

Sustainable House Design: Bamboo Screening & Battens

Avalon Beach, Sydney

Landscaping Case Study

Jamie Durie | **designer**

Silvester Fuller | **architects**

Dilcara | **builders**

Project Overview

Set on a steep, dramatically terraced site between Riverview Road and Pittwater, the Jamie Durie House is an ambitious multi-level residence designed to integrate seamlessly into its coastal bushland setting.

From Jamie’s perspective, the entire project centred on sustainability. He chose House of Bamboo specifically for bamboo’s environmental profile in the built environment, a fast-growing perennial grass delivering the warmth and structural performance of timber with a significantly lower footprint.

House of Bamboo engineered bespoke screening and architectural batten systems that unify the exterior envelope, creating a tactile, natural transition from the street arrival down to the water’s edge.





Project Scope

House of Bamboo collaborated with the design and construction professionals to engineer and supply sustainable custom architectural bamboo screening systems across the residence. Our scope included:

- **Technical Detailing:** Developing modular batten assemblies and 3D profiles for repeatable, site-wide integration.
- **Bespoke Garage Door**: Designing a lightweight bamboo screen system engineered for mechanical operation and street appeal.
- **Boundary Screening:** Supplying tailored vertical battens that balance privacy, airflow, and open water outlooks.
- **Material Alignment:** Advising on material continuity across exterior zones and interior architectural finishes.

Project Highlights

- **Sustainable by Design:** Bamboo selected as a rapidly renewable, low-impact alternative to timber throughout.

- **Landmark Coastal Residence:** A high-profile, multi-tiered waterfront home embedded into Pittwater's natural topography.

- **Custom Engineering:** Engineered modular battens balancing weight, strength, and ease of installation.

- **Seamless Street Presence:** A semi-transparent batten garage door that doubles as an illuminated, textured threshold after dark.

- **Privacy with Permeability:** Rhythmic boundary screens that shift across sloped contours while preserving light, breeze, and Pittwater views.

- **Indoor-Outdoor Synergy:** Cohesive natural material language bridging external landscape structures with interior living spaces.







Collaboration

This project was delivered through close collaboration between:

- **Designer:** Jamie Durie
- **Architect:** Silvester Fuller
- **Builder:** Dilcara
- **Natural Bamboo Systems:** House of Bamboo
- **House of Bamboo Design Consultant:** Jennifer Snyders

House of Bamboo is far more than a material supplier. We partnered with Jamie and the team from concept through to completion, providing architectural design consultancy, ongoing technical support, and bespoke product development.

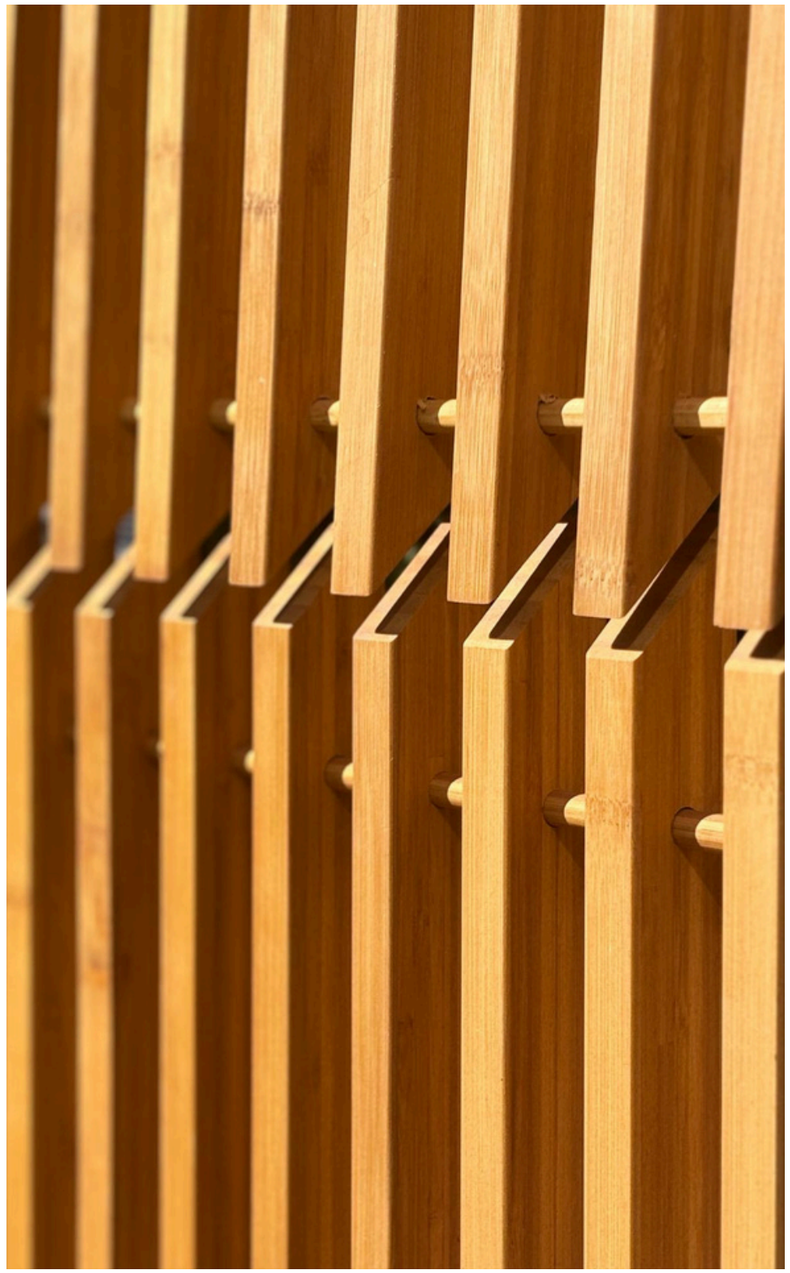
From initial planning and detailing to site-specific engineering and final delivery, we work alongside our clients to make complex designs buildable.

