

Elkford Community Conference Centre



Set to become a cultural hub for the 2,500 residents of Elkford, the beautiful new \$6.4 million Elkford Community Conference Centre is expected to enhance the community's ability to deliver programs and host functions and events. The 1,800 square metre building features a visitor information centre, playschool, commercial kitchen, banquet hall with a stage for the performing arts, multi-purpose meeting rooms as well as historical displays. Using structural wood construction to conserve energy and reduce the centre's environmental footprint, it is truly a showcase for wood innovation.

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The wood use in our new centre provides beautiful aesthetics while supporting the wood industry and wood innovation in our province. This building will play a key role in helping our community grow and prosper, benefitting current and future generations.

Mayor Dean McKerracher

Elkford Community Conference Centre

Innovating with wood: Mass Timber – expanding the possibilities of wood



Key wood innovation features:

- *Cross-laminated Timber (CLT) walls and floors*
- *Glulam beams*
- *Structural Insulated Panels (SIPs)*

Mass timber systems are very large, complete wall, floor and roof sections made from engineered wood products, and used in a variety of building types and sizes. These products offer significant benefits in terms of fire, acoustic and structural performance, scale possibilities, rigidity, stability and construction efficiency.

The Elkford Community Conference Centre is constructed with **cross-laminated timber**, which is a large multi-layer wooden panel as large as 10' X 50' made of lumber, and engineered for strength through laminations of different layers placed cross-wise to the adjacent layers.

The use of **cross-laminated timber** (CLT) wall panels in the Elkford Community Conference Centre is the first commercial application in North America. CLT panels are used as the shear walls to resist the high wind load for the building, demonstrating CLTs strength and stiffness, and proving it to be a valid alternative to concrete and steel. It's lighter, more environmentally-friendly and easier to install.

This project has also used **glulam** and **laminated veneer lumber** beams supported on the CLT walls or perimeter columns. Glulam is an engineered wood product comprised of wood laminations that are bonded together with strong, waterproof adhesives, creating an ideal structural component.

SIP panels have been used on the roof and external wall cladding due to their highly efficient insulating property.

This project also demonstrates the effectiveness of off-site prefabrication using state-of-the-art design/fabrication technologies, such as computer numerically-controlled equipment to ensure absolute precision of structural components.

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Only wood starts off green, and stays green.



“Comparative life cycle assessment studies generally show wood in construction performs well relative to non-wood materials in a number of environmental impact measures, including greenhouse gas emissions, other emissions to air and water, embodied energy and carbon storage.”

FPInnovations

With growing pressure to reduce the carbon footprint of the built environment, building designers are increasingly being called upon to balance functionality and cost objectives with reduced environmental impact. Wood can help to achieve that balance. Wood costs less—economically and environmentally—while delivering more in terms of its beauty, versatility and performance. Innovative new technologies and building systems have enabled longer wood spans, taller walls and higher buildings, and continue to expand the possibilities for wood use in construction. Wood is more than a building material; it’s a renewable and responsible choice.

reTHINK
WOOD

Elkford Community Conference Centre
June 2012



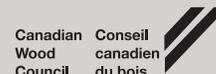
Architect: Douglas Sollows Architect Inc.
Engineer: Associated Engineering Group Ltd.

<p>V Volume of wood products used: 658 cubic metres</p> <p>C Carbon stored in the wood: 514 tonnes of CO₂</p>	<p> BC forests grow this much wood in: 11 minutes</p> <p> Avoided greenhouse gas emissions: 598 tonnes of CO₂</p>
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This is equivalent to either

<p> 136 cars off the road for one year, or</p>	<p> Energy to operate a home for 66 years</p>
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The wood products used in this building help minimize its environmental footprint.



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Elkford Community Conference Centre is one of several demonstration projects in the province selected in July 2010 to expand the use of wood products by applying traditional products in non-traditional ways, or creating innovative wood solutions. This and two other projects have been supported by the forest products and wood design industries and by the Government of British Columbia (Forestry Innovation Investment) along with Wood *WORKS!* BC and FPIInnovations.

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Elkford Community Conference Centre demonstrates a blend of leading-edge international technologies and BC design concepts. This further accelerates wood design and construction in BC to the forefront of the global experience.

Mary Tracey
Executive Director, Wood *WORKS!* BC

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The District of Elkford wanted a signature building that reflected the optimism of growth in this Resource/Tourism Community in South Eastern BC and incorporating the dynamic forms found in the surrounding mountains.

This project has been designed using pre-manufactured wood elements and systems to create the structure, building envelope and the aesthetic in one complete package.

Douglas Sollows
Douglas Sollows Architect Inc.