



Over its one thousand year history, the design of Windsor Castle has changed and evolved according to the times, tastes, requirements, and finances of successive Monarchs, although the positions of the main features have remained largely fixed. The Curfew Tower is a great D-shaped tower begun in the 1220s by Henry III to command the north-west angle of the lower ward defences. In 1477, Edward IV granted the tower to the college as a belfry and a great timber frame was erected within it to house the bells and clock mechanism and the college bells and clock have hung here ever since. Astonishingly, the medieval timber framing of the belfry remains intact, although completely concealed beneath 19th-century alterations.

Obviously, there are a number of conservation and safety issues concerning the medieval structure, not least because the bells are still rung regularly. Martin Ashley Architects, responsible for the up keep of the frame on behalf of the Dean and Canons of Windsor, commissioned PlowmanCraven to undertake a program of laser scanning and 3D modelling to enable a full structural analysis of the timbers. Despite the cramped and precarious conditions, we were able to create a full digital record of the frame in only 3 days on site. This data has been registered and processed and we are now extracting a full 3D model in MicroStation and AutoCAD using Cloudworx software. In time the model will allow each individual structural timber to be measured, assessed and, if necessary, strengthened or repaired. Laser scanning was the only way of creating this data set in such unusual and demanding conditions and within such a short timescale.

### PROJECT

#### Curfew Tower

#### Windsor Castle

The Dean and Canons of Windsor, commissioned PlowmanCraven to undertake a program of laser scanning and 3D modelling to enable a full structural analysis of the Curfew Tower timbers.



### CLIENT

#### Martin Ashley Architects

### SERVICE

#### Heritage Recording Laser Scanning 3D Modelling

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