

PACIFIC HEMFIR SOUNDSHIELD

PACIFIC HEMFIR

WOOD THAT WORKS

www.PacificHemFir.com



Pacific HemFir is produced from one of the most plentiful tree species in British Columbia. Known for its versatility and performance, HemFir is a wood wonder offering extraordinary value to a wide range of applications. Like the region it represents, Pacific HemFir is beautiful, sustainable and strong. That's why they call it **wood that works.**

Beautiful. Sustainable. Strong.

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Pacific HemFir Partners / **IBC**

OVERVIEW

Introducing Pacific HemFir. **Wood that works.**

Pacific HemFir has it all: superior technical performance; a sustainable and plentiful supply; incredible versatility; treatability; and a beautiful appearance thanks to its straight grain and consistent, light colour. These attributes make Pacific HemFir an excellent choice for everything from structural and industrial applications like framing lumber, heavy timbers and engineered components to joinery and appearance applications known for their ‘wow’ factor.

Pacific HemFir is a combination of Western hemlock (*Tsuga heterophylla*) and Amabilis fir (*Abies amabilis*), two of the most important and popular coniferous species in British Columbia. Growing intermixed, these high value species are nearly identical in appearance and performance, and are harvested, manufactured and marketed together as Pacific HemFir.

Trees of both species are large, commonly reaching heights of 35m to 55m and diameters up to 90 cm or more. They grow tall,

branch-free trunks, a natural growth characteristic that produces large amounts of clear and factory lumber from the log. The wood fibre has high strength and stiffness, combined with even density. It seasons well, hardening as it dries and ages to give excellent durability throughout its lifespan, remaining true to its original freshly milled, pale pastel colour. This desirable softwood is porous and accepts stains well, naturally delivering added richness, utility and value.

Plentiful, workable and versatile.
Choose Pacific HemFir for your next project.



Images Courtesy of Western Forest Products

**B.C. LEADS
IN SUSTAINABILITY
GLOBALLY:**

85%, OR 47 MILLION
HECTARES, OF
INDEPENDENTLY
CERTIFIED FORESTS

A FRACTION OF 1%,
OR 0.35%, OF FORESTS
HARVESTED ANNUALLY

200 MILLION SEEDLINGS
PLANTED ANNUALLY

SUSTAINABILITY

Pacific HemFir. The **sustainable, renewable** choice.

From sapling to sustainable end product, Pacific HemFir is a renewable building material that provides environmental benefits throughout its lifecycle. Grown and harvested within the context of British Columbia’s leading sustainable forest management regime, Pacific HemFir is a natural solution that helps mitigate climate change, locking in carbon over the wood product’s lifetime.

Pacific HemFir is responsibly harvested to sustain and protect forests and their ecosystems. It is sourced directly from the coastal and interior regions of B.C., which adhere to the most stringent forest management standards and practices in the world.

B.C.’s globally-recognized sustainable forest management regime includes strict forest laws, skilled forestry professionals, comprehensive monitoring, compliance and enforcement. Practices protect key environmental values including soil conservation, water quality, fish habitat, critical wildlife habitat and reforestation.

At home and abroad, government, industry and consumers alike are recognizing that wood products sourced from sustainably managed forests are critical in protecting this renewable natural resource and tackling climate change. B.C.’s established track record as a reliable supplier of quality products from sustainably managed forests positions Pacific HemFir as a leading solution for building products.

Not only can healthy forests help in the fight against climate change, sustainably grown and harvested wood products have further lifecycle benefits through their carbon-locking capabilities.

Plus, science shows that it is possible to construct zero-carbon buildings—and even make them a carbon sink—by using renewable materials such as wood. This means that B.C. forest products—particularly fast-growing Pacific HemFir—are the eco-friendly choice, especially compared to non-renewable, carbon intensive materials such as steel or concrete.

Building with sustainable, renewable Pacific HemFir supports a low carbon future, meeting the environmental, social and economic needs of current and future generations.



