7300	6800
	90	6400	6100	5400	4900	8100	7600	7000	6500
260x65	30	8500	8200	7600	7200	10700	10300	8900	7600
	40	8200	7800	7200	6800	10300	9800	9000	7700
	75	7300	6900	6300	5900	9200	8600	7900	7400
	90	7000	6600	6100	5600	8900	8300	7600	7100

Single/continuous span roof rafter with ceiling attached - AS 4055 classification C1, C2 and C3 (Cont'd)

Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
295x65	30	9200	8900	8300	7800	11600	11100	10100	8600
	40	8900	8400	7800	7400	11100	10600	9900	8700
	75	8000	7500	6900	6500	10000	9400	8700	8100
	90	7700	7200	6600	6200	9700	9100	8400	7800
330x65	30	9900	9500	8900	8500	12000	12000	11200	9700
	40	9600	9100	8500	8000	12000	11500	10700	9800_5
	75	8600	8100	7500	7000	10800	10200	9400	8800_5
	90	8300	7800	7200	6700	10500	9800	9100	8500_5
360x65	30	10500	10100	9500	9000	12000	12000	11900	10600_5
	40	10100	9700	9000	8500	12000	12000	11300	10700_{10}
	75	9100	8600	8000	7500	11400	10800	10000	9400_5
	90	8800	8300	7700	7200	11100	10500	9600	9000_{10}
395x65	30	11100	10700	10100	9600	12000	12000	12000	11700_{10}
	40	10700	10300	9600	9100	12000	12000	12000	11400_{10}
	75	9700	9200	8500	8000	12000	11600	10700	10000_{10}
	90	9400	8900	8200	7700	11800	11200	10300	9600_{10}
200x80	*30*	*7100*	*6800*	*6400*	*5900*	*8900*	*8500*	*6900*	*5900*
	40	*6800*	*6500*	*6100*	*5700*	*8600*	*8200*	*7000*	*6000*
	75	*6200*	*5800*	*5200*	*4800*	*7700*	*7300*	*6800*	*6200*
	90	*5900*	*5500*	*4900*	*4500*	*7500*	*7100*	*6500*	*6100*
265x80	*30*	*8400*	*8100*	*7700*	*7300*	*10600*	*10200*	*9300*	*7900*
	40	*8100*	*7800*	*7300*	*7000*	*10200*	*9800*	*9200*	*8000*
	75	*7400*	*7100*	*6600*	*6200*	*9400*	*8900*	*8300*	*7800*
	90	*7200*	*6800*	*6300*	*5900*	*9100*	*8600*	*8000*	*7500*
300x80	*30*	*9000*	*8800*	*8300*	*8000*	*11400*	*11000*	*10500*	*9000*
	40	*8800*	*8500*	*8000*	*7600*	*11100*	*10600*	*10000*	*9100*
	75	*8100*	*7700*	*7200*	*6700*	*10200*	*9700*	*9000*	*8500*
	90	*7800*	*7400*	*6900*	*6500*	*9900*	*9400*	*8700*	*8200*
330x80	*30*	*9600*	*9300*	*8800*	*8500*	*12000*	*11700*	*11100*	*10000*
	40	*9300*	*9000*	*8500*	*8100*	*11700*	*11300*	*10700*	*10100*
	75	*8600*	*8200*	*7600*	*7200*	*10800*	*10300*	*9600*	*9100*
	90	*8400*	*7900*	*7400*	*6900*	*10500*	*10000*	*9300*	*8700*
130x85	30	5500	5200	4600	4200	7100	6200	5000	4200
	40	5200	4800	4300	3900	6700	6300	5000	4200
	75	4400	4000	3500	3200	5900	5500	4800	4400
	90	4100	3800	3300	3100	5600	5200	4600	4200
165x85	30	6600	6300	5800	5400	8300	7900	6400	5400
	40	6300	6000	5400	5000	7900	7500	6400	5500
	75	5500	5000	4500	4100	7000	6600	6100	5600
	90	5200	4800	4200	3900	6800	6400	5800	5300
195x85	30	7400	7000	6500	6200	9300	8800	7600	6500
	40	7000	6700	6200	5800	8900	8400	7700	6500
	75	6300	5900	5300	4800	7900	7400	6800	6400
	90	6100	5600	5000	4600	7600	7200	6600	6100
230x85	30	8200	7800	7300	7000	10300	9900	9000	7700
	40	7800	7500	7000	6600	9900	9400	8700	7800
	75	7100	6700	6100	5700	8900	8400	7700	7200
	90	6800	6400	5900	5400	8600	8100	7400	6900
260x85	30	8800	8500	8000	7600	11200	10700	10000	8700
	40	8500	8100	7600	7200	10700	10200	9500	8800
	75	7700	7200	6700	6300	9700	9100	8400	7900
	90	7400	7000	6400	6000	9300	8800	8100	7600
295x85	30	9600	9200	8700	8200	12000	11600	10900	9900
	40	9200	8800	8200	7800	11600	11100	10400	9800
	75	8400	7900	7300	6900	10500	10000	9200	8600
	90	8100	7600	7000	6600	10200	9600	8900	8300

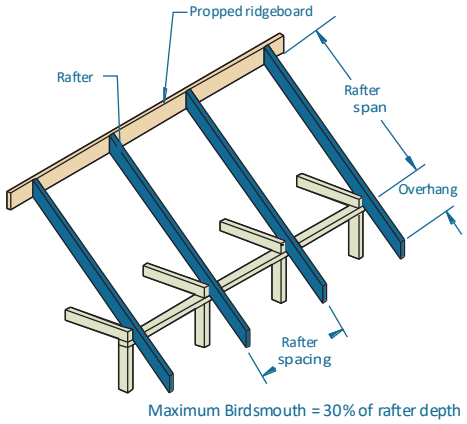
Single/continuous span roof rafter with ceiling attached - AS 4055 classification C1, C2 and C3 (Cont'd)

Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
330x85	30	10300	9900	9300	8900	12000	12000	11800	11200
	40	9900	9500	8900	8400	12000	12000	11200	10600
	75	9000	8500	7900	7400	11300	10700	9900	9400
	90	8700	8300	7600	7200	11000	10400	9600	9000
360x85	30	10800	10500	9900	9400	12000	12000	12000	11900
	40	10500	10100	9400	9000	12000	12000	11900	11300
	75	9600	9100	8400	7900	12000	11400	10600	10000
	90	9300	8800	8100	7600	11600	11000	10200	9600
395x85	30	11500	11100	10500	10000	12000	12000	12000	12000
	40	11100	10700	10000	9600	12000	12000	12000	12000
	75	10200	9700	9000	8500	12000	12000	11300	10600
	90	9800	9300	8600	8100	12000	11800	10900	10200
425x85	30	12000	11600	11000	10500	12000	12000	12000	12000
	40	11600	11200	10500	10000	12000	12000	12000	12000
	75	10700	10200	9400	8900	12000	12000	11900	11200_5
	90	10400	9800	9100	8600	12000	12000	11400	10800_5

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a batten spacing of 900 mm
3. Maximum birdsmouth depth = 30 % of rafter depth
4. End bearing lengths = 35 mm at end supports and 35 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 35 mm at internal supports
5. Construction loads shall not be applied to overhangs until a 190 x 19 (minimum) timber fascia or other fascia of equivalent stiffness is rigidly and permanently attached to the end of rafter overhangs
6. rafter spacing up to 1200 mm
7. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
8. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Single/continuous span roof rafter without ceiling attached
AS 4055 classification N1, N2, N3 & N4



Maximum Birdsmouth = 30% of rafter depth

EXAMPLE:

wind speed = C3
sheet roof - 40 kg/m^2
rafter/truss spacing = 600 mm
rafter span = 5800 mm

Enter span table at rafter spacing of 600 mm, and read down to a span equal to or greater than 5800 mm for a 40 kg/m^2 roof

ADOPT:

SmartLam GL17S - 200 x 50

Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
200x50	10	7600	7300	7000	6300	9500	9200	8000	6800
	20	7000	6700	6300	6000	8800	8500	7900	7000
	40	6300	6000	5400	5000	8000	7500	7000	6600
	60	5800	5400	4800	4400	7400	7000	6400	6000
250x50	10	8600	8400	8000	7800	10800	10600	10100	8600
	20	8000	7800	7300	7000	10100	9800	9200	8800
	40	7300	7000	6500	6100	9200	8800	8200	7700
	60	6900	6500	6000	5500	8600	8200	7500	7100
200x60	10	7700	7500	7200	6700	9600	9400	8900	7500
	20	7200	6900	6500	6200	9000	8700	8200	7700
	40	6500	6200	5700	5300	8200	7800	7200	6800
	60	6100	5700	5100	4700	7700	7200	6700	6300
265x60	10	9000	8800	8500	8200	11300	11100	10700	10100
	20	8500	8200	7800	7500	10700	10400	9800	9400
	40	7800	7500	7000	6600	9900	9400	8800	8300
	60	7400	7000	6500	6100	9300	8800	8200	7700
300x60	10	9600	9500	9100	8900	12000	11900	11500	11200
	20	9200	8900	8500	8100	11500	11200	10600	10200
	40	8500	8100	7600	7200	10700	10200	9500	9100
	60	8000	7600	7000	6700	10100	9600	8900	8400
330x60	10	10100	10000	9700	9400	12000	12000	12000	11900
	20	9700	9400	9000	8600	12000	11900	11300	10900
	40	9000	8600	8100	7700	11300	10900	10200	9700
	60	8500	8100	7500	7100	10700	10200	9500	8900
130x65	10	5400	5300	4900	4500	6900	6900	6400	5400
	20	5400	5300	4800	4500	6900	6900	6400	5500
	40	4800	4500	4000	3600	6400	6000	5400	4900
	60	4300	4000	3500	3200	5900	5400	4800	4400
165x65	10	7400	7100	6300	5700	9300	9000	8200	7000
	20	6700	6400	6000	5600	8500	8100	7500	7100
	40	6000	5600	5000	4600	7600	7100	6600	6200
	60	5400	5000	4400	4000	7000	6600	6000	5500
195x65	10	8200	7900	7400	6700	10300	9900	9400	8300
	20	7500	7200	6700	6400	9400	9000	8400	8000
	40	6700	6400	5800	5400	8500	8000	7400	6900
	60	6200	5800	5200	4800	7800	7400	6800	6300
230x65	10	9000	8700	8300	8000	11300	11000	10500	9900
	20	8400	8000	7500	7100	10500	10100	9400	9000
	40	7500	7100	6600	6200	9500	9000	8300	7800
	60	7000	6600	6100	5600	8800	8300	7600	7100
260x65	10	9700	9400	9000	8700	12000	11900	11300	10900
	20	9000	8700	8100	7800	11300	10900	10200	9800
	40	8200	7800	7200	6800	10300	9800	9100	8500
	60	7600	7200	6600	6200	9600	9000	8300	7800
295x65	10	10400	10200	9700	9400	12000	12000	12000	11800
	20	9800	9400	8900	8400	12000	11800	11100	10600
	40	8900	8400	7800	7400	11100	10600	9900	9300
	60	8300	7800	7200	6800	10400	9900	9100	8600

Single/continuous span roof rafter without ceiling attached
AS 4055 classification N1, N2, N3 & N4 (Cont'd)

Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
330x65	10	11100	10900	10400	10100	12000	12000	12000	12000
	20	10500	10100	9500	9100	12000	12000	12000	11500
	40	9600	9100	8500	8000	12000	11500	10700	10100
	60	9000	8500	7800	7400	11200	10700	9900	9300
360x65	10	11600	11400	11000	10600	12000	12000	12000	12000
	20	11000	10600	10100	9700	12000	12000	12000	12000
	40	10100	9700	9000	8500	12000	12000	11300	10700
	60	9500	9000	8300	7800	11900	11300	10500	9900
395x65	10	12000	12000	11600	11300	12000	12000	12000	12000
	20	11600	11300	10700	10300	12000	12000	12000	12000
	40	10700	10300	9600	9100	12000	12000	12000	11400
	60	10100	9600	8900	8400	12000	12000	11200	10500
200x80	*10*	*7800*	*7700*	*7400*	*7200*	*9800*	*9600*	*9300*	*8800*
	20	*7400*	*7200*	*6800*	*6500*	*9300*	*9000*	*8500*	*8200*
	40	*6800*	*6500*	*6100*	*5700*	*8600*	*8200*	*7600*	*7200*
	60	*6400*	*6100*	*5500*	*5100*	*8000*	*7600*	*7100*	*6700*
265x80	*10*	*9100*	*9000*	*8700*	*8500*	*11500*	*11300*	*11000*	*10700*
	20	*8700*	*8500*	*8100*	*7800*	*11000*	*10700*	*10200*	*9800*
	40	*8100*	*7800*	*7300*	*7000*	*10200*	*9800*	*9200*	*8800*
	60	*7700*	*7300*	*6800*	*6500*	*9700*	*9200*	*8600*	*8100*
300x80	*10*	*9800*	*9600*	*9400*	*9200*	*12000*	*12000*	*11800*	*11500*
	20	*9400*	*9200*	*8800*	*8500*	*11800*	*11500*	*11000*	*10600*
	40	*8800*	*8500*	*8000*	*7600*	*11100*	*10600*	*10000*	*9600*
	60	*8300*	*8000*	*7400*	*7100*	*10500*	*10000*	*9400*	*8900*
330x80	*10*	*10300*	*10200*	*9900*	*9700*	*12000*	*12000*	*12000*	*12000*
	20	*9900*	*9700*	*9300*	*9000*	*12000*	*12000*	*11700*	*11300*
	40	*9300*	*9000*	*8500*	*8100*	*11700*	*11300*	*10700*	*10200*
	60	*8900*	*8500*	*7900*	*7500*	*11100*	*10700*	*10000*	*9500*
130x85	10	6100	6000	5400	4900	7900	7900	7300	6300
	20	6000	5700	5200	4800	7600	7200	6700	6400
	40	5200	4800	4300	3900	6700	6400	5800	5400
	60	4600	4300	3800	3500	6200	5800	5200	4700
165x85	10	7600	7400	6900	6200	9500	9300	8800	8000
	20	7000	6700	6300	6000	8800	8500	7900	7500
	40	6300	6000	5400	5000	7900	7500	6900	6500
	60	5800	5400	4800	4400	7300	6900	6400	6000
195x85	10	8400	8100	7800	7400	10500	10200	9800	9400
	20	7800	7500	7000	6700	9800	9400	8800	8400
	40	7100	6700	6200	5800	8900	8400	7800	7300
	60	6600	6200	5600	5200	8300	7800	7200	6700
230x85	10	9200	9000	8600	8300	11500	11300	10800	10500
	20	8600	8300	7800	7500	10900	10500	9900	9400
	40	7900	7500	7000	6600	9900	9400	8700	8300
	60	7300	7000	6400	6000	9200	8700	8100	7600
260x85	10	9900	9600	9300	9000	12000	12000	11700	11300
	20	9300	9000	8500	8100	11700	11300	10700	10200
	40	8500	8100	7600	7200	10700	10200	9500	9000
	60	8000	7600	7000	6600	10000	9500	8800	8300

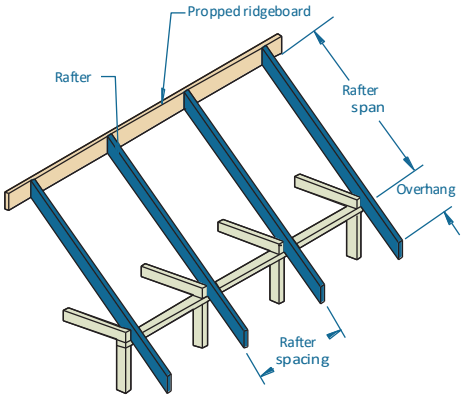
Single/continuous span roof rafter without ceiling attached
AS 4055 classification N1, N2, N3 & N4 (Cont'd)

Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
295x85	10	10600	10400	10000	9700	12000	12000	12000	12000
	20	10000	9700	9200	8800	12000	12000	11600	11100
	40	9300	8800	8200	7800	11600	11100	10400	9800
	60	8700	8200	7600	7200	10900	10400	9600	9100
330x85	10	11200	11100	10700	10400	12000	12000	12000	12000
	20	10700	10400	9900	9500	12000	12000	12000	12000
	40	9900	9500	8900	8400	12000	12000	11200	10600
	60	9400	8900	8300	7800	11800	11200	10400	9800
360x85	10	11800	11600	11300	11000	12000	12000	12000	12000
	20	11300	11000	10500	10100	12000	12000	12000	12000
	40	10500	10100	9400	9000	12000	12000	11900	11300
	60	9900	9400	8800	8300	12000	11900	11100	10400
395x85	10	12000	12000	11900	11600	12000	12000	12000	12000
	20	11900	11600	11100	10700	12000	12000	12000	12000
	40	11100	10700	10000	9600	12000	12000	12000	12000
	60	10500	10000	9300	8800	12000	12000	11800	11100
425x85	10	12000	12000	12000	12000	12000	12000	12000	12000
	20	12000	12000	11600	11200	12000	12000	12000	12000
	40	11600	11200	10500	10000	12000	12000	12000	12000
	60	11000	10500	9800	9300	12000	12000	12000	11800

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a batten spacing of 900 mm
3. Maximum birdsmouth depth = 30 % of rafter depth
4. End bearing lengths = 35 mm at end supports and 35 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 35 mm at internal supports
5. Construction loads shall not be applied to overhangs until a 190 x 19 (minimum) timber fascia or other fascia of equivalent stiffness is rigidly and permanently attached to the end of rafter overhangs
6. rafter spacing up to 1200 mm
7. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
8. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Single/continuous span roof rafter without ceiling attached
AS 4055 classification C1, C2 and C3



Maximum Birdsmouth = 30% of rafter depth

EXAMPLE:

wind speed = C3
sheet roof - 40 kg/m^2
rafter/truss spacing = 600 mm
rafter span = 5800 mm

Enter span table at rafter spacing of 600 mm, and read down to a span equal to or greater than 5800 mm for a 40 kg/m^2 roof

ADOPT:

SmartLam GL17S - 200 x 50

Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
200x50	*10*	*7600*	*6600*	*5300*	*4500*	*7800*	*6600*	*5300*	*4500*
	20	*7000*	*6700*	*5400*	*4500*	*7800*	*6700*	*5400*	*4500*
	40	*6300*	*6000*	*5400*	*4600*	*8000*	*6800*	*5500*	*4600*
	60	*5800*	*5400*	*4800*	*4400*	*7400*	*7000*	*5600*	*4700*
250x50	*10*	*8600*	*8400*	*6700*	*5700*	*9800*	*8400*	*6700*	*5700*
	20	*8100*	*7800*	*6800*	*5700*	*9900*	*8400*	*6800*	*5700*
	40	*7300*	*7000*	*6500*	*5900*	*9200*	*8600*	*6900*	*5900*
	60	*6800*	*6500*	*6000*	*5500*	*8600*	*8200*	*7100*	*6000*
200x60	*10*	*7700*	*7300*	*5800*	*4900*	*8500*	*7300*	*5800*	*4900*
	20	*7200*	*6900*	*5900*	*5000*	*8600*	*7400*	*5900*	*5000*
	40	*6500*	*6200*	*5700*	*5100*	*8200*	*7500*	*6000*	*5100*
	60	*6100*	*5700*	*5100*	*4700*	*7700*	*7200*	*6200*	*5200*
265x60	*10*	*9000*	*8800*	*7800*	*6700*	*11300*	*9800*	*7800*	*6700*
	20	*8500*	*8200*	*7800*	*6700*	*10700*	*9900*	*7900*	*6700*
	40	*7800*	*7500*	*7000*	*6600*	*9900*	*9400*	*8100*	*6900*
	60	*7400*	*7000*	*6500*	*6100*	*9300*	*8800*	*8200*	*7000*
300x60	*10*	*9600*	*9500*	*8900*	*7600*	*12000*	*11100*	*8900*	*7600*
	20	*9100*	*8900*	*8500*	*7700*	*11500*	*11200*	*9000*	*7700*
	40	*8500*	*8100*	*7600*	*7200*	*10700*	*10200*	*9200*	*7800*
	60	*8000*	*7600*	*7000*	*6700*	*10100*	*9600*	*8900*	*8000$_5$*
330x60	*10*	*10200*	*10000*	*9700*	*8400*	*12000*	*12000*	*9800*	*8400*
	20	*9700*	*9400*	*9000*	*8500*	*12000*	*11900*	*9900*	*8500*
	40	*9000*	*8600*	*8100*	*7700*	*11300*	*10900*	*10200*	*8700$_5$*
	60	*8500*	*8100*	*7500*	*7100*	*10700*	*10200*	*9500*	*8800$_{10}$*
130x65	10	5400	5000	4200	3500	6200	5300	4200	3500
	20	5400	5000	4300	3600	6300	5400	4300	3600
	40	4800	4500	4000	3600	6400	5500	4400	3700
	60	4300	4000	3500	3200	5900	5400	4500	3700
165x65	10	7000	6300	5400	4600	7900	6800	5400	4600
	20	6800	6300	5500	4600	8000	6800	5500	4600
	40	6000	5600	5000	4600	7600	7000	5600	4700
	60	5400	5000	4400	4000	7000	6600	5700	4800
195x65	10	8200	7500	6500	5500	9400	8000	6500	5500
	20	7500	7200	6500	5500	9500	8100	6500	5500
	40	6700	6400	5800	5400	8500	8000	6700	5700
	60	6200	5800	5200	4800	7800	7400	6800	5800
230x65	10	9000	8700	7700	6500	11100	9500	7700	6500
	20	8400	8000	7500	6600	10500	9600	7700	6600
	40	7500	7100	6600	6200	9500	9000	7900	6700
	60	7000	6600	6100	5600	8800	8300	7600	6900
260x65	10	9700	9400	8700	7400	12000	10800	8700	7400
	20	9000	8700	8100	7500	11300	10900	8800	7500
	40	8200	7800	7200	6800	10300	9800	9000	7700
	60	7600	7200	6600	6200	9600	9000	8300	7800

Single/continuous span roof rafter without ceiling attached AS 4055 classification C1, C2 and C3 (Cont'd)

Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
295x65	10	10400	10200	9700	8500	12000	12000	9900	8500
	20	9700	9400	8900	8400	12000	11800	10000	8500
	40	8900	8400	7800	7400	11100	10600	9900	8700
	60	8300	7800	7200	6800	10400	9900	9100	8600
330x65	10	11100	10900	10400	9500	12000	12000	11100	9500
	20	10400	10100	9500	9100	12000	12000	11200	9600
	40	9500	9100	8500	8000	12000	11500	10700	9800_5
	60	9000	8500	7800	7400	11200	10700	9900	9300_5
360x65	10	11600	11400	11000	10400	12000	12000	12000	10400
	20	11000	10600	10100	9700	12000	12000	12000	10500_5
	40	10100	9700	9000	8500	12000	12000	11300	10700_{10}
	60	9500	9000	8300	7800	11900	11300	10500	9900_5
395x65	10	12000	12000	11600	11300	12000	12000	12000	11500_5
	20	11600	11300	10700	10300	12000	12000	12000	11600_{10}
	40	10700	10300	9600	9100	12000	12000	12000	11400_{10}
	60	10100	9600	8900	8400	12000	12000	11200	10500_{10}
200x80	*10*	*7800*	*7700*	*6800*	*5800*	*9800*	*8500*	*6800*	*5800*
	20	*7400*	*7200*	*6800*	*5800*	*9300*	*8600*	*6900*	*5800*
	40	*6800*	*6500*	*6100*	*5700*	*8600*	*8200*	*7000*	*6000*
	60	*6400*	*6100*	*5500*	*5100*	*8000*	*7600*	*7100*	*6100*
265x80	*10*	*9100*	*9000*	*8700*	*7800*	*11500*	*11300*	*9100*	*7800*
	20	*8700*	*8500*	*8100*	*7800*	*11000*	*10700*	*9200*	*7800*
	40	*8100*	*7800*	*7300*	*7000*	*10200*	*9800*	*9200*	*8000*
	60	*7700*	*7300*	*6800*	*6500*	*9700*	*9200*	*8600*	*8100*
300x80	*10*	*9800*	*9600*	*9400*	*8800*	*12000*	*12000*	*10400*	*8800*
	20	*9400*	*9200*	*8800*	*8500*	*11800*	*11500*	*10500*	*8900*
	40	*8800*	*8500*	*8000*	*7600*	*11100*	*10600*	*10000*	*9100*
	60	*8300*	*8000*	*7400*	*7100*	*10500*	*10000*	*9400*	*8900*
330x80	*10*	*10300*	*10200*	*9900*	*9700*	*12000*	*12000*	*11500*	*9800*
	20	*9900*	*9700*	*9300*	*9000*	*12000*	*12000*	*11600*	*9900*
	40	*9300*	*9000*	*8500*	*8100*	*11700*	*11300*	*10700*	*10100*
	60	*8900*	*8500*	*7900*	*7500*	*11100*	*10700*	*10000*	*9500*
130x85	10	6000	5400	4800	4100	7100	6100	4900	4100
	20	6000	5400	4800	4100	7200	6200	4900	4200
	40	5200	4800	4300	3900	6700	6300	5000	4200
	60	4600	4300	3800	3500	6200	5800	5100	4300
165x85	10	7600	6900	6000	5300	9100	7800	6200	5300
	20	7000	6700	6000	5400	8800	7900	6300	5400
	40	6300	6000	5400	5000	7900	7500	6400	5500
	60	5800	5400	4800	4400	7300	6900	6400	5600
195x85	10	8300	8200	7100	6300	10500	9300	7400	6300
	20	7800	7500	7000	6400	9800	9400	7500	6400
	40	7000	6700	6200	5800	8900	8400	7700	6500
	60	6600	6200	5600	5200	8300	7800	7200	6700
230x85	10	9200	9000	8400	7500	11500	11000	8800	7500
	20	8600	8300	7800	7500	10900	10500	8900	7600
	40	7900	7500	7000	6600	9900	9400	8700	7800
	60	7300	7000	6400	6000	9200	8700	8100	7600
260x85	10	9900	9600	9300	8500	12000	12000	10000	8500
	20	9300	9000	8500	8100	11700	11300	10100	8600
	40	8500	8100	7600	7200	10700	10200	9500	8800
	60	8000	7600	7000	6600	10000	9500	8800	8300

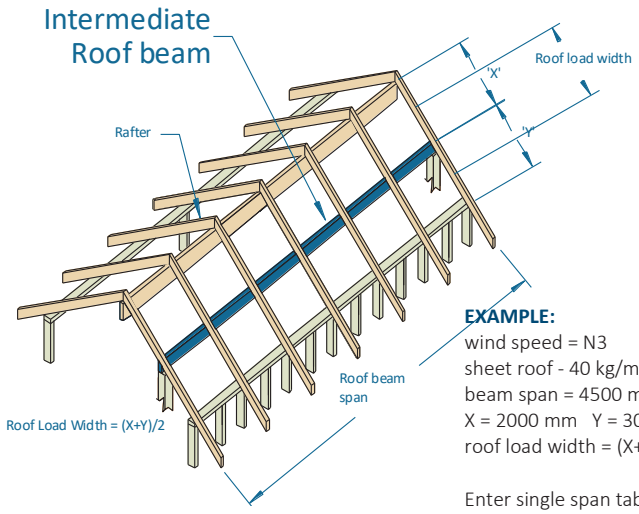
Single/continuous span roof rafter without ceiling attached AS 4055 classification C1, C2 and C3 (Cont'd)

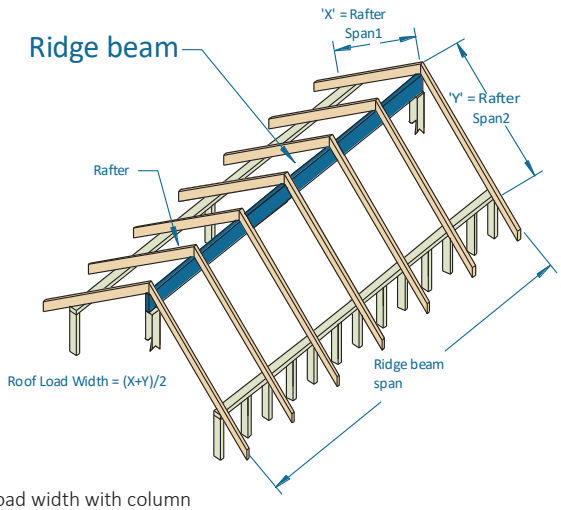
Rafter spacing (mm)		450	600	900	1200	450	600	900	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended rafter span (mm)							
		Single Span				Continuous Span			
295x85	10	10600	10400	10000	9700	12000	12000	11400	9700
	20	10000	9700	9200	8800	12000	12000	11500	9800
	40	9200	8800	8200	7800	11600	11100	10400	9800
	60	8700	8200	7600	7200	10900	10400	9600	9100
330x85	10	11200	11100	10700	10400	12000	12000	12000	10900
	20	10700	10400	9900	9500	12000	12000	12000	11100
	40	9900	9500	8900	8400	12000	12000	11200	10600
	60	9400	8900	8300	7800	11800	11200	10400	9800
360x85	10	11800	11600	11300	11000	12000	12000	12000	12000
	20	11300	11000	10500	10100	12000	12000	12000	12000
	40	10500	10100	9400	9000	12000	12000	11900	11300
	60	9900	9400	8800	8300	12000	11900	11100	10400
395x85	10	12000	12000	11900	11600	12000	12000	12000	12000
	20	11900	11600	11100	10700	12000	12000	12000	12000
	40	11100	10700	10000	9600	12000	12000	12000	12000
	60	10500	10000	9300	8800	12000	12000	11800	11100
425x85	10	12000	12000	12000	12000	12000	12000	12000	12000
	20	12000	12000	11600	11200	12000	12000	12000	12000
	40	11600	11200	10500	10000	12000	12000	12000	12000
	60	11000	10500	9800	9300	12000	12000	12000	11800_5

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a batten spacing of 900 mm
3. Maximum birdsmouth depth = 30 % of rafter depth
4. End bearing lengths = 35 mm at end supports and 35 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 35 mm at internal supports
5. Construction loads shall not be applied to overhangs until a 190 x 19 (minimum) timber fascia or other fascia of equivalent stiffness is rigidly and permanently attached to the end of rafter overhangs
6. rafter spacing up to 1200 mm
7. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
8. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Ridge/Intermediate roof beam
AS 4055 Classification N1, N2, N3 & N4





EXAMPLE:
wind speed = N3
sheet roof - 40 kg/m^2
beam span = 4500 mm
X = 2000 mm Y = 3000 mm
roof load width = (X+Y)/2 = 2500 mm

Enter single span table at 3000 roof load width with column and read down to span equal to or greater than 4500 mm

ADOPT:
SmartLam GL17S - 250 x 50

Roof load width (mm)		1800	3000	4200	5400	6600	7800	1800	3000	4200	5400	6600	7800
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Ridge/Intermediate beam span (mm)											
		Single span						Continuous span					
200x50	*40*	*4300*	*3600*	*3200*	*2900*	*2700*	*2500*	*5700*	*4200*	*3500*	*3100*	*2800*	*2500*
	90	*3400*	*2900*	*2500*	*2300*	*2100*	*2000*	*4600*	*3500*	*2900*	*2500*	*2300*	*2100*
250x50	*40*	*5400*	*4500*	*4000*	*3600*	*3400*	*3100*	*7000*	*5200*	*4400*	*3900*	*3500*	*3200*
	90	*4300*	*3600*	*3200*	*2900*	*2700*	*2500*	*5800*	*4300*	*3600*	*3200*	*2800*$_{10}$	*2600*$_{15}$
200x60	*40*	*4600*	*3900*	*3400*	*3100*	*2800*	*2700*	*6200*	*4600*	*3900*	*3400*	*3000*	*2800*
	90	*3600*	*3000*	*2700*	*2500*	*2300*	*2100*	*4900*	*3800*	*3200*	*2800*	*2500*	*2300*
265x60	*40*	*6000*	*5100*	*4500*	*4100*	*3800*	*3500*	*7500*	*6100*	*5100*	*4500*	*4000*	*3700*
	90	*4800*	*4000*	*3600*	*3300*	*3000*	*2900*	*6400*	*5000*	*4200*	*3700*	*3300*$_{5}$	*3000*$_{10}$
300x60	*40*	*6500*	*5700*	*5100*	*4600*	*4300*	*4000*	*8200*	*7000*	*5800*	*5100*	*4600*	*4200*$_{5}$
	90	*5400*	*4600*	*4100*	*3700*	*3400*	*3200*	*7000*	*5700*	*4800*	*4200*$_{5}$	*3700*$_{15}$	*3400*$_{25}$
330x60	*40*	*7000*	*6200*	*5600*	*5100*	*4700*	*4400*	*8800*	*7700*	*6300*	*5600*	*5000*$_{5}$	*4600*$_{15}$
	90	*5900*	*5000*	*4500*	*4100*	*3800*	*3600*	*7400*	*6200*	*5200*$_{5}$	*4600*$_{15}$	*4100*$_{25}$	*3700*$_{35}$
130x65	40	3100	2600	2300	2100	1900	1800	4200	3400	2900	2500	2200	2000
	90	2400	2000	1800	1600	1500	1400	3300	2800	2400	2000	1800	1700
165x65	40	3900	3300	2900	2600	2400	2300	5400	4300	3600	3200	2800	2600
	90	3100	2600	2300	2100	1900	1800	4200	3500	3000	2600	2300	2100
195x65	40	4600	3900	3400	3100	2900	2700	6200	5100	4300	3800	3400	3100
	90	3600	3100	2700	2500	2300	2100	5000	4200	3500	3100	2800	2500
230x65	40	5500	4600	4000	3700	3400	3200	7000	6000	5000	4400	4000	3600
	90	4300	3600	3200	2900	2700	2500	5800	4900	4200	3600	3300	3000
260x65	40	6100	5200	4600	4100	3800	3600	7700	6700	5700	5000	4500	4100
	90	4900	4100	3600	3300	3100	2900	6400	5600	4700	4100	3700$_{5}$	3400$_{10}$
295x65	40	6700	5800	5200	4700	4300	4000	8400	7400	6500	5700	5100	4700$_{5}$
	90	5500	4600	4100	3800	3500	3300	7100	6200	5300	4700$_{5}$	4200$_{15}$	3800$_{20}$
330x65	40	7200	6400	5800	5300	4900	4500	9100	8000	7200	6300	5700$_{5}$	5200$_{15}$
	90	6100	5200	4600	4200	3900	3700	7600	6800	6000$_{5}$	5200$_{15}$	4700$_{25}$	4300$_{35}$
360x65	40	7700	6800	6200	5700	5300	4900	9700	8600	7800	6900$_{5}$	6200$_{15}$	5700$_{20}$
	90	6500	5600	5000	4600	4300	4000	8200	7200	6500$_{10}$	5700$_{20}$	5100$_{35}$	4600$_{45}$

Ridge/Intermediate roof beam
AS 4055 Classification N1, N2, N3 & N4 (Cont'd)

Roof load width (mm)		1800	3000	4200	5400	6600	7800	1800	3000	4200	5400	6600	7800
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Ridge/Intermediate beam span (mm)											
		Single span						Continuous span					
395x65	40	8200	7300	6700	6200	5800	5400	10400	9200	8400	7600_{15}	6800_{20}	6200_{30}
	90	6900	6100	5500	5000	4700	4400	8800	7700	7100_{20}	6200_{30}	5600_{45}	5100_{55}
425x65	40	8700	7700	7000	6500	6200	5800	10900	9700	8800_{5}	8100_{20}	7300_{30}	6700_{40}
	90	7300	6500	5900	5400	5000	4700	9200	8200	7500_{25}	6700_{40}	6000_{55}	5500_{75}
200x80	*40*	*5000*	*4200*	*3700*	*3400*	*3100*	*2900*	*6600*	*5300*	*4500*	*3900*	*3500*	*3200*
	90	*4000*	*3300*	*3000*	*2700*	*2500*	*2400*	*5400*	*4400*	*3700*	*3200*	*2900*	*2600*
265x80	*40*	*6400*	*5500*	*4900*	*4500*	*4100*	*3900*	*8000*	*7100*	*5900*	*5200*	*4600*	*4200*
	90	*5200*	*4400*	*3900*	*3600*	*3300*	*3100*	*6800*	*5700*	*4800*	*4200*	*3800*	*3500*
300x80	*40*	*6900*	*6200*	*5600*	*5100*	*4700*	*4400*	*8700*	*7800*	*6600*	*5800*	*5200*	*4800*
	90	*5900*	*5000*	*4500*	*4100*	*3800*	*3600*	*7400*	*6500*	*5500*	*4800*	4300_{5}	3900_{10}
330x80	*40*	*7400*	*6600*	*6100*	*5600*	*5200*	*4800*	*9300*	*8300*	*7300*	*6400*	*5800*	5300_{5}
	90	*6300*	*5500*	*4900*	*4500*	*4200*	*3900*	*8000*	*7100*	*6000*	5300_{5}	4700_{10}	4300_{20}
130x85	40	3400	2800	2500	2300	2100	1900	4600	3900	3300	2900	2600	2300
	90	2600	2200	2000	1800	1700	1600	3600	3000	2700	2300	2100	1900
165x85	40	4300	3600	3200	2900	2600	2500	5800	4900	4100	3600	3300	3000
	90	3400	2800	2500	2300	2100	2000	4600	3800	3400	3000	2700	2400
195x85	40	5000	4200	3700	3400	3100	2900	6600	5800	4900	4300	3900	3500
	90	4000	3300	3000	2700	2500	2400	5400	4500	4000	3500	3200	2900
230x85	40	5900	5000	4400	4000	3700	3400	7400	6600	5800	5100	4500	4200
	90	4700	3900	3500	3200	3000	2800	6300	5400	4800	4200	3700	3400
260x85	40	6500	5600	5000	4500	4200	3900	8100	7200	6500	5700	5100	4700
	90	5300	4500	4000	3600	3400	3200	6800	6000	5400	4700	4200	3800
295x85	40	7100	6300	5600	5100	4700	4400	8900	7900	7200	6500	5800	5300
	90	6000	5000	4500	4100	3800	3600	7500	6600	6100	5300	4800_{5}	4300_{10}
330x85	40	7700	6800	6200	5700	5300	4900	9700	8500	7800	7200	6500	5900_{5}
	90	6500	5600	5000	4600	4300	4000	8200	7200	6600	5900_{5}	5300_{10}	4900_{20}
360x85	40	8200	7200	6600	6200	5800	5400	10300	9100	8300	7700	7100_{5}	6500_{10}
	90	6900	6100	5500	5000	4700	4400	8700	7700	7000	6500_{10}	5800_{20}	5300_{30}
395x85	40	8700	7700	7100	6600	6200	5900	11000	9700	8900	8300	7800_{10}	7100_{20}
	90	7400	6500	6000	5500	5100	4800	9300	8200	7600	7000_{20}	6400_{30}	5800_{40}
425x85	40	9200	8200	7500	7000	6600	6200	11500	10300	9400	8800_{5}	8300_{15}	7600_{25}
	90	7800	6900	6300	5900	5500	5200	9800	8700	8000_{5}	7400_{25}	6800_{35}	6200_{50}

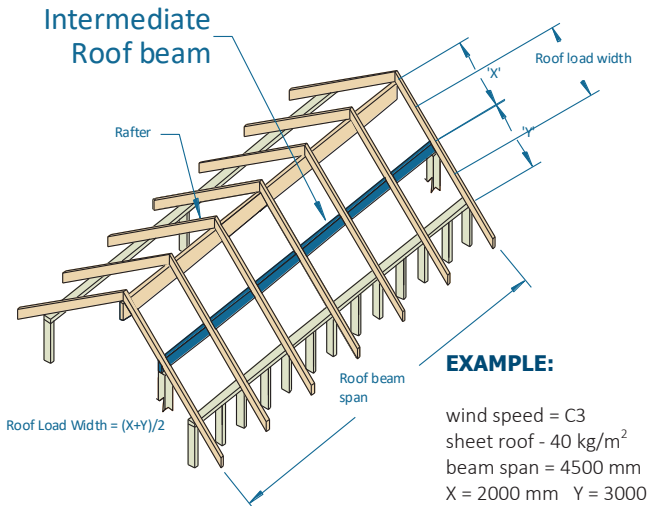
Ridge/Intermediate roof beam
AS 4055 Classification N1, N2, N3 & N4 (Cont'd)

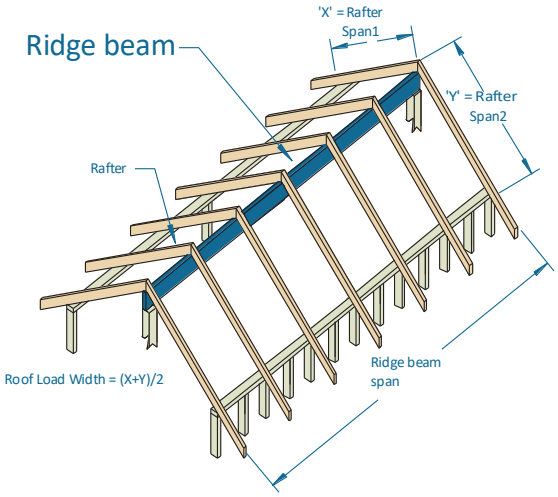
Roof load width (mm)		1800	3000	4200	5400	6600	7800	1800	3000	4200	5400	6600	7800
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Ridge/Intermediate beam span (mm)											
		Single span						Continuous span					
195x115	40	5500	4700	4100	3700	3500	3200	7100	6200	5600	5000	4500	4100
	90	4400	3700	3300	3000	2800	2600	5900	5000	4500	4100	3700	3300
230x115	40	6300	5500	4900	4400	4100	3800	8000	7000	6400	5900	5300	4800
	90	5100	4300	3900	3500	3300	3100	6700	5900	5300	4800	4300	3900
260x115	40	6900	6100	5500	5000	4600	4300	8700	7700	7000	6500	6000	5400
	90	5800	4900	4400	4000	3700	3500	7300	6500	5900	5400	4900	4400
295x115	40	7500	6700	6100	5600	5200	4900	9500	8400	7700	7200	6800	6200
	90	6400	5600	5000	4500	4200	4000	8100	7100	6500	6100	5500	5000
330x115	40	8200	7300	6700	6200	5800	5400	10300	9100	8400	7800	7400	6900
	90	6900	6100	5500	5100	4700	4400	8700	7700	7100	6600	6200	5600_{5}
360x115	40	8700	7700	7100	6600	6200	5900	10900	9700	8900	8300	7900	7500
	90	7400	6600	6000	5500	5100	4800	9300	8200	7600	7100	6700_{5}	6100_{15}
395x115	40	9300	8300	7600	7100	6700	6400	11600	10400	9500	8900	8400	8000_{5}
	90	7900	7000	6400	6000	5600	5300	10000	8800	8100	7600	7200_{15}	6700_{25}
425x115	40	9700	8700	8000	7500	7100	6700	12000	10900	10100	9400	8900	8400_{10}
	90	8300	7400	6800	6400	6000	5700	10500	9300	8600	8000_{5}	7600_{20}	7200_{30}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. End bearing lengths = 70 mm at end supports and 70 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 70 mm at end supports and 70 mm at internal supports.
3. rafter spacing up to 1200 mm
4. Not all sizes of SmartLam GL17S in this table are stocked in each state. Please check with your supplier before ordering
5. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Ridge/Intermediate roof beam
AS 4055 Classification C1, C2 & C3





EXAMPLE:

wind speed = C3
sheet roof - 40 kg/m^2
beam span = 4500 mm
X = 2000 mm Y = 3000 mm
roof load width = (X+Y)/2 = 2500 mm

Enter single span table at 3000 roof load width with column and read down to span equal to or greater than 4500 mm

ADOPT:

