

## 3DTY Demonstration 07 – Wall Panel

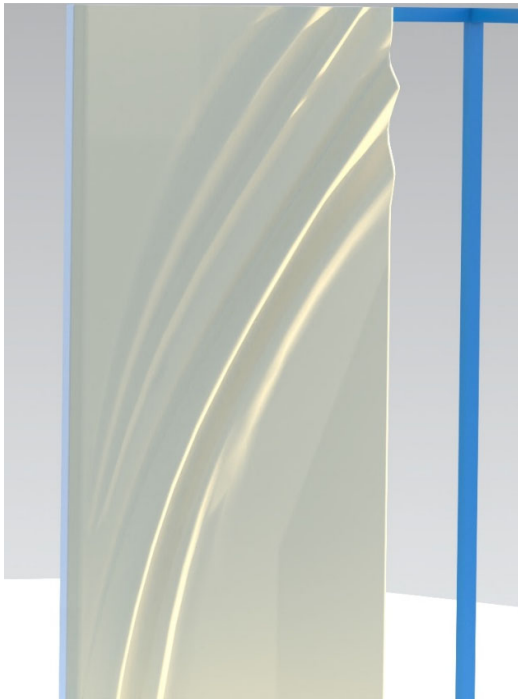
Printed by: REDU

This demonstration showcases how combining engineering and design can result in novel decorative wall elements. Large format additive manufacturing can be an essential tool in enabling bold ideas in architecture and design. Due to its thin nature, the part was printed in two sections to avoid swaying of the panel, and thus print failure, at greater heights.

The part was printed in horizontal orientation, utilizing a 30mm ramp at the back of the panel to transition between layers. By designing for a continuous toolpath, the geometry was optimized for large format AM.

The material used for the print is [UPM's Formi 3D 20/19](#). It is a PLA with a 20% wood fiber component. The material is no longer being produced by UPM but should shortly be available from [KCL Biocomposites](#). For more information check the links above.

The material is a rather forgiving and easy to print. It is also easy to machine. It does have a certain tendency to warp, which can be mitigated via a heated printbed and/or mechanical adhesion, e.g. printing on plywood coated with PVA glue.



Link to video: [3DTY FormNext Wall Element](#)

### Print info: Panels

**Material:** UPM Formi 3D 20/19  
**Dimensions:** 1250 x 1200 x 120  
**Weight:** ~14.5kg/panel  
**Print time:** 7 h 44 min  
**Software:** Siemens NX  
**Hardware:** CEAD AM Flexbot

Nozzle size: 4 mm  
Layer height: 2 mm  
Layer width: 6 mm  
Layer time: 45 sec