Images Courtesy of naturallywood.com

PACIFIC HEMFIR
REPORT CARD:

A+ VALUE

A+ VERSATILITY

A STRENGTH

PERFORMANCE

Pacific HemFir. The **smart** choice.

There's a reason why Pacific HemFir is called wood that works. Strong, stiff, dense and durable are just some of the attributes that make Pacific HemFir a high value wood with superior technical performance. When combined with its plentiful supply and sustainability benefits, it's clear why Pacific HemFir is the smart choice.

Pacific HemFir is prized for its high strength to weight ratio, ideal for structural applications particularly where appearance is key. Its beauty is captured in warm, honey-coloured paneling and impressive ceiling spans. The wood will bend but not break which—with its even density and resulting high nail and screw holding ability—offers added safety benefits, especially in areas that are seismically sensitive.

A preferred choice where pressure treated wood is required, Pacific HemFir offers dependable performance thanks to its even density which allows for easy drying and the uniform penetration of preservatives

during the treatment process. This property makes it well suited to outdoor applications like decking and landscape features and gives Pacific HemFir durability and excellent wear resistance on high-traffic areas.

Its strength together with its stiffness make Pacific HemFir a preferred material for use in horizontal components and longer spans—one reason Pacific HemFir is pressure treated and used in industrial applications such as bridges and piers.

In fact, HemFir's strength values have recently been updated in the Canadian Standards Association's CSA O86,

Engineering design in wood standard. This new standard for timbers makes it much easier for engineers, architects, regulators and other users to specify Pacific HemFir in industrial applications where structural calculations are required.

Together these qualities make Pacific HemFir an exceptional fit for most structural, appearance and industrial uses. It can meet many of the structural load bearing and load carrying requirements of residential, light commercial and heavy construction.



Images Courtesy of Western Forest Products and naturallywood.com

PACIFIC HEMFIR FEATURES:

FINE, STRAIGHT GRAIN

CONSISTENT,
LIGHT COLOUR

EXCELLENT STAINABILITY

DESIGN ATTRIBUTES

Pacific HemFir. The beautiful choice.

Pacific HemFir is a natural beauty with its fine grain, pale golden colouring, lack of pitch and fashion savvy stainability. Not only does this make Pacific HemFir an excellent choice for appearance and joinery applications, but its innate strength and other notable attributes make it ideal for structural applications where aesthetics are key.

Pacific HemFir has beautiful, consistent, light-coloured tones ranging between creamy, nearly white to a warm, light straw. Some Pacific HemFir may have a slight lavender cast—which gives it a natural appeal—especially around the knots and in the transition area between the spring and summerwood's growth rings. The heartwood is not distinct. Sometimes small, delicate dark grey or black streaks appear in the wood.

Pacific HemFir is non-resinous and because of its light color,

freedom from pitch, excellent machining properties and fine, straight grain, it takes any stain, finish or preservative like a pro. This combination of light colour and excellent stainability also means that Pacific HemFir can easily be made to look like many other high value wood species such as teak or oak.

Its even texture gives Pacific HemFir a refined appearance and enables it to sand smoothly and glue easily.

Nature and Art Become One

Enveloped by evergreens, the Audain Art Museum prominently features Pacific HemFir throughout, providing a seamless transition from the surrounding natural landscape.

The project's architect, David Shone, Patkau Architects, says the firm carefully selected appearance grade Pacific HemFir for its warmth, beautiful aesthetic qualities and fabrication capabilities.

Openings in the matte black metal exterior are overlaid with inviting, luminous Pacific HemFir casing. Public spaces in the interior, which are visible from the exterior, continue to feature the honey-hued wood. Together this creates a charming effect, giving visitors the sense that the wood is glowing out of the black cladding, mimicking a larger-than-life lantern in the forest. At night and in winter, this impression is particularly stunning as the building radiates warmth.

The use of native Pacific HemFir “resonates with the powerful alpine landscape in which the museum sits and reinforces a connection to the region that inspired much of the art collection within,” says Shone.

The Audain Art Museum—a building truly in harmony with nature.