SmartLam GL17S - 300 x 60 mm

Roof load width (mm)		1800	3000	4200	5400	6600	7800	1800	3000	4200	5400	6600	7800
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Ridge/Intermediate beam span (mm)											
		Single span						Continuous span					
200x50	*40*	*3600*	*2800*	*2300*	*2000*	*1900*	*1700*	*3600*	*2800*	*2300*	*2000*	*1900*	*1700*
	90	*3400*	*2900*	*2400*	*2100*	*1900*	*1700*	*3700*	*2900*	*2400*	*2100*	*1900$_5$*	*1700$_{10}$*
250x50	*40*	*4600*	*3500*	*2900*	*2600*	*2300*	*2100*	*4600*	*3500*	*2900*	*2600*	*2300$_5$*	*2100$_{15}$*
	90	*4300*	*3600*	*3000*	*2600*	*2400*	*2200*	*4800*	*3600*	*3000$_5$*	*2600$_{15}$*	*2400$_{25}$*	*2200$_{30}$*
200x60	*40*	*4000*	*3000*	*2500*	*2200*	*2000*	*1900*	*4000*	*3000*	*2500*	*2200*	*2000*	*1900*
	90	*3600*	*3000*	*2600*	*2300*	*2100*	*1900*	*4100*	*3100*	*2600*	*2300*	*2100*	*1900$_5$*
265x60	*40*	*5400*	*4000*	*3400*	*3000*	*2700*	*2500*	*5400*	*4000*	*3400*	*3000*	*2700$_5$*	*2500$_{10}$*
	90	*4800*	*4000*	*3500*	*3100*	*2800*	*2500*	*5600*	*4100*	*3500*	*3100$_{10}$*	*2800$_{20}$*	*2500$_{30}$*
300x60	*40*	*6200*	*4500*	*3800*	*3400*	*3100*	*2800*	*6200*	*4500*	*3800*	*3400$_5$*	*3100$_{15}$*	*2800$_{25}$*
	90	*5400*	*4600*	*4000*	*3500*	*3100*	*2900*	*6400*	*4700*	*4000$_{10}$*	*3500$_{20}$*	*3100$_{30}$*	*2900$_{45}$*
330x60	*40*	*6900*	*5000*	*4200*	*3700*	*3400*	*3100*	*6900*	*5000*	*4200$_5$*	*3700$_{15}$*	*3400$_{25}$*	*3100$_{35}$*
	90	*5900*	*5000*	*4300*	*3800*	*3500*	*3200*	*7000*	*5200$_5$*	*4300$_{20}$*	*3800$_{30}$*	*3500$_{45}$*	*3200$_{55}$*
130x65	40	2900	2200	1900	1600	1500	1400	2900	2200	1900	1600	1500	1400
	90	2400	2000	1800	1600	1500	1400	3000	2300	1900	1700	1500	1400
165x65	40	3700	2800	2400	2100	1900	1700	3700	2800	2400	2100	1900	1700
	90	3100	2600	2300	2100	1900	1800	3800	2900	2500	2200	1900	1800
195x65	40	4400	3300	2800	2500	2300	2100	4400	3300	2800	2500	2300	2100
	90	3600	3100	2700	2500	2300	2100	4600	3500	2900	2600	2300	2100
230x65	40	5300	3900	3300	2900	2700	2500	5300	3900	3300	2900	2700	2500
	90	4300	3600	3200	2900	2700	2500	5500	4100	3400	3000	2700$_5$	2500$_{15}$
260x65	40	6100	4500	3800	3300	3000	2800	6100	4500	3800	3300	3000	2800$_{10}$
	90	4900	4100	3600	3300	3100	2800	6300	4600	3900	3400$_{10}$	3100$_{20}$	2800$_{25}$
295x65	40	6700	5100	4300	3800	3400	3200	6900	5100	4300	3800$_5$	3400$_{15}$	3200$_{25}$
	90	5500	4600	4100	3800	3500	3200	7100	5200	4400$_{10}$	3900$_{20}$	3500$_{30}$	3200$_{40}$
330x65	40	7200	5700	4800	4200	3800	3500	7800	5700	4800	4200$_{15}$	3800$_{25}$	3500$_{35}$
	90	6100	5200	4600	4200	3900	3600	7700	5900$_5$	4900$_{20}$	4300$_{30}$	3900$_{45}$	3600$_{55}$
360x65	40	7700	6200	5200	4600	4200	3900	8600	6200	5200$_{10}$	4600$_{20}$	4200$_{35}$	3900^{45}
	90	6500	5600	5000	4600	4300	3900	8200	6400$_{10}$	5400$_{25}$	4700$_{40}$	4300$_{55}$	3900$_{75}$

Single span Ridge/Intermediate roof beam
AS 4055 Classification C1, C2 & C3 (Cont'd)

Roof load width (mm)		1800	3000	4200	5400	6600	7800	1800	3000	4200	5400	6600	7800
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Ridge/Intermediate beam span (mm)											
		Single span						Continuous span					
395x65	40	8200	6900	5700	5100	4600	4200	9500	6900_{5}	5700_{20}	5100_{30}	4600_{45}	4200_{55}
	90	6900	6100	5500	5000	4700	4300	8700	7100_{20}	5900_{35}	5200_{55}	4700_{80}	4300_{95}
425x65	40	8700	7500	6200	5500	4900	4600	10200	7500_{10}	6200_{25}	5500_{40}	4900_{55}	4600_{75}
	90	7300	6500	5900	5400	5000	4600	9200	7800_{30}	6400_{45}	5600_{70}	5000_{90}	4600_{105}
200x80	*40*	*4700*	*3500*	*3000*	*2600*	*2400*	*2200*	*4700*	*3500*	*3000*	*2600*	*2400*	*2200*
	90	*4000*	*3300*	*3000*	*2700*	*2400*	*2200*	*4800*	*3600*	*3000*	*2700*	*2400*	*2200*
265x80	*40*	*6300*	*4600*	*3900*	*3500*	*3100*	*2900*	*6300*	*4600*	*3900*	*3500*	*3100*	*2900*
	90	*5200*	*4400*	*3900*	*3500*	*3200*	*2900*	*6500*	*4800*	*4000*	*3500*	3200_{5}	2900_{15}
300x80	*40*	*6900*	*5300*	*4400*	*3900*	*3600*	*3300*	*7200*	*5300*	*4400*	*3900*	3600_{5}	3300_{10}
	90	*5900*	*5000*	*4500*	*4000*	*3600*	*3300*	*7400*	*5400*	*4600*	*4000*	3600_{20}	3300_{25}
330x80	*40*	*7400*	*5800*	*4900*	*4300*	*3900*	*3600*	*8000*	*5800*	*4900*	*4300*	3900_{10}	3600_{20}
	90	*6300*	*5500*	*4900*	*4400*	*4000*	*3700*	*8000*	*5900*	5000_{5}	4400_{15}	4000_{30}	3700_{40}
130x85	40	3300	2500	2100	1900	1700	1600	3300	2500	2100	1900	1700	1600
	90	2600	2200	2000	1800	1700	1600	3400	2600	2200	1900	1700	1600
165x85	40	4300	3200	2700	2400	2200	2000	4300	3200	2700	2400	2200	2000
	90	3400	2800	2500	2300	2100	2000	4400	3400	2800	2500	2200	2000
195x85	40	5000	3800	3200	2900	2600	2400	5100	3800	3200	2900	2600	2400
	90	4000	3300	3000	2700	2500	2400	5300	4000	3300	2900	2600	2400
230x85	40	5900	4500	3800	3400	3100	2800	6100	4500	3800	3400	3100	2800
	90	4700	3900	3500	3200	3000	2800	6300	4700	3900	3500	3100	2900_{5}
260x85	40	6500	5100	4300	3800	3500	3200	7000	5100	4300	3800	3500	3200
	90	5300	4500	4000	3600	3400	3200	6900	5300	4400	3900	3500_{5}	3200_{15}
295x85	40	7100	5800	4900	4300	3900	3600	8000	5800	4900	4300	3900	3600_{10}
	90	6000	5000	4500	4100	3800	3600	7500	6000	5000	4400_{10}	4000_{15}	3700_{25}
330x85	40	7700	6600	5500	4800	4400	4100	9000	6600	5500	4800	4400_{10}	4100_{20}
	90	6500	5600	5000	4600	4300	4000	8100	6800	5600_{5}	5000_{20}	4500_{30}	4100_{40}
360x85	40	8200	7200	6000	5300	4800	4400	9900	7200	6000	5300_{10}	4800_{20}	4400_{30}
	90	6900	6100	5500	5000	4700	4400	8700	7500_{5}	6200_{15}	5400_{25}	4900_{40}	4500_{50}
395x85	40	8700	7700	6600	5800	5300	4900	10900	8000	6600_{5}	5800_{20}	5300_{30}	4900_{40}
	90	7400	6500	6000	5500	5100	4800	9300	8200_{10}	6700_{25}	5900_{35}	5400_{50}	4900_{65}
425x85	40	9200	8200	7100	6300	5700	5200	11500	8700	7100_{15}	6300_{25}	5700_{40}	5200_{50}
	90	7800	6900	6300	5900	5500	5200	9800	8700_{15}	7300_{30}	6400_{45}	5800_{60}	5300_{85}
195x115	40	5500	4500	3800	3300	3000	2800	6000	4500	3800	3300	3000	2800
	90	4400	3700	3300	3000	2800	2600	5900	4600	3900	3400	3100	2800
230x115	40	6300	5300	4400	3900	3600	3300	7200	5300	4400	3900	3600	3300
	90	5100	4300	3900	3500	3300	3100	6700	5400	4600	4000	3600	3300
260x115	40	6900	5900	5000	4400	4000	3700	8200	5900	5000	4400	4000	3700
	90	5800	4900	4400	4000	3700	3500	7300	6100	5200	4500	4100	3800

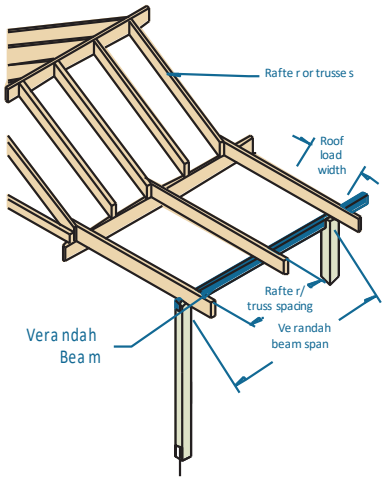
Single span Ridge/Intermediate roof beam
AS 4055 Classification C1, C2 & C3 (Cont'd)

Roof load width (mm)		1800	3000	4200	5400	6600	7800	1800	3000	4200	5400	6600	7800
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Ridge/Intermediate beam span (mm)											
		Single span						Continuous span					
295x115	40	7500	6700	5700	5000	4600	4200	9400	6900	5700	5000	4600	4200
	90	6400	5600	5000	4500	4200	4000	8100	7100	5900	5200	4700_{5}	4300_{10}
330x115	40	8200	7300	6400	5600	5100	4700	10200	7800	6400	5600	5100	4700_{5}
	90	6900	6100	5500	5100	4700	4400	8700	7700	6500	5800_{5}	5200_{15}	4800_{20}
360x115	40	8700	7700	7000	6200	5600	5100	10900	8600	7000	6200	5600_{5}	5100_{15}
	90	7400	6600	6000	5500	5100	4800	9300	8200	7100	6300_{15}	5700_{20}	5200_{30}
395x115	40	9300	8300	7600	6800	6100	5600	11600	9500	7700	6800_{5}	6100_{15}	5600_{25}
	90	7900	7000	6400	6000	5600	5300	10000	8800	7800_{10}	6900_{20}	6200_{30}	5700_{40}
425x115	40	9700	8700	8000	7300	6600	6100	12000	10300	8200	7300_{10}	6600_{20}	6100_{30}
	90	8300	7400	6800	6400	6000	5700	10500	9300	8400_{15}	7400_{30}	6700_{40}	6100_{50}
460x115	40	10300	9200	8500	7900	7100	6600	12000	11200	9000_{10}	7900_{20}	7100_{30}	6600_{40}
	90	8800	7800	7200	6700	6400	6100	11100	9900	9100_{25}	8000_{35}	7200_{50}	6600_{65}
495x115	40	10800	9700	8900	8300	7700	7100	12000	12000_{5}	9800_{15}	8500_{25}	7700_{40}	7100_{50}
	90	9300	8300	7600	7100	6800	6400	11700	10400_{5}	9600_{30}	8600_{45}	7800_{60}	7100_{85}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. End bearing lengths = 35 mm at end supports and 70 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 70 mm at internal supports.
3. rafter spacing up to 1200 mm
4. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
5. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Single span Verandah beam
AS 4055 Classification N1, N2, N3 & N4



EXAMPLE:

wind speed = N3
sheet roof - 40 kg/m^2
roof load width = 3900 mm
rafter/truss spacing = 600 mm
verandah span = 3500 mm

Enter span table at 4500 roof load width column, rafter spacing of 600 mm, and read down to a span equal to or greater than 3500 mm

ADOPT:
SmartLam GL17S - 265 x 60

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended verandah span (mm)									
		Single span									
200x50	*40*	*4200*	*4200*	*3400*	*3200*	*2700*	*2700*	*2400*	*2200*	*2100*	*1900*
	90	*3300*	*3300*	*2600*	*2700*	*2300*	*2300*	*2100*	*2000*	*1900*	*1600*
250x50	*40*	*4900*	*4900*	*4200*	*4100*	*3400*	*3300*	*2900*	*2800*	*2600*	*2600*
	90	*4100*	*4100*	*3300*	*3300*	*2900*	*2900*	*2600*	*2700*	*2400*	*2400*
200x60	*40*	*4300*	*4300*	*3600*	*3500*	*3000*	*2900*	*2600*	*2500*	*2300*	*2200*
	90	*3500*	*3500*	*2800*	*2800*	*2400*	*2500*	*2200*	*2200*	*2100*	*2000*
265x60	*40*	*5300*	*5300*	*4600*	*4500*	*4000*	*3900*	*3500*	*3300*	*3100*	*2900*
	90	*4400*	*4400*	*3700*	*3700*	*3300*	*3200*	*3000*	*2900*	*2700*	*2800*
300x60	*40*	*5800*	*5800*	*5000*	*5000*	*4500*	*4500*	*3900*	*3800*	*3500*	*3300*
	90	*4900*	*4900*	*4100*	*4100*	*3700*	*3600*	*3400*	*3300*	*3100*	*3100*
330x60	*40*	*6200*	*6200*	*5400*	*5400*	*4900*	*4900*	*4300*	*4200*	*3900*	*3700*
	90	*5200*	*5200*	*4400*	*4400*	*4000*	*4000*	*3700*	*3600*	*3500*	*3400*
130x65	40	3000	3000	2400	2500	2100	2100	1800	1600	1600	1200
	90	2300	2400	1800	1800	1600	1500	1500	1300	1400	1100
165x65	40	3900	3800	3100	3100	2700	2700	2400	2300	2100	2000
	90	3000	3000	2400	2400	2100	2000	1900	1900	1700	1700
195x65	40	4400	4400	3700	3600	3200	3200	2800	2800	2500	2500
	90	3500	3500	2800	2800	2500	2500	2200	2200	2100	2000
230x65	40	5000	5000	4200	4200	3800	3800	3400	3200	3000	2900
	90	4100	4100	3300	3300	2900	2900	2600	2700	2400	2400
260x65	40	5400	5400	4600	4600	4200	4200	3800	3700	3400	3300
	90	4500	4500	3800	3700	3300	3300	3000	3000	2800	2800
295x65	40	5900	5900	5100	5100	4600	4600	4300	4300	3900	3800
	90	4900	4900	4200	4200	3700	3700	3400	3400	3200	3100
330x65	40	6400	6400	5500	5500	5000	5000	4700	4700	4400	4300
	90	5400	5400	4600	4500	4100	4100	3800	3800	3500	3500

Single span Verandah beam
AS 4055 Classification N1, N2, N3 & N4 (Cont'd)

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended verandah span (mm)									
		Single span									
360x65	40	6800	6800	5900	5900	5400	5400	5000	5000	4800	4700
	90	5700	5700	4900	4800	4400	4400	4100	4100	3900	3800
395x65	40	7300	7300	6300	6300	5700	5700	5400	5400	5100	5100
	90	6100	6100	5200	5200	4700	4700	4400	4400	4200	4200
425x65	40	7700	7700	6600	6600	6100	6000	5700	5600	5400	5400
	90	6500	6500	5500	5500	5000	5000	4700	4600	4400	4400
200x80	*40*	*4600*	*4600*	*4000*	*3900*	*3500*	*3300*	*3000*	*2900*	*2700*	*2600*
	90	*3800*	*3800*	*3100*	*3100*	*2700*	*2700*	*2400*	*2500*	*2300*	*2200*
265x80	*40*	*5600*	*5600*	*4900*	*4900*	*4400*	*4400*	*4000*	*3900*	*3600*	*3400*
	90	*4700*	*4700*	*4000*	*4000*	*3600*	*3500*	*3300*	*3200*	*3000*	*3000*
300x80	*40*	*6100*	*6100*	*5300*	*5300*	*4900*	*4900*	*4500*	*4500*	*4000*	*3900*
	90	*5200*	*5200*	*4400*	*4400*	*4000*	*4000*	*3700*	*3600*	*3400*	*3400*
330x80	*40*	*6500*	*6500*	*5700*	*5700*	*5200*	*5200*	*4900*	*4900*	*4500*	*4400*
	90	*5600*	*5500*	*4800*	*4700*	*4300*	*4300*	*4000*	*4000*	*3800*	*3700*
165x85	40	4100	4100	3400	3300	3000	3000	2700	2700	2500	2400
	90	3300	3200	2600	2700	2300	2300	2100	2000	1900	1900
195x85	40	4700	4700	4000	4000	3500	3500	3200	3100	2900	2800
	90	3900	3800	3100	3100	2700	2700	2400	2500	2300	2200
230x85	40	5300	5300	4500	4500	4100	4100	3800	3700	3500	3300
	90	4400	4400	3600	3600	3200	3100	2900	2900	2700	2700
260x85	40	5700	5700	4900	4900	4500	4500	4200	4200	3900	3800
	90	4800	4800	4100	4100	3600	3500	3300	3200	3000	3000
295x85	40	6300	6300	5400	5400	4900	4900	4600	4600	4400	4300
	90	5300	5300	4500	4400	4000	4000	3700	3700	3500	3400
330x85	40	6800	6800	5900	5800	5300	5300	5000	5000	4700	4700
	90	5700	5700	4900	4800	4400	4400	4100	4100	3900	3800
360x85	40	7200	7200	6300	6200	5700	5700	5300	5300	5100	5000
	90	6100	6100	5200	5200	4700	4700	4400	4400	4100	4100
395x85	40	7700	7700	6700	6700	6100	6100	5700	5700	5400	5400
	90	6500	6500	5600	5500	5000	5000	4700	4700	4500	4400
425x85	40	8100	8100	7100	7000	6400	6400	6000	6000	5700	5700
	90	6900	6800	5900	5800	5300	5300	5000	4900	4700	4700
165x115	40	4400	4400	3700	3700	3300	3200	3000	3000	2800	2800
	90	3600	3500	2900	2900	2500	2600	2300	2300	2100	2100
195x115	40	5000	5000	4300	4300	3900	3800	3500	3500	3300	3200
	90	4200	4200	3400	3400	3000	3000	2700	2700	2500	2600
230x115	40	5600	5600	4800	4800	4400	4400	4100	4100	3900	3800
	90	4700	4700	4000	4000	3500	3500	3200	3200	3000	3000
260x115	40	6100	6100	5300	5300	4800	4800	4500	4500	4300	4300
	90	5100	5100	4400	4400	4000	3900	3600	3600	3400	3300

Single span Verandah beam
AS 4055 Classification N1, N2, N3 & N4 (Cont'd)

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended verandah span (mm)									
		Single span									
295x115	40	6700	6700	5800	5800	5300	5300	4900	4900	4700	4700
	90	5600	5600	4800	4800	4400	4300	4100	4100	3800	3800
330x115	40	7200	7200	6300	6200	5700	5700	5400	5400	5100	5100
	90	6100	6100	5200	5200	4700	4700	4400	4400	4200	4200
360x115	40	7700	7600	6700	6700	6100	6100	5700	5700	5400	5400
	90	6500	6500	5600	5600	5100	5100	4700	4700	4500	4500
395x115	40	8200	8100	7100	7100	6500	6500	6100	6100	5800	5800
	90	6900	6900	6000	5900	5400	5400	5100	5000	4800	4800
425x115	40	8600	8500	7500	7500	6900	6900	6400	6500	6100	6100
	90	7300	7300	6300	6300	5700	5700	5300	5300	5100	5000

Continuous span Verandah beam
AS 4055 Classification N1, N2, N3 & N4

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended verandah span (mm)									
		Continuous span									
200x50	*40*	*4800*	*4800*	*3400*	*3300*	*2800*	*2800*	*2300*	*2200*	*2100*	*1600*
	90	*4300*	*4300*	*3200*	*3100*	*2600*	*2600*	*2200*	*1700*	*1700*	*1500*
250x50	*40*	*6000*	*6000*	*4200*	*4200*	*3500*	*3400*	*3000*	*3000*	2700_{5}	2700_{10}
	90	*5100*	*5100*	*4000*	*3900*	*3200*	*3200*	2800_{10}	2800_{10}	2500_{20}	2500_{15}
200x60	*40*	*5300*	*5300*	*3700*	*3600*	*3000*	*3000*	*2600*	*2700*	*2300*	*2100*
	90	*4500*	*4500*	*3500*	*3400*	*2800*	*2800*	*2400*	*2400*	*2200*	*1700*
265x60	*40*	*6600*	*6600*	*4900*	*4900*	*4000*	*4000*	*3500*	*3400*	3100_{5}	3100_{5}
	90	*5600*	*5600*	*4600*	*4500*	*3700*	*3700*	3300_{5}	3100_{5}	2900_{15}	2900_{15}
300x60	*40*	*7100*	*7200*	*5600*	*5600*	*4600*	*4500*	3900_{5}	3900_{5}	3500_{15}	3300_{10}
	90	*6100*	*6100*	*5200*	*5200*	4200_{5}	4200_{5}	3700_{15}	3600_{15}	3300_{25}	3200_{25}
330x60	*40*	*7500*	*7700*	*6200*	*6100*	*5000*	*5000*	4300_{15}	4300_{10}	3900_{25}	3800_{20}
	90	*6500*	*6500*	*5600*	*5600*	4700_{15}	4600_{10}	4000_{25}	4000_{25}	3600_{40}	3300_{30}

