

3D Models Revolutionise Architecture Projects



Hi-tech 3D modelling software from Pointools is being employed by University College of London (UCL) to create 3D computer visualisations of environmental installations. Researchers at the acclaimed Bartlett School of Architecture are using the Pointools software to process millions of laser scanned measurements into highly detailed 3D models. These are then used to complete environmental analysis of potential sites and create a digital landscape in which installation prototypes could be formed, honed and tested.

The projects making the most of this high tech surveying and modelling solution included a 'rainbow maker' and '55/02', a steel structure designed to maximise key site lines at its

location on the shores of Kielder Water in Northumberland .

Using a Faro Photon 120 [3D laser scanner](#) the researchers took detailed measurements of potential sites and their surrounding environments. These were fed into the Pointools software to create highly accurate representation of the site and were used to forecast climatic conditions in which the installation would operate. Subsequent measurements from the model were fed into the manufacturing and design processes, providing a mesh onto which bespoke parts could be mapped. Later scans recreated in Pointools were also used to further explore the potential of the installation, giving evidence of range of the current location and used to speculate a larger proposal in the context.

'Slow becoming delightful' was an installation in a small pocket of space within Kielder Park cleared by a storm. Designed to draw attention to the magical properties of weather events the installation consisted of a series of passively activated pressure vessels linked to an array of humidity tanks. Over time energy and water was collected and stored and when the 'ideal' circumstances were in place a fine mist was dispersed creating a rainbow.

Visitors to Kielder Park will come across '55/02' an experimental building by Bartlett based practice sixteen*(makers). Named after the latitude and longitude of its location, the brightly painted steel structure is located within a stand of trees at Cock Stoor on the north shore of Kielder Water. The structure highlights the importance of location to its design, where key site lines contribute to its unusual layout, and seating orientates visitors towards particular views looking out onto the lake.