

This private residence in Northern Michigan, designed and built by Amazon Timber Frames, blends seamlessly into its natural surroundings.

sustainable building



rescuing amazon timber

BY JANICE BINKERT

HONORING THE SPIRIT OF THE AMAZON

Amazon Timber Frames (ATF) is the world's premier supplier of precision handcrafted timber frames made from Brazilian hardwoods, supplying both commercial and residential markets. While this fact may throw up a "save-the-rain-forests" red flag for some, the Michigan-based company, founded in 2002, is actually fervent about preserving Brazil's greatest natural resource, upon which its very existence depends. ATF takes every opportunity to increase awareness of the Amazon's plight.

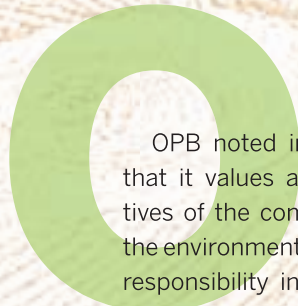
Amazon Timber Frames and its on-site partner, Zero Impact Brazil (ZIB), are both deeply committed to ecologically sound business practices. The partnership is designated as a "green" operation by the Brazilian government. ZIB itself recently earned the "Top of Environmental Quality 2007" award from the Order of Parliamentary of Brazil (OPB).

continued on pg. 51



LEFT: (clockwise from upper left) Typical scenery in Amazon Basin forests of Brazil; measuring the diameter of a log; a Brazilian craftsman hand-hewing a timber; a timber frame structure being raised.

RIGHT: ATF's team of skilled craftsmen is made up of former boat builders.



OPB noted in its letter of recognition that it values and encourages the initiatives of the company in the treatment of the environment, saying that it shows great responsibility in helping to establish and maintain "harmony in nature and the biodiversity of the planet." ZIB is now authorized to use the "Top of Environmental Quality" stamp in all of its products, services and media materials.

Amazon Timber Frames source for quality hardwoods is land that has been legally designated by the Brazilian government to be cleared for mining or agriculture. The majority of the logs purchased by Amazon Timber Frames come from Porto Trombetas and Juruti, two communities deep in the Amazon Basin that are home to the largest bauxite mining operations in the world. Bauxite is the raw product that is refined to make aluminum. A typical bauxite deposit might be 25 feet below the surface of the forest, and the deposit may be as thick as 50 feet.

To get the bauxite out of the ground, the forest needs to be cleared. But before this

is done, the mining companies' forestry specialists analyze just what species are on each tract to be cleared. The mining companies are making a concerted effort to replant the land when they are finished mining. The same species of native trees, that existed before clearing, are grown in company greenhouses for replanting after the bauxite has been removed. In addition to replanting trees, Amazon Timber Frames' supplier in Porto Trombetas, Mineracao do Rio Norte (MRN), has also cleaned up a polluted lake in the area, earning its operation the coveted ISO-14001 certificate, the first issued to a Western Hemisphere mining town.

In today's world, aluminum is essential. It has to come from somewhere. The reality is that these mines exist and will continue to exist. The mine in Juruti is new and will be in operation until mid-century or beyond. The mine in Porto Trombetas has been operating since 1979 and is projected to be in operation for another 30 years. There will be millions of logs available from these two projects for years to come.

continued on pg. 53



Casa do Sapo (House of Frogs) spans a Koi pond in Northern Michigan.



The question is not whether trees will be cut, but rather what will happen to them afterward. If the logs that have to be cut to mine bauxite were not used by an entity like Amazon Timber Frames, they most likely would be buried. This was the practice in Porto Trombetas for the first 30 years of the mines' operation. Amazon Timber Frames' purchase and use of these byproducts of the mining and farming operations amounts to a major recycling program. Porto Trombetas is a perfect example of the environmental awareness that ATF demands in its business associates. No roads have been built to connect this remote town to the outside world, because of the fear that they would bring more people and thus more infrastructure, which would inevitably lead to increased deforestation. The 6000 inhabitants enjoy fresh drinking water as well as sewage and garbage recycling systems. They even have their own power plant, a school and a 32-bed hospital.

Juruti adheres to a number of sustainable development practices, having implemented programs such as climate, noise, water and air quality control, flora conservation, monitoring of animals, insects and fish, environmental education, reclamation of altered areas, solid waste management and environmental emergency control, among many others.

continued on pg. 55

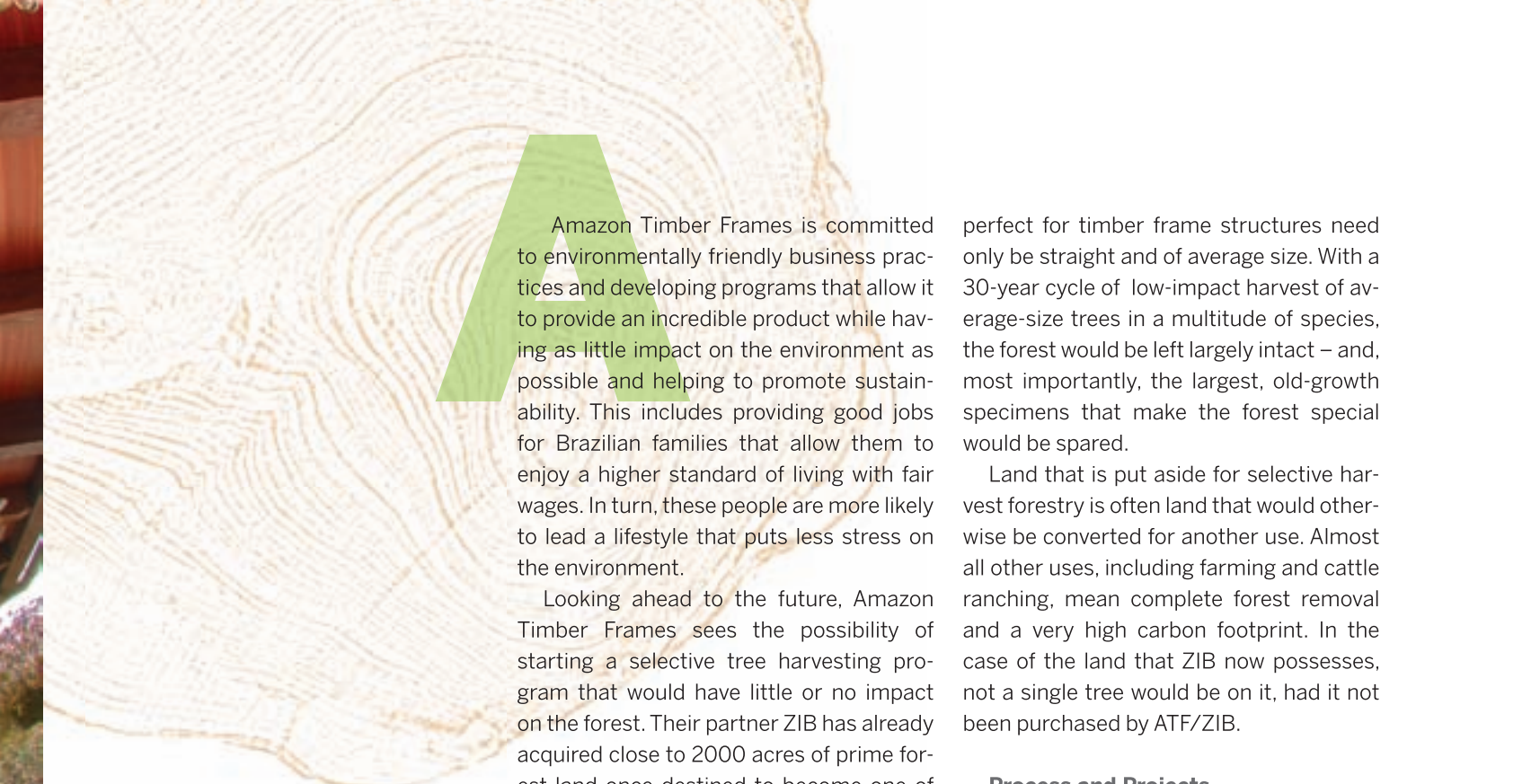


UPPER LEFT AND RIGHT:

The timbers used in Casa do Sapo are naturally decay resistant, withstanding the elements for years without chemical treatment of any kind and thus protecting the pond's delicate ecosystem.







Amazon Timber Frames is committed to environmentally friendly business practices and developing programs that allow it to provide an incredible product while having as little impact on the environment as possible and helping to promote sustainability. This includes providing good jobs for Brazilian families that allow them to enjoy a higher standard of living with fair wages. In turn, these people are more likely to lead a lifestyle that puts less stress on the environment.

Looking ahead to the future, Amazon Timber Frames sees the possibility of starting a selective tree harvesting program that would have little or no impact on the forest. Their partner ZIB has already acquired close to 2000 acres of prime forest land once destined to become one of the many large-scale farms so common in the region. There are 1200 known species in this area. The typical timber operation in that part of Brazil focuses on no more than five species and seeks only the largest and finest logs, since they yield the most high-grade timber. Amazon Timber Frames, on the other hand, takes a different approach, avoiding the exploited trees and focusing on long-term, selective and managed harvest of the other 1195 species that inhabit the forest.

The company is also avoiding the “granddaddy trees,” since those that are

perfect for timber frame structures need only be straight and of average size. With a 30-year cycle of low-impact harvest of average-size trees in a multitude of species, the forest would be left largely intact – and, most importantly, the largest, old-growth specimens that make the forest special would be spared.

Land that is put aside for selective harvest forestry is often land that would otherwise be converted for another use. Almost all other uses, including farming and cattle ranching, mean complete forest removal and a very high carbon footprint. In the case of the land that ZIB now possesses, not a single tree would be on it, had it not been purchased by ATF/ZIB.