Continuous span Verandah beam (Cont'd)
AS 4055 Classification N1, N2, N3 & N4

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended verandah span (mm)									
		Continuous span									
130x65	40	3900	3800	2700	2700	2200	2100	1900	1800	1700	1500
	90	3200	3100	2500	2500	2100	2000	1800	1500	1600	1500
165x65	40	4800	4900	3500	3400	2800	2800	2400	2600	2200	2100
	90	4000	4000	3200	3200	2700	2700	2300	2200	2000	2000
195x65	40	5500	5500	4100	4100	3400	3300	2900	2900	2600	2600
	90	4500	4500	3800	3800	3100	3100	2700	2700	2400	2400
230x65	40	6200	6200	4800	4800	4000	3900	3400	3300	3000	3000
	90	5100	5200	4400	4300	3700	3600	3200	3200	29005	2900_{5}
260x65	40	6700	6700	5500	5500	4500	4400	3900	3800	3500	3400
	90	5600	5600	4800	4700	4200	4200	3600_{5}	3500_{5}	3200_{15}	3200_{10}
295x65	40	7200	7400	6200	6200	5100	5100	4400_{5}	4400_{5}	3900_{10}	3900_{10}
	90	6200	6200	5200	5200	4700_{5}	4700	4100_{15}	4100_{15}	3700_{25}	3600_{25}
330x65	40	7700	8000	6800	6900	5700	5700	4900_{10}	4900_{10}	4400_{20}	4400_{20}
	90	6600	6700	5700	5700	5200_{10}	5200_{10}	4600_{25}	4600_{25}	4100_{35}	4100_{35}
360x65	40	8100	8600	7200	7300	6200_{10}	6200_{10}	5400_{20}	5400_{20}	4800_{30}	4700_{30}
	90	7000	7100	6100	6100	5500_{15}	5500_{15}	5000_{35}	5000_{35}	4500_{50}	4500_{50}
395x65	40	8500	9100	7600	7800	6800_{15}	6800_{15}	5900_{30}	5800_{30}	5300_{40}	5300_{45}
	90	7400	7600	6500	6500	5900_{20}	5900_{20}	5500_{45}	5500_{45}	4900_{60}	4900_{60}
425x65	40	8900	9600	7900	8300	7300_{25}	7300_{25}	6300_{40}	6300_{35}	5700_{50}	5600_{50}
	90	7700	8100	6800	6800	6200_{25}	6200_{30}	5800_{55}	5800_{50}	5300_{85}	5300_{85}
200x80	*40*	*5800*	*5800*	*4300*	*4300*	*3500*	*3400*	*3000*	*3000*	*2700*	*2700*
	90	*4800*	*4800*	*4000*	*4000*	*3300*	*3200*	*2800*	*2800*	*2500*	*2600*
265x80	*40*	*6900*	*7000*	*5700*	*5700*	*4700*	*4600*	*4000*	*4000*	*3600*	*3500*
	90	*5900*	*5900*	*5000*	*5100*	*4300*	*4300*	*3700*	*3700*	*34005*	*3300*
300x80	*40*	*7400*	*7600*	*6500*	*6500*	*5300*	*5300*	*4600*	*4500*	*4100*	*4100_{5}*
	90	*6500*	*6500*	*5500*	*5600*	*4900*	*4900*	*42005*	*4200_{5}*	*3800_{15}*	*3700_{10}*
330x80	*40*	*7800*	*8200*	*7000*	*7100*	*5800*	*5800*	*5000*	*5000*	*4500_{10}*	*4500_{10}*
	90	*6800*	*6900*	*5900*	*6000*	*5400*	*5400*	*4700_{15}*	*4600_{10}*	*4200_{25}*	*4200_{25}*
195x85	40	5800	5800	4700	4700	3800	3800	3300	3200	2900	2900
	90	4800	4900	4100	4100	3600	3500	3100	3100	2800	2800
230x85	40	6500	6600	5600	5500	4500	4500	3900	3900	3500	3400
	90	5500	5500	4600	4600	4200	4200	3700	3600	3300	3200
260x85	40	7000	7100	6100	6100	5100	5100	4400	4400	4000	3900
	90	6000	6000	5100	5100	4600	4600	4100	4100	3700	3600
295x85	40	7500	7800	6700	6700	5800	5800	5000	5100	4500	4500
	90	6500	6600	5600	5600	5100	5100	4700_{5}	4600_{5}	4200_{15}	4200_{15}
330x85	40	8100	8500	7100	7300	6500	6500	5600	5600	5000_{10}	5000_{10}
	90	7000	7100	6100	6100	5500	5500	5100_{10}	5200_{10}	4700_{25}	4600_{20}
360x85	40	8400	9000	7500	7800	7000	7100	6100_{10}	6100_{10}	5500_{20}	5500_{20}
	90	7400	7600	6500	6500	5900	5900	5500_{15}	5500_{15}	5100_{30}	5100_{30}

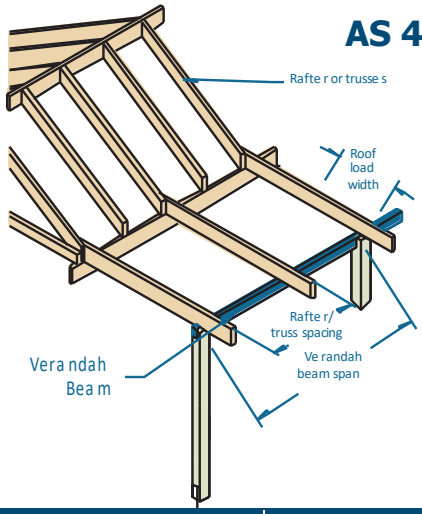
Continuous span Verandah beam
AS 4055 Classification N1, N2, N3 & N4

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended verandah span (mm)									
		Continuous span									
395x85	40	9000	9600	7900	8400	7400	7600_{5}	6700_{15}	6700_{15}	6100_{30}	6000_{25}
	90	7800	8100	6800	6900	6300_{5}	6300_{5}	5900_{25}	5900_{25}	5600_{40}	5600_{40}
425x85	40	9400	10100	8300	8800	7700_{5}	8000_{5}	7300_{25}	7200_{25}	6500_{35}	6500_{35}
	90	8100	8600	7100	7300	6600_{10}	6600_{10}	6200_{30}	6200_{30}	5900_{50}	5900_{50}
230x115	40	6900	7000	6000	6000	5300	5300	4600	4500	4100	4100
	90	5900	5900	5000	5000	4500	4500	4200	4200	3800	3700
260x115	40	7400	7600	6500	6600	6000	5900	5200	5200	4600	4600
	90	6400	6400	5500	5500	4900	5000	4600	4600	4300	4300
295x115	40	7900	8300	7100	7200	6500	6600	5900	5800	5200	5200
	90	6900	7000	6000	6000	5400	5500	5100	5100	4800	4800
330x115	40	8400	9000	7500	7800	7000	7100	6600	6600	5900	5800
	90	7400	7600	6500	6500	5900	5900	5500	5500	5200_{5}	5200_{5}
360x115	40	8900	9500	7900	8400	7400	7600	7000	7100	6400_{5}	6400_{5}
	90	7700	8100	6900	6900	6300	6300	5900	5900	5600_{10}	5600_{10}
395x115	40	9400	10200	8300	8900	7800	8200	7400	7600	7000_{15}	7000_{15}
	90	8200	8700	7200	7400	6700	6700	6300_{5}	6300_{5}	6000_{20}	6000_{20}
425x115	40	9900	10700	8700	9300	8100	8600	7700_{5}	8100_{5}	7400_{20}	7600_{20}
	90	8600	9100	7600	7800	7000	7100	6600_{10}	6700_{10}	6300_{25}	6300_{20}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. End bearing lengths = 35 mm at end supports and 70 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 70 mm at internal supports.
3. Restraint value for slenderness calculations is 1200 mm
4. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
5. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Single span Verandah beam
AS 4055 Classification C1, C2 & C3



EXAMPLE:
wind speed = C3
sheet roof - 40 kg/m^2
roof load width = 3900 mm
rafter/truss spacing = 600 mm
verandah span = 3500 mm

Enter span table at 4500 roof load width column, rafter spacing of 600 mm, and read down to a span equal to or greater than 3500 mm

ADOPT:
SmartLam GL17S – 300 x 60

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum verandah span (mm)									
		Single span									
200x50	*40*	*3900*	*3700*	*2700*	*2600*	*2200*	*2100*	*1800*	*1500*	*1600*	*NS*
	90	*3300*	*3300*	*2600*	*2700*	*2200*	*2100*	*1900*	*1500*	*1600*	*NS*
250x50	*40*	*4900*	*4800*	*3400*	*3200*	*2700*	*2700*	*2400*	*2300*	*2100*	*1600*
	90	*4100*	*4100*	*3300*	*3300*	*2800*	*2700*	*2400*	*2300*	*2100*	*1700*
200x60	*40*	*4200*	*4100*	*2900*	*2800*	*2400*	*2300*	*2000*	*1800*	*1800*	*1400*
	90	*3500*	*3500*	*2800*	*2800*	*2400*	*2300*	*2100*	*1900*	*1800*	*1500*
265x60	*40*	*5300*	*5300*	*4000*	*3800*	*3200*	*3100*	*2800*	*2700*	*2500*	*2400*
	90	*4400*	*4400*	*3700*	*3700*	*3200*	*3100*	*2800*	*2700*	*2500*	*2400*
300x60	*40*	*5800*	*5800*	*4500*	*4400*	*3700*	*3500*	*3100*	*3000*	*2800*	*2700*
	90	*4900*	*4900*	*4100*	*4100*	*3700*	*3500*	*3200*	*3000*	*2800*	*2700*
330x60	*40*	*6200*	*6200*	*5000*	*4900*	*4000*	*3900*	*3500*	*3300*	*3100*	*3000*
	90	*5200*	*5200*	*4400*	*4400*	*4000*	*3900*	*3500*	*3400*	*3100*	*3000*
165x65	40	3900	3800	2700	2700	2300	2100	1900	1600	1700	1300
	90	3000	3000	2400	2400	2100	2000	1900	1700	1700	1300
195x65	40	4400	4400	3300	3100	2700	2600	2300	2200	2000	1700
	90	3500	3500	2800	2800	2500	2500	2200	2200	2100	1900
230x65	40	5000	5000	3900	3700	3100	3000	2700	2600	2400	2300
	90	4100	4100	3300	3300	2900	2900	2600	2700	2400	2400
260x65	40	5400	5400	4400	4300	3600	3400	3100	3000	2700	2700
	90	4500	4500	3800	3700	3300	3300	3000	3000	2800	2700
295x65	40	5900	5900	5000	5000	4100	3900	3500	3400	3100	3000
	90	4900	4900	4200	4200	3700	3700	3400	3400	3200	3000
330x65	40	6400	6400	5500	5500	4600	4500	3900	3800	3500	3400
	90	5400	5400	4600	4500	4100	4100	3800	3800	3500	3400
360x65	40	6800	6800	5900	5900	5000	5000	4300	4200	3800	3700
	90	5700	5700	4900	4800	4400	4400	4100	4100	3900	3800
395x65	40	7300	7300	6300	6300	5500	5400	4800	4800	4200	4100
	90	6100	6100	5200	5200	4700	4700	4400	4400	42005	4200$_{15}$
425x65	40	7700	7700	6600	6600	5900	5800	5100	5100	4600	4500
	90	6500	6500	5500	5500	5000	5000	4700	4600	4400	4400$_{10}$

Single span Verandah beam
AS 4055 Classification C1, C2 & C3 (Cont'd)

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended verandah span (mm)									
		Single span									
200x80	*40*	*4600*	*4600*	*3500*	*3300*	*2800*	*2700*	*2400*	*2300*	*2100*	*2000*
	90	*3800*	*3800*	*3100*	*3100*	*2700*	*2700*	*2400*	*2300*	*2200*	*2100*
265x80	*40*	*5600*	*5600*	*4600*	*4600*	*3700*	*3600*	*3200*	*3100*	*2800*	*2800*
	90	*4700*	*4700*	*4000*	*4000*	*3600*	*3500*	*3200*	*3100*	*2900*	*2800*
300x80	*40*	*6100*	*6100*	*5200*	*5200*	*4200*	*4100*	*3700*	*3500*	*3200*	*3100*
	90	*5200*	*5200*	*4400*	*4400*	*4000*	*4000*	*3700*	*3500*	*3300*	*3100*
330x80	*40*	*6500*	*6500*	*5700*	*5600*	*4700*	*4700*	*4000*	*3900*	*3600*	*3400*
	90	*5600*	*5500*	*4800*	*4700*	*4300*	*4300*	*4000*	*3900*	*3600*	*3500*
195x85	40	4700	4700	3800	3600	3000	2900	2600	2600	2400	2200
	90	3900	3800	3100	3100	2700	2700	2400	2500	2300	2200
230x85	40	5300	5300	4500	4400	3600	3500	3100	3000	2800	2700
	90	4400	4400	3600	3600	3200	3100	2900	2900	2700	2700
260x85	40	5700	5700	4900	4900	4100	4000	3600	3400	3200	3000
	90	4800	4800	4100	4100	3600	3500	3300	3200	3000	3000
295x85	40	6300	6300	5400	5400	4700	4700	4000	3900	3600	3400
	90	5300	5300	4500	4400	4000	4000	3700	3700	3500	3400
330x85	40	6800	6800	5900	5800	5200	5200	4500	4500	4000	3900
	90	5700	5700	4900	4800	4400	4400	4100	4100	3900	3800
360x85	40	7200	7200	6300	6200	5700	5600	4900	4900	4400	4300
	90	6100	6100	5200	5200	4700	4700	4400	4400	4100	4100
395x85	40	7700	7700	6700	6700	6100	6100	5400	5300	4900	4900
	90	6500	6500	5600	5500	5000	5000	4700	4700	4500	4400
425x85	40	8100	8100	7100	7000	6400	6400	5800	5700	5200	5200
	90	6900	6800	5900	5800	5300	5300	5000	4900	4700	4700
395x85	40	7700	7700	6700	6700	6100	6100	5400	5300	4900	4900
	90	6500	6500	5600	5500	5000	5000	4700	4700	4500	4400
425x85	40	8100	8100	7100	7000	6400	6400	5800	5700	5200	5200
	90	6900	6800	5900	5800	5300	5300	5000	4900	4700	4700
195x115	40	5000	5000	4300	4300	3600	3400	3100	2900	2700	2700
	90	4200	4200	3400	3400	3000	3000	2700	2700	2500	2600
230x115	40	5600	5600	4800	4800	4200	4100	3700	3500	3300	3100
	90	4700	4700	4000	4000	3500	3500	3200	3200	3000	3000
260x115	40	6100	6100	5300	5300	4800	4800	4100	4000	3700	3500
	90	5100	5100	4400	4400	4000	3900	3600	3600	3400	3300
295x115	40	6700	6700	5800	5800	5300	5300	4700	4700	4200	4100
	90	5600	5600	4800	4800	4400	4300	4100	4100	3800	3800

Single span Verandah beam
AS 4055 Classification C1, C2 & C3 (Cont'd)

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended verandah span (mm)									
		Single span									
330x115	40	7200	7200	6300	6200	5700	5700	5300	5200	4700	4700
	90	6100	6100	5200	5200	4700	4700	4400	4400	4200	4200
360x115	40	7700	7600	6700	6700	6100	6100	5700	5700	5100	5100
	90	6500	6500	5600	5600	5100	5100	4700	4700	4500	4500
395x115	40	8200	8100	7100	7100	6500	6500	6100	6100	5600	5600
	90	6900	6900	6000	5900	5400	5400	5100	5000	4800	4800
425x115	40	8600	8500	7500	7500	6900	6900	6400	6500	6100	6000
	90	7300	7300	6300	6300	5700	5700	5300	5300	5100	5000

Continuous span Verandah beam
AS 4055 Classification C1, C2 & C3

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended verandah span (mm)									
		Continuous span									
200x50	*40*	*3900*	*3800*	*2700*	*2700*	*2200*	*1700*	*1600*	*1400*	*1500*	*NS*
	90	*3900*	*3900*	*2800*	*2800*	*2200*	*2000*	*1700*	*1400*	*1500*	*1000*
250x50	*40*	*4900*	*4900*	*3400*	*3300*	*2800*	*2800*	*2300*	*1900*	1900_{5}	1900_{5}
	90	*4900*	*4900*	*3500*	*3400*	2800_{10}	2800_{10}	2400_{20}	*1900*	1900_{20}	1900_{20}
200x60	*40*	*4300*	*4200*	*3000*	*3000*	*2400*	*2400*	*2100*	*1600*	*1600*	*1300*
	90	*4300*	*4200*	*3000*	*3000*	*2500*	*2600*	*2100*	*1600*	*1600*	*1400*
265x60	*40*	*5700*	*5600*	*4000*	*4000*	*3200*	*3100*	2800_{5}	2800_{5}	2400_{10}	*1900*
	90	*5600*	*5600*	*4000*	*4000*	3300_{5}	*3200*	2800_{15}	2800_{20}	2500_{25}	2500_{25}
300x60	*40*	*6400*	*6400*	*4500*	*4500*	*3700*	*3600*	3200_{15}	3200_{15}	2600_{20}	2800_{25}
	90	*6100*	*6100*	*4500*	*4500*	3700_{15}	3600_{15}	3200_{30}	3200_{30}	2600_{35}	2900_{45}
330x60	*40*	*7100*	*7000*	*5000*	*5000*	4000_{10}	4000_{10}	3500_{20}	3300_{20}	3100_{35}	3000_{30}
	90	*6500*	*6500*	5000_{5}	5000_{5}	*410025*	4100_{25}	3600_{40}	3300_{35}	3200_{55}	3000_{50}

Continuous span Verandah beam
AS 4055 Classification C1, C2 & C3

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended verandah span (mm)									
		Continuous span									
130x65	40	3100	3100	2200	2100	1700	1500	1500	1300	1400	NS
	90	3200	3100	2200	2100	1800	1700	1500	1400	1400	NS
165x65	40	4000	4000	2800	2800	2200	2200	2000	1600	1600	1400
	90	4000	4000	2800	2800	2300	2200	2000	1900	1600	1400
195x65	40	4700	4700	3300	3200	2700	2700	2300	2200	2100	1600
	90	4500	4500	3400	3300	2700	2800	2300	2200	2100	1600
230x65	40	5600	5500	3900	3900	3200	3200	2800	2800	2400	2400
	90	5100	5200	4000	3900	3200	3200	2800_{5}	2800_{5}	2400_{15}	2500_{15}
260x65	40	6300	6300	4400	4400	3600	3500	3100	3100	2800_{10}	2800_{10}
	90	5600	5600	4500	4400	3600_{5}	3600_{5}	3200_{15}	3100_{15}	2800_{25}	2800_{30}
295x65	40	7200	7100	5000	5000	4100	4100	3500_{15}	3400_{10}	3200_{20}	3100_{20}
	90	6200	6200	5100	5100	4100_{15}	4100_{15}	3600_{30}	3500_{25}	3200_{40}	3200_{40}
330x65	40	7700	8000	5600	5600	4600_{10}	4500_{10}	4000_{25}	3900_{20}	3600_{35}	3300_{30}
	90	6600	6700	5700_{5}	5700_{5}	4700_{25}	4600_{25}	4000_{40}	4000_{40}	3600_{55}	3300_{45}
360x65	40	8100	8600	6100	6100	5000_{15}	5000_{15}	4300_{30}	4300_{30}	3900_{45}	3400_{35}
	90	7000	7100	6100_{10}	6100_{15}	5100_{35}	5100_{35}	4400_{50}	4400_{50}	3900_{75}	3700_{60}
395x65	40	8500	9100	6700	6700_{10}	5500_{25}	5500_{25}	4800_{40}	4700_{40}	4200_{55}	4200_{55}
	90	7400	7600	6500_{20}	6500_{20}	5600_{45}	5600_{45}	4800_{70}	4700_{65}	4300_{95}	4300_{95}
425x65	40	8900	9600	7300_{15}	7200_{15}	5900_{35}	5900_{35}	5100_{50}	5100_{50}	4600_{75}	4600_{75}
	90	7700	8100	6800_{20}	6800_{25}	6000_{55}	5900_{55}	5200_{90}	5200_{90}	4600_{105}	4600_{105}
200x80	*40*	*4900*	*5000*	*3500*	*3400*	*2800*	*2800*	*2400*	*2400*	*2200*	*1700*
	90	*4800*	*4800*	*3500*	*3400*	*2800*	*2800*	*2500*	*2600*	*2200*	*1700*
265x80	*40*	*6600*	*6600*	*4600*	*4600*	*3700*	*3700*	*3200*	*3100*	*2900*	*2900*
	90	*5900*	*5900*	*4600*	*4600*	*3800*	*3700*	3300_{5}	*3200*	2900_{15}	2900_{15}
300x80	*40*	*7400*	*7500*	*5200*	*5200*	*4200*	*4200*	*3700*	*3600*	3300_{10}	3200_{10}
	90	*6500*	*6500*	*5200*	*5200*	4300_{5}	4300_{5}	3700_{15}	3600_{15}	3300_{25}	3200_{25}
330x80	*40*	*7800*	*8200*	*5800*	*5700*	*4700*	*4600*	4000_{10}	4000_{10}	3600_{20}	3300_{15}
	90	*6800*	*6900*	*5800*	*5700*	4700_{10}	4600_{10}	4100_{25}	4100_{25}	3700_{40}	3300_{30}
195x85	40	5400	5400	3800	3700	3100	3100	2700	2700	2300	2200
	90	4800	4900	3800	3800	3100	3100	2700	2700	2400	2400
230x85	40	6400	6400	4500	4400	3600	3600	3200	3100	2800	2800
	90	5500	5500	4500	4500	3700	3600	3200	3200	2800_{5}	2900_{5}
260x85	40	7000	7200	5100	5100	4100	4100	3600	3500	3200	3100
	90	6000	6000	5100	5100	4200	4200	3600_{5}	3500_{5}	3200_{15}	3100_{10}
295x85	40	7500	7800	5800	5700	4700	4600	4000	4000	3600_{10}	3500_{10}
	90	6500	6600	5600	5600	48005	4700	4100_{15}	4100_{15}	3700_{25}	3600_{25}
330x85	40	8100	8500	6400	6400	5200	5300	4500_{10}	4500_{10}	4100_{20}	4000_{20}
	90	7000	7100	6100	6100	5300_{10}	5300_{10}	4600_{25}	4600_{25}	4100_{35}	4100_{40}
360x85	40	8500	9000	7000	7000	5700_{5}	5700_{5}	5000_{20}	4900_{20}	4400_{30}	4400_{30}
	90	7400	7600	6500	6500	5800_{20}	5700_{20}	5000_{35}	5000_{35}	4500_{50}	4500_{50}

