



P.O. Box 877, Gibsons British Columbia, Canada VON 1VO

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Letter from the President

Welcome to West Coast Log Homes.

A home made of natural trees is a unique and satisfying space.

Not only is each home exceptional but so is each component. Each log has it's own character, color, texture, feel, aroma, dimensions, and acoustic properties. All belong to that tree alone. No two can be the same.

Our homes go well beyond the traditional concept of the log cabin in the woods. We design and build our products with a sophistication and attention to detail that are orders of magnitude above the norm. This ensures that the home is in harmony with it's *immediate* environment and makes an individual statement appropriate in any location.

Much of what you will see in the following pages has to do directly with technical aspects of the manufacturing process of our products. However, we use technology to enhance the artistic values of a log home, always aware that we are creating works of art and nature.

Sincerely,

Andy Koberwitz

President, West Coast Log Homes Ltd.

2007



Introduction

West Coast Log Homes is a custom log-home builder dedicated to delivering a home that blends top quality craftsmanship with the natural beauty of wood logs.

We are located on the Sunshine Coast in Gibsons, British Columbia, Canada and serve markets worldwide. West Coast Log Homes is fortunate to have access to abundant local supplies of Western Red cedar, our principle building material.

Our logs are selectively harvested, hand-stripped and power washed. The resulting smooth surface of our logs is visually appealing, resistant to decay and requires significantly less stain to finish.

We offer three home types; Traditional Full-scribe, Post & Beam and Fusion Style.

Full-scribe homes have logs stacked horizontally with each log cut to match exactly the one below it, without the use of chinking. **Post & Beam** homes incorporate round posts and beams interlocked by mortise and tenon joinery. **Fusion Style** homes incorporate 3 rounds of full-scribe upon which a post and beam frame is built. And finally **Timber Frame** homes feature dimensional sawn timbers joined in old world style to create another unique style of heavy timber construction

Our homes use materials and craftsmanship that will last for generations. Characterized by extremely well engineered roof systems and complex joinery we can build from designs that appear impossible to do. This makes the home truly an expression of individualism. In addition, we provide full design services, window packages and finishing options such as stairs, fireplaces, railings, custom carvings and log furniture.

Our homes are completed and assembled at our work site prior to being shipped by truck or container to your building site. This ensures that no components are missing and everything fits as designed.

West Coast Log Homes works closely with your local contractors to ensure a smooth set-up that will minimize costs and avoid delays. This includes communicating clearly our requirements for site preparation and scheduling. If requested, we will send our employees to set-up the home.

Compare before you choose. We are confident that West Coast Log Homes will prove able to satisfy your every requirement.

Head Office:

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The Team and The Site

West Coast Log Homes is most particular about its personnel. The processes involved in the creation of our product are very specific and require specialized skills and techniques.

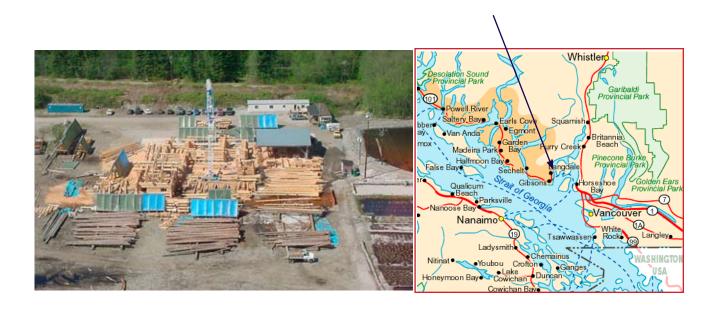
We prefer to hire rookies to our industry as there is a considerable amount of training involved and it is more effective and easier to begin with a clean slate than to unlearn inappropriate skills. We look for enthusiasm, willingness to learn, a professional attitude and an ability to work closely and in harmony with others. The veterans of our team all have undergone and successfully completed our training and have emerged as highly skilled professionals dedicated to being the best log builders they can be.

This means that the team really is a Team. All members are aware that they are instrumentally involved in building a Home, not just a post or a wall.

Pride in our work and attention to detail is evident at every stage. Not one building project receives less than our best effort. This ensures the highest standards of manufacture and finish, a top quality product constructed to meet the most exacting professional standards.