Process and Projects

ATF provides start-to-finish logistics for every project, whether commercial or residential. This also includes architectural services or referrals, including converting conventional home plans to a timber frame, if requested. Building materials include exotic woods in an amazing variety of natural colors and grain patterns, allowing for a great deal of design creativity and customization. In addition to the structural elements for the actual framing, ATF can also provide siding, decking, custom flooring, inlays, trim, stair parts and paneling, all manufactured by independently owned

continued on pg. 56

LEFT: Dramatic architectural elements carried out in colors and wood grains of unmatched natural beauty put a unique stamp on an Alabama pool house and a party pavilion in Southeastern Michigan.

RIGHT: Decking, siding and a custom door in exotic Brazilian hardwood from ATF.



FOUR RECENT ATF PROJECTS GIVE AN INDICATION OF THE DIVERSITY OF APPLICATIONS FOR THESE WOODS:

1. Casa do Sapo (House of the Frog), a beautiful and unique outdoor timber frame structure behind a home in Northern Michigan, spans a Koi pond. It was constructed from a variety of exotic Brazilian hardwoods, including jatoba, gonalco alves, massaranduba, ipe, cumaru, tatajuba, sapucaia, purple heart and marblewood. Held together with approximately 300 wood wedges and 100 pegs, Casa do Sapo is 60' long.

2. For a private homeowner in Southeastern Michigan, ATF designed and built a 26'x26' party pavilion that sits on a man-made stone island. Assembled and raised in just ten days, it features massaranduba hewn timbers and angelim pedra purlins, with curatinga mahogany interior roof decking.

3. A client in Tennessee commissioned an elegant 3900 sq. ft. horse barn, for which ATF used a combination of natural stone and Brazilian timbers, including sapucaia, angelim pedra, gonalco alves and massaranduba. The barn comprises eight stalls plus a tack room and an upper gallery. Hand-split exotic hardwood shakes cover the roof.

4. A luxurious 1950 sq. ft. pool house in Alabama is a testament to the versatility and beauty of several exotic Brazilian hardwoods, including gonalco alves, jatoba, angelim pedra, cumaru, massaranduba, curatinga mahogany and macacauba. This project also included a 752 sq. ft. carport and a 250 sq. ft. pavilion featuring this same combination of wood species.



ABOVE: Detail of the door and framing stage of a horse barn in Tennessee.
RIGHT: A finished horse barn project in Tennessee.

continued from pg. 55

Rare Earth Hardwoods. Another product innovation from ATF is hand-split Brazilian hardwood shakes. These shakes are naturally fire resistant, available in a multitude of colors, and handcrafted from ipe, itauba, massaranduba, jatoba and many other durable species.

After the customer chooses which wood or woods will be used, the next step is preparation of the logs in Brazil. ATF's entire skilled workforce in Brazil consists of former boat builders, who are experts in handcrafting timbers. Using both the latest high-tech machinery and traditional tools like adzes, chisels, wooden mallets and planes, they produce precision-built structures unmatched in the industry. Brazil has a proud history of boat builders that dates all the way back to 1690, when the Portuguese settled the country. With the resources available and these talented native craftsmen, even difficult effects, such as complex curves with intricate joinery and intricate custom carvings, can be achieved. ATF is proud that it can be part of preserving this traditional trade.

When the complete timber package is ready, it is shipped down the Amazon and across the ocean to a major coastal port, where it is transferred to a truck and continues its journey to the building site – which could be anywhere around the globe. Upon arrival at the site, a highly skilled crew of timber framers led by the designer and builder who heads up ATF's Brazil operations erects the structure to specification.

Brazilian hardwoods are extremely versatile. Architects can do amazing things with them because of their size, shape and

strength. An "average" tree in the Amazon can be over 200 feet tall. The logs cut from their trunks range from 18 inches to over 6 feet in diameter, and they are often free of any knots to 120 feet in length, so every inch is usable. The wood is remarkably stable compared to domestic species and less prone to twisting, splitting or warping. Four recent ATF projects give an indication of the diversity of applications for these woods: The common thread running through everything ATF creates from Brazilian hardwoods is that it is all incredibly beautiful. But in keeping with the company's environmental consciousness, that beauty is more than skin deep. Homes and commercial buildings are very energy efficient – the panelized system used for exterior walls and roofs has a very high insulation and safety rating. The timbers used for construction are also naturally decay resistant, requiring no chemical treatment of any kind and thus avoiding chemical leaching into ground water or runoff into lakes and rivers. And, of course, there is the human and economic sustainability factor in these products' country of origin. Brazilian hardwoods may come in a variety of colors, but in the hands of Amazon Timber Frames, they're all green!

Amazon Timber Frames
6778 Traverse Highway
Traverse City, MI 49684
Tel. 800-968-0074
Fax. 800-968-0094
www@amazontimberframes.com

