

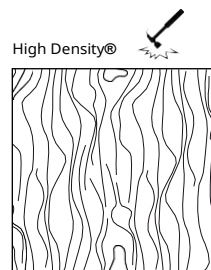
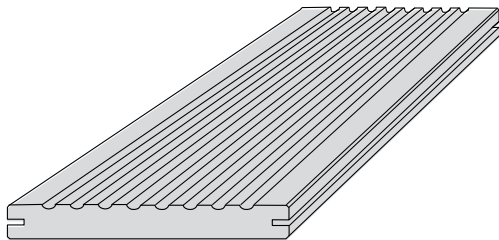
Bamboo N-Durance
DECKING
Installation & Care
instructions

As a home owner, builder, designer or architect we understand you want to work with a reliable company that offers not only a solid product base and great price, but also comprehensive warranties, technical and installation support, manufacturing information and thorough product testing.

Plantation is a leader in the field of bamboo building products and is here to assist you with information and support throughout the design and building process. Here are our installation and care instructions for our bamboo N-Durance decking:

Installation summary

- Install a suitable, fixed, stable and durable sub-frame - with joists spaced 462.5mm apart, for quick and efficient installation
- Determine which side of the board will be used – the ribbed or flat side
- Fix the boards on the sub-frame using provided clips (to be inserted in the grooves of the board) or alternatively with screws (through the surface)
- Ideally provide a 1-2% slope to assist with water run-off and ensure good ventilation is available around the decking
- After installation, make sure proper cleaning and maintenance is done, according to the chosen finish (if desired)
- Final treatment with water based oil/saturator is recommended, after allowing the deck to weather for a few months
- For further info please see the installation/maintenance instructions below.
- For a handy 5 minute installation video go to our website or [here](#).



Decking boards are 1850 x 137 x 20mm in size, flat on one side & ribbed on other, with grooves on the edges of boards, which the clips fit into for fixing to joists. Bamboo N-Durance decking comes in boxes of 5 boards = 1.267m² per box, weighing 31 kgs.

Bamboo N-Durance fixing

Fastening clips and screws: With the clips and screws supplied, Plantation Bamboo N-Durance decking can be easily installed. When installed correctly the clips provide a 3-4mm gap between the boards. The clips are powder coated stainless steel and come with matching stainless steel screws. We also have available edge/starter clips as an accessory - these come in bags of 25 clips/screws for \$8+GST per bag.



Before installation

Water logging under the decking must be avoided by preparing a water permeable ground structure. This can be achieved by sand layers and gravel dispersion above.

Use cement/stone tiles 40-50 mm thick or pedestals, to support the sub frame. See drawing.

It is suggested to place a root barrier under the decking to prevent weeds growing from under the decking.

Install the decking boards with a slope of 1-2% to enable water to run off the surface.

Ensure good ventilation of the decking by keeping a least 20 mm space at walls and obstacles and avoid closing the terrace on the sides.

When the surface underneath the decking is not fast drying, there should be at least 100mm distance between the decking and the surface underneath.

Use sub frame joists with the minimum size of 40x60mm. Suitable joists are those with the same durability class as the decking; ALU sub frame joists, stable hardwood joists or impregnated pine joists. Avoid direct contact with the earth.

To minimise cutting and wastage, install the bamboo N-Durance decking boards on sub frame joists with 462.5mm space between the joists (centre-to-centre). It is recommended to always install the head sides (ends) of the boards exactly on a joist.