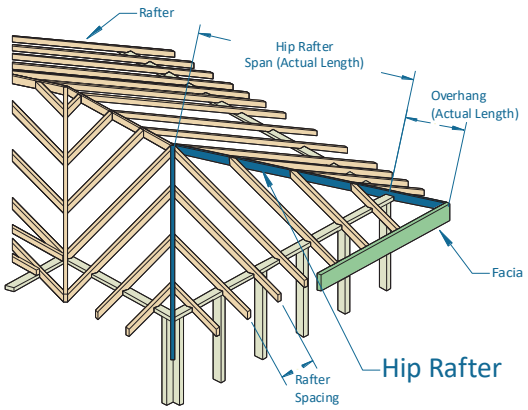
Continuous span Verandah beam
AS 4055 Classification C1, C2 & C3

Roof load width (mm)		1500		3000		4500		6000		7500	
Rafter/truss spacing (mm)		600	1200	600	1200	600	1200	600	1200	600	1200
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended verandah span (mm)									
		Continuous span									
395x85	40	9000	9600	7700	7700	6300_{15}	6300_{15}	5400_{25}	5400_{25}	4900_{40}	4800_{40}
	90	7800	8100	6800	6900	6300_{30}	6300_{30}	5500_{45}	5500_{45}	4900_{65}	4900_{65}
425x85	40	9400	10100	8300_{5}	8300_{5}	6800_{20}	6800_{20}	5900_{35}	5800_{35}	5200_{50}	5200_{45}
	90	8100	8600	7100_{5}	7300_{5}	6600_{35}	6600_{35}	5900_{55}	5900_{55}	5300_{85}	5300_{85}
195x115	40	6200	6200	4400	4400	3600	3500	3100	3100	2800	2800
	90	5200	5200	4400	4400	3600	3600	3200	3100	2800	2800
230x115	40	6900	7000	5200	5200	4200	4200	3700	3600	3300	3200
	90	5900	5900	5000	5000	4300	4300	3700	3600	3300	3300
260x115	40	7400	7600	5900	5900	4800	4800	4100	4100	3700	3600
	90	6400	6400	5500	5500	4800	4800	4200	4200	3800	3700
295x115	40	7900	8300	6700	6700	5500	5400	4700	4700	4200	4200
	90	6900	7000	6000	6000	5400	5500	4800_{5}	4700	4300_{10}	4300_{10}
330x115	40	8400	9000	7500	7500	6100	6100	5300	5300	4800_{10}	4700_{5}
	90	7400	7600	6500	6500	5900	5900	5300_{10}	5300_{10}	4800_{20}	4700_{20}
360x115	40	8900	9500	7900	8200	6700	6700	5800_{5}	5700_{5}	5200_{15}	5200_{15}
	90	7700	8100	6900	6900	6300	6300	5800_{20}	5800_{20}	5200_{30}	5200_{30}
395x115	40	9400	10200	8300	8900	7300	7300	6300_{15}	6300_{10}	5700_{25}	5600_{25}
	90	8200	8700	7200	7400	6700_{5}	6700_{10}	6300_{30}	6300_{25}	5700_{40}	5700_{40}
425x115	40	9900	10700	8700	9300	7900_{10}	7900_{10}	6800_{20}	6800_{20}	6100_{30}	6000_{30}
	90	8600	9100	7600	7800	7000_{10}	7100_{15}	6600_{35}	6700_{35}	6200_{50}	6100_{50}

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. End bearing lengths = 35 mm at end supports and 70 mm at internal supports for continuous members. Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end supports and 70 mm at internal supports.
3. Restraint value for slenderness calculations is 1200 mm
4. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
5. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Hip rafter - sheet and tile roof
AS 4055 Classification N1, N2, N3, N4, C1, C2 & C3



EXAMPLE:

wind speed = N3
roof load = 40 kg/m2 (sheet roof)
hip rafter span = 4500 mm (single span)
rafter spacing = 600 mm

Enter column at (N1,N2 & N3) wind speed, 600 mm rafter spacing and read down to span equal to or greater than 4500 mm for a 40 kg/m^2 roof load

ADOPT:

SmartLam GL17S - 265 x 60

Wind speed		N1, N2, N3 & N4				C1, C2 & C3			
Rafter spacing (mm)		600		1200		600		1200	
Member size (GL17S) DxB (mm)	Roof & ceiling mass (kg/m^2)	Maximum recommended rafter span + overhang span (mm)							
		Span	Overhang	Span	Overhang	Span	Overhang	Span	Overhang
200x50	*40*	*4000*	*650*	*4000*	*550*	*3700*	*650*	*3700*	*550*
	90	*3500*	*550*	*3500*	*450*	*3500*	*550*	*3500*	*450*
250x50	*40*	*4600*	*850*	*4600*	*750*	*4200*	*800*	*4200*	*750*
	90	*4000*	*700*	*4000*	*600*	*4000*	*700*	*4000*	*600*
200x60	*40*	*4100*	*750*	*4100*	*650*	*3800*	*750*	*3800*	*650*
	90	*3600*	*650*	*3600*	*550*	*3600*	*650*	*3600*	*550*
265x60	*40*	*4900*	*900*	*4900*	*950*	*4500*	*900*	*4500*	*900*
	90	*4300*	*850*	*4300*	*750*	*4300*	*850*	*4300*	*750*
300x60	*40*	*5300*	*1050*	*5300*	*1050*	*4900*	*900*	*4900*	*900*
	90	*4600*	*900*	*4600*	*850*	*4600*	*900*	*4600*	*850*
330x60	*40*	*5600*	*1100*	*5600*	*1100*	*5200*	*1000*	*5200*	*1000*
	90	*4900*	*900*	*4900*	*900*	*4900*	*900*	*4900*	*900*
130x65	40	3200	600	3200	600	3000	600	3000	600
	90	2900	500	2900	550	2900	500	2900	550
165x65	40	3700	700	3700	700	3500	700	3500	700
	90	3300	650	3300	650	3300	650	3300	650
195x65	40	4100	800	4100	800	3800	750	3800	750
	90	3700	700	3700	700	3700	700	3700	700
230x65	40	4600	900	4600	900	4200	800	4200	800
	90	4000	800	4000	800	4000	800	4000	800
260x65	40	4900	900	4900	900	4600	900	4600	900
	90	4400	800	4400	800	4400	800	4400	800
295x65	40	5300	1050	5300	1050	4900	900	4900	900
	90	4700	900	4700	900	4700	900	4700	900
330x65	40	5700	1100	5700	1100	5300	1050	5300	1050
	90	5000	1000	5000	1000	5000	1000	5000	1000
360x65	40	6000	1200	6000	1200	5600	1100	5600	1100
	90	5300	1050	5300	1050	5300	1050	5300	1050
395x65	40	6400	1200	6400	1200	5900	1100	5900	1100
	90	5600	1100	5600	1100	5600	1100	5600	1100
425x65	40	6600	1300	6600	1300	6100	1200	6100	1200
	90	5900	1100	5800	1150	5800	1150	5900	1100
200x80	*40*	*4400*	*800*	*4400*	*850*	*4100*	*800*	*4100*	*800*
	90	*3800*	*750*	*3800*	*650*	*3800*	*750*	*3800*	*650*
265x80	*40*	*5200*	*1000*	*5200*	*1000*	*4800*	*950*	*4800*	*950*
	90	*4500*	*900*	*4500*	*900*	*4500*	*900*	*4500*	*900*
300x80	*40*	*5600*	*1100*	*5600*	*1100*	*5200*	*1000*	*5200*	*1000*
	90	*4900*	*900*	*4900*	*900*	*4900*	*900*	*4900*	*900*
330x80	*40*	*5900*	*1100*	*5900*	*1100*	*5500*	*1100*	*5500*	*1100*
	90	*5200*	*1000*	*5200*	*1000*	*5200*	*1000*	*5200*	*1000*

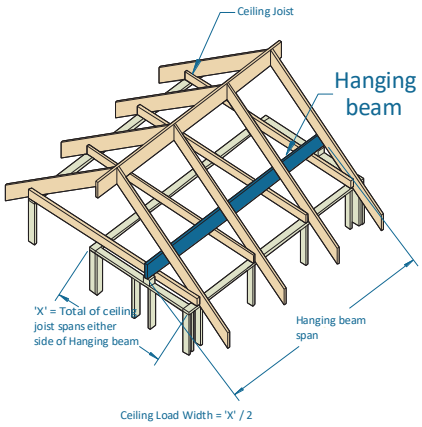
Hip rafter - sheet and tile roof
AS 4055 Classification N1, N2, N3, N4, C1, C2 & C3

Wind speed		N1, N2, N3 & N4				C1, C2 & C3			
Rafter spacing (mm)		600		1200		600		1200	
Member size (GL17S) DxB (mm)	Roof & ceiling mass (kg/m^2)	Maximum recommended rafter span + overhang span (mm)							
		Span	Overhang	Span	Overhang	Span	Overhang	Span	Overhang
130x85	40	3400	600	3400	600	3200	600	3200	600
	90	3000	600	3000	600	3000	600	3000	600
165x85	40	4000	800	4000	800	3700	700	3700	700
	90	3500	700	3500	700	3500	700	3500	700
195x85	40	4400	800	4400	800	4000	800	4000	800
	90	3900	700	3900	700	3900	700	3900	700
230x85	40	4800	950	4800	950	4500	900	4500	900
	90	4300	850	4300	850	4300	850	4300	850
260x85	40	5200	1000	5200	1000	4800	950	4800	950
	90	4600	900	4600	900	4600	900	4600	900
295x85	40	5600	1100	5600	1100	5200	1000	5200	1000
	90	4900	900	4900	900	4900	900	4900	900
330x85	40	6000	1200	6000	1200	5600	1100	5600	1100
	90	5300	1050	5300	1050	5300	1050	5300	1050
360x85	40	6300	1250	6300	1250	5900	1100	5900	1100
	90	5600	1100	5600	1100	5600	1100	5600	1100
395x85	40	6700	1300	6700	1300	6200	1200	6200	1200
	90	5900	1100	5900	1100	5900	1100	5900	1100
425x85	40	7000	1400	7000	1400	6500	1300	6500	1300
	90	6200	1200	6200	1200	6200	1200	6200	1200

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a batten spacing of 900 mm
3. Minimum Backspan = 200 % of overhang
4. Maximum Birdsmouth depth = 30 % of depth
5. End bearing length = 35 at end supports . Subscript values indicate the minimum additional bearing length where required to be greater than 35 mm at end support.
6. Construction loads shall not be applied to overhangs until a 190 x 1 9 mm (min) timber fascia or other fascia of equivalent stiffness is rigidly and permanently attached to the end of rafter overhangs
7. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
8. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Hanging beam supporting ceiling loads only
AS 4055 Classification N1, N2, N3 & N4



ceiling mass - 20 kg/m^2

EXAMPLE:

Wind speed = N3
X = 5000 mm
Ceiling load width = X/2 = 5000/2 = 2500 mm
Hanging beam span = 4200 mm

Enter column at 3000 mm ceiling load width & read down to a span greater than or equal to 4200 mm

ADOPT:
SmartLam GL17S - 200 x 60

Ceiling load width (mm)	1800	2400	3000	3600	4200	4800
Member size (GL17S) DxB (mm)	Maximum recommended Hanging beam span (mm)					
200x50	*4700*	*4400*	*4100*	*3900*	*3700*	*3600*
250x50	*5500*	*5200*	*4900*	*4600*	*4400*	*4200*
200x60	*4900*	*4600*	*4300*	*4100*	*3900*	*3700*
265x60	*6000*	*5600*	*5300*	*5000*	*4800*	*4600*
300x60	*6500*	*6100*	*5800*	*5500*	*5300*	*5100*
330x60	*6900*	*6500*	*6200*	*5900*	*5600*	*5400*
130x65	3700	3400	3100	2900	2700	2600
165x65	4400	4100	3800	3600	3400	3300
195x65	5000	4600	4300	4100	3900	3800
230x65	5600	5200	4900	4700	4400	4300
265x65	6200	5800	5400	5200	4900	4700
295x65	6700	6200	5900	5600	5300	5100
330x65	7200	6800	6400	6100	5800	5600
360x65	7700	7200	6800	6500	6200	5900
200x80	*5200*	*4800*	*4600*	*4400*	*4200*	*4000*
265x80	*6300*	*5900*	*5600*	*5300*	*5100*	*4900*
300x80	*6800*	*6400*	*6100*	*5800*	*5600*	*5400*
330x80	*7300*	*6900*	*6500*	*6200*	*6000*	*5800*
130x85	3900	3700	3400	3200	3000	2800
165x85	4700	4300	4100	3900	3700	3600
195x85	5300	4900	4600	4400	4200	4000
230x85	5900	5500	5200	5000	4700	4500
295x85	7100	6600	6200	5900	5700	5500
330x85	7600	7100	6800	6400	6200	5900
360x85	8100	7600	7200	6800	6600	6300

Hanging beam supporting ceiling loads only
AS 4055 Classification C1, C2 & C3

Ceiling mass - 20 kg/m^2

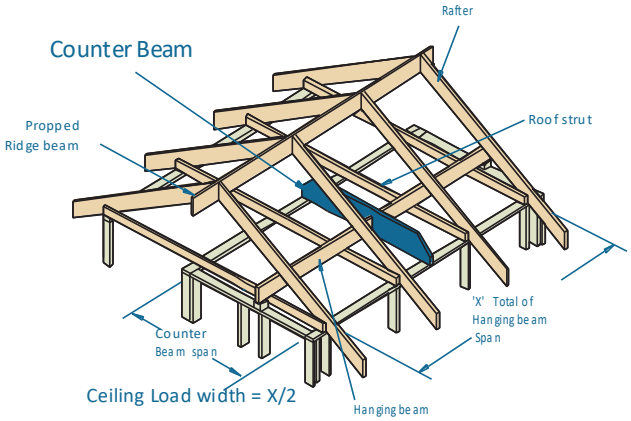
Ceiling load width (mm)	1800	2400	3000	3600	4200	4800
Member size (GL17S) DxB (mm)	Maximum recommended Hanging beam span (mm)					
200x50	*4500*	*3900*	*3500*	*3200*	*3000*	*2800*
250x50	*5500*	*4900*	*4400*	*4000*	*3700*	*3500*
200x60	*4900*	*4300*	*3800*	*3500*	*3200*	*3000*
265x60	*6000*	*5600*	*5100*	*4600*	*4300*	*4000*
300x60	*6500*	*6100*	*5700*	*5200*	*4800*	*4500*
330x60	*6900*	*6500*	*6200*	*5800*	*5300*	*5000*
130x65	3700	3200	2800	2600	2400	2200
165x65	4400	4000	3600	3300	3000	2800
195x65	5000	4600	4300	3900	3600	3400
230x65	5600	5200	4900	4600	4200	3900
265x65	6200	5800	5400	5200	4900	4500
295x65	6700	6200	5900	5600	5300	5100
330x65	7200	6800	6400	6100	5800	5600
360x65	7700	7200	6800	6500	6200	5900
200x80	*5200*	*4800*	*4400*	*4000*	*3700*	*3500*
265x80	*6300*	*5900*	*5600*	*5300*	*4900*	*4600*
300x80	*6800*	*6400*	*6100*	*5800*	*5600*	*5200*
330x80	*7300*	*6900*	*6500*	*6200*	*6000*	*5700*
130x85	3900	3600	3300	3000	2700	2500
165x85	4700	4300	4100	3800	3500	3200
195x85	5300	4900	4600	4400	4100	3800
230x85	5900	5500	5200	5000	4700	4500
265x85	6500	6100	5800	5500	5300	5000
295x85	7100	6600	6200	5900	5700	5500
330x85	7600	7100	6800	6400	6200	5900
360x85	8100	7600	7200	6800	6600	6300

NOTES:

1. D = member depth, B = member breadth, NS = not suitable
2. The above table was based on a maximum ceiling mass of 20 kg/m^2
3. Minimum bearing length = 70 mm at end supports
4. Restraint value for slenderness calculations is 1500 mm
5. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
6. Sizes in Italics are for a Natural Durability class 3 Hardwood GL17S

Counter beam supporting hanging beam
AS 4055 Classification N1, N2, N3 & N4

Ceiling mass - 20 kg/m^2



EXAMPLE:

wind speed = N3
total of hanging beam SPAN = 6400 mm
ceiling load width = 'X' / 2 = 6400 / 2 = 3200 mm
counter beam span = 4500 mm

Enter column at 3600 mm ceiling load width and read down to a span greater than or equal to 4500 mm

ADOPT:

SmartLam GL17S - 200 x 60

Ceiling load width (mm)	600	1800	2400	3000	3600	4200	4800	5400	6600
Member size (GL17S) DxB (mm)	Maximum recommended Counter beam span (mm)								
200x50	*6500*	*5400*	*5100*	*4900*	*4700*	*4500*	*4400*	*4200*	*4000*
250x50	*7400*	*6300*	*6000*	*5700*	*5500*	*5300*	*5200*	*5000*	*4800*
200x60	*6600*	*5600*	*5300*	*5100*	*4900*	*4700*	*4600*	*4400*	*4200*
265x60	*7900*	*6800*	*6400*	*6200*	*5900*	*5800*	*5600*	*5500*	*5200*
300x60	*8500*	*7400*	*7000*	*6700*	*6500*	*6300*	*6100*	*6000*	*5700*
330x60	*9000*	*7800*	*7500*	*7200*	*6900*	*6700*	*6500*	*6400*	*6100*
130x65	5300	4200	3900	3600	3400	3300	3100	3000	2800
165x65	6200	5100	4800	4500	4300	4100	4000	3800	3600
195x65	6900	5700	5400	5100	4900	4800	4600	4500	4200
230x65	7700	6400	6100	5800	5600	5400	5200	5100	4800
260x65	8300	7000	6600	6300	6100	5900	5700	5600	5300
295x65	9000	7600	7200	6900	6600	6400	6200	6100	5800
330x65	9700	8200	7800	7500	7200	7000	6800	6600	6300
360x65	10200	8700	8300	7900	7600	7400	7200	7000	6700
395x65	10800	9300	8800	8500	8200	7900	7700	7500	7200
425x65	11200	9800	9300	8900	8600	8300	8100	7900	7600
200x80	*6800*	*5900*	*5600*	*5400*	*5200*	*5000*	*4900*	*4700*	*4500*
265x80	*8100*	*7100*	*6800*	*6500*	*6300*	*6100*	*5900*	*5800*	*5600*
300x80	*8700*	*7700*	*7300*	*7100*	*6800*	*6700*	*6500*	*6300*	*6100*
330x80	*9200*	*8200*	*7800*	*7500*	*7300*	*7100*	*6900*	*6800*	*6500*
165x85	6500	5400	5100	4800	4600	4500	4300	4200	3900
195x85	7200	6000	5700	5400	5200	5100	4900	4800	4600
230x85	8000	6800	6400	6100	5900	5700	5500	5400	5200
260x85	8600	7300	7000	6700	6400	6200	6000	5900	5600
295x85	9300	8000	7600	7300	7000	6800	6600	6500	6200
330x85	9900	8600	8200	7900	7600	7400	7200	7000	6700
360x85	10500	9100	8700	8300	8100	7800	7600	7400	7100
395x85	11000	9700	9200	8900	8600	8400	8100	8000	7600
425x85	11500	10200	9700	9300	9000	8800	8600	8400	8000

Counter beam supporting Hanging beam
AS 4055 Classification C1, C2 and C3

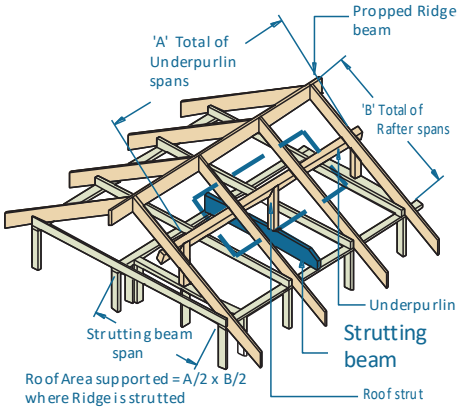
Ceiling mass - 20 kg/m^2

Ceiling load width (mm)	600	1800	2400	3000	3600	4200	4800	5400	6600
Member size (GL17S) DxB (mm)	Maximum recommended Counter beam span (mm)								
200x50	*6500*	*4600*	*4000*	*3600*	*3300*	*3000*	*2800*	*2700*	*2400*
250x50	*7400*	*5700*	*5000*	*4400*	*4100*	*3800*	*3500*	*3300*	*3000*
200x60	*6600*	*5000*	*4400*	*3900*	*3600*	*3300*	*3100*	*2900*	*2600*
265x60	*7900*	*6600*	*5700*	*5200*	*4700*	*4400*	*4100*	*3900*	*3500*
300x60	*8500*	*7400*	*6500*	*5800*	*5300*	*4900*	*4600*	*4400*	*4000*
330x60	*9000*	*7800*	*7100*	*6400*	*5900*	*5400*	*5100*	*4800*	*4300*
130x65	5300	3700	3200	2900	2600	2400	2300	2100	1900
165x65	6200	4700	4100	3700	3300	3100	2900	2700	2500
195x65	6900	5600	4800	4300	4000	3700	3400	3200	2900
230x65	7700	6400	5700	5100	4700	4300	4000	3800	3400
260x65	8300	7000	6400	5800	5300	4900	4600	4300	3900
295x65	9000	7600	7200	6500	6000	5500	5200	4900	4400
330x65	9700	8200	7800	7300	6700	6200	5800	5500	4900
360x65	10200	8700	8300	7900	7300	6700	6300	5900	5400
395x65	10800	9300	8800	8500	8000	7400	6900	6500	5900
425x65	11200	9800	9300	8900	8600	7900	7400	7000	6400
200x80	*6800*	*5800*	*5000*	*4500*	*4100*	*3800*	*3600*	*3400*	*3000*
265x80	*8100*	*7100*	*6600*	*5900*	*5400*	*5000*	*4700*	*4400*	*4000*
300x80	*8700*	*7700*	*7300*	*6700*	*6100*	*5700*	*5300*	*5000*	*4600*
330x80	*9200*	*8200*	*7800*	*7400*	*6700*	*6200*	*5900*	*5500*	*5000*
165x85	6500	5400	4700	4200	3800	3500	3300	3100	2800
195x85	7200	6000	5500	4900	4500	4200	3900	3700	3300
230x85	8000	6800	6400	5800	5300	4900	4600	4400	3900
260x85	8600	7300	7000	6600	6000	5600	5200	4900	4400
295x85	9300	8000	7600	7300	6800	6300	5900	5600	5000
330x85	9900	8600	8200	7900	7600	7000	6600	6200	5600
360x85	10500	9100	8700	8300	8100	7700	7200	6800	6200
395x85	11000	9700	9200	8900	8600	8400	7900	7400	6700
425x85	11500	10200	9700	9300	9000	8800	8500	8000	7300