West Coast Log Homes is located on the shore of Howe Sound on the Sunshine Coast, British Columbia, Canada (20Km from Vancouver). Howe Sound is the largest log sorting ground in the world. This is where logs are graded, scaled and sorted and then towed to markets. We are deliberately in close proximity with Terminal Forest Products which affords us immediate access to premium quality logs with minimal transportation costs. We literally have the pick of the crop.





Post and Beam

Post & Beam homes use logs interlocked by high precision joinery. Our creative innovations and high technical standards provide outstanding compatibility for all building phases.













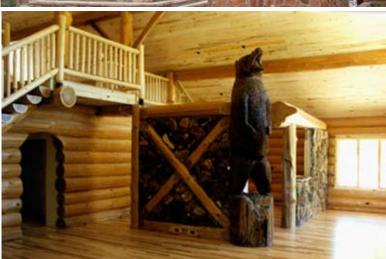
Traditional Full-Scribe





Full-scribe homes have logs stacked horizontally. Each log is precisely marked (scribed) and cut to match exactly the one below it. A tight fit and the use of a lateral gasket seals the logs and provides optimal weather protection without the need for chinking.









Fusion Style





Fusion Style homes incorporate 3 rounds of full-scribe logs on which a post and beam frame is built. This is a popular style that will have the massive feel of a traditional log home yet still have the practicality of a Post & Beam home.







Timber Frame









Timber Frame homes use sawn timbers rather than whole logs to create a structure. Timbers are placed either on the inside or outside of the wall depending on the design. Timbers are joined using old world style precision joinery.















































Joinery 1

We combine proven traditional joinery with leading edge building techniques. The result is a finished product that surpasses the highest standards of our industry.

Post end with tenon and brace pocket



Final touch up on a dove tail end







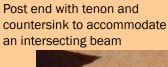
Diamond Notch; WCLH optional notch since 2000



Dove tail joinery detail on a purlin



X brace; very decorative detail providing shear strength and stability in a wall segment.





Setup of a dove tail post to beam connection









Purlin with dove tail end joinery and framing flats



▲ Entrance with arched tie beam





Chain mortiser at work



Typical floor beam connection using dove tail joinery



Dove tail post end



▲ Dove tail socket joinery in a roof beam



Joinery 3

Entrance way with arched tie beam. ▼



Truss systems provide wide open spaces with fewer posts.



Setup moment. A knee brace is being installed. No hardware is required as we use countersinks.



Floor beams countersinking into a main post at different angles.



Roof system with trusses.
Decorative and functional.



Compound joinery hip rafters and ridge beam meet over a center post.



X brace providing stability in an **a** outside wall element.

Floor beams and knee braces meet a post.



Beams joining over a post.





Details 1





Details 2



Electrical outlets are cut into the logs according to plan.
Rope will later be used to feed wire though the log walls.

An inverted flare supports four beams.







Options and Furnishing 1

Mantelpieces:



Many of our clients have included custom made mantelpieces in the same style as the rest of the home. The pressure washed, planed log top plate supported by small (very difficult to find) flares adds a dramatic and

functional statement to a fireplace.





Tables:

This is an example of a 'rustic look' dining room table.





A picnic table

Railings:

WCLH can supply railings for stairs and balconies.











Options and Furnishing 2

Planters:

An example of a small flare being used as a plant stand.



Stairs: Stairs treads are being manufactured.







WCLH has also has experience making commercial signage, as seen here for a local shopping mall.





In a rare idle moment one of our cutters carved this chain using, of course, a chain saw.



Carvings:

Some clients have chosen to have carvings incorporated into the log structure. If the client wishes WCLH can recommend talented local carvers.











FAQs and Explanations

Does a Log home cost more than a conventional home? Why?

Short answer, yes, but not by as much as you might expect. Working with logs is of course more complex than using dimensional lumber. Post and Beam homes on average cost about 15%-30% more and Handcrafted log homes (full scribe) about 30% more. However, bear in mind that in many cases, due to the style of the home, owners will incorporate special features such as rock fireplaces, solid hardwood flooring and solid wood doors and windows. As Handcrafted log homes are much faster to build there is a lower labor cost involved.

Approximately what is the cost per square foot:

Determining the cost of a custom home is always a challenge. Each and every home we build has it's own unique design and associated costs. Just dealing with the log shell the more complex the structure is the more expensive it will be. When looking at budgets it is important to stay realistic and always keep a final budget in mind. It is the designers job to ensure that the home design will fit within the proposed budget.

