

# Case Study - Fresh Sawn Oak Structure



## The Gridshell, Weald & Downland Museum, West Sussex

This double curvature gridshell structure was designed by Edward Cullinan Architects with Buro Happold engineers and was made by the Green Oak Carpentry Company using fresh sawn Oak sourced from France.

The engineering requirements for the timber were stringent and although, English Oak was preferred and available it did not meet the volumes required within time constraints to produce the entire frame.

The timber needed to be very straight grained for structural reliability and to allow it to be effectively machined and finger jointed and fitted with the unique, bespoke fixings.

The Oak was graded and machined into 6.0m, defect free, finger jointed laths that were then joined to make laths of 36.0m in length from which the span was achieved

In addition the building was clad with locally sourced Western Red Cedar and the floor was English Ash.

This was a ground breaking project in terms of design and engineering with timber and has proved a great success with encouraging engineers to develop & explore similar methods on other projects.