



Plantation XTR
PANELS

thinking of our **FUTURE**

A close-up photograph of several bamboo stalks and leaves. The stalks are green and segmented, with visible nodes. The leaves are also green and have a smooth texture. The background is a soft, out-of-focus green, suggesting a natural outdoor setting.

Plantation XTR OVERVIEW

Plantation XTR is a solid, high density bamboo panel, made from compressed bamboo strips. It is suitable for outdoor applications such as decking, furniture and joinery.

A special patented heat treatment process alters the hardness, dimensional stability and durability of the bamboo to a level superior to the best tropical hardwood species.

Like any untreated tropical hardwood species when exposed to outdoor conditions, Plantation XTR will turn grey over time, creating a very natural look.

High Performance Panels

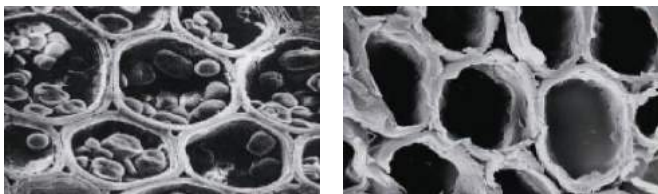
There has been significant research and various testing methods of how to best protect bamboo in outdoor circumstances. Initial tests (which are also often used by other bamboo suppliers) were found to be unsatisfactory, not performing to Plantation's quality standards. Therefore Plantation looked to a supplier who had developed an alternative way to solve the problem.

By modifying the density of the bamboo and also applying a special heat treatment process, our supplier was able to improve the durability and stability of bamboo. This technique is referred to as "density-thermo treatment".

This invention was registered internationally in 2008, with laboratory and practical testing performed the following year. The research proved density-thermo treatment to be the most effective method (and currently the only efficient solution) to ensure bamboo is suitable for outdoor applications.

Density-thermo treatment counters previous problems with using bamboo outdoors, such as cracking in dry conditions, and the inner wood material being subject to attack from micro-organisms and fungi, due to the high sugar content of bamboo.

Density-thermo Treatment



Bamboo on molecular level before (left) and after (right) the density-thermo treatment:

- Before: the sugar molecules are still visible,
- After the treatment: they have disappeared.

With this treatment, bamboo is no longer a feeding place for fungi and micro-organisms, resulting in a high performing exterior bamboo product.





How you Benefit

Plantation is the largest specialist supplier of bamboo products in the New Zealand market. With offices in Auckland, Wellington and Christchurch we have support for you throughout the process – before, during and after fabrication of your panels. We have found this to be a huge benefit to customers, allowing us to offer a better service with higher quality control.

In addition, we are able to offer you competitive pricing and the best quality bamboo products on the market.

Quality Management

All products comply with the highest international standards. The production is carried out with the restriction and guarantee of ISO9001 Quality Management System and ISO14001 Environment System.

Each link of the production chain is under the strictest supervision, with quality control checks, so as to ensure high quality end products.

Emissions

All our products comply with the European E1 standard with a VOC emission rate of less than 0.001ppm (parts per million).

Durability Class

Plantation XTR Panels have been tested according to EN113 and EN350-1 and are classified as meeting Durability Class 1.

Warranty

Plantation offers a 15-year warranty on our Plantation XTR Panels.

Visit www.plantationbamboo.co.nz to download full warranty information



Performance Comparison

Swelling Rate of Water Absorption *immersed in water for 24h

No.	Species	Width Swelling Rate of Water Absorption*	Thickness Swelling Rate of Water Absorption*
1	PlantationXTR	0.30%	0.50%
2	Teak	0.40%	6.10%
3	Ipe	0.50%	0.70%
4	Red Cedar	0.60%	1.70%
5	Merbau	0.60%	0.60%
6	Red Meranti	0.60%	0.30%
7	Carbonised Pine	1.00%	0.50%
8	CCA Pine	1.30%	1.80%

Elastic Modulus

No.	Species	Elastic modulus (Gpa)
1	Ipe	20.62
2	Merbau	16.23
3	PlantationXTR	13.63
4	Teak	11.20
5	Carbonised Pine	11.18
6	CCA Pine	9.66
7	Red Meranti	7.08
8	Red Cedar	3.76

Hardness/Wear-resistance

No.	Species	Hardness (Gpa)
1	Ipe	119.10
2	PlantationXTR	116.60
3	Merbau	61.90
4	Teak	55.80
5	Red Meranti	47.10
6	Carbonised Pine	44.30
7	Red Cedar	44.10
8	CCA Pine	43.10



“The best exterior bamboo panels in the world”



Appearance and colour

Plantation XTR is a natural product which can vary in colour, grain and appearance. Colour will change over time, depending on the maintenance schedule. The panels have a brown to dark brown colour when installed, which turns into a lighter caramel colour several weeks after installation. Without further maintenance, the colour becomes grey relatively fast (similar to most other wood species). If a brown colour is preferred, maintenance should be carried out with exterior oil recommended by Plantation.

Plantation XTR is similar to other hardwoods in grain and structure. The characteristic bamboo nodes can however, be recognised, giving the product a unique and appealing look.

Natural greying of Plantation XTR over time (without maintenance)

New, non-weathered panels (left); after three months of weathering (middle); and after 18 months of weathering (right).



Surface of Plantation XTR with different maintenance and cleaning scenarios

Weathered, non-maintained panels (left); weathered, cleaned decking (middle); and re-oiled decking (right).

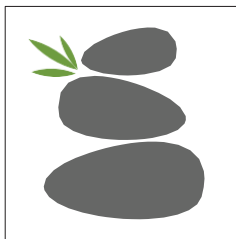


The surface becomes weathered under the influences of wind, rain, frost and ultraviolet light. As a result, the surface will turn grey. It is important to use outdoor oil to maintain the appearance and performance of your bamboo.

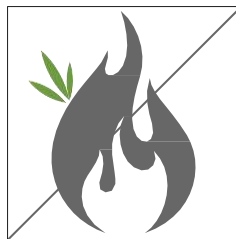
Dimensions

Each Plantation XTR Panel measures 1860mm x 1250mm and is available in 20mm, 30mm, and 40mm thickness.





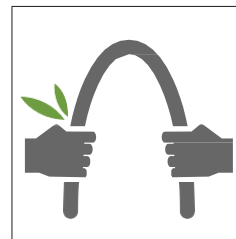
Healthy eco friendly



Fire-proof



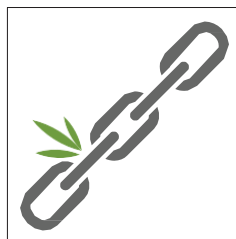
Excellent shrink and swell rate



Hard & durable



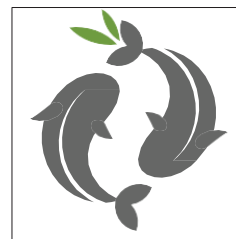
15 year guarantee



Corrosion-resistant



High mould-proof



Good dimension stability



Summary

Plantation is excited about the opportunity to work with you. Please contact any of our team members to discuss your project and potential options. **Think bamboo, think Plantation!**

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