The costs of construction also vary greatly depending on local building costs. In some areas it is simply more expensive to build than others. The single most important part of predicting costs and budgets is a good set of plans. Even preliminary concepts can help in estimating costs.

Does a log home take longer to build than a conventional home?

Post and Beam: Yes, about 15% longer. It takes more time to interface between conventional construction and logs. Of greatest concern is insulation, weather proofing and water penetration control.

Handcrafted Log: No, about twice as fast. It is much faster to build because the exterior is already done. There is no exterior siding, insulation to do and much of the interior is complete.

Fusion of styles: Yes, about 20% longer. Due largely to the increased complexity of interface.

Construction time can be greatly reduced by using offsite framing, SIP's, and other time saving techniques. Also the single most important factor is having good plans to speed up construction.

How structurally safe is a log home compared to a conventional home?

All structures should be designed and constructed to local codes & to local engineering standards.

Being a log home should not be an issue since the structural safety of a house should not depend on the type of construction but how it is designed and engineered.

Why is do you use only Western Red Cedar as a building material?

http://www.wrcla.org/

WCLH uses only Western Red Cedar (Thuja plicata) for many reasons.

- Natural oils in the wood (Thujic acid) act as a preservative preventing decay and inhibiting invasion by insects.
- High in-place dimensional stability and comparative strength. Resists splitting. Cedar has a tight, straight grain and does not warp and twist as much as other woods.



- Western Red Cedar handles moisture very well. One reason why it is used in saunas all over the world.
- Logged in managed forests ensuring protection of the species and guaranteed harvest.
- Exceptional acoustic properties. High sound transmission loss and absorption coefficient.
- Exceptional insulation properties. Delivers a higher insulation value than most woods and considerably greater than that of brick or concrete. Buildings stay cooler in the summer and warmer in the winter.
- Energy efficiency. As determined by the Canadian National Research Council, western red cedar log homes are the most energy efficient for all Canadian climates regardless of home heating fuel.
- Naturally aromatic. A fragrance much used for environmental enhancement, containing natural aromatics that repel moths and other damaging insects. Plus it eliminates unwelcome odors and mustiness of stored fabrics, linens, clothing, rugs, etc.
- A lightweight wood easy to handle and cost effective to transport.
- Undisputed beauty. A range of warm and natural color tones, a depth of luster and richly textured grain.
- Cedar is free of pitch and resins and accepts finishes such as transparent or full-bodied stains and paints readily.

FEATURES OF WESTERN RED CEDAR

Acoustic properties: Cedar tends to dampen sound transmission

Density (oven-dry): 22 lb/ft3 Specific Gravity (oven dry): 0.35

Durable species

Fasteners: Corrosion resistant only (aluminum, hot-dipped galvanized, brass, etc.)

Finishing: Paints, stains, varnishes, oils and waxes all work well

Smoke developed classification: 98

Flame spread rating: 69(class II)

k value (12% mc) 0.74 BTU in. per square ft.h degrees F

R value: 1.35 in. of thickness

Stability: Cedar is the most stable softwood species

Workability: Easy to cut, saw, nail and glue

Is there a limit to the length of beam that can be used?

The interior length dimension of the container in which logs are shipped, usually about 40 feet, often determines the limit of beam length. Structurally it is not reasonable to span more than 25 – 30 feet. Of course, using knee braces increases span length by the distance from brace to post. Working with truss systems will also dramatically increase span length. It is also possible to splice log beams providing they are supported at the splice.

Do the logs need special care and attention, like cedar shakes on the roof?

Care and attention of the logs have to take place at various stages. An Antifungus protector is applied to the logs prior to being shipped to the site. Once on site one must be careful not



to cause abrasions to the logs during the construction process. Abrasions can be touched up by using a wood stain "cedar" color as this color most closely resembles the actual naturally seasoned log color. Do not protect the logs with poly as it will build up moisture and stain the log. Form a barrier with plywood or cardboard. When preparing to stain make sure log surfaces are clean and if there is a lot of discoloration due to excessive moisture i.e.. downspouts draining directly onto untreated log surface, should be treated with a wood conditioner. A low ph oxillic acid(wood bleach)works well. Then stain as directed and follow up with desired topcoat.

Can the product be delivered anywhere?

We can ship our product anywhere in the world.

How long does it take to build a log home?

Depending on the size of the home.....average is 8 – 12 weeks.

What kind of warranty do you offer?

Standard for our industry. Two years parts and labor.

Is there any after sales support?

