

Buyer How To : Site Locations

Finding land or a lot site for your cedar log home can be challenging. If you haven't yet located land, you'll want to work with a broker in the area who understands the ins and outs of lots and land in your area. If you're building in an area new to you, you'll want to get a good picture of the climate as well — average snowfall and/or rain totals, temperature ranges, hours of daylight, potential for winds from hurricanes or strong storms. Here are some of the factors to consider when looking at land:

- **Rules and Regulations.** The broker will be able to identify subdivisions where a log home is permitted under the covenants, ensure that the site is buildable, and will know the area where the site is located.
- **History.** Take a visit to the Register of Deeds to determine what the use of the land has been for the past 50 to 75 years. A well-forested area near a river might have been the site of a factory. In rural settings, a dairy or pig farm might have waste disposal issues that could affect water. Some rural areas have been used as informal local dumps for appliances and vehicles, which might also affect water quality.
- **The Building Envelope.** Walk the land – including the boundaries – to determine any potential issues that could affect where you site your home. Examine the features within the building envelope, the area that allows for setbacks, easements and other boundary issues. How you position your house within the building envelope is key to being able to fit the home to the landscape, maximize natural solar light and exposure, and orientation of the rooms within the home.
- **Surveys, Soils, Septic.** Make sure that you obtain a plot plan and recent survey. Using your plot plan, identify where soil tests have been performed in relation where you think you might locate your home. If municipal water or sewer is available mark where those utilities might be accessed.
- **Topographical Features.** Talk with your broker about other characteristics that may affect your building site. Ask whether there is rock ledge that might need to be blasted before building a foundation or if low-lying areas will need additional fill. Determine whether there are wetlands on the property and what restrictions might apply to their proximity to your home. If there is a seasonal stream or vernal pool on your land you may want to inspect the land in the spring after a good rainstorm.
- **Codes and Environmental Impact.** Most states have restrictions relating to building near bodies of water, cutting trees, and runoff water management. A visit to the town or municipal code enforcement officer will answer a lot of questions about potential limitations to building on a particular parcel.
- **On-site Meeting.** Your local Katahdin dealer or representative will also have a lot of insight on local conditions, restrictions and land conformations. If you're considering a particular parcel, you'll want to meet your dealer or representative on location to conduct an on-site review. This will help the dealer to identify which styles of log homes will suit the unique topography of the land. Try to keep an open mind about the style of home that will best suit your needs as well as suit the property. As one dealer puts it: "It's easier to find a floor plan to fit a lot than to find a lot to fit a floor plan."



- **Preliminary Plans.** Once the sketch and budget process is complete and approved, Katahdin will prepare preliminary plans, which includes a first floor plan, a loft or second floor plan, all four exterior elevations or views, and a basement plan if applicable. These plans will help you to see the design more clearly and may also be used for permitting or financing in some cases. Many times these preliminary plans require some adjustments. The design department will email preliminary plans to your dealer to review and modify if necessary. Preliminary plans are generally revised 1-2 times, and do not require upfront payment.
- **Approval of Preliminary Plans.** Once you're satisfied that the preliminary plans include all the elements and revisions you've discussed, your Katahdin Dealer or Representative will prepare a contract and accept your deposit. Once these preliminary plans have been approved with your signature, Katahdin's design department will advance your project to the next step: Final Construction Plans. Note that approved preliminary plans are not the final construction plans, but will often be useful for permitting, and mortgage requirements.
- **Final Construction Plans.** The Katahdin Design Team will now create the highly detailed Final Construction Plans for your Katahdin Cedar Log Home, including building cross-sections, framing plans for floors, ceilings, windows, and doors; the roof system; the numbered elevations for log walls that correspond to your pre-cut and drilled logs—all the details that you and your dealer have worked out. The turnaround time for this stage varies, depending upon a number of factors such as your delivery date and time of year.
- **Approval and Order.** Once the final construction plans are completed, the Final Construction Plans are printed and sent to your Dealer. At this time you'll want to share these plans with your contractor so the he or she can begin to schedule the actual construction. Your Katahdin Cedar Log Home order will be moved to the manufacturing division for scheduling and milling.