[LEARN MORE](#)

Does your project need performance
and extraordinary beauty?
Look no further than Pacific HemFir.

Audain Art Museum, Whistler, B.C.
Patkau Architects | Derek Lepper Photography
Image Courtesy of naturallywood.com

Comparative Physical Properties of Pacific HemFir

			HEMFIR	
	HIGH RANGE ◆	LOW RANGE ●	AMABILIS FIR	WESTERN HEMLOCK
Physical Properties				
Density (12%-kg/m³)			445	480
Specific Gravity (12% m.c.)			0.39	0.43
Bending Strength (MOR)(MPa)			68.9	81.1
Stiffness (MOE)(x103MPa)			11.4	12.3
Compression parallel to grain (MPa)			40.8	46.7
Compression perpendicular to grain (MPa)			3.6	4.5
Shear (MPa)			7.5	6.5
Cleavage (N/mm)			36.8	37.5
Dimensional stability			9.2	7.8
(Shrinkage % green to O.D.)			4.4	4.2
Hardness (N)			1820	2740
Durability				
Natural durability (approx. life in contact with ground)	>10 yrs	≤ 10 yrs	●	●
Treatability (preservatives or fire)	permeable – moderately resistant	resistant – extremely resistant	◆	◆
Drying				
Drying rate	rapid – moderate	fairly slow – very slow	◆	◆
Tendency to check during drying	absent or easily controllable	controllable with some care	◆	◆
Tendency to distortion during drying	absent – slight	moderate	◆	●



Images Courtesy of naturallywood.com

			HEMFIR	
	HIGH RANGE	LOW RANGE	AMABILIS FIR	WESTERN HEMLOCK
	◆	●		
Workability				
Machining (planing/turning/moulding/ mortising/boring, etc.)	good – excellent	fair	◆	◆
Blunting	very little/slight – little/slight	moderate	◆	◆
Nailing/resistance to splitting	well – excellent	poor – satisfactory	◆	◆
Screw/nail holding	good – excellent	satisfactory	◆	◆
Gluing	w/out difficulty – exceptional	difficult – satisfactory	◆	◆
Finishing				
Natural colour: whitsh ¹ , lt. buff ² , yellwsh-brn ³			1,2,3	1,3
Paint finishing	good – excellent	poor – satisfactory	◆	◆
Stain finishing	good – excellent	poor – satisfactory	◆	◆
Tendency to resin exudation	absent or infrequent after drying	acceptability depends on finish to be used and visual standards required	◆	◆
Miscellaneous Properties				
Tendency to corrode ferrous metals	likely	unlikely	●	●
Becomes stained in contact with ferrous metals	likely	unlikely	●	●

PACIFIC HEMFIR SOUNDSHIELD FENCING

Better fences make better neighbours

Introducing: the Pacific HemFir SoundShield

A sustainable and carbon neutral solution to noise reduction

British Columbia communities looking for innovative ways to reduce noise and their environmental impact are finding the ideal solution in the Pacific HemFir SoundShield. This sound abatement fencing system is providing communities with an environmentally friendly, cost-effective and visually appealing option to reduce traffic noise. Sourced from responsibly managed B.C. forests, this highly effective sound barrier is sustainable, easy to install and popular with residents.



A 3-metre-high Pacific HemFir SoundShield installation in progress. Image courtesy of FPIInnovations

Strong, durable and cost-effective by nature

A product of advanced wood construction technologies, the Pacific HemFir SoundShield is a wood-concrete hybrid system that delivers a wealth of competitive advantages and design benefits making it an ideal choice for B.C. communities.

100% renewable, the lumber sourced for the Pacific HemFir SoundShield system is a high quality, eco-friendly and cost-effective alternative to other more carbon intensive systems.

Pacific HemFir is plentiful in British Columbia, so it costs less than other building products, offering an innovative and natural solution to noise reduction. Additionally, wood is lighter than other building materials which translates into less breakage during transportation and lower shipping costs.

Pacific HemFir's high strength to weight ratio and pressure treating capabilities make the Pacific HemFir SoundShield a durable and long-lasting product.



