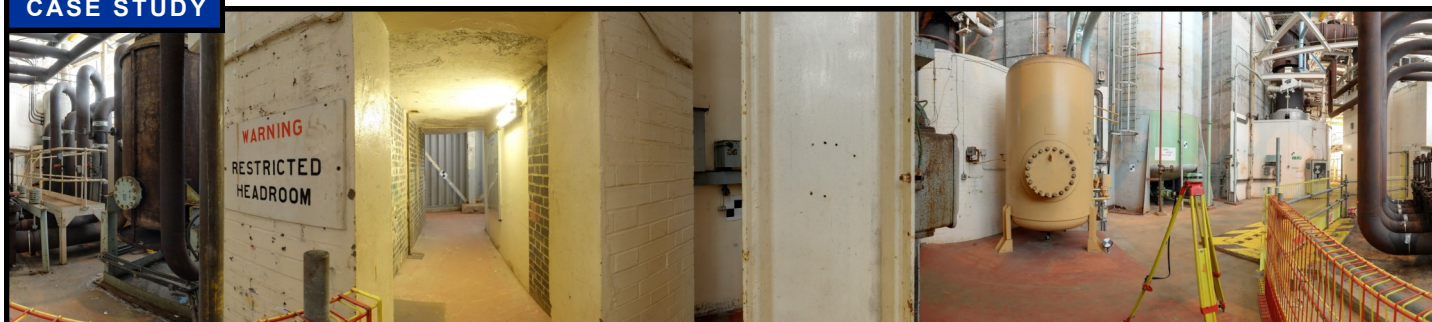


CASE STUDY



Hunterston Nuclear Plant



WHAT'S THE STORY?

Hunterston is a nuclear power station in North Ayrshire, close to Glasgow, that during its 20-year life generated a total of 73TWh for the national grid. This twin-reactor site was the largest in the world when it opened in 1969 and is currently being decommissioned by Magnox on behalf of the Nuclear Decommissioning Authority.

With responsibility for 11 other nuclear sites in the UK, including Hinkley Point and Dungeness, Magnox is exploring the many benefits of BIM (Building Information Modelling) to the decommissioning industry.

In order to help facilitate this, Plowman Craven provided a range of laser-scanning services for Magnox at Hunterston and continues to help the client to understand the potential applications of BIM.

WHAT DID WE DO?

Establish survey grid and datum

Relating all measurements accurately to Ordnance Survey National Grid and Height Datum. Correctly setting up survey controls ensured maximum levels of accuracy.

Survey facility with high-definition scanners

From the co-ordinated survey stations, the facility was 3D laser scanned, enabling us to capture a cloud of data points at one million points per second. A two-man survey team took six days to scan the facility.

Capture high-definition, 360° photographic record

At the same time as scanning the area, 360° panoramic photography is also captured. By overlaying imagery on the point-cloud survey using TruView software, users are able to move around the resulting virtual facility at will, looking at areas of interest and extracting measurements.

Create 3D model from point cloud survey

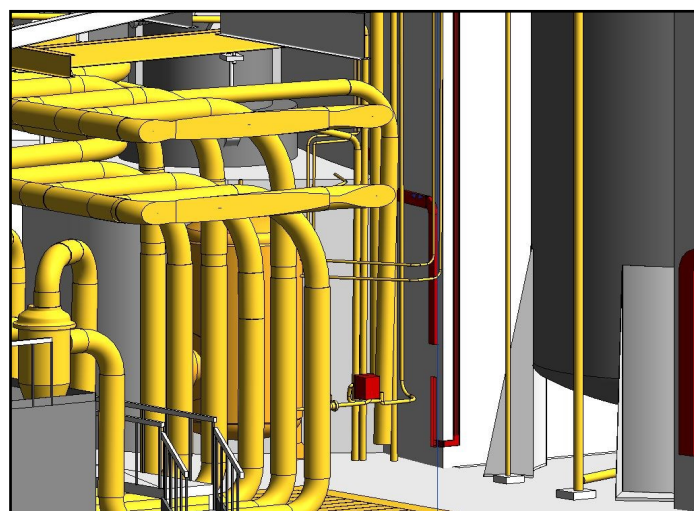
Using Revit we created a complete structural envelope of the building, overlaying 3D objects such as beams and pipes onto the point cloud survey.

Deliver LOD5 BIM model

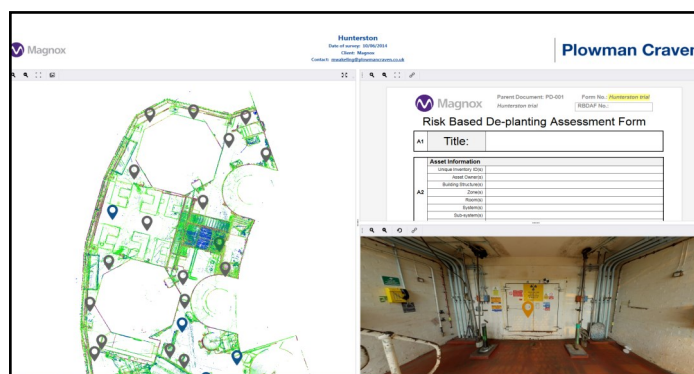
This was the final piece of the jigsaw, with the maximum level of detail and information included. We delivered to the client a fully interactive model that could be viewed on any platform, either in the office or on site.

AT A GLANCE:

- Full 3D laser scan of Hunterston 'A' nuclear facility
- TruView report overlaying data & 360° photography
- 3D Revit model created from point cloud data
- LOD 5 BIM model



LOD 5 BIM Model



TruView deliverable

About Plowman Craven

Plowman Craven provides integrated measurement and consultancy services to the property and infrastructure markets, pioneering the use of technical innovation to deliver proven expertise and trusted results throughout the project lifecycle.

Head Office

Plowman Craven House
2 Lea Business Park, Lower Luton Rd
Harpenden, Herts. AL5 5EQ
Tel: +44 (0)1582 765566

London Office

115 Southwark Bridge Rd
London
SE1 0AX
Tel: +44 (0)20 7490 7700