Congratulations!



Buyer How To : Wells and Septic Systems

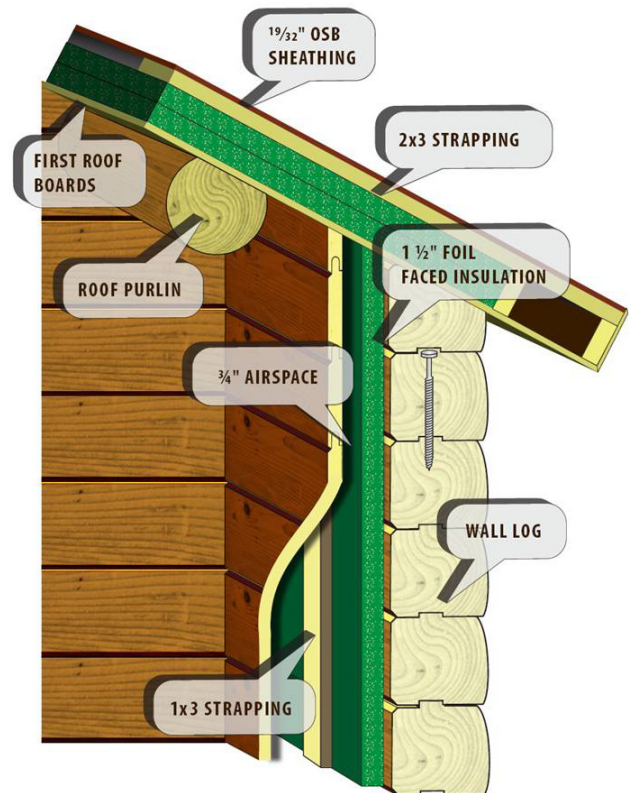
If you're building in a rural or remote setting, most likely you'll need to build a private water and waste system.

- **Septic Systems.** Your building site should have had a successful soils analysis or "perk" (or percolation) test completed prior to purchase. This test involves digging a test pit to a certain diameter and depth, pouring in a volume of water then timing how long it takes for the water to drain away. A perk test needs to be conducted by a certified professional and submitted to the permitting agency. Getting your perk tests done as early in the process as possible is important, because often septic placement can affect where the home can be located.
- **Capacity.** Your septic system will be designed to process the estimated amount of waste produced. In most areas, this is based on the number of bedrooms—theoretically the number of occupants— and whether a garbage disposal will be installed.
- **Transmission.** In many cases the septic field is located so that gravity will drain the waste into the field. If this is not the case, a septic pump will be necessary. Ensure that the pump includes an alarm and is properly electrified to function.
- **Location.** Your well and septic system should be located at least 100 feet apart; more distance may be required in some areas.
- **Well drilling.** You may be able to get a feel for the depth needed to locate water on your property by speaking with adjacent homeowners, though this is never a guarantee. Most wells fall within the 800 foot range. You'll want to have the water tested soon after drilling to determine whether it is safe or requires any additional treatment for drinkability. Your well drilling professional will install an electric pump to bring the water to the surface. If the location is remote with frequent power outages, you may want to consider installing a hand pump to access your water when the power is out.

Buyer How To : Selecting Insulation

Most people take a hard look at a car's miles-per-gallon ratings when researching a new vehicle. Yet it seems that fewer people take a look at their home's "mpg" or energy efficiency, especially when it comes to insulation. Here are some factors to consider when finalizing the details of your Katahdin Cedar Log Home:

