



# 3D laser scanning

Our 3D laser scanning services accurately capture buildings, infrastructure, and landscapes. We provide BIM models, point clouds, and 2D & 3D CAD drawings. Available across the UK.

- ✓ Indoor & outdoor structures
- ✓ Space planning & design
- ✓ Floor plans, cross-sections & elevations
- ✓ Maintenance, renovation & retrofits
- ✓ Deviation analysis, structural testing & clash detection
- ✓ Virtual tours & VR

 [See our 81+ Google Reviews](#)

## Request a 3D laser scanning quote





# Accurate as-is data collection



## 3D building scanning

We can scan any building from **small residential houses** and **construction sites** to **large office complexes** and **hotels**. Digitise an entire property or specific areas like stairwell or roofing sections.

☑ **Industrial plants & factories**

☑ **Heritage sites**





## ✔ Healthcare facilities & schools

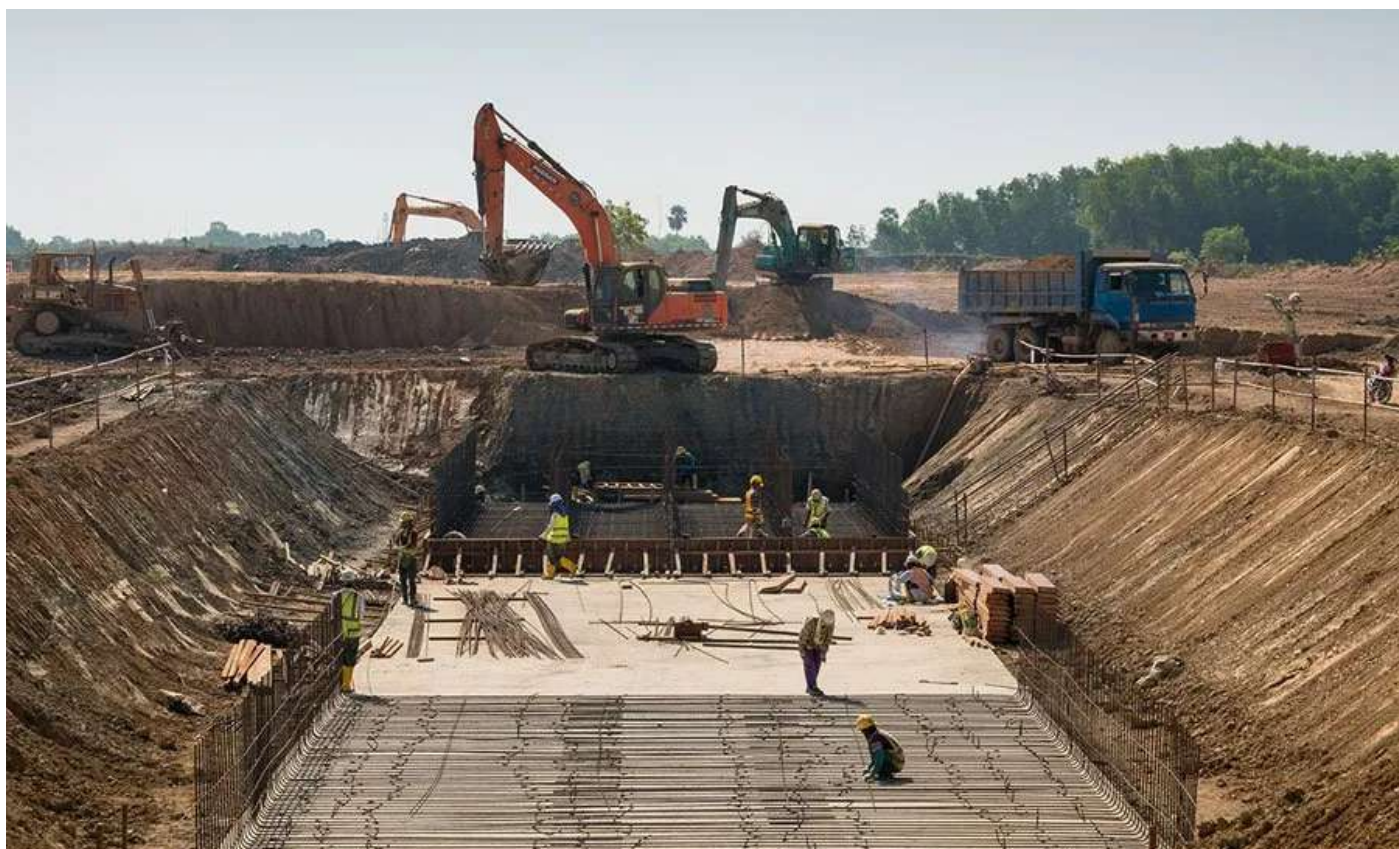


## Civil infrastructure

Receive complete 3D data of civil infrastructure including **railways**, **bridges** and **tunnels**. We can supply a variety of deliverables to aid new design, urban planning, and refurbishment.

- ✔ Roads & roundabouts
- ✔ City developments
- ✔ Airports & ports
- ✔ Dams





## