



**Simple  
Framing  
System**<sup>®</sup>

A Builder Guide for  
Floor & Roof Framing  
Construction

Engineered wood products represent a bold step forward, not only in terms of their ease of use, excellent performance, and cost saving characteristics, but in the environmental credentials that they offer to specifiers and end users who are increasingly required to prove the eco ratings of the buildings that they construct.

Unlike conventional timber, the performance of engineered wood products can be accurately predicted which means we can fine-tune a design so that exactly the right amount of product is employed for any given situation. Put simply, there



**SFI**  
CERTIFIED  
SOURCING

is no need to over-specify, saving both money and resources. In addition, the product's manufacture requires no ancient or virgin timber and leads to very little wastage since virtually the whole tree is utilized – typically at least a third less trees are required than to develop the same profile conventionally. It is

also worth remembering that, due to the manufacturing process, engineered wood products are stronger than the solid wood alternative.

When it comes to comparisons with steel and concrete, figures for embodied energy and manufacturing emissions leave engineered wood products as the clear environmental favourite every time. Properly managed, harvesting trees and protecting the environment are indeed compatible objectives.

Quite rightly, the timber industry is under the environmental microscope, and it is ever more important for us all to prove that we are responsible through third-party auditing processes. At Boise, we are justifiably proud of our record. We are a founding member of the Sustainable Forestry Initiative (SFI®) programme and the company's fibre procurement systems are certified to the SFI® standards while our engineered wood products qualify under the SFI's fibre source on-product labeling programme.

In 2006, Boise became a SFI® chain of custody system so the UK government departments can identify the percentage content of timber from SFI® managed forests and assure buyers that the timber is from a sustainable source. The SFI® scheme joins the Canadian Standards Association (CSA) Forest Stewardship Council (FSC) and The Programme for the Endorsement of Forest Certification (PEFC) schemes in providing assurance of both legal and sustainable timber. We have led the UK market since January 2005 by being the first company permitted to stamp our engineered wood products with the SFI® label. This label means that the facility that produced the product bearing it is part of a programme whose participants plant more than 1.7 million trees every day.

The SFI® programme provides a standard for integrating the sustainable growing and harvesting of trees with protection of wildlife, plants, soil, and water quality. It is the only forest certification system with both land management and wood fibre procurement performance criteria and is founded on the concept of continuous improvement. There are currently over 150 million acres of forest-land in North America enrolled in the SFI® programme, making it among the world's largest sustainable forestry programmes.

SFI® is governed by a 15-member, multi-stakeholder Sustainable Forestry Board made up of five members from the forest industry, five representatives from the environmental community, and five "other" stakeholders from academia, small private landowners, and other interested groups.

Boise undertakes SFI® certification audits annually. Trained auditors from PricewaterhouseCoopers conduct the audits with a team of technical auditors specializing in hydrology, wildlife biology, roads, harvesting, and best management practices.

During its most recent audit, PricewaterhouseCoopers cited a number of good sustainable management practices. *For example, Boise's advance purchasing of wood chips, which allows chip vendors to plan volumes in advance, thus reducing the possibility of harvesting in unsuitable locations or during bad weather just to fulfill a contract.* Also noted was the company's high level of professional leadership on numerous local, state, and national committees and organizations.

Claims about the environmental performance of building materials and products are easy to make, but their sustainability is difficult to substantiate without a universal measuring system. We believe it is important to have a full understanding of how products compare so we are now pursuing the aim of profiling our products to help designers and specifiers ensure that they are selecting the materials that will best fulfill a sustainable brief.

The more participants in the various certification programmes, the faster the building green movement will grow. Timber has always been an important building material but now, with the move towards environmentally conscious building gathering momentum, we must be ready with innovative timber products that shout their environmental credentials and remove any doubt from people's minds.

## EcoHomes

EcoHomes is an assessment method in the UK that rates the environmental qualities of new and renovated dwellings. Buildings are verified by independent assessors and rated on a scale of pass, good, very good and excellent. The scheme rewards developers who improve the environmental performance of a development through good design, rather than through high capital cost solutions. EcoHomes is designed to help tackle climate change, resource use, impact on wildlife and balance these issues against the need to provide safe and healthy living and a high quality of life. For more details about EcoHomes please visit the website [www.ecohomes.org](http://www.ecohomes.org).

During 2005 Boise commissioned the BRE to carry out a life cycle analysis, environmental profile and EcoHomes points rating on our BCI® Joist products. The results and subsequent Green Guide rating can be found on line at [www.redbooklive.com](http://www.redbooklive.com) in the section for domestic specification or we can supply details upon request. In summary, Boise has complied with the requirements identified in the scheme SD 028 and is authorised to use the BRE Certificate Mark on all publications related to the environmental profile of our BCI® Joist products. Certificate number ENP 340, issue 1, 26/06/2006 to 25/06/2009 refers.



Our undertaking to carry out this assessment in conjunction with the SFI® Chain of Custody certification for both our BCI® Joist and VERSA-LAM® beam manufacturing facilities is testament to our commitment to the UK construction industry and the evolving specification market.

