

Case Study

Partner: WoodBarn (India)

Project: Resort style double laminated Tongue and Groove (T&G) house



**Canadian
Wood**

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T & G house on display at
Indiawood 2020

Canadian Wood species
The fine art of working with wood

Manufacturer Profile

WoodBarn (India) is a pioneer in creating sustainable and eco-friendly wooden structures in India. They've been in business of erecting Tongue and Groove houses for over 14 years, building homes and resorts that are energy efficient. Some of their key projects include Tamara Coorg, Pancheri, Radisson Blue Dharamshala, ITC Dharamshala and some of the Club Mahindra properties.

Initially, India provided design drawings to China and Finland where fabrication took place using S-P-F. Last year, due to the rising cost of import products, WoodBarn decided to set up a factory in India to make T&G houses and imported the machinery from their supplier in Finland. Canadian Wood took this as an opportunity to collaborate on a project with WoodBarn (India) to make their first T&G house in India using S-P-F for its structural applications. This house was showcased at the Indiawood show in Feb/Mar 2020 in Bengaluru and now is relocated at a popular tourist location in North Goa.

Assisted by Canadian Wood and driven by proactive planning and design, WoodBarn (India) worked towards reducing work on site to be able to deliver in flat pack form to Bengaluru trade fair site. Later this would help them deliver T&G structures to even the most remote areas.



Challenge

In recent times, building with wood in India has been largely limited to posts-and-beam, roofing and other decorative parts of construction. The use of wood in structural applications has met resistance due to skepticism regarding its ability to withstand weather conditions in India that include high humidity, extreme temperature change and the safety aspect. In addition is the fear of high maintenance and termite attacks.



Opportunity

The hospitality industry is increasingly looking at building resorts using wood in structural applications, particularly in the case of beach and hill resorts where permits are often issued for “temporary housing” only. This is a sizeable opportunity for T&G style housing in resort accommodation, which is already well established. There is an upward trend in increased usage of wood in the home category by leading architects, manufacturers and high net worth individuals (HNIs) looking at villas, country homes and farmhouses as a lifestyle statement.

Manufacturers like WoodBarn (India) are increasingly aware of the growing market potential for wooden houses and want to offer quick, affordable solutions for the same.

Product Trial

- Spruce-Pine-Fir (S-P-F) J grade was used to build all the structural elements of the house such as walls and floor.
- The glue laminated wall structure with T&G employed by WoodBarn (India) increased the wall thickness to 70mm which enhanced strength, stiffness, wall span and insulation values.
- Every component was pre-coated prior to leaving the factory with only a final coat required after construction.
- The house was put together by the manufacturer on site in 12 hours.

The interiors of the house optimised on the opportunity to showcase different applications of other species of Canadian wood, examples being –

- Ceiling and soffit in western hemlock done by WoodBarn (India).
- Doors and windows in yellow cedar by Artius showcased durability.
- Intricately hand painted furniture in western hemlock by Bramola adorned the living room.
- Carved furniture pieces and cabinets in yellow cedar by EvoWood embellished the bedroom and the washroom area.

Key Takeouts

Functional, organic and beautiful wood in construction.

- The display home allows potential manufacturers and customers to experience the look, feel and quality of versatile timber construction.
- S-P-F is graded and grade-stamped in Canada meeting North American standards of strength and safety. The wood is mature, fine grain, stable and light in colour with smaller knot structure. It is easily worked, glued, nailed and stained.
- The house with its laminated T&G construction (70mm) and attention to detail elevated the standards of quality, reliability and consumer appeal in this sector which has been undermined by unskilled manufacturers offering low cost rudimentary structures that do not last or perform.



Why use Canadian Wood?

Sustainable, Green Building Material

British Columbia (B.C.) is Canada and the world's leader in sustainable forest management. The rigor of B.C.'s forest management laws is demonstrated by third-party forest certifications (PEFC/FSC).

Long Term Performance

Wood's versatility, character and individuality are unmatched. If it is properly maintained, wood can be reused, repurposed, and reapplied to other projects. Canadian wood species produce stable lumber with consistently straight grain. The wood is easy to work, finish and glue.

Easy to Manufacture

With low-to-moderate density values, species like western hemlock, Douglas-fir, yellow cedar, western red cedar and Spruce-Pine-Fir (S-P-F) are all easy to face-laminate, edge-glue, and/or finger-joint.

Quality Assurance

Canadian wood species from B.C. are separated into a wide variety of grades and each grade is intended for a specific end use. Factory grades are intended for ripping or cross cutting to recover the wood's clear fibre; the clear grades help produce knot-free products in a length range of 8-20 feet. This variety of grades allows buyers to choose a quality that suits both their needs and their price considerations.

Multipurpose Applications

Because of their low tangential to radial shrinkage (T/R) ratio, softwoods typically have better stability than hardwoods. Softwoods are well-suited to many applications across interiors, outdoors and structural uses.



If you're interested in incorporating Canadian wood species into your product line, 'Try Canadian Wood' initiative is an ideal way to use, experiment and understand wood's numerous advantages.

For technical/procurement assistance free of cost, write to FII India at info@canadianwood.in or call +91 2249221600.

For design inspiration and decor ideas using wood, follow us on [f](#) [in](#)



With support from
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Canada

Western hemlock | Douglas-fir | Yellow cedar | Western red cedar | Spruce-Pine-Fir (S-P-F)

FII India has made every attempt to ensure the accuracy and reliability of the information provided with inputs from each trial partner.