

Branch

DESIGN PROPOSAL

BY JAMESCANN.DESIGN

New open-source
connector designed for
assembling structures





Branch

Branch is a 3D printer corner bracket for creating modular furniture. It is made using the Batch.Works method of design for printing out of recycled food waste packaging from Reflow.

Branch was developed as part of a design for disassembly hackathon commissioned by EU's CIRCuIT project (Circular construction in regenerative cities). Branch is shared under a Creative Commons (CC) license. Download and adapt the parametric part to print their own at [Jamescann.design](https://jamescann.design)

The purpose of Branch was to design an exhibition display system that can be cleanly repurposed to useful and desirable furniture.



James Cann

Distributed Design Studio
with Other Today



jamescann.design

Branch



"Every corner celebrates the wavy lines which is playful and emotional detail"

BLAKE PARKINSON, DCA DESIGN









Printing in spiral vase mode

3D printing in spiral vase mode and extruding at 2mm with a 1.5mm nozzle creates a very refined and strong product. Allowing the extruder rPLA to clash the bioplastic together to create strong points. The exterior wavy lines are structural and provide flexibility for the arms to grip onto the sheet material. The efficient qualities of the design and spiral 3D printing make this a perfect product for open sourcing and batch manufacturing.

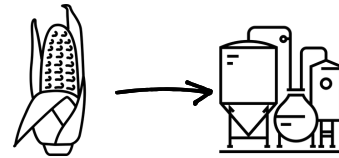
Material

Reflow supply a range of 98% recycled PLA called Earth Tones. The beautiful range of matte colours are aesthetically and texturally rewarding.

Branch

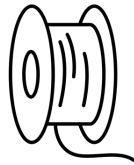


Impact Measures & Supply Chain



Raw Material

The raw material that makes PLA (Polylactic acid) is derived from corn starch. Corn starch is from maize which is grown and harvested and is typically inexpensive resource.



rPLA Filament Production

Recycled PLA can be broken down and reused, therefore its life can be extended for another cycle. Producing the PLA uses 5 maize plants per 1kg of PLA.



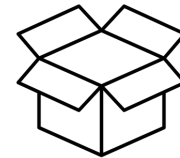
PLA Food Packaging Waste

Recycled PLA by Reflow is reused from food packing waste which may otherwise go to landfill or get incinerated.



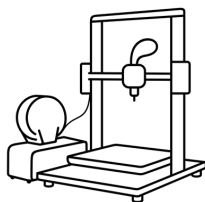
Online Platform

The open source platform for Branch encourages innovation through collaboration and ensures even more adaptability and freedom to change and distribute the product. Purchasable prints are also available in the UK.



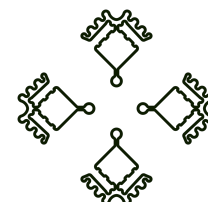
Material Recovery

The product is promoted to be sent back to Branch who then send it to the filament producer. Additionally filament spools are sent back too. This keeps material in a circular supply for as long as possible.



3D Printing

3D printing enables localised manufacturing and gives people the freedom to print at home. One unit uses 22 grams of filament and takes 22-30 minutes to print.



Consumer Use

Customers who purchase ready made products may be encouraged to invest in their own 3D printer which would reduce the impact of shipping and mass production of linear products.



Exhibition structures & displays