For more information on  
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Feature	Benefit
Laminated Veneer Lumber (LVL)	Stable, strong and reliable engineered wood product that will not shrink, twist, cup, or bow like solid timber.
Tight manufacturing tolerances	Accurate product sizes for installation into service class 1 & 2 environments. No shrinkage - no squeaks.
Wide range of products	Competitive and compatible solutions.
Clean appearance	Inspires product confidence for the builder, inspector, and home buyer.
Stiff and strong	Quiet, flat floors – even ceilings. No herringbone strutting / blocking required at the mid span.
Light in weight	Easy to handle.
Eased edges	Reduces potential splinter injuries.
Pre-stamped knock out holes	Easy access for wiring and plumbing.
High performance OSB web	Accommodates holes for larger services if necessary in accordance with guidelines detailed in this technical guide.
BC CALC® and BC FRAMER®	Computer-aided design. Full supporting calculations and layout drawings.
Full layout drawings	Easy-to-read, job-specific joist layout plans.
Precise component packages	Easy to install, no waste.
Installation guide	Easy-to-read installation instructions.
Technical guide	Comprehensive technical details.
Technical support team	Expert help is on hand.
Site trimming	Easy to cut on site using basic hand tools.
Materially efficient	Wise use of natural resources. The peeling process in the manufacture of LVL is a very efficient use of round log raw materials. The BCI® Joist is a very efficient structural shape.
Quality assured – BBA approved	Clean, consistent, reliable products.
Lifetime guarantee	Instills confidence in the products and the construction.



BCI® Joists and VERSA-LAM® Products are approved for use by the BBA.

### Lifetime Guaranteed Quality and Performance

Boise warrants its BCI® Joist, VERSA-LAM®, and ALLJOIST® products to comply with our specifications, to be free from defects in material and workmanship, and to meet or exceed our performance specifications for the normal and expected life of the structure when correctly stored, installed and used according to our Installation Guide.



**Engineered Wood Products**

Certificate Number 036/007





## The SIMPLE FRAMING SYSTEM®

BCI® Joists and VERSA-LAM® Products  
for floor and roof framing applications





## BCI® Joists

A world leader in high quality engineered wood products, Boise Engineered Wood Products offers a wide range of BCI® Joists.

BCI® Joists are manufactured to precise specifications using VERSA-LAM® laminated veneer lumber flanges bonded to an orientated strand board (OSB) web.

The use of VERSA-LAM® as the flange material avoids the inherent problems that plague solid timber such as shrinking, twisting, cupping, and bowing, all of which contribute to squeaking floors.

Light in weight, yet immensely strong, the long-length BCI® Joists are quick and easy to install. Delivered to site in precise precut component packages, the SIMPLE FRAMING SYSTEM® dramatically reduces installation times and the potential for error.

Straight and true, BCI® Joists create flat floors and even ceilings. Pre-stamped holes in the OSB web allows speedy installation of wiring and plumbing. Other holes can be made in the web to accommodate larger services.



## VERSA-LAM®

VERSA-LAM® provides the foundation for the SIMPLE FRAMING SYSTEM®.

Manufactured by bonding high-specification rotary-peeled timber veneers to create huge billets of engineered wood, VERSA-LAM® is one of the strongest and most reliable engineered wood products available in the UK today.

Available in a wide range of sizes, VERSA-LAM® is an excellent partner for BCI® Joists in the SIMPLE FRAMING SYSTEM® and can also be used for a variety of purposes including floor and roof beams, lintels, purlins, columns, studs, door stock, and more.

VERSA-LAM® is popular amongst timber frame designers and manufacturers with a range of sizes suitable for timber frame as well as masonry construction.

Boise leads the world in new veneer technology. Our Product Development Team continuously researches new veneer species and bonding techniques to further push the boundaries of engineered wood products.





## VERSA-LAM® as Rim

VERSA-LAM® is available in a 38mm width for use as a high grade rim board in timber frame applications. It can also be used as a stairwell close and in certain beam applications.

VERSA-LAM® has been specially developed to withstand high compressive stresses perpendicular to the grain. This makes it ideal as a rimboard in timber frame construction or to transmit the vertical loads from load-bearing walls through the floor construction to the load-bearing walls below.

The use of VERSA-LAM® can reduce the need for squash blocks in high load applications.

VERSA-LAM® is available in a range of depths to suit the other components in the SIMPLE FRAMING SYSTEM®.



## I-bloc™ UK Patent GB2406343B

I-bloc™ is a specially profiled LVL joist cap designed to enable BCI® Joists to be built into masonry external and party walls whilst meeting all current Building Regulation and NHBC technical requirements.

There is no need for extensive propping as the I-bloc™ allows decked floors to be used as a safe working platform. There is also no need for additional restraint straps parallel to the joists as they sit on the wall with a minimum 90mm bearing.

Using the I-bloc™ stops air leakage around the joist ends in compliance with Building Regulations, Part L1 (air leakage). Once installed, it eliminates the need for a silicone sealant finish at the joist ends on the inner blockwork leaf, subject to good workmanship when keying with mortar.

The I-bloc™ is quick and easy to use; it is simply a push fit with no mechanical fixings or glue required. It can be used on perimeter and party walls in compliance with Building Regulations, Part B (fire) and Part E (sound) requirements.





Engineered Wood Products

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System®

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