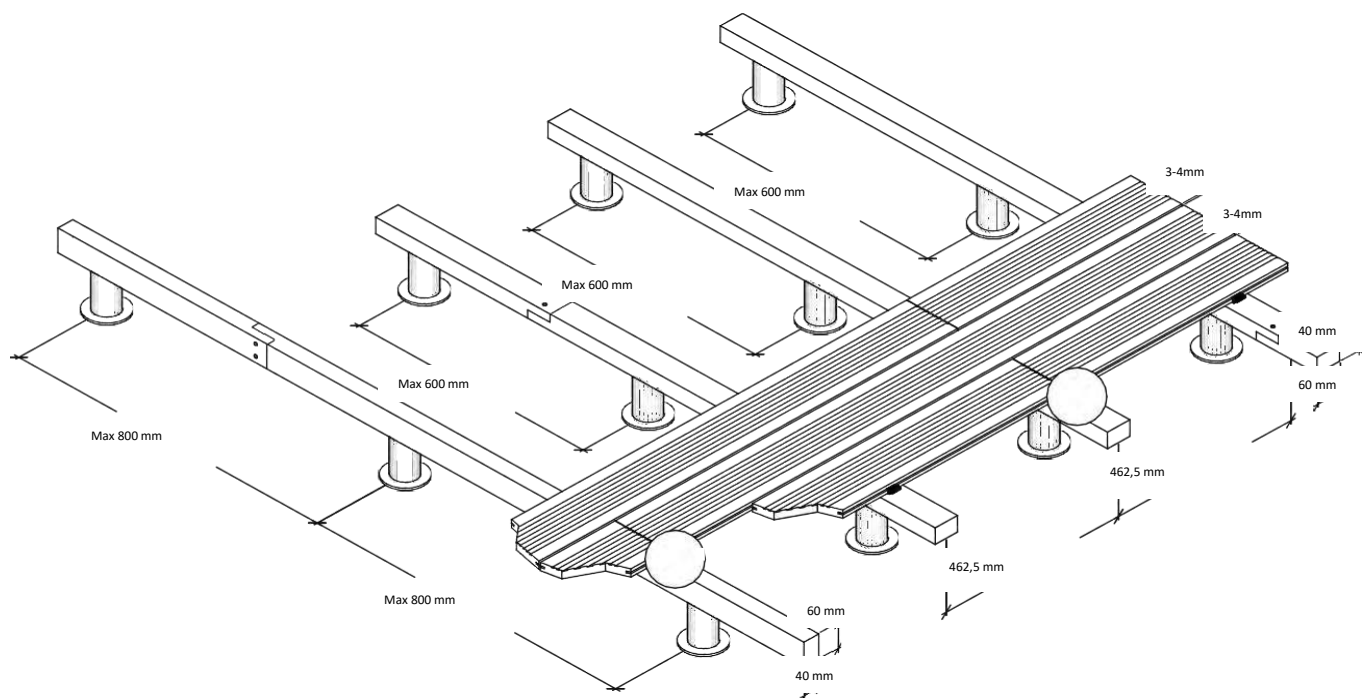
Please note: Bamboo N-Durance decking is a natural forest product, which varies in colour, grain and appearance. Colour will change over time as the decking weathers, from a warm caramel to more of a grey colour, depending on the maintenance schedule applied.

Some cracks and splinters on the surface and on the end of the boards may arise from the different drying characteristics of the surface and cross cut ends. This phenomenon is normal for most wood species and is minimised for this product by its unique "Outdoor-Density®" production method. Cracks on the board ends can be further minimised by applying wax on cross-end sides of the cut boards, see below.

Any splinters and roughness can be removed by cleaning the surface of the decking with a silicon carbid broom, sanding or similar - the surface will become smoother, and splinters are removed.

Dimensional change or cupping of the boards can occur after installation, but less so than most deck types. This phenomenon is normal for most wood species; however, this is minimised for this product by its unique "Outdoor-Density®" production process.

When using the flat side of the boards as the surface please note that deformation under influence of climate will likely be more visible. Deformation of the surface is not considered to be a fault of the material, which can normally be improved by sanding or maintenance.



Installation instructions

Bamboo N-Durance decking cuts well with a sharp, fine tooth saw-blade (eg 60-80 tooth).

Edging boards: If clean edges are preferred (without grooved edge) for steps, fascia or deck edging, the long edge can be ripped/cut off and sanded, for a crisp, clean look.

The Installation:

- It is recommended to use the supplied clips to keep a 3-4mm expansion space between the boards (in width direction).
- Because of the stability of the boards and the shape of the head-side tongue and groove (at ends), no expansion space is needed on the head-side.
- It is recommended that cut ends of boards be impregnated with suitable timber sealing wax, to protect the cut ends.
- Yearly maintenance with an exterior wood oil will be required to maintain the warm caramel colour and the anti-surface fungi resistance. For the first decking oil it is recommended to perform after 3-4 months.