- **Northern White Cedar.** Your choice of cedar logs for your home already puts you ahead of other wood species when it comes to insulation. Cedar's superior insulation properties give homeowners an advantage in lowering heating and cooling costs, thus reducing lifetime fuel consumption. Northern White Cedar has an R-Factor of 1.41 per inch of thickness —the highest of any species used in log homes. For a six-inch log wall, that translates into an average R-Factor of 8.46 before any additional insulation is applied to the structure. Pine has an average R-Factor of 1.12 per inch or only 7.26 for a six-inch log wall.
- **Continuous insulating properties.** Log walls have an advantage over conventional exterior wall construction because of their continuous insulation. Conventional walls are constructed with 2" x 6" or 2' x 8" studs with the spaces in between filled with a high R-factor fiberglass insulation. What many people don't realize is that the R-factor of a stud is significantly lower than the insulation placed in between. The stud wall acts just like a sieve, allowing energy to escape your home through each vertical stud. In fact, normally installed fiberglass actually "loses" about 28% of their stated R-factor because the installation conditions are not laboratory controlled as they are in testing (1). Cedar log walls, however, offer a continuous barrier of about R-9 before additional insulation is applied.
- **Wall Insulation Options.** Katahdin has offered our customers options for adding insulation without compromising the look and feel of an authentic log home.
 - Our standard insulation package offers an increased R-14 of continuous insulation in your home, by applying a sheet of rigid insulation and then cedar paneling to act as the interior wall surface. This option increases your energy efficiency substantially.
 - R-23 Energy Envelope is Katahdin's newly developed technology for log homes that increases the R-value of exterior cedar log walls by 156% to R-23. The insulation system was developed to meet or exceed new efficiency codes nationwide and to qualify for green construction ratings without modifications.





- **Basement Insulation.** You'll want to pay special attention to foundation insulation, which can lose 20-30 percent of your home's energy. Even though it looks solid, poured concrete has an R-Factor that is actually less than a double glazed window. New codes will soon require exterior foundation insulation, but it makes sense to include it in your home design as a matter of efficiency and savings.
- **Windows and doors.** While many advances have been made in efficient windows and doors, the best way to make your home energy efficient is to minimize the number of windows on north-facing walls, use insulating window treatments such as cellular shades, and maximize the passive solar advantages on southern facing windows. E-glaze treated windows, which are widely available, can minimize the effects of passive solar gain, so you'll want to make sure that window selection is appropriate for the overall design of your home.
- **Calculate your efficiency.** Most people know what their principle and interest payment will be on their mortgage 20 years from now, but rarely give consideration to their monthly energy bill 20 years down the road. Sit down with your heating and cooling contractor to calculate the estimated cost of your energy consumption over the next twenty years, based on square footage, type of fuel, heating systems and initial cost of equipment. If you still have questions, Katahdin can help to calculate the energy savings for your individual home design, to give you a clearer picture of your savings over the long term.

Buyer How To : Taking a Green Approach to Your Log Home Design

At Katahdin we've made a clear commitment to a green approach to building, not only because it makes sense, but because it helps our customers to save money over the long term. Taking a green approach can lower your expenditures, reduce your impact on the environment and provide a safer indoor environment by limiting exposure to mold and harmful substances. Designing with a green approach can work throughout many areas of the design process:

- **Figure your energy costs.** Much in the same way you figure the cost of your mortgage over its term, you need to compare your initial investment and long-term savings for energy. Sit down with your heating and cooling contractor to calculate the estimated cost of your energy consumption over the next twenty years, based on square footage, type of fuel, heating systems and initial cost of equipment. If you still have questions, Katahdin can help to calculate the energy savings for your individual home design, to give you a clearer picture of your savings over the long term.
- **Green and energy-efficient materials.** Constructing your log home with abundant and renewable Northern White Cedar is a great way to start down the green path. If you opt for the R-23 Energy Envelope insulation package, you'll further enhance your home's continuous insulation and cut your energy consumption dramatically.
- **Check Out the Benefits of Green Certification.** There are many approaches and programs for green certification available on a national, state and local level. In some areas of the country, utility companies may provide a percentage rate cut incentive for certification. A green certification provides your dealer and builder with a checklist of energy-saving features and standards that are assigned point values. To qualify for certification a threshold number of points must be reached. We've found that with very few alterations, Katahdin Cedar Log Homes qualify for many certification programs. The key here is to include certification in your plans from the very beginning. For a nominal fee a Certification Agent will work with your dealer to review plans for efficiency, monitor the building process and provide testing upon completion of construction. Very soon, green certification may add to the value of your home—many states now include green certification in appraisals.
- **Green Programs to Investigate.** Though the field of certification programs is growing with new demands for green building standards, once good place to start is the Database of State Incentives for Renewable Energy (DSIRE). Here you'll find state by state incentives and rebates for homeowners. Another resource for energy efficiency is the Energy Star Qualified New Homes Program. Beyond its ratings for appliances, Energy Star also provides home efficiency ratings that may qualify you for beneficial energy rates. Other certification programs are being developed on a national and state-by-state basis including the U.S. Green Building Council's LEED for Homes and the National Association of Home Builders' National Green Building Program.