Absolutely. WCLH stands firmly behind it's products and is always prepared to help.

Will my contractor know what to do with a log home construction?

There is a learning curve involved but any competent builder will be able to adapt. WCLH offers short training courses for general and specific construction if required.

Are there special requirements for trades to work in a log home?

Yes. Plans are needed for plumbing and electrical chases.

Post and Beam: Not much problem as the walls are conventional frame.

Hand Crafted Log: More complicated getting pipes from floor to floor and through the walls. Electrical outlets and lighting fixtures and ventilation (AC and FAG) all need special planning.

Fusion: Same considerations as with Hand Crafted Log.

Do log homes insulate better than conventional?

Wood itself is a good insulator. Western Red Cedar specifically has a cellular structure of interior air spaces that delivers a higher insulation value than most woods and considerably greater than that of brick or concrete. It is important that a log home is built to high standards of fit and allowances made for the shrinkage of the logs or a log home that initially is quite weather tight would over time become drafty. WCLH use a precision-engineered diamond notch and lateral gaskets to ensure weatherproofing as the house settles. Other special features such as wall board slots, drip sills and drainage slopes maintain a tight fit around doors and windows.

How high can you build a log home?

Generally speaking there are pre existing building codes that govern the height of your home for your region. The height constraints are obtained from your local planning office.



In the case of a handcrafted log home (full scribe) the recommended wall height limit is 10-12 feet. Logs stacked on top of each other will exhibit excessive compression if stacked higher. Multiple floors can be built as long as there is bearing support every 10 vertical feet. This means that a log home can be many stories high, built in much the same way as an apartment building. This facilitates the builder to capitalize on the look and feel of a log building whilst optimizing the use of space.

In the case of Post and Beam the physical height limits are considerably greater. Our experience has shown that posts extending 40-50 feet floor to ceiling can easily be achieved.

For Export the dimension of the container limits the length of a log. This is typically 40 feet.

Are there any size constraints when building a log home?

The length of a wall varies with species of log used. We at WCLH use only Western Red Cedar. This will yield a maximum continuous length of approximately 40 feet. Wall length can be dramatically increased by splicing (butting) logs together. Alternatively walls can be offset slightly. Either method allows for wall length limited only by your property line and imagination.

Are there much more engineering problems or complications with log homes?

This depends on design. Here in BC they are required to be engineered. There are usually different types of details required between standard construction and log home construction but not necessarily more complicated.

How long will a log home last?

A well-constructed log home has remarkable durability. It is likely that your great, great, great, great etc. grand children will inherit. There are many log homes still standing after more than 1000 years. This does not mean that a poorly built house will last any time at all or that there is no care and maintenance required.

Are there interface problems with log to conventional materials?

Yes. Matching drywall to log and flooring to log takes some more care and skill.

Can the logs be stained to a color of our choice?

Their are many colors to chose from depending on the manufacturer. As far as custom colors go, anyone can intermix stock colors. Be very careful to choose the right product. A sample of the color should be tried on the same wood that is being finished.



Customer comments

Gibsons Landing Harbour Authority

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Mr. A Koberwitz, President West Coast Log Homes P.O. Box 877 Gibsons, B.C. VON IVO

"The Gibsons Landing Harbour Authority cannot express enough its appreciation for a job well done." November 5, 2000

J. Hayes, Chairman.

Earlier this year you and your company, West Coast Log Homes completed the Gibsons Landing Harbour Authority office building which has become the civic pride of the Town of Gibsons, the gateway to the Sunshine Coast

Since the completion of the facility we have had compliments from hundreds of tourist from around the globe and boaters throughout the Northwest. It is a testament to the design and new construction techniques you have adopted in the construction of log buildings. The most interesting part of the building is the flared log ends. People count the rings of the logs guessing the age of the tree.

The Gibsons Landing Harbour Authority is very fortunate and proud to have such a fine facility. We thank you personally, your company and your craftsmen for the dedication and professionalism West Coast Log Homes showed during construction

Again, the Gibsons Landing Harbour Authority cannot express enough its appreciation for a job well done.

9/30/01

Dear Fellow Log Home Aficionados:

I am pleased to recommend West Coast Log Homes to anyone who is contemplating building a log home. Once you begin to explore the features of these homes you will be sold on their virtues, as were my wife and I.