Installation with clips:

- Determine the surface side of the boards (ribbed or flat surface)
- Pre-drill screw holes in the side of the first board. Be sure to pre-drill with a large enough hole to avoid cracking of the decking.
- Screw down one side of first board to the joist
- Insert the clip to other side of board, then screw it to the joist
- Use a plastic/rubber hammer to ensure the clips fit snugly.
- Use approx 16-20 clips per m² – one on each joist.

If using a screw-down installation method:

- Determine the surface side of the boards (ribbed or flat surface)
- Pre-drill the screw holes 20mm from the side of the board. Be sure to pre-drill with a large enough drill to avoid cracking of the decking
- Always screw both sides (left and right) of the board
- Use stainless steel decking screws (ca 5 x 50mm).

Post-installation

First oiling can be performed directly after installation. The best time for the first maintenance is 3-4 months after installation, when the surface is more open than immediately after installation (after the decking has weathered a little).

Additional Note

Whilst all due care is taken to ensure the accuracy of the installation instructions, individual circumstances (location, sub-floor, and installation procedures) may vary and are beyond the manufacturer's control. In case of doubt, therefore, consult Plantation Bamboo.

Storage

Until used, store bamboo N-Durance decking in a dry, cool place protected from dust and sunlight.

Pro-Tip!

An experienced builder who has installed a lot of bamboo decking has suggested a great tip (that he does when installing the decking). He found that as the timber decking framing dries out over summer, or due to some seismic movement, etc – the bamboo decking can sometimes move a little (and maybe creak) or the clips rattle when walked on. Therefore, he suggests using a product like **"Sika Sikaflex MS Silicone (black)"** to provide a flexible adhesive to help if the framing moves (as you're more likely to see movement in the deck framing than from the bamboo N-Durance decking on top).

The "pro tip" is to place a small bead of the silicone in the bottom of the "female" end of the tongue-in-groove join – so that when the boards fit together it creates a small cushion, with any excess spilling under the board (not on top, making a mess). The expert also suggests placing a small dab of silicone on the clip, once screwed to the joist, and inserted in one board, prior to connecting the second board.

These tips are not absolutely necessary but may help provide a "pro" finish to your bamboo N-Durance decking installation.

After installation

After installation, there may be some bleeding or leaching of colour from the bamboo material when it gets wet, eg. when it rains. This possible bleeding is typical for wood and will disappear over time. The brownish liquid can easily be cleaned from the Bamboo N-durance® material, however controlled water drainage and prevention of splash water is required to prevent any discoloration of surrounding or underlying building components.

Maintenance & cleaning

The surface of the decking will weather under the influence of wind, rain, frost, and sunshine (UV). As a result, like other timber-like products, the surface will naturally turn a grey/silver colour, get dirty and some surface cracks/splinters may appear. Cleaning and maintenance will keep the decking in good condition and ensure it will last a long time.

Bamboo N-Durance decking is pre-oiled, double sided, with WOCA exterior water based decking oil (from Woodcare Denmark).

- It is advisable to keep the decking free from dust and dirt as much as possible (clean by broom regularly).
- Clean the bamboo N-Durance decking at least once per year with WOCA Decking Cleaner and silicon carbid broom or similar products, after soaking the decking with plenty of water, to help loosen dirt etc. DO NOT use a high-pressure cleaner/water blaster. Depending on climate and use, it may be necessary to perform cleaning more than once per year.
- Scrub the soaked decking lengthwise following the bamboo grain until it appears clean. If the decking has been installed flat side up, first scrub at an angle of 45 degrees before scrubbing in the length direction.
- Repeat the cleaning if necessary.
- Remove the dirty water residue on the boards with clean water and let the deck dry for approx 24 hours. The decking must be completely dry before any oil treatment can be done.
- If the decking shows any splintering or cracking, we recommend sanding to smooth the surface (100 grit sandpaper, in length grain direction).
- Apply 1-2 new coats of WOCA Decking Oil (WOCA exterior oil, teak colour (or other preferred colour) – or other high-quality water based penetrating decking oil when required, following the manufacturer's instructions.
- When a new oil finish (with anti-fungal properties) is not applied annually (depending on the situation), the decking will change in colour. Surface (superficial) fungi may occur, but this has no effect on the material's integrity or fitness for use.
- When not applying new outdoor oil, the deck will gradually turn a grey colour tone.