Buyer How To : Permitting

Each state, town, and municipality has rules and regulations for the permits needed for home construction. If you've decided on a parcel or lot within a particular community, you'll want to meet with the local code enforcement officer to determine the ins and outs of that town's permitting structure. Some can be quite relaxed; others have very precise regulations determining the permits needed for construction. Here are some questions you'll want to ask:

- **What is required for a building permit?** Some towns require land plat maps, percolation or "perk" tests, building plans, any required engineering, septic designs and other information before a permit will be issued. Check to make sure that zoning is appropriate for residential use, and identify abutters in case there might be a notification requirement before you build. Other information that may be required might include electrical service (200 vs. 400 amps), type of heating system, fuel type, number of bedrooms, even plans for a garbage disposal.
- **Will there be fees associated with permitting?** Because many inspections require the time of a professional, there may be fees associated with the permitting process. Some areas, often closer to larger towns, will impose an impact fee to help defer costs to infrastructure, schools and other town services. The closer your site is to a metropolitan area, the more likely you will be charged for permitting.
- **Are building permits available for my construction timeframe?** Many communities have enacted development plans or "anti-sprawl" regulations which limit the number of building permits issued during a time frame. You may have to submit your name to a waiting list, or delay your home construction until a building permit is available. Some communities allow activities such as road building, site preparation, foundation or basement work, and septic or well construction before a permit becomes valid and the actual construction begins.
- **What is the procedure for issuance of a certificate of occupancy?** You'll want to know what is required for inspections at the end of the construction process, so that you can occupy your new log home on schedule. Inspections of electrical, plumbing and heating work, as well as the septic and well may be required before you can move in.
- **Are there any special environmental permits required?** Many areas also require review for wetlands, vernal pools, drainage runoff management and other environmentally based issues. Check these requirements out to avoid any surprises once construction is started.

Buyer How To : Site Preparation

Many Katahdin Cedar Log Home customers choose sites that are not part of an established development. Rural parcels and undeveloped land have requirements that should be assessed early in the process, as infrastructure costs can become a substantial part of your budget. When you review your site with your real estate broker, your Katahdin Dealer or Representative and your contractor, you'll want to identify these key elements.

- **Cutting and clearing wooded sites.** Walk the land and identify the building envelope and the path of your driveway or road. Take note of significant established trees within your building site—preserving these elders will provide existing landscaping for your new home. You may need to reconsider roadways based on the requirements for culverts, ground stability, drainage and other factors.
- **Road or driveway construction.** Because your Katahdin Cedar Log Home will arrive to your building site on a semi-tractor trailer, you'll need to configure your road and driveway to accommodate these oversized vehicles, including turnarounds. If such turnarounds or access is not practical, you'll need to plan for staging areas, where the large semi can be offloaded onto smaller flatbed trucks. Make sure you have a solid base under your roadways. Also give special consideration to the distance your site is from sources of materials, such as gravel, sand, concrete or stone. If your site is located a long distance from these materials locations, you'll pay extra for transporting the materials to your site.
- **Excavation, blasting and fill.** Each site has its own special characteristics, some of which will not be discovered until ground is broken. If your area is prone to hidden hazards like rock ledges, friable soil or other factors, you'll want to have a little extra budget set aside in case you need to dynamite rock, or add fill to your site. Less than optimum site characteristics can often be remedied by a skilled excavator, some fill and a culvert or two. An average home can take about 1-2 days to excavate under ideal conditions, depending on the size and complexity of your home.
- **Utilities.** If you are not part of a subdivision or development that has electrical, cable and other utilities available on the lot, you'll need to plan to get power, telephone and cable to your home. Your local Katahdin Dealer or contractor will know the best way to construct for utility service, either via poles or underground. You'll want to make sure that all utilities are coordinated so that the cables can be strung or laid in trenches at the same time.
- **Official Address.** This is also a very good time to begin work on identifying your "official" or emergency 911 address. If you are located in a rural area you may need to name your private road, alert your local post office or emergency agency to receive appropriate numbering and signage. Your new official address may be required for your mortgage, and will be necessary to release you home for shipment from Oakfield to the building site.



