

# Timber Frame Wood Species

When dismantling the historic *timber framed barns* and shelters of the past, it's common to discover a variety of different wood timbers making up the structural frame. When function – not aesthetics – was the priority, timbers easily accessible and indigenous to the immediate area were the most likely candidates. Poplar, maple, and beech might do the job – but so would a chestnut (considered extinct) or a walnut timber, too. Barn restorers and reclaimed flooring manufacturers would consider these a treasured find. Today, accessibility is less of an issue. We have the means to ship timber from close or afar, which broadens our menu of choices. And single specie timber frames are standard – although not in every case. Our choices, if not dictated by engineering requirements for strength or length, are typically based more on the color, stability, and cost.



Doug Fir

In general, the trees from which the timber is extracted come in two categories: deciduous and coniferous. Deciduous trees are identifiable because they lose their leaves annually. Ash and maple fall into this category but are generally not chosen for timbers for various reasons. Other hardwoods favored by timber framers, like the oaks and cherry are very strong and attractive but difficult to find in high quality AND suitable sizes. All woods that are hard are more susceptible to "checking" as they dry. Checking is the cracking that forms along the vertical grain of the timber while it dries. Although all wood checks to a degree, it is not uncommon for a hardwood to form a check deep and wide enough to insert the tips of your fingers. Checking does not necessarily affect the structural integrity of the timber – especially when care is taken to maintain the heart (center where the growth rings begin) within the timber; this is referred to as boxed heart.

As a rule of thumb, it takes approximately one year to air dry one inch of timber – so, expect an occasional "crack" in the middle of the night during the first six to eight years of enjoying your timber framed home. At this time, there are some experimental facilities attempting to kiln dry timber – but, unlike the scale of wood used in furniture, a timber is very different in mass. Arguably, the methods are still rudimentary and can adversely affect the appearance and cell structure of a timber. Since one cannot expect the kiln dried appearance of fine furniture in a timber, we opt to allow the timber to dry in place, set nicely in housed joinery and firmly snugged with wooden pegs.



Douglas fir, hemlock, white and yellow pine, heart pine, spruce, cedar and others are all viable timber frame choices. They are generally more plentiful, check less, and emit a pleasant scent for years. Considered "softwoods", the name should not imply weakness. Douglas fir, for instance, is harvested from both sides of the Cascade Mountains in the Pacific Northwest. It is very strong, stable and is available in long lengths (easily up to 50 feet). It comes in a variety of quality levels and appearance grades. Its color varies from warm pinks, oranges and rusty reds. While eastern white pine, very consistent in color and just as stable, is about half its raw material cost – making it a popular favorite. Southern pine and hemlock are on the harder side of the scale for soft woods and can be unruly and check like hardwoods, but they are beautiful in color and grain.

Most timber suppliers are connected with forest management and replenishment programs, but if your conscience pulls you in the conservationist direction, reclaimed timbers offer an excellent alternative. Upon request, timbers that have enjoyed a previous life as a factory, a bridge, or a warehouse can be reused in your project. Riddled with character marks; bolt holes, rust stains and nail pocks, etc., reclaimed timbers can be used as is or re-milled to give it a facelift and expose its lost inner beauty. Its recovery generally adds steps to the procurement process which increases its cost over newly harvested timbers, but the results can be dramatic and unique.



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