Materials

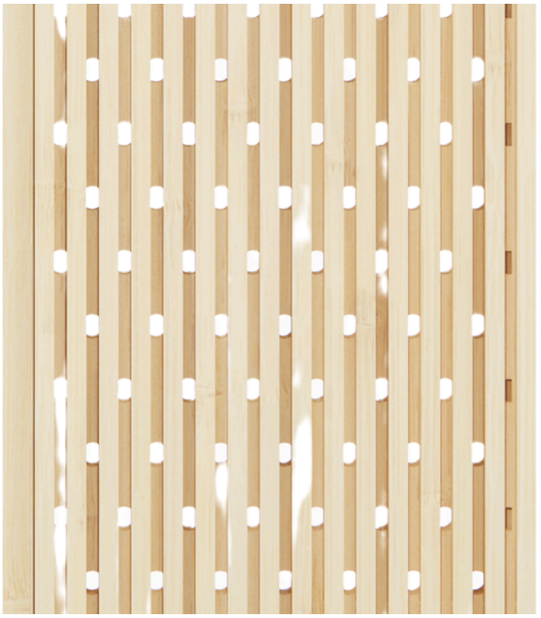
Engineered Bamboo Battens Seachange Series: garage door, garden & boundary fencing, gates & side pathways, pool and terrace screens.

Acoustic Panels Opera Range 1: interior spaces.

Pool-Compliant Sorrento Range: A bespoke solution using stainless steel posts clad in bamboo for in-ground battens around the pool area.







Outcome

The project exemplifies how natural bamboo systems can resolve complex architectural challenges on a steep, exposed waterfront site. By treating fencing, gates, and garage doors as a unified, repeatable family of details, House of Bamboo delivered a unified screening solution that balances functional performance with a natural aesthetic.

The result is a harmonious dialogue between built form and native landscape. The project highlights House of Bamboo's ability to combine bespoke industrial design with sustainable natural materials, delivering refined, high-performance architectural solutions.





Why Is Bamboo Sustainable?

- **Self-regenerative, No Replanting:** Matures in 3–5 years, compared to decades for traditional timber. Cutting culms stimulates new growth without tilling or replanting.

- **Annual Harvesting:** Ensures yearly supply of raw material, unlike timber timelines of 15 - 50+ years. Harvested yearly without killing the plant or clear-cutting land.

- **No Deforestation:** An agricultural crop, not a forestry plant (perennial grass). Self-selects culms above ground

- **High Carbon Capture:** Absorbs up to 4× more CO_2 and generates 35% more oxygen than equivalent timber.

- **GBCA Responsible Product Framework:** Responsible Product Value (RPV) combined: 17. RPV (EPD + PHD) 15 is the best-practice threshold for structure and envelope.

house of bamboo

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