NOTES:

1. D = member depth, B = member breadth, NS = not suitable
2. The above table was based on a maximum ceiling mass of 20 kg/m^2
3. Minimum bearing length = 70 mm at end supports
4. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
5. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Strutting beam supporting Underpurlins
AS 4055 Classification N1, N2, N3 & N4



EXAMPLE:
wind speed = N3
sheet roof = 20 kg/m^2
total of underpurlin span 'A'= 5000 mm
total of rafter span 'B' = 4200 mm
roof area supported = (A/2) x (B/2)
= (5000/2) x (4200/2)
= 5250000 mm^2 **(convert to m^2)**
= 5250000/1000000 = 5.25 m^2
strutting beam span = 4500 mm

Enter column at 6m^2 roof area supported and read down to a span greater than or equal to 4500 mm

ADOPT: SmartLam GL 17S - 200 x 60

Roof area supported (m^2)		2	4	6	8	10	12
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting beam span (mm)					
200x50	*20*	*5800*	*5100*	*4200*	*3200*	*2500*	*2100*
	60	*4900*	*3900*	*3200*	*2700*	*2200*	*1800*
250x50	*20*	*7100*	*6200*	*5700*	*5000*	*4000*	*3300*
	60	*6000*	*5000*	*4400*	*3900*	*3400*	*2800*
200x60	*20*	*6200*	*5400*	*4800*	*3800*	*3000*	*2500*
	60	*5200*	*4200*	*3500*	*3000*	*2600*	*2200*
265x60	*20*	*7600*	*6800*	*6200*	*5800*	*5400*	*4500*
	60	*6600*	*5600*	*4900*	*4500*	*4100*	*3800*
300x60	*20*	*8300*	*7500*	*6900*	*6500*	*6100*	*5800*
	60	*7300*	*6200*	*5600*	*5100*	*4800*	*4500*
330x60	*20*	*8900*	*8100*	*7500*	*7000*	*6600*	*6300*
	60	*7800*	*6800*	*6100*	*5600*	*5200*	*4900*
195x65	20	6200	5500	4900	4500	3700	3100
	60	5300	4200	3500	3100	2700	2500
230x65	20	7300	6400	5700	5300	5000	4300
	60	6100	5100	4500	3900	3500	3200
260x65	20	8100	7100	6400	5900	5600	5300
	60	6800	5700	5000	4600	4200	3900
295x65	20	8900	7900	7200	6700	6300	5900
	60	7600	6400	5700	5200	4900	4600
330x65	20	9600	8600	7900	7400	6900	6600
	60	8300	7100	6300	5800	5400	5100
360x65	20	10200	9200	8500	7900	7500	7100
	60	8900	7600	6800	6300	5900	5600
395x65	20	10800	9900	9200	8600	8100	7800
	60	9600	8300	7400	6900	6400	6100
200x50	*20*	*5800*	*5100*	*4200*	*3200*	*2500*	*2100*
	60	*4900*	*3900*	*3200*	*2700*	*2200*	*1800*
250x50	*20*	*7100*	*6200*	*5700*	*5000*	*4000*	*3300*
	60	*6000*	*5000*	*4400*	*3900*	*3400*	*2800*
200x60	*20*	*6200*	*5400*	*4800*	*3800*	*3000*	*2500*
	60	*5200*	*4200*	*3500*	*3000*	*2600*	*2200*
265x60	*20*	*7600*	*6800*	*6200*	*5800*	*5400*	*4500*
	60	*6600*	*5600*	*4900*	*4500*	*4100*	*3800*
300x60	*20*	*8300*	*7500*	*6900*	*6500*	*6100*	*5800*
	60	*7300*	*6200*	*5600*	*5100*	*4800*	*4500*
330x60	*20*	*8900*	*8100*	*7500*	*7000*	*6600*	*6300*
	60	*7800*	*6800*	*6100*	*5600*	*5200*	*4900*

Strutting beam supporting underpurlins
AS 4055 Classification N1, N2, N3 & N4

Roof area supported (m^2)		2	4	6	8	10	12
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting beam span (mm)					
195x85	20	6800	5900	5300	4900	4600	4100
	60	5700	4700	4000	3500	3100	2900
230x85	20	7700	6800	6200	5700	5400	5100
	60	6500	5500	4900	4400	4000	3700
260x85	20	8400	7500	6900	6400	6000	5700
	60	7300	6100	5500	5000	4700	4400
295x85	20	9200	8300	7600	7100	6700	6400
	60	8000	6900	6100	5600	5300	5000
330x85	20	9900	9000	8400	7900	7400	7100
	60	8800	7600	6800	6300	5900	5600
360x85	20	10500	9600	9000	8500	8000	7700
	60	9400	8200	7400	6800	6400	6000
395x85	20	11100	10300	9700	9100	8700	8300
	60	10100	8800	8000	7400	7000	6600
425x85	20	11700	10800	10200	9700	9200	8900
	60	10600	9400	8500	7900	7400	7100

Strutting beam supporting underpurlins
AS 4055 Classification C1, C2 & C3

Roof area supported (m^2)		2	4	6	8	10	12
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting beam span (mm)					
200x50	*20*	*5600*	*2800*	*1800*	*1100*	*NS*	*NS*
	60	*4900*	*3000*	*2000*	*1400*	*NS*	*NS*
250x50	*20*	*7100*	*4400*	*2900*	*2200*	*1300*	*NS*
	60	*6000*	*4800*	*3200*	*2400*	*1800*	*1100*
200x60	*20*	*6200*	*3300*	*2200*	*1700*	*NS*	*NS*
	60	*5200*	*3600*	*2400*	*1800*	*1200*	*NS*
265x60	*20*	*7600*	*6000*	*3900*	*2900*	*2300*	*1700*
	60	*6600*	*5600*	*4300*	*3200*	*2500*	*2100*
300x60	*20*	*8300*	*7500*	*5000*	*3800*	*3000*	*2500*
	60	*7300*	*6200*	*5500*	*4100*	*3300*	*2700*
330x60	*20*	*8900*	*8100*	*6200*	*4600*	*3600*	*3000*
	60	*7800*	*6800*	*6100*	*5000*	*4000*	*3300*
195x65	20	6200	4100	2700	2000	1600	1000
	60	5300	4200	3000	2200	1800	1400
230x65	20	7300	5700	3800	2800	2300	1900
	60	6100	5100	4100	3100	2500	2000
260x65	20	8100	7100	4800	3600	2900	2400
	60	6800	5700	5000	4000	3200	2600
295x65	20	8900	7900	6300	4700	3700	3100
	60	7600	6400	5700	5100	4100	3400
330x65	20	9600	8600	7800	5900	4700	3900
	60	8300	7100	6300	5800	5100	4200
360x65	20	10200	9200	8500	7000	5600	4600
	60	8900	7600	6800	6300	5900	5000
395x65	20	10800	9900	9200	8500	6700	5600
	60	9600	8300	7400	6900	6400	6100

Strutting beam supporting underpurlins
AS 4055 Classification C1, C2 & C3

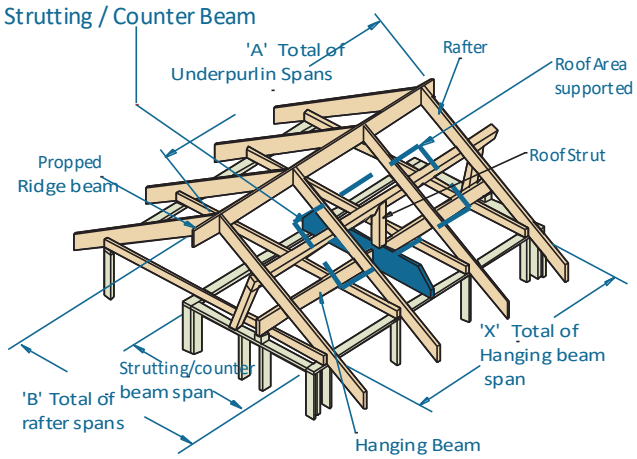
Roof area supported (m^2)		2	4	6	8	10	12
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting beam span (mm)					
200x80	*20*	*6500*	*4500*	*3000*	*2200*	*1800*	*1300*
	60	*5500*	*4600*	*3200*	*2400*	*1900*	*1600*
265x80	*20*	*7900*	*7200*	*5300*	*3900*	*3100*	*2600*
	60	*7000*	*6000*	*5400*	*4300*	*3400*	*2800*
300x80	*20*	*8600*	*7900*	*6800*	*5100*	*4000*	*3300*
	60	*7700*	*6700*	*6000*	*5500*	*4400*	*3600*
330x80	*20*	*9100*	*8400*	*7900*	*6100*	*4900*	*4000*
	60	*8200*	*7200*	*6600*	*6100*	*5300*	*4400*
	60	*9500*	*8400*	*7700*	*7200*	*6800*	*6500*
195x85	20	6800	5400	3600	2700	2100	1800
	60	5700	4700	3900	2900	2300	1900
230x85	20	7700	6800	5000	3700	3000	2500
	60	6500	5500	4900	4000	3200	2700
260x85	20	8400	7500	6400	4800	3800	3200
	60	7300	6100	5500	5000	4100	3400
295x85	20	9200	8300	7600	6100	4900	4100
	60	8000	6900	6100	5600	5300	4400
330x85	20	9900	9000	8400	7700	6100	5100
	60	8800	7600	6800	6300	5900	5500
360x85	20	10500	9600	9000	8500	7400	6100
	60	9400	8200	7400	6800	6400	6000
395x85	20	11100	10300	9700	9100	8700	7300
	60	10100	8800	8000	7400	7000	6600
425x85	20	11700	10800	10200	9700	9200	8500
	60	10600	9400	8500	7900	7400	7100

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. Minimum bearing length = 70 mm at end supports.
3. Restraint value for slenderness calculations is 1500 mm
4. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
5. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Strutting/counter beam supporting underpurlins & hanging beam
AS 4055 Classification N1, N2, N3 & N4

Ceiling mass - 20 kg/m^2



Roof Area supported = A/2xB/2 Counter/Strutting beam spacing = X/2

EXAMPLE:

wind speed = N3
sheet roof = 40kg/m^2
total of underpurlin span 'A'= 5000 mm
total of rafter span 'B' = 4200 mm
roof area supported = (A/2) x (B/2)
= (5000/2) x (4200/2)
= 5250000 mm^2 **(convert to m^2)**
= 5250000/1000000 = 5.25 m^2
total of hanging beam span 'X' = 4500 mm
effective beam spacing = 'X' / 2 = 4500 / 2 = 2250 mm
strutting/counter beam span = 4500 mm

Enter column at 3600 mm effective beam spacing, 6m^2 roof area supported and read down to a span greater than or equal to 4500 mm

ADOPT: SmartLam GL17S - 300 x 60

Effective beam spacing (mm)		1800						3600					
Roof area supported (m^2)		2	4	6	8	10	12	2	4	6	8	10	12
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting/Counter beam span (mm)											
200x50	*40*	*4200*	*3700*	*3000*	*2200*	*1800*	*1400*	*3800*	*3500*	*3000*	*2300*	*1800*	*1500*
	90	*3700*	*3000*	*2600*	*2000*	*1600*	*1300*	*3500*	*2900*	*2500*	*1900*	*1600*	*1300*
250x50	*40*	*5000*	*4500*	*4200*	*3500*	*2800*	*2300*	*4500*	*4200*	*4000*	*3500*	*2800*	*2300*
	90	*4500*	*3900*	*3500*	*3000*	*2500*	*2100*	*4200*	*3800*	*3400*	*3000*	*2400*	*2000*
200x60	*40*	*4400*	*3900*	*3600*	*2700*	*2100*	*1700*	*4000*	*3700*	*3400*	*2800*	*2200*	*1800*
	90	*3900*	*3300*	*2800*	*2300*	*1900*	*1600*	*3700*	*3100*	*2700*	*2300*	*1900*	*1600*
265x60	*40*	*5500*	*5000*	*4700*	*4400*	*3800*	*3100*	*5000*	*4600*	*4400*	*4200*	*3900*	*3200*
	90	*5000*	*4400*	*4000*	*3700*	*3300*	*2800*	*4600*	*4200*	*3800*	*3600*	*3200*	*2700*
300x60	*40*	*6000*	*5500*	*5200*	*4900*	*4600*	*4100*	*5400*	*5100*	*4900*	*4600*	*4400*	*4200*
	90	*5500*	*4900*	*4400*	*4100*	*3900*	*3500*	*5100*	*4600*	*4300*	*4000*	*3800*	*3400*
330x60	*40*	*6400*	*6000*	*5600*	*5300*	*5100*	*4800*	*5800*	*5500*	*5300*	*5000*	*4800*	*4700*
	90	*6000*	*5300*	*4800*	*4500*	*4200*	*4000*	*5500*	*5000*	*4600*	*4400*	*4100*	*3900*
165x65	40	3900	3400	2900	2300	1800	1500	3500	3100	2800	2400	1900	1500
	90	3400	2600	2200	1900	1700	1400	3100	2500	2100	1900	1600	1400
195x65	40	4400	4000	3600	3300	2600	2200	4000	3700	3400	3100	2700	2200
	90	4000	3300	2800	2500	2200	1900	3700	3100	2700	2400	2200	1900
230x65	40	5100	4600	4200	4000	3700	3000	4600	4300	4000	3800	3600	3100
	90	4600	4000	3600	3200	2900	2600	4300	3800	3400	3100	2800	2600
260x65	40	5600	5100	4700	4400	4200	3900	5000	4700	4400	4200	4000	3900
	90	5100	4400	4000	3700	3400	3100	4700	4200	3900	3600	3300	3100
295x65	40	6200	5700	5300	5000	4700	4500	5500	5200	4900	4700	4500	4300
	90	5700	5000	4500	4200	3900	3700	5200	4700	4300	4000	3800	3600
330x65	40	6700	6200	5800	5500	5200	5000	6000	5700	5400	5200	5000	4800
	90	6200	5500	5000	4600	4400	4100	5700	5200	4800	4500	4200	4000
360x65	40	7200	6600	6300	5900	5600	5400	6400	6100	5800	5600	5400	5200
	90	6600	5900	5400	5000	4700	4500	6100	5600	5200	4900	4600	4400
395x65	40	7700	7200	6700	6400	6100	5900	6900	6500	6300	6000	5800	5600
	90	7200	6400	5900	5500	5200	4900	6500	6000	5600	5300	5000	4800
425x65	40	8100	7600	7200	6800	6500	6300	7200	6900	6600	6400	6200	6000
	90	7600	6800	6300	5900	5500	5300	6900	6400	6000	5600	5400	5100

Strutting/counter beam supporting underpurlins & hanging beam AS 4055 Classification N1, N2, N3 & N4 (Cont'd)

Ceiling mass - 20 kg/m^2

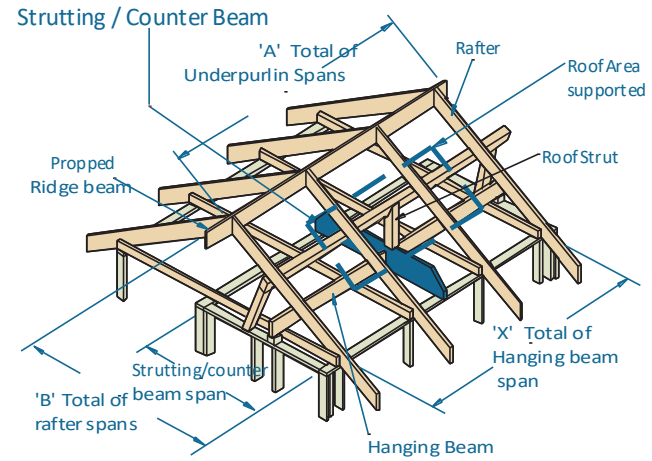
Effective beam spacing (mm)		1800						3600					
Roof area supported (m^2)		2	4	6	8	10	12	2	4	6	8	10	12
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting/Counter beam span (mm)											
200x80	*40*	*4700*	*4300*	*3900*	*3600*	*2900*	*2400*	*4300*	*4000*	*3700*	*3500*	*2900*	*2400*
	90	*4300*	*3700*	*3200*	*2800*	*2500*	*2100*	*4000*	*3500*	*3100*	*2700*	*2500*	*2100*
265x80	*40*	*5800*	*5400*	*5000*	*4700*	*4500*	*4200*	*5300*	*5000*	*4700*	*4500*	*4300*	*4200*
	90	*5400*	*4700*	*4300*	*4000*	*3700*	*3600*	*5000*	*4500*	*4100*	*3900*	*3700*	*3500*
300x80	*40*	*6400*	*5900*	*5600*	*5300*	*5000*	*4800*	*5800*	*5500*	*5200*	*5000*	*4800*	*4600*
	90	*5900*	*5300*	*4800*	*4500*	*4200*	*4000*	*5500*	*5000*	*4600*	*4300*	*4100*	*3900*
330x80	*40*	*6800*	*6400*	*6000*	*5700*	*5500*	*5300*	*6200*	*5900*	*5600*	*5400*	*5200*	*5000*
	90	*6400*	*5700*	*5300*	*4900*	*4600*	*4400*	*5900*	*5400*	*5000*	*4700*	*4500*	*4300*
195x85	40	4800	4300	3900	3700	3400	2800	4300	4000	3700	3500	3300	2900
	90	4300	3700	3200	2800	2600	2300	4000	3500	3100	2700	2500	2300
230x85	40	5400	4900	4600	4300	4100	3900	4900	4600	4300	4100	3900	3700
	90	4900	4300	3900	3600	3200	3000	4600	4100	3700	3400	3200	2900
260x85	40	5900	5500	5100	4800	4500	4300	5400	5000	4800	4500	4300	4200
	90	5500	4800	4300	4000	3800	3600	5000	4500	4200	3900	3700	3500
295x85	40	6500	6000	5700	5400	5100	4900	5900	5600	5300	5100	4900	4700
	90	6100	5400	4900	4500	4300	4000	5600	5100	4700	4400	4100	4000
330x85	40	7100	6600	6200	5900	5600	5400	6400	6100	5800	5600	5400	5200
	90	6600	5900	5400	5000	4700	4500	6100	5600	5200	4900	4600	4400
360x85	40	7600	7100	6700	6400	6100	5800	6800	6500	6200	6000	5800	5600
	90	7100	6400	5800	5500	5100	4900	6500	6000	5600	5300	5000	4800
395x85	40	8100	7600	7200	6900	6600	6300	7300	7000	6700	6500	6200	6000
	90	7600	6900	6300	5900	5600	5300	7000	6400	6000	5700	5400	5200
425x85	40	8500	8000	7700	7300	7000	6800	7700	7400	7100	6900	6600	6400
	90	8000	7300	6800	6300	6000	5700	7400	6800	6400	6100	5800	5600

NOTES:

1. D = member depth, B = member breadth, NS = not suitable
2. Minimum bearing length = 70 mm at end supports
3. The above table was based on a maximum ceiling mass of 20 kg/m^2
4. Restraint value for slenderness calculations is 1500 mm
5. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
6. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Strutting/counter beam supporting underpurlins & hanging beam
AS 4055 Classification C1, C2 & C3

Ceiling mass - 20 kg/m^2



Roof Area supported = A/2xB/2 Counter/Strutting beam spacing = X/2

EXAMPLE:

wind speed = N3
sheet roof = 40kg/m^2
total of underpurlin span 'A'= 5000 mm
total of rafter span 'B' = 4200 mm
roof area supported = (A/2) x (B/2)
= (5000/2) x (4200/2)
= 5250000 mm^2 **(convert to m^2)**
= 5250000/1000000 = 5.25 m^2
total of hanging beam span 'X' = 4500 mm
effective beam spacing = 'X' / 2 = 4500 / 2 = 2250 mm
strutting/counter beam span = 4500 mm

Enter column at 3600 mm effective beam spacing, 6m^2 roof area supported and read down to a span greater than or equal to 4500 mm

ADOPT: SmartLam GL17S - 300 x 60

Effective beam spacing (mm)		1800						3600					
Roof area supported (m^2)		2	4	6	8	10	12	2	4	6	8	10	12
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting/Counter beam span (mm)											
200x50	*40*	*4200*	*3000*	*1900*	*1400*	*1100*	*NS*	*3800*	*3100*	*2000*	*1400*	*1100*	*NS*
	90	*3700*	*2900*	*2000*	*1500*	*1200*	*1000*	*3500*	*2800*	*2000*	*1500*	*1200*	*1000*
250x50	*40*	*5000*	*4500*	*3100*	*2300*	*1800*	*1500*	*4500*	*4200*	*3200*	*2300*	*1800*	*1500*
	90	*4500*	*3900*	*3100*	*2400*	*1900*	*1600*	*4200*	*3800*	*3000*	*2300*	*1900*	*1600*
200x60	*40*	*4400*	*3600*	*2400*	*1700*	*1400*	*1100*	*4000*	*3700*	*2400*	*1700*	*1400*	*1100*
	90	*3900*	*3300*	*2400*	*1800*	*1400*	*1200*	*3700*	*3100*	*2300*	*1800*	*1400*	*1200*
265x60	*40*	*5500*	*5000*	*4200*	*3100*	*2500*	*2000*	*5000*	*4600*	*4400*	*3200*	*2500*	*2100*
	90	*5000*	*4400*	*4000*	*3100*	*2500*	*2100*	*4600*	*4200*	*3800*	*3100*	*2500*	*2100*
300x60	*40*	*6000*	*5500*	*5200*	*4000*	*3200*	*2600*	*5400*	*5100*	*4900*	*4100*	*3200*	*2700*
	90	*5500*	*4900*	*4400*	*4000*	*3200*	*2700*	*5100*	*4600*	*4300*	*3900*	*3200*	*2700*
330x60	*40*	*6400*	*6000*	*5600*	*4900*	*3900*	*3200*	*5800*	*5500*	*5300*	*5000*	*3900*	*3200*
	90	*6000*	*5300*	*4800*	*4500*	*3900*	*3300*	*5500*	*5000*	*4600*	*4400*	*3800*	*3200*
165x65	40	3900	3200	2000	1500	1200	1000	3500	3100	2100	1500	1200	1000
	90	3400	2600	2100	1600	1300	1000	3100	2500	2100	1600	1300	1000
195x65	40	4400	4000	2900	2100	1700	1400	4000	3700	3000	2200	1700	1400
	90	4000	3300	2800	2200	1800	1500	3700	3100	2700	2200	1800	1500
230x65	40	5100	4600	4100	3000	2400	2000	4600	4300	4000	3100	2400	2000
	90	4600	4000	3600	3100	2500	2100	4300	3800	3400	3000	2400	2000
260x65	40	5600	5100	4700	3900	3100	2500	5000	4700	4400	4000	3100	2600
	90	5100	4400	4000	3700	3100	2600	4700	4200	3900	3600	3100	2600
295x65	40	6200	5700	5300	5000	4000	3300	5500	5200	4900	4700	4000	3300
	90	5700	5000	4500	4200	3900	3400	5200	4700	4300	4000	3800	3300
330x65	40	6700	6200	5800	5500	5000	4100	6000	5700	5400	5200	5000	4200
	90	6200	5500	5000	4600	4400	4100	5700	5200	4800	4500	4200	4000
360x65	40	7200	6600	6300	5900	5600	4900	6400	6100	5800	5600	5400	5000
	90	6600	5900	5400	5000	4700	4500	6100	5600	5200	4900	4600	4400
395x65	40	7700	7200	6700	6400	6100	5900	6900	6500	6300	6000	5800	5600
	90	7200	6400	5900	5500	5200	4900	6500	6000	5600	5300	5000	4800
425x65	40	8100	7600	7200	6800	6500	6300	7200	6900	6600	6400	6200	6000
	90	7600	6800	6300	5900	5500	5300	6900	6400	6000	5600	5400	5100

Strutting/counter beam supporting underpurlins & hanging beam
AS 4055 Classification C1, C2 & C3

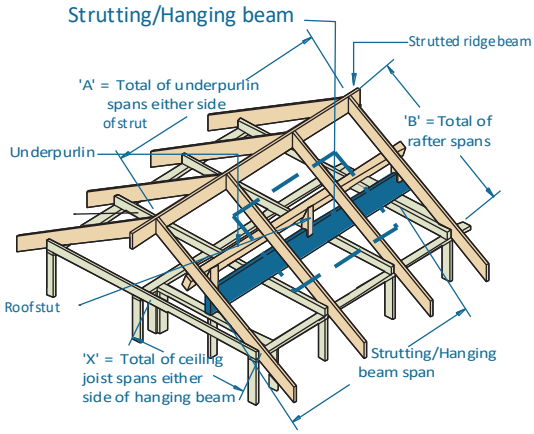
Ceiling mass - 20 kg/m^2

Effective beam spacing (mm)		1800						3600					
Roof area supported (m^2)		2	4	6	8	10	12	2	4	6	8	10	12
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting/Counter beam span (mm)											
200x80	*40*	*4700*	*4300*	*3200*	*2300*	*1900*	*1500*	*4300*	*4000*	*3300*	*2400*	*1900*	*1500*
	90	*4300*	*3700*	*3100*	*2400*	*1900*	*1600*	*4000*	*3500*	*3100*	*2400*	*1900*	*1600*
265x80	*40*	*5800*	*5400*	*5000*	*4200*	*3300*	*2700*	*5300*	*5000*	*4700*	*4300*	*3400*	*2800*
	90	*5400*	*4700*	*4300*	*4000*	*3400*	*2800*	*5000*	*4500*	*4100*	*3900*	*3300*	*2800*
300x80	*40*	*6400*	*5900*	*5600*	*5300*	*4300*	*3500*	*5800*	*5500*	*5200*	*5000*	*4400*	*3600*
	90	*5900*	*5300*	*4800*	*4500*	*4200*	*3600*	*5500*	*5000*	*4600*	*4300*	*4100*	*3500*
330x80	*40*	*6800*	*6400*	*6000*	*5700*	*5200*	*4300*	*6200*	*5900*	*5600*	*5400*	*5200*	*4400*
	90	*6400*	*5700*	*5300*	*4900*	*4600*	*4300*	*5900*	*5400*	*5000*	*4700*	*4500*	*4200*
195x85	40	4800	4300	3800	2800	2200	1800	4300	4000	3700	2900	2300	1900
	90	4300	3700	3200	2800	2300	1900	4000	3500	3100	2700	2300	1900
230x85	40	5400	4900	4600	4000	3100	2600	4900	4600	4300	4100	3200	2600
	90	4900	4300	3900	3600	3200	2700	4600	4100	3700	3400	3200	2700
260x85	40	5900	5500	5100	4800	4000	3300	5400	5000	4800	4500	4100	3400
	90	5500	4800	4300	4000	3800	3400	5000	4500	4200	3900	3700	3400
295x85	40	6500	6000	5700	5400	5100	4300	5900	5600	5300	5100	4900	4400
	90	6000	5400	4900	4500	4300	4000	5600	5100	4700	4400	4100	4000
330x85	40	7100	6600	6200	5900	5600	5400	6400	6100	5800	5600	5400	5200
	90	6600	5900	5400	5000	4700	4500	6100	5600	5200	4900	4600	4400
360x85	40	7600	7100	6700	6400	6100	5800	6800	6500	6200	6000	5800	5600
	90	7100	6400	5800	5500	5100	4900	6500	6000	5600	5300	5000	4800
395x85	40	8100	7600	7200	6900	6600	6300	7300	7000	6700	6500	6200	6000
	90	7600	6900	6300	5900	5600	5300	7000	6400	6000	5700	5400	5200
425x85	40	8500	8000	7700	7300	7000	6800	7700	7400	7100	6900	6600	6400
	90	8000	7300	6800	6300	6000	5700	7400	6800	6400	6100	5800	5600

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. Minimum bearing length = 70 mm at end supports
3. The above table was based on a maximum ceiling mass of 20 kg/m^2
4. Restraint value for slenderness calculations is 1500 mm
5. Not all sizes of SmartLam GL 1S in this table are stocked in each state. Please check with your supplier before ordering
6. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Strutting/hanging beam
AS 4055 classification N1, N2, N3 & N4



Roof Area Supported =A/2 x B/2 Ceiling Load width = X/2

Ceiling mass - 20 kg/m^2

EXAMPLE:

wind speed = N3
sheet roof = 40 kg/m^2
A = 5000 mm, B = 4200 mm
roof area supported = (A/2) x (B/2)
= (5000/2) x (4200/2)
= 5250000 mm^2 **(convert to m^2)**
= 5250000/1000000 = 5.25 m^2
strutting/hanging beam span = 4200 mm
ceiling joist span ('X') = 4400 mm
ceiling load width = ['X' / 2) = 4400/2 = 2200 mm

Enter column at 3600 mm ceiling load width, 6 m^2 roof area supported and read down to a span greater than or equal to 4200 mm

ADOPT: SmartLam GL17S - 265 x 60

Ceiling load width (mm)		1800						3600					
Roof area supported (m^2)		2	4	6	8	10	12	2	4	6	8	10	12
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting/Hanging beam span (mm)											
200x50	*20*	*4300*	*4000*	*3800*	*3500*	*2900*	*2400*	*3700*	*3500*	*3300*	*3100*	*2700*	*2400*
	60	*3900*	*3400*	*2900*	*2600*	*2300*	*1900*	*3500*	*3000*	*2700*	*2500*	*2200*	*1900*
250x50	*20*	*5100*	*4800*	*4500*	*4300*	*4100*	*3700*	*4400*	*4200*	*4100*	*3900*	*3800*	*3500*
	60	*4700*	*4200*	*3800*	*3600*	*3300*	*2900*	*4200*	*3800*	*3600*	*3300*	*3100*	*2900*
200x60	*20*	*4500*	*4200*	*3900*	*3700*	*3400*	*2900*	*3900*	*3700*	*3600*	*3400*	*3200*	*2800*
	60	*4100*	*3600*	*3200*	*2900*	*2600*	*2300*	*3700*	*3300*	*2900*	*2700*	*2500*	*2200*
265x60	*20*	*5600*	*5300*	*5000*	*4800*	*4600*	*4400*	*4800*	*4600*	*4500*	*4300*	*4200*	*4100*
	60	*5200*	*4600*	*4300*	*4000*	*3800*	*3600*	*4600*	*4300*	*4000*	*3800*	*3600*	*3400*
300x60	*20*	*6100*	*5800*	*5500*	*5300*	*5100*	*4900*	*5300*	*5100*	*5000*	*4800*	*4700*	*4600*
	60	*5700*	*5200*	*4800*	*4500*	*4200*	*4000*	*5100*	*4700*	*4400*	*4200*	*4000*	*3900*
330x60	*20*	*6600*	*6300*	*6000*	*5800*	*5600*	*5400*	*5700*	*5500*	*5300*	*5200*	*5100*	*4900*
	60	*6200*	*5600*	*5200*	*4900*	*4600*	*4400*	*5400*	*5100*	*4800*	*4600*	*4400*	*4200*
195x65	20	4600	4200	4000	3800	3600	3400	3900	3700	3600	3400	3200	3100
	60	4100	3600	3200	2900	2600	2400	3700	3300	2900	2700	2500	2300
230x65	20	5200	4900	4600	4400	4200	4000	4400	4300	4100	4000	3800	3700
	60	4800	4200	3900	3600	3300	3100	4200	3900	3600	3400	3100	2900
260x65	20	5700	5400	5100	4900	4700	4500	4900	4700	4500	4400	4300	4100
	60	5300	4700	4300	4000	3800	3600	4600	4300	4000	3800	3600	3400
295x65	20	6300	5900	5700	5400	5200	5000	5400	5200	5000	4900	4700	4600
	60	5800	5300	4900	4500	4300	4100	5100	4800	4500	4300	4100	3900
330x65	20	6800	6500	6200	6000	5700	5600	5900	5700	5500	5400	5200	5100
	60	6400	5800	5400	5000	4800	4500	5600	5300	5000	4700	4500	4300
360x65	20	7300	7000	6700	6400	6200	6000	6300	6100	5900	5800	5600	5500
	60	6900	6300	5800	5500	5200	4900	6000	5700	5400	5100	4900	4700
395x65	20	7800	7500	7200	6900	6700	6500	6700	6500	6400	6200	6100	5900
	60	7400	6800	6300	5900	5600	5400	6500	6100	5800	5500	5300	5100
425x65	20	8200	7900	7600	7400	7100	6900	7100	6900	6700	6600	6400	6300
	60	7800	7200	6700	6300	6000	5800	6800	6500	6200	5900	5700	5500

Strutting/hanging beam
AS 4055 Classification N1, N2, N3 & N4 (Cont'd)

Ceiling mass - 20 kg/m^2

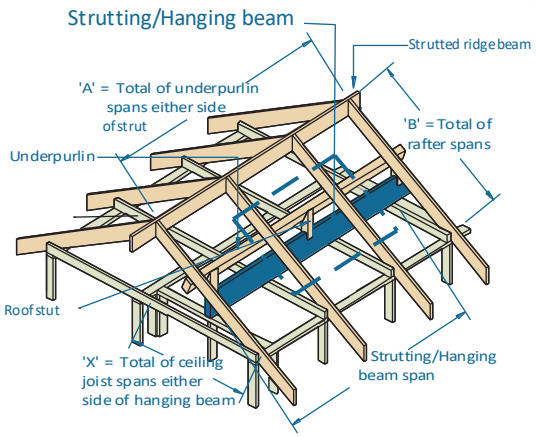
Ceiling load width (mm)		1800						3600					
Roof area supported (m^2)		2	4	6	8	10	12	2	4	6	8	10	12
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting/Hanging beam span (mm)											
200x80	*20*	*4800*	*4500*	*4300*	*4100*	*3900*	*3700*	*4200*	*4000*	*3800*	*3700*	*3600*	*3400*
	60	*4400*	*3900*	*3600*	*3200*	*3000*	*2700*	*3900*	*3600*	*3300*	*3000*	*2800*	*2600*
265x80	*20*	*5900*	*5600*	*5400*	*5200*	*5000*	*4800*	*5100*	*5000*	*4800*	*4700*	*4500*	*4400*
	60	*5500*	*5000*	*4600*	*4300*	*4100*	*3900*	*4900*	*4600*	*4300*	*4100*	*3900*	*3800*
300x80	*20*	*6500*	*6200*	*5900*	*5700*	*5500*	*5300*	*5600*	*5500*	*5300*	*5200*	*5000*	*4900*
	60	*6100*	*5600*	*5200*	*4900*	*4600*	*4400*	*5400*	*5100*	*4800*	*4600*	*4400*	*4200*
330x80	*20*	*7000*	*6700*	*6400*	*6200*	*6000*	*5800*	*6100*	*5900*	*5700*	*5600*	*5500*	*5300*
	60	*6600*	*6000*	*5600*	*5300*	*5000*	*4800*	*5800*	*5500*	*5200*	*5000*	*4800*	*4600*
195x85	20	4900	4500	4300	4100	3900	3700	4200	4000	3800	3700	3600	3400
	60	4500	3900	3600	3200	3000	2700	3900	3600	3300	3000	2800	2600
230x85	20	5500	5200	4900	4700	4500	4300	4700	4600	4400	4300	4100	4000
	60	5100	4600	4200	3900	3700	3500	4500	4200	3900	3700	3500	3300
260x85	20	6100	5700	5500	5200	5000	4800	5200	5000	4900	4700	4600	4500
	60	5600	5100	4700	4400	4100	3900	5000	4600	4400	4100	3900	3800
295x85	20	6700	6300	6100	5800	5600	5400	5700	5600	5400	5200	5100	5000
	60	6200	5700	5200	4900	4700	4400	5500	5100	4900	4600	4400	4200
330x85	20	7200	6900	6600	6400	6200	6000	6200	6100	5900	5700	5600	5500
	60	6800	6200	5800	5400	5200	4900	6000	5600	5300	5100	4900	4700
360x85	20	7700	7400	7100	6900	6600	6400	6700	6500	6300	6200	6000	5900
	60	7300	6700	6300	5900	5600	5400	6400	6100	5800	5500	5300	5100
395x85	20	8200	7900	7600	7400	7200	7000	7100	7000	6800	6600	6500	6400
	60	7800	7200	6800	6400	6100	5800	6900	6500	6200	6000	5700	5500
425x85	20	8700	8400	8100	7800	7600	7400	7500	7300	7200	7000	6900	6700
	60	8300	7700	7200	6800	6500	6200	7300	6900	6600	6300	6100	5900

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a maximum ceiling mass of 20 kg/m^2
3. Minimum bearing length = 70 mm at end supports
4. Restraint value for slenderness calculations is 1500 mm
5. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
6. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Strutting/Hanging beam
AS 4055 classification C1, C2 & C3

Ceiling mass - 20 kg/m^2



Roof Area Supported =A/2 x B/2 Ceiling Load width = X/2

EXAMPLE:
wind speed = N3
sheet roof = 40 kg/m^2
A = 5000 mm, B = 4200 mm
roof area supported = (A/2) x (B/2)
= (5000/2) x (4200/2)
= 5250000 mm^2 **(convert to m^2)**
= 5250000/1000000 = 5.25 m^2
strutting/hanging beam span = 4200 mm
ceiling joist span ('X') = 4400 mm
ceiling load width = ['X' / 2) = 4400/2 = 2200 mm

Enter column at 3600 mm ceiling load width, 6 m^2 roof area supported and read down to a span greater than or equal to 4200 mm

ADOPT: SmartLam GL17S - 250 x 60

Ceiling load width (mm)		1800						3600					
Roof area supported (m^2)		2	4	6	8	10	12	2	4	6	8	10	12
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting/Hanging beam span (mm)											
200x50	*20*	*3600*	*3600*	*2500*	*1900*	*1200*	*NS*	*2500*	*2500*	*2400*	*1800*	*1200*	*NS*
	60	*3600*	*3200*	*2200*	*1700*	*NS*	*NS*	*2500*	*2600*	*2100*	*1600*	*NS*	*NS*
250x50	*20*	*4400*	*4500*	*3800*	*2900*	*2400*	*1800*	*3100*	*3200*	*3200*	*2800*	*2300*	*1700*
	60	*4500*	*4200*	*3400*	*2600*	*2100*	*1200*	*3200*	*3200*	*3200*	*2500*	*2000*	*1200*
200x60	*20*	*3900*	*4000*	*3000*	*2300*	*1800*	*1300*	*2700*	*2800*	*2800*	*2200*	*1800*	*1200*
	60	*4000*	*3600*	*2600*	*2000*	*1500*	*NS*	*2800*	*2900*	*2500*	*1900*	*1400*	*NS*
265x60	*20*	*5100*	*5200*	*5000*	*3900*	*3200*	*2700*	*3600*	*3700*	*3700*	*3700*	*3100*	*2600*
	60	*5200*	*4600*	*4300*	*3400*	*2800*	*2300*	*3700*	*3800*	*3800*	*3300*	*2700*	*2300*
300x60	*20*	*5800*	*5800*	*5500*	*4900*	*4000*	*3400*	*4100*	*4100*	*4200*	*4200*	*3900*	*3300*
	60	*5700*	*5200*	*4800*	*4400*	*3500*	*3000*	*4100*	*4200*	*4300*	*4200*	*3400*	*2900*
330x60	*20*	*6400*	*6300*	*6000*	*5800*	*4800*	*4100*	*4500*	*4500*	*4600*	*4600*	*4600*	*4000*
	60	*6200*	*5600*	*5200*	*4900*	*4300*	*3600*	*4600*	*4600*	*4700*	*4600*	*4100*	*3500*
195x65	20	4300	4200	3400	2800	2200	1900	3000	3100	3100	2700	2200	1800
	60	4100	3600	3200	2400	1900	1600	3100	3100	2900	2400	1900	1600
230x65	20	5100	4900	4400	3800	3100	2600	3600	3600	3600	3600	3000	2600
	60	4800	4200	3900	3300	2700	2300	3600	3700	3600	3200	2600	2200
260x65	20	5700	5400	5100	4500	3900	3300	4000	4100	4100	4100	3800	3200
	60	5300	4700	4300	4000	3400	2900	4100	4200	4000	3800	3300	2800
295x65	20	6300	5900	5700	5400	4900	4200	4600	4600	4600	4700	4700	4100
	60	5800	5300	4900	4500	4300	3700	4600	4700	4500	4300	4100	3600
330x65	20	6800	6500	6200	6000	5700	5200	5100	5100	5200	5200	5200	5000
	60	6400	5800	5400	5000	4800	4500	5100	5200	5000	4700	4500	4300
360x65	20	7300	7000	6700	6400	6200	6000	5600	5600	5600	5700	5600	5500
	60	6900	6300	5800	5500	5200	4900	5600	5700	5400	5100	4900	4700
395x65	20	7800	7500	7200	6900	6700	6500	6100	6100	6200	6200	6100	5900
	60	7400	6800	6300	5900	5600	5400	6200	6100	5800	5500	5300	5100
425x65	20	8200	7900	7600	7400	7100	6900	6600	6600	6600	6600	6400	6300
	60	7800	7200	6700	6300	6000	5800	6600	6500	6200	5900	5700	5500

Strutting/Hanging beam
AS 4055 classification C1, C2 & C3

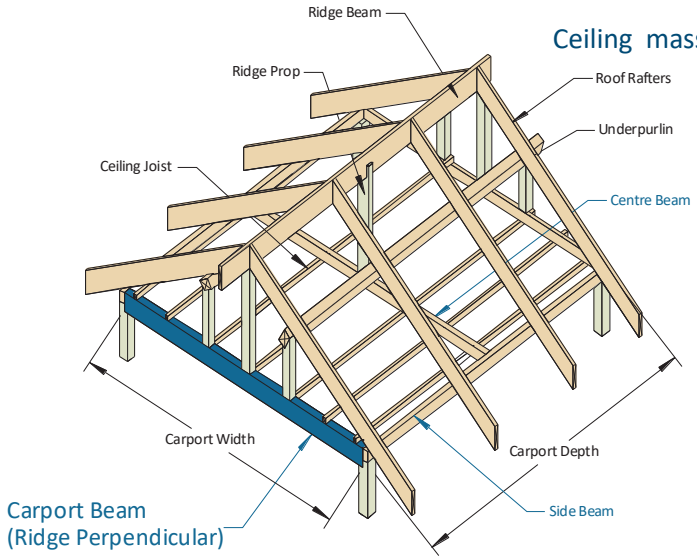
Ceiling mass - 20 kg/m^2

Ceiling load width (mm)		1800						3600					
Roof area supported (m^2)		2	4	6	8	10	12	2	4	6	8	10	12
Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Maximum recommended Strutting/Hanging beam span (mm)											
200x80	*20*	*4500*	*4500*	*3900*	*3000*	*2400*	*2000*	*3200*	*3200*	*3200*	*2900*	*2400*	*2000*
	60	*4400*	*3900*	*3400*	*2600*	*2100*	*1800*	*3200*	*3300*	*3300*	*2600*	*2100*	*1700*
265x80	*20*	*5900*	*5600*	*5400*	*5100*	*4200*	*3500*	*4200*	*4200*	*4300*	*4300*	*4000*	*3400*
	60	*5500*	*5000*	*4600*	*4300*	*3700*	*3100*	*4200*	*4300*	*4300*	*4100*	*3600*	*3000*
300x80	*20*	*6500*	*6200*	*5900*	*5700*	*5300*	*4500*	*4700*	*4800*	*4800*	*4800*	*4900*	*4300*
	60	*6100*	*5600*	*5200*	*4900*	*4600*	*3900*	*4800*	*4900*	*4800*	*4600*	*4400*	*3800*
330x80	*20*	*6900*	*6700*	*6400*	*6200*	*6000*	*5400*	*5200*	*5200*	*5300*	*5300*	*5400*	*5100*
	60	*6600*	*6000*	*5600*	*5300*	*5000*	*4700*	*5300*	*5300*	*5200*	*5000*	*4800*	*4600*
195x85	20	4900	4500	3900	3400	2900	2400	3500	3500	3500	3400	2800	2400
	60	4500	3900	3600	3100	2500	2100	3500	3600	3300	3000	2500	2100
230x85	20	5500	5200	4900	4300	3800	3400	4100	4100	4100	4200	3800	3300
	60	5100	4600	4200	3900	3500	2900	4100	4200	3900	3700	3400	2900
260x85	20	6100	5700	5500	5200	4600	4200	4600	4600	4700	4700	4600	4100
	60	5600	5100	4700	4400	4100	3700	4600	4600	4400	4100	3900	3700
295x85	20	6700	6300	6100	5800	5600	5100	5200	5300	5300	5200	5100	5000
	60	6200	5700	5200	4900	4700	4400	5300	5100	4900	4600	4400	4200
330x85	20	7200	6900	6600	6400	6200	6000	5800	5900	5900	5700	5600	5500
	60	6800	6200	5800	5400	5200	4900	5900	5600	5300	5100	4900	4700
360x85	20	7700	7400	7100	6900	6600	6400	6400	6400	6300	6200	6000	5900
	60	7300	6700	6300	5900	5600	5400	6400	6100	5800	5500	5300	5100
395x85	20	8200	7900	7600	7400	7200	7000	7000	6900	6800	6600	6500	6400
	60	7800	7200	6800	6400	6100	5800	6900	6500	6200	6000	5700	5500
425x85	20	8700	8400	8100	7800	7600	7400	7500	7300	7200	7000	6900	6700
	60	8300	7700	7200	6800	6500	6200	7300	6900	6600	6300	6100	5900

