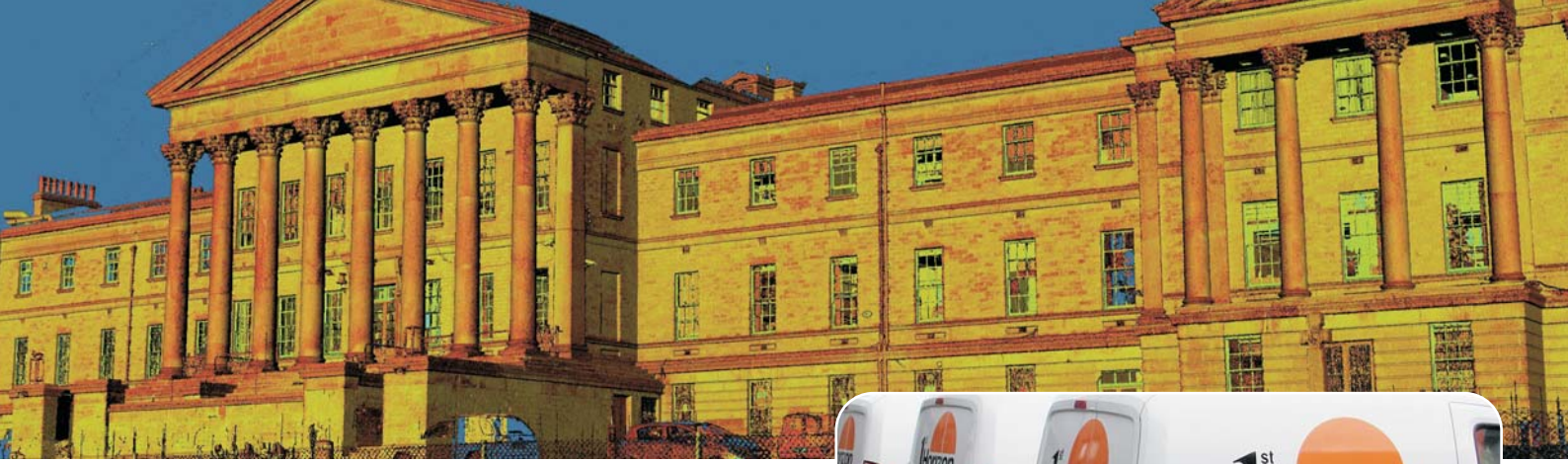


# Architectural 3D Laser Scanning

3D Laser Scanner &  
Survey Equipment Hire  
Service Available



## Company Overview

1st Horizon Surveying and Engineering Ltd offers a complete survey, 3D laser scanning and engineering service. We provide expertise for everything from simple reduced level surveys to detailed laser scans and intelligent 3D modelling.

Based centrally in the UK, 1st Horizon is able to provide both nationwide and global support for construction, design, development and infrastructure.

Strong focus has always been placed on the use of the very latest technologies and techniques available. This continual investment in professional development enables us to apply the most efficient, versatile and cost effective techniques to our clients' measurement requirements.



Our primary objective is to achieve complete customer satisfaction. This is implemented by our dedication to maintaining the highest quality standards and the level of importance allocated to customer service.....

**“Client satisfaction is always paramount”**

## Principles of 3D Laser Scanning

The technology of 3D laser scanning is essentially the rapid capture of three dimensional data using laser beam signals reflected from an object or surface. Using this technology we are able to analyse a real world object / environment in terms of geometry, texture and colour.

### Architectural Laser Scanning Markets

- Architectural design
- Structural engineering
- Heritage
- Manufacturing
- Retail
- Commercial real estate