Buyer How To : Foundations

There are many types of foundations, and are selected based upon local preferences. No matter what type of foundation is specified, it is important to construct a foundation that provides a solid base for you log home. Here are some types of foundations used in North America:

- **Full/partial basement.** A full basement comprises all or most of the area beneath the footprint of the home. A partial basement is still a minimum of 8-9 feet finished depth but may not extend to the complete perimeter of the house footprint. Basements are used in many areas as a place for locating utilities (furnace, water heater, boiler), as well as living area. If you plan to finish off the basement area at a later date, consider digging an extra deep basement to allow for ductwork, ceiling panels and headroom. If possible, include larger windows and a walkout design to maximize natural light in the basement area. Full basements may be constructed of poured concrete, prefabricated concrete panels, or concrete cinderblock.
- **Crawlspace.** Where soils do not permit a full basement, often a crawlspace is specified to allow room and access for duct work, plumbing, wiring and other utilities. A crawlspace is typically just 3-4 feet in height and can be constructed of poured concrete or masonry blocks.
- **Slab.** A slab foundation is typically a poured concrete foundation that rest upon deeper pilings or frost walls to keep the foundation from shift or cracking from temperature changes.



Some additional factors to consider in foundations include:

- **Insulation.** In full or partial basements it is essential to insulate the foundation to reduce a possible 20-25 percent heat loss.
- **Accessibility.** A remote building site may not allow a concrete truck access to pour concrete. In these instances, using masonry blocks or prefabricated concrete walls may be the only option.
- **Weather and season.** The ambient temperature and humidity during construction may adversely affect the strength of poured concrete. If the temperature is below freezing, the concrete will not pour and may set unevenly.
- **Drainage.** Prepare a French drain around the base perimeter of the foundation to carry water away from the foundation. The drain should be directed away from the home and from any septic systems. The drain should also be backfilled with sand to enable water to percolate to the drain.

Buyer How To : Day of Arrival

Finally, the day your home is delivered arrives! This date is generally arranged one to two months in advance, working closely with Katahdin's mill in Oakfield, the truckers who will transport the elements to your building site, and the construction crew that will build your home.

- **Directions.** Many of the home sites we deliver to are along unestablished or private roads, which may not have an official address yet. For delivery, Katahdin requires an official emergency 911 address. You'll want to make sure that clear, concise directions are provided and that you have a cell phone in reach on the delivery date should your driver encounter any delays or need clarification.
- **First load.** Most contractors arrange for the first load to arrive early in the workweek. Your Katahdin Dealer and/or your contractor will work to ensure that foundations and other site work are ready to accept the first load of logs from the mill. The foundation will need to be set or poured from as far out as a week to a day before the first shipment arrives, depending upon the type of foundation you have.
- **Multiple truckloads.** Most homes can be shipped entirely on 2-3 trucks, but larger projects may require more loads.
- **Direct shipments.** Windows, doors and other items included in your package may also be shipped directly to the site with another freight carrier at a later date.
- **Unloading the trailer.** Make sure your contractor or representative has arranged for a forklift or other heavy equipment on site to unload your home components. The logs are stacked and shrink wrapped in the order that they will be assembled from the bottom up. Each log of the log walls is stamped with an identifying number and UPC code that will correspond to your building plans. Purlin timbers are not coded. Our Quality Control Department double checks each order before it is wrapped, loaded and shipped, so that you can be assured of having all the elements to get started.
- **Utilizing a staging area.** If your home site is at the end of a steep driveway or is otherwise inaccessible by semi-tractor trailer, you'll need to designate a large staging area nearby to off load from the semi onto smaller flatbed trucks.



