Wood Specification:
Locally Produced Materials

Locally produced materials are often sought because they match a local design aesthetic and can be more durable in the local climate. However, choosing local materials also supports local economies and reduces the environmental impacts of transportation.

Terminology

Extraction:
the removal of natural materials from the earth for the purposes of human use.

Harvested:
refers to all or part of a plant that has been collected and removed from the location of its growth.

Site of final manufacture:
the location where final assembly of components into the building product takes place.

Manufacturing process:
activities associated with the production of materials, goods, or products.

Processing:
operations involved in the manufacture or treatment of a product or material.

Resources

naturally:wood

www.naturallywood.com supplierdirectory/

British Columbia wood product suppliers number more than 500, including a vast array of exterior and interior, construction and finishing, specialty and reclaimed products of all kinds. Whether your next project is sustainable, cutting-edge design or simply utilitarian in nature, the breadth of suppliers that manufacture, fabricate and sell products made from British Columbia wood is vast and diverse.

Wood Source BC

http://www.woodsourcebc.com/

BC Wood

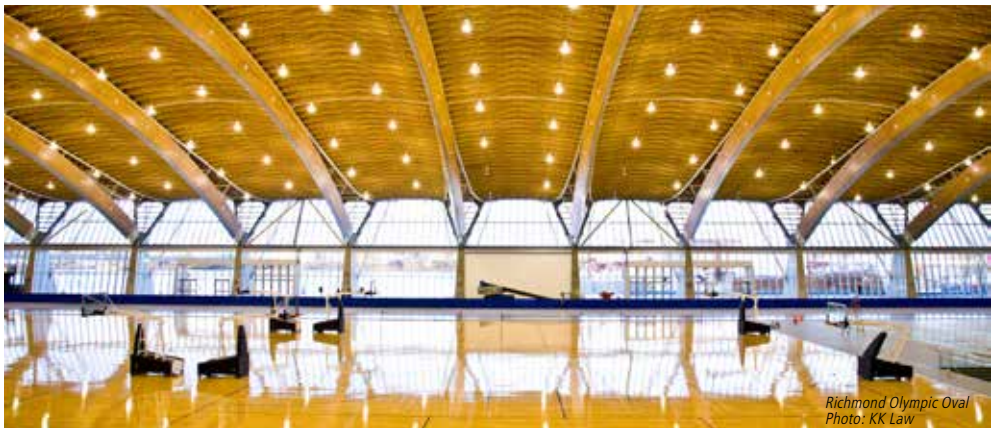
www.bcwood.com/membership/member-directory/

BC Wood represents British Columbia's value-added wood products industry, with an on-line member directory of their 120 specialty wood manufacturers.

For purposes of gaining credits in green building rating systems, documentation as outlined below is important only if working within older versions of LEED (2009) or other programs where local materials were considered to be those where all materials and components originated from within a 500 mile radius. Documentation is now needed only for those materials sourced from within a 100 mile radius if seeking credits under LEED v4.

Why Locally Produced Wood Adds Value

- Locally sourced materials may be more cost-effective because of reduced transportation costs, although these savings may be offset by the higher costs associated with complying with more demanding social and environmental legislation.
- In some jurisdictions, governments have recognized the value of wood and have put in place programs and incentives to encourage the incorporation of wood into building design.
- The support of local manufacturers and labour forces retains capital in the community, thus contributing to a more stable tax base and a healthier local economy as well as showcasing the resources and skills of the region.
- Green building rating systems award credits where a prescribed percentage of locally produced materials are used in a building's design.



Richmond Olympic Oval
Photo: KK Law

How to Include Locally Produced Wood in Design

- Getting to know the region is central to the practice of design. Develop relationships with local contractors and developers to determine where materials are from and what regional options are available. Being familiar with local policies that promote local materials is essential.
- Establish and maintain a library of regional materials and manufacturers for ready access during the design phase.
- It is important to set goals early in the design process for the use of locally produced wood and other materials. Assess the availability of regional materials and determine the best available products to minimize the project's environmental impacts. This may require careful research to determine what local products are available.
- The use of life cycle assessment tools may provehelpful in the decision-making process evaluating impacts between local materials and other alternatives.
- Set appropriate local materials targets based on the project's budget and ensure related requirements are captured in the construction documents along with approved alternatives.

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What to Ask Suppliers

- Regarding the materials used to make the product, where were they extracted, harvested, or processed?
- Where was the final product manufactured?
- How far are these locations from the project site?
- How were the materials transported to the project site? Were they delivered by rail, water, or truck?
- Documentation, such as a letter from the manufacturer, or environmental information sheets, demonstrating the proportion of local materials in the total assembly of the product (based on weight) must be acquired from the manufacturer or the supplier.

Transporting logs near Quesnel, B.C. Photo: Brudder

Procedure

- When working with green building rating systems, it is important to establish and track information about the manufacturers and the product costs. It is also important to document the distance between the project site and the manufacturers' locations, and the distances between the manufacturers' locations and the extraction, processing, and manufacturing sites. Record the mode of travel for each raw material in each product too.
- Material technical data must be acquired from suppliers, usually in the form of environmental information sheets and technical spec sheets.
- Where appropriate, maintain a list of material costs, excluding labor and equipment.
- If working with LEED 2009 or other rating systems patterned after LEED, for assemblies or products made with components originating from within a 500-mile (800-km) radius of the project site. If working within LEED v4, keep data only for products sourced within a 100 mile radius.
- The percentage of locally produced materials is calculated by dividing the cost of locally produced materials by the total cost of materials. Total material costs are obtained either by multiplying total construction costs by 0.45 or by calculating the actual material costs, if known.
- If only a fraction of a product or material is extracted, harvested, recovered, processed, and manufactured locally, then only that percentage (by weight) must contribute to the regional value. Furniture may be included in calculating the percentage of locally produced materials.
- Life cycle assessment tools can provide comprehensive information about the impacts of using local products. Most life cycle assessment tools provide regionally specific data.

percentage of local materials =

$$\frac{\text{total cost of local materials (\$)}}{\text{total material cost (\$)}} \times 100$$

Pre-design: calculate baseline budget

Design: estimate the total cost of materials for site work and construction sections.

or

Design: use the default budget if seeking to avoid breaking out material and labour costs.

Design: on a map, draw a 500-mile (800-km) radius around the project site, and identify major extraction and manufacturing sites.

Contract Documentation: starting with big-ticket materials, specify products from regional sources.

Construction: track regional materials on a spreadsheet. This process can be included in a larger analysis of all materials applicable to resource credits because the regional materials may contribute to other credits as well. Calculate percentages for points, and reassess as needed.

Throughout: revisit the project's budget calculations throughout design and construction to ensure the project is on track to achieve its goals.