We are the fortunate owners of a beautiful property in the southern Rockies in Colorado. We purchased this property nine years before building on it. We had looked at just about all the log home companies that advertise in the log home magazines and then some Disheartened we explored the post and beam homes but didn't see any thing that would do justice to the land.

A contractor friend of ours showed us a house that was better than any thing he had ever built. It was a West Coast Log Home. One look at the beauty of the house and we knew that this type of house belonged on our property. The magnificence of the trees used in the construction is displayed. Our admiration for the house grew once we understood the engineering that goes into one of these homes. The house is built like a fine wooden

The attention to details in the design, engineering and construction of a West Coast Log Home became evident once we met the company president, Andy Koberwitz, and most of the people associated with the building of one. Pride in their skill and ingenuity is reflected in the superiority of the home that results. The professionalism of Andy Koberwitz is enhanced by his welcoming style. He was responsive to the needs and wishes that we were able to verbalize as well as those that we could not express

West Coast Log Homes not only sold me a log home package they also sold me on the concept that a united buyer and builder are essential to the realization of a dream.

Does this letter sound like an advertisement? If it does it is because we have the satisfaction of ownership of something exceptional.

Respectfully

Dr. Xavier and Susan Gonzalez Pagosa Springs, Colorado

"The best decision we ever made. We love our log home. It far sur-passes our best expectations."

Dr. Steenhuis, Home Owner

"This is something designers always hope for. A product that genuinely expands the creative and artistic palette." S. Christian, Designer.

> TECK CONSTRUCTION LTD. 5197 - 216 STREET LANGLEY B.C. V3A 2No June 7, 2001 WEST COAST LOG HOMES LTD. 5224 Ratcliff Road Sechelt, B.C. V0H 3A2 Attention: Andy Koberwitz Dear Sir: Re: Our Vacation Home - East Barriere Lake Please find enclosed some photos of our cabin which is now nearing completion. At this time I would like to take the opportunity to thank you for the professional service and quality of workmanship you provided and your continuing concern for detail for the completion of the project. In closing, I can certainly recommend your work to future clients as your quality and style is unique to the industry "I can certainly recom-TECK CONSTRUCTION LTD. mend your work to future n clients as your quality and Al Tecklenborg style is unique to the indus-Enclosures trv. A. Tecklenborg, Teck Construction.

> > PROFESSIONAL PRE-CONSTRUCTION AND CONSTRUCTION SERVICES . SINCE 1957

"I could not praise the craftsmanship and attention to detail more. They (WCLH) truly care about their product."

T. Wong. Contractor.



Environmental Policy

The **West Coast Log Homes** operations are located on Terminal Forest Products Langdale Log Sort site adjacent to Howe Sound. As a tenant at this site WCLH operates within the TFP Langdale Log Sort Environmental Management System which is in compliance with ISO 14001 - 1996 and certified by QMI (Management Systems Registration, a division of the Canadian Standards Association group).

In keeping with the high standards set by Terminal Forest Products West Coast Log Homes is committed to conducting it's operations following the Environmental Management Program of Terminal Forest Products Langdale Log Sort.

WCLH operations will:

- Be conducted in a manner that at all times is conscious of and maintains the integrity of the environment.
- Comply with all environmental laws and legal requirements governing our operations.
- Liaise with governmental and other appropriate authorities in the identification and conservation of environmental elements.
- Ensure that our employees and contractors are trained in environmentally responsible work practices.
- Initiate periodic audits of our operational procedures to ensure environmental protection objectives are being maintained and meet our standards.
- Maintain strict pollution prevention controls and pro actively institute any modifications that improve our procedures.
- Actively monitor, evaluate and constantly work towards improving our environmental practices.

West Coast Log Homes actively supports and practices recycling. Waste from our operations, vehicles and equipment is collected and transported to appropriate recycling depots. All non-recyclable waste is disposed of in an environmentally acceptable manner. We are meticulous concerning site clean up and dispose all garbage, waste and recyclable materials on a regular basis to avoid accumulation on site.

West Coast Log Homes has always promoted environmentally sensitive harvesting of logs. Two of our major suppliers, Terminal Forest Products and Witherby Tree Farms, have recently received AF&PA (American Forest and Paper Association) Sustainable Forestry Initiative certification of their woodlands.

West Coast Log Homes is acutely aware of the impact of the manufacturing process on the environment and pro actively participates in environment friendly practices.. On a regular basis we check for updates to existing environmental policies and instigation of new environmental initiatives and promptly instigate changes.



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