Buyer How To : Log Raising

The log raising process is a very exciting time. The exterior walls and first floor will go up quickly depending on the weather—usually within the first week to ten days. The second floor, roof, trusses and purlins may take another 2-3 weeks—again dependent on weather and scheduling.

- **Walls up!** Seeing your homes walls rise quickly is quite exciting after all the preparation you've done. You'll notice that each log is bar coded, pre-drilled and cut at our mill in Oakfield, which keeps the construction process moving quickly.
- **Trusses and Purlins.** Your trusses and purlins will be constructed with mortise and tenon joints on site, most likely using a chainsaw, to rough cut the notches and tabs, with finer handmade adjustments being made by the construction workers. If you are able to use a crane on your site, the trusses may be built on the ground then raised into place. Otherwise, the trusses may be built in place, with workers lifting each component to the roof area to then assemble them.
- **Roof Systems.** The final part of the log raising will be to finish the roof system, including rigid insulation, strapping, sheathing, and shingles.



Buyer How To : Interior Finishing

Once your Katahdin Cedar Log Home is enclosed, work will begin on the inside to finish interior living spaces. Many of these steps will be occurring simultaneously or in different sequences, depending on subcontractor scheduling. Here are some of the steps involved in interior finishing:

- **Interior partition walls.** These walls will be constructed at this time. Interior doors, windows and other partition elements will be constructed.
- **Masonry.** If you have any stone work around fireplaces or woodstoves, or have a masonry fireplace planned, the stonework will start as soon as the home is enclosed, sometimes sooner.
- **Wall insulation.** If you opted for one of our insulation packages, then the inside of exterior walls will be finished with insulation package components (strapping and insulation sheets) and any wiring that is contained within insulation system on log walls. If your home is not using an insulation package, the walls will be drilled for wiring during the log raising. Once the insulation and wiring is in place the interior log siding can be installed to complete the log appearance within your home.
- **Interior log finishing.** Once the interior walls are complete, the cedar surfaces need to be sanded and finished with protective finish. You'll find that log walls are easy to keep clean once the finish topcoat is applied.
- **Electrical wiring.** With an insulation package, you'll find that your electrician will have a simpler and quicker means for wiring your home—which can potentially save you several thousands in a typical home electrical installation. With whole log walls, the drilling to accommodate electrical wiring will be done during the construction of the outer walls.
- **Stairways, doors and floors.** Your dealer or contractor will be coordinating the construction and/or installation of stairs to lofts or second floors, including railings. Plumbing fixtures like sinks, tubs and toilets may be placed as well and finished with tiling surrounds. Hard flooring such as tile, hardwoods, Pergo or veneers will be put down first; carpeting will be one of the last flooring items to be installed.
- **Kitchen areas.** Cabinetry will be installed and hung, and utility service for stoves, refrigerators and other appliances will be hooked up. Once the cabinets and sinks are installed, your countertops made from granite or other materials can be set into place.
- **Lighting, door hardware, doorbells.** All the smaller items the combine to make a house a home will be installed as the larger jobs are completed.

Buyer How To : Exterior Finishing

Finishing the exterior of your Katahdin Cedar Log Home is an important step in protecting your investment. When finished properly, your exterior should provide many years of beauty with some routine maintenance each year.

- **Stains and topcoats.** Stains and topcoats protect your cedar from damage by ultraviolet light. Stain colors also provide the primary color scheme for the exterior of your home.
- **Application.** Once your home is enclosed with the roof on, but before the windows and doors are installed, your contractor can begin applying stain and topcoat. Because Katahdin's cedar has a very low moisture content, there's no need to wait to apply finishes once your home's exterior is complete. Also, it's much simpler to have a crew utilize staging equipment from the log raising to make quick work of the stain and topcoat application. For more details about stains and topcoats, [click here](#).
- **Decks and porches.** Any exterior decking will also be completed once the home is enclosed. You'll want to apply stain and topcoats to these surfaces as well to protect them from the elements.
- **Grading.** As the home construction process nears completion, you'll want to have the grading finished up so that rainwater is directed away from the foundation. Final grading should be no less than 24 inches from the bottom of the subfloor. Any earth moving for landscaping may also begin at this point in the building process.

