

# THE OCULUS - UNIVERSITY OF WARWICK

Architecturally outstanding and set to be valued by generations to come

Project: The Oculus, University of Warwick

Company: Binderholz, B&K Structures & Rubner Holzbau

Sector: Education

Technology: Solid Wood

## Overview:

The Oculus reflects its green surroundings through the use of materials such as terracotta, sandstone and spectacular timber technology including glulam beams. The building is architecturally outstanding and set to be valued by generations to come.

Timber architecture is having its moment – however it is going to be far greater than that. It is a trend that has major potential for the future of building design and development. Forming a magnificent backdrop for this event – The Oculus building at the University of Warwick, with its outstanding roof featuring massive glulam arches – will play host to Solid Wood Solutions on the 05 July 2018.

## Project Application:

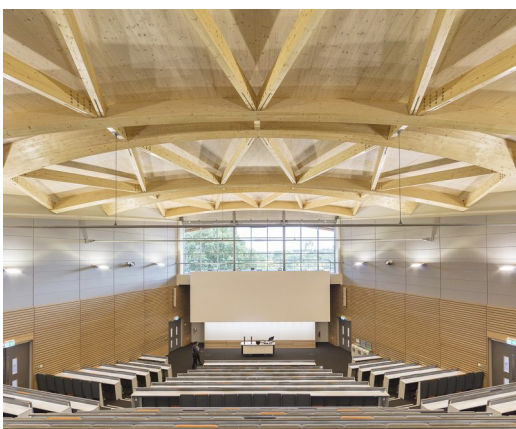
The Oculus provides the University of Warwick with a new flagship building – the first on the campus to be dedicated purely to teaching and learning. Located on a prominent site close to the social heart of the campus, the building contains two tiered lecture theatres, with the 500-seater being the largest in the university. A 250-seat theatre is sited beneath, which features the spectacular open underside of the timber roof. The two lecture theatres boast extremely large state of the art wide format projection screens with multiple edge blended ultra HD high brightness laser projectors.

The integrity of the timber structure also serves as an educational experience – during construction second, third and fourth year students from the department of engineering toured the site, the project team hosted a series of student workshops. The choice of timber also helped fulfill the acoustic requirements, with the cross laminated timber (CLT) deck providing good sound insulation from break-in noise, whilst the exposed glulam structure beneath assisted with breaking down internal reflections to manage the reverberation times within the lecture theatre.

The design of the timber roof structure delivered a rapid, reliable and safe result and offers a stunning, maintenance free feature. The primary arches were delivered to site in two sections, direct from Binderholz in Austria. All of the timber is visual grade which has been left in its natural state, requiring no return maintenance for the University. The timber is expected to simply improve over time as the natural colour intensifies with age. Great care was taken to ensure that the soffit of the roof was kept completely clear of all services. The soffit is generally uplift to provide a warm diffuse character to the interior lighting.

## Outcome/Results/Success Factor:

The Oculus achieved BREEAM Excellent and EPC A ratings, largely due to the use of low carbon glulam timber for the main roof, natural light, and ventilation reinforced by a roof mounted PV installation, connection to the campus wide CHP district heating and power system together with the use of heat recovery ventilation systems for the conditioned spaces which also used air source heat pumps with adiabatic cooling.



This project was delivered via the Scape Framework by the main contractor, Willmott Dixon Construction, who provided the University with a 'turnkey' service. From the very outset, the design and contractor teams worked closely throughout the initial concept stages right through to completion – the final result was an iconic building which will be valued by generations to come.