

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.

For the purpose of green building rating systems, local or regional materials are those that are extracted, harvested, and manufactured within 500 miles (800 km) (1,500 miles (2,400 km) if shipped by rail or water) of the project site.

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.



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 prove helpful in the decision-making process because local materials may have a significantly lower carbon footprint than imported 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.



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

www.naturallywood.com: a portal to British Columbia's wood products and services, including a database of over 600 British Columbia wood companies.

www.buildgreenwithwood.com: a community for professionals to share innovations, connect with industry news, and find out more about building green with wood from sustainably managed forests.

www.cofi.org/buyers_guide/search.asp: lists over 30 lumber manufacturers from the Interior of B.C. including those manufacturing products from pine beetle wood, spruce-pine-fir and Douglas-fir/Larch.

www.iforwood.com/architect-and-designer-program/company-directory/: lists over 110 manufacturers of value-added wood products including cabinets, engineered wood products, furniture, log homes and timber framing, millwork, prefab housing and remanufactured wood products.

Wood Specification: Locally Produced Materials

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.

Vancouver Convention Centre West

In Vancouver, British Columbia, Convention Centre West is the LEED® Platinum showcase venue on the city's waterfront and is a high-profile ambassador for British Columbia wood products and expertise.

Wood blocks from locally harvested hemlock are a predominant interior finish. Douglas-fir slats comprise the ceiling, extending from the outside to the inside and running the length of the building to provide a directional texture to the spaces. The wood came from regional coastal forests.



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 labour and equipment.
- For assemblies or products made with components originating from both inside and outside the 500-mile (800-km) radius of the project site, base the proportionality of their costs on the weight of their various components.
- 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 =

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