Check out the maintenance
and cleaning movie at:
www.moso-bamboo.com/youtube/n-durance

Application of oil (Woca exterior oil)

- Apply in dry weather only. Avoid direct sunlight and high temperatures (please follow the oil manufacturer's detailed instructions)
- Stir the oil thoroughly before use. Apply an even coat of oil with a brush.
- The oil is cream-coloured when it is wet
- After a few minutes, the material has an oily appearance as the water is evaporating
- Wipe off any excess oil with a clean cotton cloth after no more than 5-10 minutes.
- Take particular care to remove excess oil from joints and grooves.
- Repeat the above process.
- When the material is dry, it may be polished with a polishing pad or polishing machine to ensure an extra hard-wearing surface. It takes 24 to 48 hours for the oil to harden thoroughly, depending on weather conditions and outdoor temperatures. The material should not be exposed to water during this period.
- Due to the risk of self-ignition, it is important that oil-wetted cloths are soaked in water and are disposed in a tightly closed container after use.

If other decking oil is preferred, please test this first on your bamboo N-Durance decking - then follow the manufacturer's instructions on how best to apply it.

Maintenance of flat side

Please be aware that on the flat surface, irregularities in the surface (eg cracks, splinters etc) may be more visible than on the ribbed surface. Deformation of the surface is not considered to be a defect of the material and is likely to be less than most other decking products.

If regular maintenance with a water based decking oil is performed, the likelihood of cracks or splintering will be reduced.



Swimming Pools



If Bamboo N-Durance decking is to be used around swimming pool areas, the following should be taken into account:

As with any wooden product used outdoors, there is always a risk of formation of splinters, however splinters from Bamboo N-Durance are normally smaller than (tropical) hard wood splinters. A regular application of oil (more frequently around swimming pools) is recommended to reduce the formation of splinters. Furthermore, regular maintenance with the silicon carbide broom/disk or brushing/sanding is suggested to effectively remove splinters and smoothen the surface.

The boards must be installed in such a way that the surface water does not directly flow into the pool.

Also bear in mind that treated swimming pool water contains salt and chlorine which can cause the boards around the pool to "weather" and become bleached faster than the boards in areas not exposed to the swimming pool water.

Technical characteristics & certifications of Bamboo N-Durance Decking

- Density: +/- 1200 kg/m³
- Resistance to Indentation - Brinell Hardness: \pm 9.5 kg/mm² (average value - EN 1534)
- Reaction to fire: Class Bfl-s1 (EN 13501-1)
- Slip resistance: R 10 (CEN/TS 16165 Annex B - DIN 51130)
- Modulus of Elasticity: 12090 N/mm² (mean value - EN 408)
- Bending strength: 99.6 N/mm² (characteristic value - EN 408)
- Biological durability: Class 1 according to (EN 350 / CEN/TS 15083-2), simulated graveyard test; Class 1 (EN 350 / EN 113-2 (CEN/TS 15083-1))
- Superficial preservatives and finish: comply with European biocide product regulation (BPR) and are not listed on the restrictions list of REACH Annex XVII/candidate list.
- Effectiveness against surface fungi: Class O, Strong fungi static (EN ISO 846), treatment only superficial.
- Use Class: Class 4 (EN 335)
- Environmental Product Declaration - EPD (EN 15804)
- Contribution LEED BD+C - v4: MR 1, MR 2, MR 3 (FSC[®]) EQ 2, SS 7 v2009: MR 6, IEQ 4.3, IEQ 4.4
- Contribution BREEAM: MAT 1, MAT 3 (FSC[®]), MAT 5
- Plantation offers a 25 year warranty on our Bamboo N-Durance[®] decking (see warranty on website)



breeam



Contact us:

For more information, photos, and frequently asked questions – please go to our website:

www.plantationbamboo.co.nz

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