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a maximum ceiling mass of 20 kg/m^2
3. Minimum bearing length = 70 mm at end supports
4. Restraint value for slenderness calculations is 1500 mm
5. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
6. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Carport beam - Ridge perpendicular
AS 4055 classification N1, N2, N3 and N4



Ceiling mass - 20 kg/m^2

EXAMPLE:

wind speed = N3
sheet roof - 20 kg/m^2
Carport side depth 5300 mm
Carport beam span 4800 mm

Enter span table at carport depth of 5400 mm, and read down to a span equal to or greater than 4800 mm for a 20 kg/m^2 roof

ADOPT:

SmartLam GL17S - 250 x 50

Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Carport Depth (side)				
		5200	5400	5600	5800	6000
		Maximum recommended carport beam span (mm)				
200x50	*20*	*4400*	*4300*	*4300*	*4300*	*4200*
	70	*3700*	*3600*	*3600*	*3600*	*3500*
250x50	*20*	*5100*	*5100*	*5000*	*5000*	*5000*
	70	*4300*	*4300*	*4200*	*4200*	*4200*
200x60	*20*	*4500*	*4500*	*4500*	*4400*	*4400*
	70	*3800*	*3800*	*3700*	*3700*	*3700*
265x60	*20*	*5500*	*5500*	*5400*	*5400*	*5400*
	70	*4700*	*4600*	*4600*	*4600*	*4500*
300x60	*20*	*6000*	*6000*	*5900*	*5900*	*5900*
	70	*5100*	*5100*	*5000*	*5000*	*5000*
330x60	*20*	*6400*	*6400*	*6300*	*6300*	*6300*
	70	*5500*	*5400*	*5400*	*5400*	*5300*
195x65	20	4600	4600	4500	4500	4500
	70	3800	3800	3800	3700	3700
230x65	20	5200	5100	5100	5100	5000
	70	4300	4300	4300	4200	4200
260x65	20	5700	5600	5600	5500	5500
	70	4800	4700	4700	4600	4600
295x65	20	6200	6100	6100	6000	6000
	70	5200	5200	5100	5100	5000
330x65	20	6700	6600	6600	6500	6500
	70	5700	5600	5600	5500	5500
360x65	20	7100	7100	7000	7000	6900
	70	6000	6000	5900	5900	5800
395x65	20	7600	7500	7500	7400	7400
	70	6500	6400	6300	6300	6200
200x80	*20*	*4800*	*4800*	*4700*	*4700*	*4700*
	70	*4100*	*4000*	*4000*	*4000*	*3900*
265x80	*20*	*5800*	*5800*	*5800*	*5700*	*5700*
	70	*5000*	*4900*	*4900*	*4900*	*4800*
300x80	*20*	*6400*	*6300*	*6300*	*6200*	*6200*
	70	*5500*	*5400*	*5400*	*5300*	*5300*
330x80	*20*	*6800*	*6700*	*6700*	*6600*	*6600*
	70	*5800*	*5800*	*5700*	*5700*	*5700*

Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Carport Depth (side)				
		5200	5400	5600	5800	6000
		Maximum recommended carport beam span (mm)				
195x85	20	4900	4800	4800	4800	4700
	70	4100	4100	4000	4000	4000
230x85	20	5500	5400	5400	5400	5300
	70	4600	4600	4500	4500	4500
260x85	20	6000	5900	5900	5800	5800
	70	5100	5000	5000	4900	4900
295x85	20	6500	6500	6400	6400	6300
	70	5500	5500	5400	5400	5400
330x85	20	7100	7000	7000	6900	6900
	70	6000	6000	5900	5900	5800
360x85	20	7500	7400	7400	7300	7300
	70	6400	6300	6300	6200	6200
395x85	20	8000	7900	7900	7800	7800
	70	6800	6800	6700	6700	6600
195x115	20	5200	5200	5100	5100	5000
	70	4400	4300	4300	4300	4200
230x115	20	5800	5800	5700	5700	5700
	70	4900	4900	4900	4800	4800
260x115	20	6300	6300	6300	6200	6200
	70	5400	5400	5300	5300	5200
295x115	20	6900	6900	6800	6800	6700
	70	5900	5900	5800	5800	5700
330x115	20	7500	7400	7400	7300	7300
	70	6400	6400	6300	6300	6200
360x115	20	7900	7900	7800	7800	7700
	70	6800	6800	6700	6700	6600
395x115	20	8400	8400	8300	8300	8200
	70	7300	7200	7200	7100	7100

Carport beam—Ridge perpendicular
AS 4055 classification C1, C2 and C3

Ceiling mass - 20 kg/m^2

Member size (GL 17S) DxB (mm)	Roof mass (kg/m^2)	Carport Depth (side)				
		5200	5400	5600	5800	6000
		Maximum recommended carport beam span (mm)				
200x50	*20*	*4200*	*4100*	*4000*	*4000*	*3900*
	70	*3700*	*3600*	*3600*	*3600*	*3500*
250x50	*20*	*5100*	*5100*	*5000*	*5000*	*4900*
	70	*4300*	*4300*	*4200*	*4200*	*4200*
200x60	*20*	*4500*	*4500*	*4400*	*4300*	*4300*
	70	*3800*	*3800*	*3700*	*3700*	*3700*
265x60	*20*	*5500*	*5500*	*5400*	*5400*	*5400*
	70	*4700*	*4600*	*4600*	*4600*	*4500*
300x60	*20*	*6000*	*6000*	*5900*	*5900*	*5900*
	70	*5100*	*5100*	*5000*	*5000*	*5000*
330x60	*20*	*6400*	*6400*	*6300*	*6300*	*6300*
	70	*5500*	*5400*	*5400*	*5400*	*5300*
195x65	20	4600	4600	4500	4500	4500
	70	3800	3800	3800	3700	3700
230x65	20	5200	5100	5100	5100	5000
	70	4300	4300	4300	4200	4200
260x65	20	5700	5600	5600	5500	5500
	70	4800	4700	4700	4600	4600
295x65	20	6200	6100	6100	6000	6000
	70	5200	5200	5100	5100	5000
330x65	20	6700	6600	6600	6500	6500
	70	5700	5600	5600	5500	5500
360x65	20	7100	7100	7000	7000	6900
	70	6000	6000	5900	5900	5800
395x65	20	7600	7500	7500	7400	7400
	70	6500	6400	6300	6300	6200
200x80	*20*	*4800*	*4800*	*4700*	*4700*	*4700*
	70	*4100*	*4000*	*4000*	*4000*	*3900*
265x80	*20*	*5800*	*5800*	*5800*	*5700*	*5700*
	70	*5000*	*4900*	*4900*	*4900*	*4800*
300x80	*20*	*6400*	*6300*	*6300*	*6200*	*6200*
	70	*5500*	*5400*	*5400*	*5300*	*5300*
330x80	*20*	*6800*	*6700*	*6700*	*6600*	*6600*
	70	*5800*	*5800*	*5700*	*5700*	*5700*

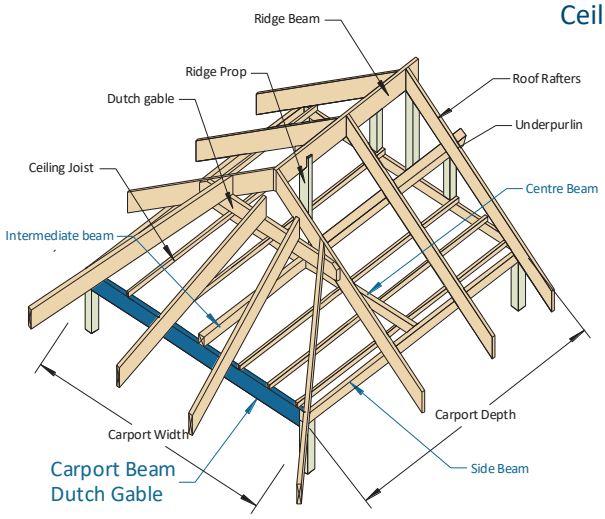
Member size (GL 17S) DxB (mm)	Roof mass (kg/m^2)	Carport Depth (side)				
		5200	5400	5600	5800	6000
		Maximum recommended carport beam span (mm)				
195x85	20	4900	4800	4800	4800	4700
	70	4100	4100	4000	4000	4000
230x85	20	5500	5400	5400	5400	5300
	70	4600	4600	4500	4500	4500
260x85	20	6000	5900	5900	5800	5800
	70	5100	5000	5000	4900	4900
295x85	20	6500	6500	6400	6400	6300
	70	5500	5500	5400	5400	5400
330x85	20	7100	7000	7000	6900	6900
	70	6000	6000	5900	5900	5800
360x85	20	7500	7400	7400	7300	7300
	70	6400	6300	6300	6200	6200
395x85	20	8000	7900	7900	7800	7800
	70	6800	6800	6700	6700	6600
195x115	20	5200	5200	5100	5100	5000
	70	4400	4300	4300	4300	4200
230x115	20	5800	5800	5700	5700	5700
	70	4900	4900	4900	4800	4800
260x115	20	6300	6300	6300	6200	6200
	70	5400	5400	5300	5300	5200
295x115	20	6900	6900	6800	6800	6700
	70	5900	5900	5800	5800	5700
330x115	20	7500	7400	7400	7300	7300
	70	6400	6400	6300	6300	6200
360x115	20	7900	7900	7800	7800	7700
	70	6800	6800	6700	6700	6600
395x115	20	8400	8400	8300	8300	8200
	70	7300	7200	7200	7100	7100

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a maximum ceiling mass of 20 kg/m^2
3. Minimum bearing length = 70 mm at end supports
4. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
5. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S

Carport beam - Hip and Dutch Gable over opening
AS 4055 classification N1, N2, N3 and N4

Ceiling mass - 20 kg/m^2



EXAMPLE:

wind speed = N3
sheet roof - 20 kg/m^2
Carport side depth 5300 mm
Carport beam span 4800 mm

Enter span table at carport depth of 5400 mm, and read down to a span equal to or greater than 4800 mm for a 20 kg/m^2 roof

ADOPT:

SmartLam GL17S - 250 x 50

Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Carport Depth (side)				
		5200	5400	5600	5800	6000
		Maximum recommended carport beam span (mm)				
200x50	*20*	*4600*	*4500*	*4500*	*4500*	*4400*
	70	*4000*	*3900*	*3900*	*3900*	*3900*
250x50	*20*	*5300*	*5300*	*5300*	*5200*	*5200*
	70	*4700*	*4600*	*4600*	*4600*	*4500*
200x60	*20*	*4700*	*4700*	*4700*	*4600*	*4600*
	70	*4100*	*4100*	*4100*	*4000*	*4000*
265x60	*20*	*5800*	*5700*	*5700*	*5600*	*5600*
	70	*5100*	*5000*	*5000*	*5000*	*4900*
300x60	*20*	*6300*	*6200*	*6200*	*6100*	*6100*
	70	*5600*	*5500*	*5500*	*5400*	*5400*
330x60	*20*	*6700*	*6600*	*6600*	*6600*	*6500*
	70	*5900*	*5900*	*5900*	*5800*	*5800*
195x65	*20*	*4800*	*4800*	*4700*	*4700*	*4700*
	70	*4200*	*4200*	*4100*	*4100*	*4100*
230x65	*20*	*5400*	*5400*	*5300*	*5300*	*5300*
	70	*4700*	*4700*	*4700*	*4600*	*4600*
260x65	*20*	*5900*	*5900*	*5800*	*5800*	*5700*
	70	*5200*	*5100*	*5100*	*5100*	*5000*
295x65	*20*	*6500*	*6400*	*6400*	*6300*	*6300*
	70	*5700*	*5600*	*5600*	*5500*	*5500*
330x65	*20*	*7000*	*6900*	*6900*	*6800*	*6800*
	70	*6200*	*6100*	*6100*	*6000*	*6000*
360x65	*20*	*7400*	*7400*	*7300*	*7300*	*7200*
	70	*6600*	*6500*	*6400*	*6400*	*6300*
395x65	*20*	*7900*	*7900*	*7800*	*7800*	*7700*
	70	*7000*	*6900*	*6900*	*6800*	*6800*
200x80	*20*	*5000*	*5000*	*4900*	*4900*	*4900*
	70	*4400*	*4400*	*4300*	*4300*	*4300*
265x80	*20*	*6100*	*6000*	*6000*	*6000*	*5900*
	70	*5400*	*5400*	*5300*	*5300*	*5200*
300x80	*20*	*6600*	*6600*	*6500*	*6500*	*6400*
	70	*5900*	*5800*	*5800*	*5800*	*5700*
330x80	*20*	*7000*	*7000*	*6900*	*6900*	*6900*
	70	*6300*	*6200*	*6200*	*6200*	*6100*

Member size (GL17S) DxB (mm)	Roof mass (kg/m^2)	Carport Depth (side)				
		5200	5400	5600	5800	6000
		Maximum recommended carport beam span (mm)				
195x85	20	5100	5100	5000	5000	5000
	70	4500	4400	4400	4400	4300
230x85	20	5700	5700	5600	5600	5600
	70	5000	5000	4900	4900	4900
260x85	20	6200	6200	6200	6100	6100
	70	5500	5400	5400	5400	5300
295x85	20	6800	6800	6700	6700	6600
	70	6000	6000	5900	5900	5800
330x85	20	7300	7300	7300	7200	7200
	70	6500	6500	6400	6400	6300
360x85	20	7800	7700	7700	7600	7600
	70	6900	6900	6800	6800	6700
395x85	20	8300	8200	8200	8100	8100
	70	7400	7300	7300	7200	7200
195x115	20	5400	5400	5300	5300	5300
	70	4800	4700	4700	4700	4600
230x115	20	6100	6000	6000	5900	5900
	70	5400	5300	5300	5200	5200
260x115	20	6600	6600	6500	6500	6400
	70	5900	5800	5800	5700	5700
295x115	20	7200	7100	7100	7000	7000
	70	6400	6300	6300	6300	6200
330x115	20	7700	7700	7600	7600	7600
	70	6900	6900	6800	6800	6700
360x115	20	8200	8100	8100	8100	8000
	70	7400	7300	7200	7200	7100
395x115	20	8700	8700	8600	8600	8500
	70	7900	7800	7700	7700	7600

Carport beam - Hip and Dutch Gable over opening
AS 4055 classification C1, C2 and C3

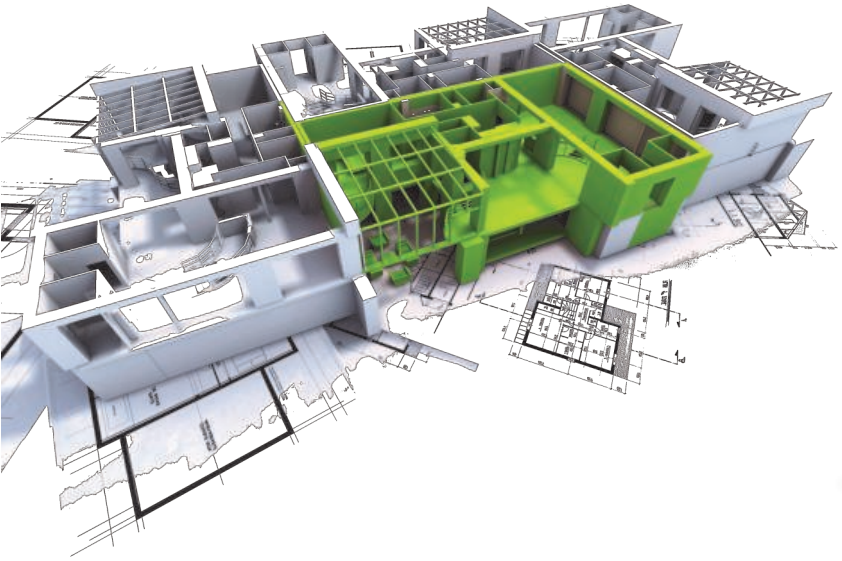
Ceiling mass - 20 kg/m^2

Member size (GL 17S) DxB (mm)	Roof mass (kg/m^2)	Carport Depth (side)				
		5200	5400	5600	5800	6000
		Maximum recommended carport beam span (mm)				
200x50	*20*	*4600*	*4500*	*4500*	*4500*	*4400*
	70	*4000*	*3900*	*3900*	*3900*	*3900*
250x50	*20*	*5300*	*5300*	*5300*	*5200*	*5200*
	70	*4700*	*4600*	*4600*	*4600*	*4500*
200x60	*20*	*4700*	*4700*	*4700*	*4600*	*4600*
	70	*4100*	*4100*	*4100*	*4000*	*4000*
265x60	*20*	*5800*	*5700*	*5700*	*5600*	*5600*
	70	*5100*	*5000*	*5000*	*5000*	*4900*
300x60	*20*	*6300*	*6200*	*6200*	*6100*	*6100*
	70	*5600*	*5500*	*5500*	*5400*	*5400*
330x60	*20*	*6700*	*6600*	*6600*	*6600*	*6500*
	70	*5900*	*5900*	*5900*	*5800*	*5800*
195x65	20	4800	4800	4700	4700	4700
	70	4200	4200	4100	4100	4100
230x65	20	5400	5400	5300	5300	5300
	70	4700	4700	4700	4600	4600
260x65	20	5900	5900	5800	5800	5700
	70	5200	5100	5100	5100	5000
295x65	20	6500	6400	6400	6300	6300
	70	5700	5600	5600	5500	5500
330x65	20	7000	6900	6900	6800	6800
	70	6200	6100	6100	6000	6000
360x65	20	7400	7400	7300	7300	7200
	70	6600	6500	6400	6400	6300
395x65	20	7900	7900	7800	7800	7700
	70	7000	6900	6900	6800	6800
200x80	*20*	*5000*	*5000*	*4900*	*4900*	*4900*
	70	*4400*	*4400*	*4300*	*4300*	*4300*
265x80	*20*	*6100*	*6000*	*6000*	*6000*	*5900*
	70	*5400*	*5400*	*5300*	*5300*	*5200*
300x80	*20*	*6600*	*6600*	*6500*	*6500*	*6400*
	70	*5900*	*5800*	*5800*	*5800*	*5700*
330x80	*20*	*7000*	*7000*	*6900*	*6900*	*6900*
	70	*6300*	*6200*	*6200*	*6200*	*6100*

Member size (GL 17S) DxB (mm)	Roof mass (kg/m^2)	Carport Depth (side)				
		5200	5400	5600	5800	6000
		Maximum recommended carport beam span (mm)				
195x85	20	5100	5100	5000	5000	5000
	70	4500	4400	4400	4400	4300
230x85	20	5700	5700	5600	5600	5600
	70	5000	5000	4900	4900	4900
260x85	20	6200	6200	6200	6100	6100
	70	5500	5400	5400	5400	5300
295x85	20	6800	6800	6700	6700	6600
	70	6000	6000	5900	5900	5800
330x85	20	7300	7300	7300	7200	7200
	70	6500	6500	6400	6400	6300
360x85	20	7800	7700	7700	7600	7600
	70	6900	6900	6800	6800	6700
395x85	20	8300	8200	8200	8100	8100
	70	7400	7300	7300	7200	7200
195x115	20	5400	5400	5300	5300	5300
	70	4800	4700	4700	4700	4600
230x115	20	6100	6000	6000	5900	5900
	70	5400	5300	5300	5200	5200
260x115	20	6600	6600	6500	6500	6400
	70	5900	5800	5800	5700	5700
295x115	20	7200	7100	7100	7000	7000
	70	6400	6300	6300	6300	6200
330x115	20	7700	7700	7600	7600	7600
	70	6900	6900	6800	6800	6700
360x115	20	8200	8100	8100	8100	8000
	70	7400	7300	7200	7200	7100
395x115	20	8700	8700	8600	8600	8500
	70	7900	7800	7700	7700	7600

NOTES:

1. D = member depth, B = member breadth, NS = not suitable.
2. The above table was based on a maximum ceiling mass of 20 kg/m^2
3. Minimum bearing length = 70 mm at end supports
4. Not all sizes of SmartLam GL 17S in this table are stocked in each state. Please check with your supplier before ordering
5. Sizes in *Italics* are for a Natural Durability class 3 Hardwood GL17S



SMARTFRAME Design Library

Design Library Contents	Interactive	Printable	PC
Specifications software	✓	✓	✓
Technical Support	✓		✓
Design Guides (PDF)		✓	✓
Technical Illustrations		✓	✓
Fixing Details		✓	✓

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