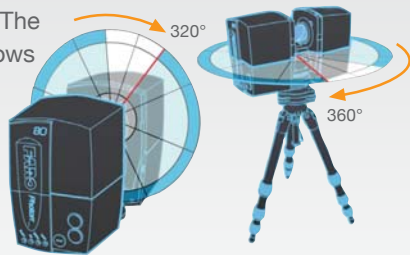


Specialist in 3D Laser Scanning & Measured Surveys



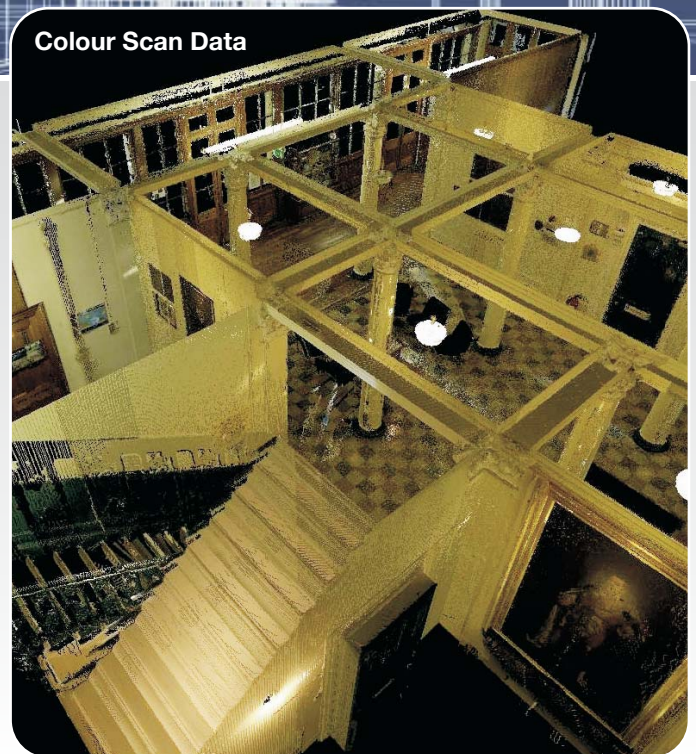
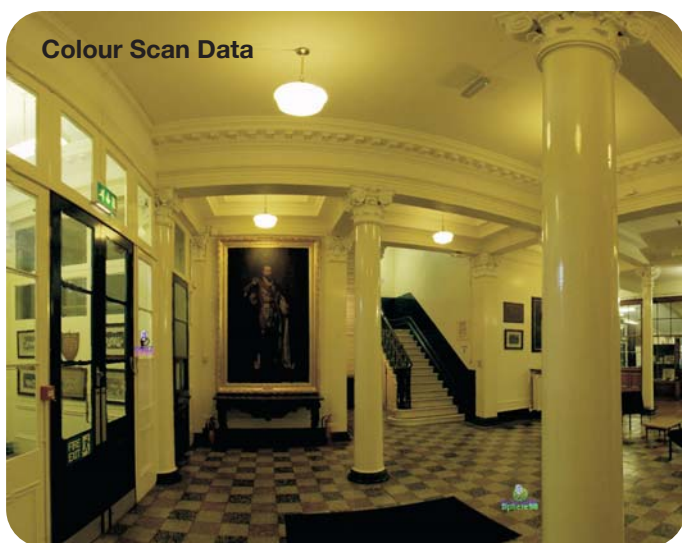
## Our Capabilities

Our specialist staff have extensive experience in the rapidly developing field of laser scanning. With the recent addition of Faro Photon scanners to our fleet of instrumentation, we are now able to capture data at a rate of up to 1 million points per second. The 360° x 320° field of view allows very dense point clouds, comprising of literally millions of co-ordinated points, to be created in minutes.



Our clients are able to take virtual tours of the site / facility from the comfort of their office. The scan data can be accessed via the internet and the photorealistic, colour point clouds can be freely interrogated. Measurements can be made quickly and easily, as and when required, without the need for return visits. Once the project data set has been captured the deliverables can be produced in order of priority.

We offer a complete 3D laser scanning, dimensional control and CAD service which utilises many complimentary measurement services. Deliverables and software solutions are tailored to each individual client's exact requirements.



## Applications

- Architectural design
- Air flow and temperature analysis
- Asset management
- Store planning & VM
- Health and safety planning
- Design verification & as-built surveys
- Heritage recording for posterity
- Monitoring
- Animations and visualisations
- Refurbishments, retrofits & additions.

## Deliverables

- 2D drawings - elevations, sections and floor plans
- 3D surface / solid models
- BIM models
- Point cloud
- Triangulated mesh



Colour Scan Data

## 3D Laser Scanning Benefits

- Remote, non-contact measurement - Non-intrusive and rapid data collection is possible when measuring dangerous or sensitive subjects.
- Health and safety - Dangerous or hard to reach areas can be measured safely from a distance without the expense of preventative measures to allow safe access.
- High speed measurement - Huge data sets may be captured in very short time windows minimising shut down times and disruption.
- Comprehensive nature of capture - The completeness of data capture often eliminates the need for repeat site visits and clients are able to take virtual tours from the comfort of their office.



**Based centrally in the UK our services are operational both nationwide and globally.**



Head Office:  
1st Horizon Surveying & Engineering Ltd  
Unit 2, Bullhouse Mill, Lee Lane, Millhouse Green, Sheffield S36 9NN, UK  
Tel: +44 (0)1226 766 446 Fax: +44 (0)1226 766 317  
E-mail: [office@1sth.co.uk](mailto:office@1sth.co.uk)  
[www.1sth.co.uk](http://www.1sth.co.uk)

**Specialist in 3D  
Laser Scanning &  
Measured Surveys**