

Case Study

Partner: Convent school of Jesus & Mary, Ambala
Project: Acoustic panels in the school auditorium



**Canadian
Wood**

www.canadianwood.in



Using solid wood's sound conduction properties to create acoustic panels

Canadian Wood species:
The fine art of working with wood

Institution Profile

Convent of Jesus and Mary, Ambala Cantonment, Haryana (CJM) is a co-educational senior secondary school affiliated to the Central Board of Secondary Education (CBSE), founded in 1909.

Challenge

Inspired by the light coloured wood and acoustic properties of the materials used in the Sydney Opera House concert hall, the project architect decided to use Canadian Douglas-fir for the construction of acoustic panels in the school auditorium. The 45-feet wide ceiling was a design challenge since the wood was only available in 8 to 20 feet lengths, but that was overcome by end-matching the boards using inner tongue and groove joints.

Opportunity

The species' medium density and ready availability as seasoned ready-to-use lumber were big advantages in completing this project on-time and within budget without compromising on the architect's vision. Each inverse U-panel is 75 feet in length from end-to-end and was made from acoustic backing material featuring 25x100 mm Douglas-fir strips, designed with a 30 mm gap between each strip to create a shadow line.



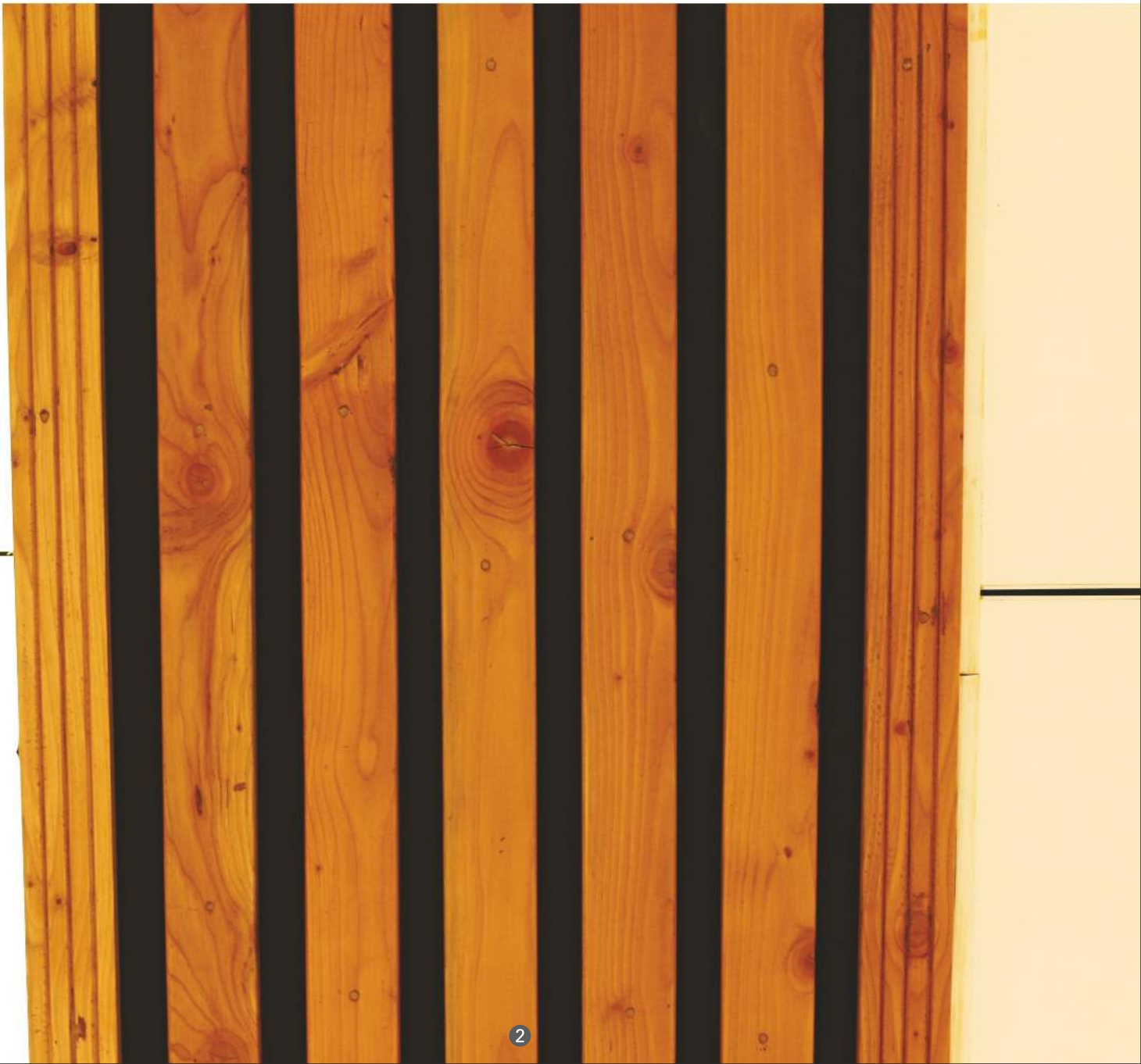
Product Trials

- #2 structural grade Douglas-fir was chosen due to the wood's colour, attractive grain and acoustic properties.
- The use of softwood expedited the installation as it was readily available from stockists on short notice, and was already seasoned and easy to process due to its good working properties.
- Douglas-fir was used to create inverted U-panels which were acoustic in nature but also achieved the warm and natural look and feel desired by the school and their architect.
- The project required more than 4000 lineal feet of Douglas-fir 1x4.

Key Takeouts

Functional, affordable approach

- The relatively simple design concept capitalizes on the natural colour and design values of Canadian softwood.
- The medium density of Douglas-fir and ease of installation is advantageous for panelling, screening and ceiling applications.
- The use of Canadian Douglas-fir is price competitive, both in the cost of the wood and on-site construction.



Why Use Canadian Wood?

Sustainable, Green Building Material

British Columbia, Canada is a world 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. When 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 outdoor, interior and structural uses.



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

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

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

Updated November 2021

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 input from each trial partner.

www.canadianwood.in