Unique tongue and groove construction makes for easy assembly and delivers an acoustical performance exceeding North American requirements.

A formidable opponent to rocks and other highway debris, it is an excellent choice in colder climates where roads are treated with salt.

Available in long lengths, the Pacific HemFir SoundShield system can be installed with fewer posts and less disturbed ground, making installation easier. Often, heavy machinery is not needed which is important in a tight urban setting. Its flexibility and lower overall weight make the Pacific HemFir Sound System easier to install and more suitable for complex geotechnical areas.

The wood component of the HemFir SoundShield reflects sound, effectively neutralizing unwelcome traffic noise. As a result, the hybrid system's unique, easy-to-install tongue and groove construction delivers an acoustical performance that exceeds North American requirements of 20 to 30 sound transmission class.

FAST FACTS

- ✓ Cost-effective and easy to install
- ✓ Meets or exceeds code standards without intensive use of concrete or steel
- ✓ Easy to maintain and paint over graffiti
- ✓ Saves 300 tonnes of CO2e per km over alternatives
- ✓ Pressure treating of the wood extends the system's lifespan
- ✓ Ranks as Recognized Product on B.C. Ministry of Transportation and Infrastructure list of sound reflective walls
- ✓ Use sustains employment and local economies

The sustainable choice

Produced from one of the most plentiful tree species in British Columbia, Pacific HemFir plays a significant part in climate change solutions, chiefly because of its ability to reduce greenhouse gas emissions by capturing carbon. As a forest

grows, trees absorb and store carbon. But as trees age and succumb to natural disturbances, such as fire and pests, and then decompose, they release carbon dioxide and other greenhouse gases back into the atmosphere.

Managing forests to avoid large emissions from the loss of old trees, while rapidly removing carbon from the atmosphere through newly planted forest growth, supplies both storage and sequestration benefits. Wood products, made from Pacific HemFir,

store carbon through their entire lifespan helping to create a low carbon future. Pressure treating further extends the service life of the Pacific HemFir SoundShield, allotting more time for forest growth in the continuing lifecycle.



Choosing the Pacific HemFir SoundShield, over other non-wood systems, reduces our environmental footprint because less energy is needed to create wood products and carbon is stored in the wood itself over the product's lifespan.

The natural choice

While the Pacific HemFir SoundShield is a practical and cost-competitive solution to noise reduction, the system also brings the warmth and aesthetic appeal of wood to surrounding communities. The Pacific HemFir SoundShield blends seamlessly and naturally into the landscape and creates a curb appeal that concrete cannot replicate.

In one of B.C.'s first communities to undertake the system installation, **85% of residents preferred the Pacific HemFir SoundShield over alternate products**, citing its visual appeal and acoustic performance.



Wood offers a natural solution to noise reduction that delivers environmental benefits, especially when the products come from British Columbia, recognized as a world leader in sustainable forest management. Image courtesy of FPIInnovations

A quality made-in-B.C. innovation, the Pacific HemFir SoundShield exceeds code requirements without the intensive use of concrete or steel. Its light weight, modular wood design means it can be installed without the use of heavy machinery, saving on cost, time, and damage and disruption to the surrounding area.

Beautiful. Sustainable. Strong. For performance and design, the **Pacific HemFir SoundShield** is **wood that works.**

Fabrication and Installation to follow FP Innovation's engineered drawing on file [here](#).



PACIFIC HEMFIR
**Wholesale Distributors/
Treaters**

Where to Buy

**MicroPro
Sienna**

Manufactured by CanWel
Building Materials Division

[LEARN MORE](#)

**Taiga
Building
Products**

[LEARN MORE](#)

**Westminster
Industries**

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The HemFir SoundShield is manufactured in British Columbia
by Western Forest Products and Teal Jones.


PACIFIC HEMFIR PARTNERS

Partially Funded by
Financé partiellement
par



In
partnership
with





For more information,
please email us at
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Strong
Straight
Dense
Treatable
Versatile
Sustainable
Plentiful
Durable

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