



## Case Study

### Company

Shepherd Construction Limited

### Industry

Construction and Refurbishment

### Website

[www.shepherd-group.com](http://www.shepherd-group.com)

### Solution

Access Scaffold

### Profile

Shepherd Group is one of the leading family-owned private businesses in the UK.



# Liverpool Library Atrium Dome

## Challenge

To facilitate full access to the fully glazed atrium domed roof, of Liverpool central library.

## Solution

A scheme that would involve erecting a free-standing scaffold, incorporating an alloy modular beam span, over the top of the dome, which would support a monorail lifting beam and also hanging working platforms, allowing localised access to the work face.

## Problem

Hardy Access Services were asked to facilitate full access to the fully glazed atrium dome on the roof of Liverpool central library. The dome, which resides above the central stair core, was installed during the library refurbishment some 8 years ago. Now access was required to inspect the whole of the external of the dome and change some failed units, but due to the shape, height, glazed facade and position of the dome (24m from ground, on the roof of the library, within a mile of the banks of the river Mersey and potential for high winds), this was not an easy task.

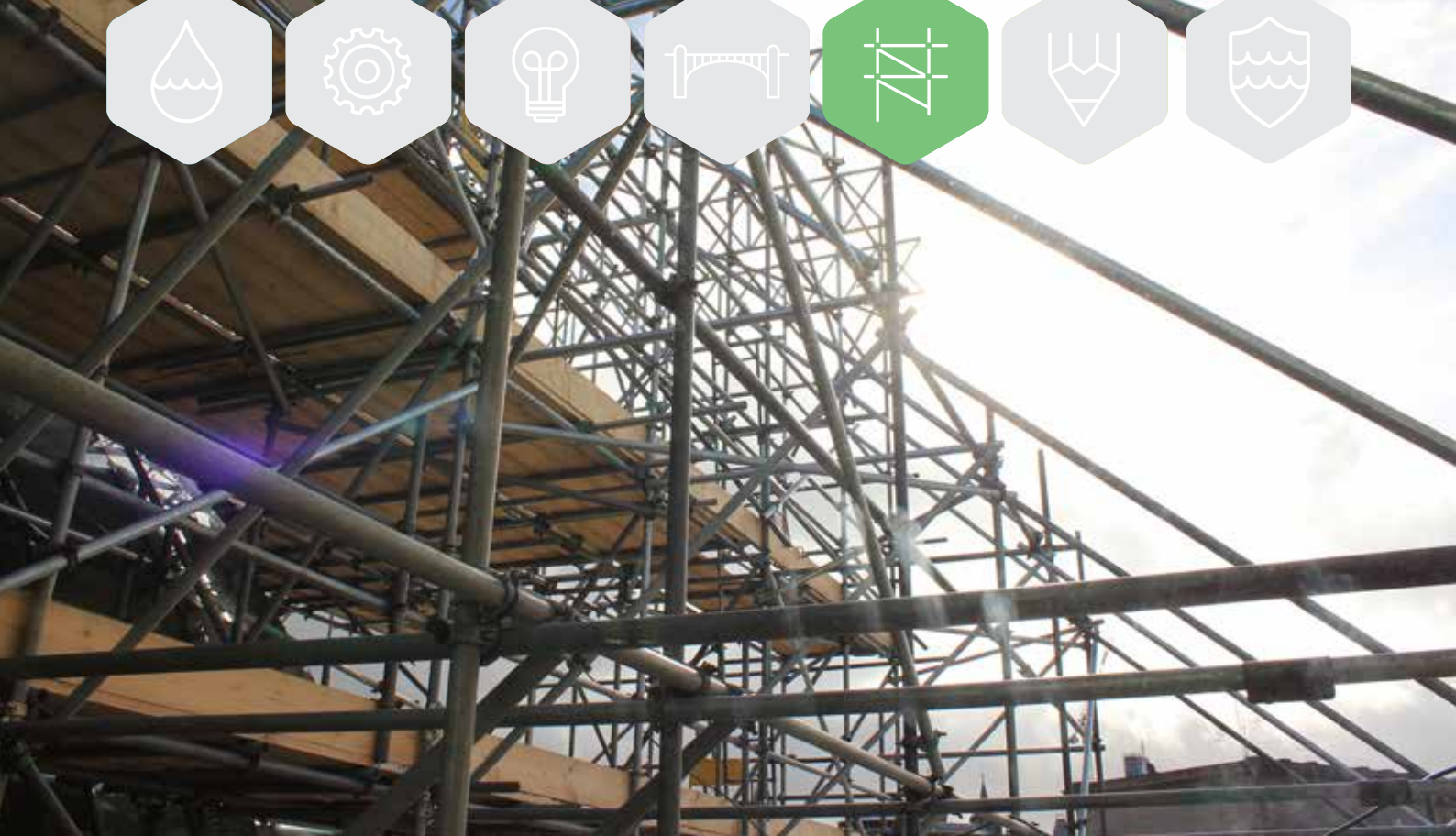
## Solution

Hardy Access Services put forward a scheme that would involve erecting a free-standing scaffold, which would in turn allow modular beams that would span over the top of the dome and support a monorail lifting beam, and tie the scaffolds together increasing the stability of the structure. The lifting beam also needed to have a loading capacity of up to 500kg, as there was the potential of removing the central Oculus section of glass. From the overhead beams, we would then be able to erect hanging scaffolds, providing access to be achieved right up to the glazed façade. Now the actual working scaffold was planned, all that was needed now was to deliver the scaffold materials to the works face. Large heavy cranes were considered, but due to the point

**“Modular beams would span over the top of the dome and support a monorail lifting beam.”**







loading on the roof, and size of crane required to reach from the road, up on to the library roof, the more economical method of a large loading tower was opted for.

The tower, 6m long x 4m wide and 24m high, and erected without the need to tie into the historic façade of the library, would provide both the means for us to raise by hand the materials required to build the atrium scaffold, but also had the potential to allow erection of a gantry hoist, should any materials be required to complete the actual glazing works. Measures to prevent unauthorised access were also deployed, these involved a tin sheet hoarding and fence panels being used to mitigate against any trespass on the scaffold structure.

**“There was the potential of removing the central Oculus section of glass.”**



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