



Project
Woodland Goods
Designer
Material Cultures
Material
Bark, natural lignin glue, and pine needles
Resource Type
Bio-based
Country of Origin
United Kingdom
Manufacturer
Erthly
Area of Use
Sheet material for design and construction
Category
Cultivated

Utilizing woodland resources for a postcarbon future

Material Cultures explores overlooked building materials from Britain’s woodlands, demonstrating how sustainable alternatives beyond conventional processed wood can support the construction and furniture industry.

Britain’s forests have suffered dramatic losses, with more ancient woodland destroyed in the 40 years after the Second World War than in the previous four centuries, as noted by conservationist Isabella Tree. Through their research, Material Cultures identified a heavy reliance on coniferous trees for the country’s construction industry, a practice which can lead to a monoculture forestry that threatens biodiversity and native species.

Drawing from Indigenous practices and reexamining underused woodland resources—bark, natural lignin glue, and pine needles—Material Cultures aims to find alternatives to commonly used sheet materials and cladding composites that are free from plastics and harmful glues. The solid, naturally waterproof sheets they have developed are made by layering strips of sequoia, pine, and birch bark in alternating directions, followed by compression and heating. This process activates the lignin in the bark, which acts like a natural glue and binds the sheet material components together.

The studio also tested spruce-bark chips and Scots pine needles from the forest floor—resources that are often underused or considered waste in the lumber industry. Although these materials did not respond to heat and pressure alone, the studio has explored the potential of bio-resins for developing composite sheets.

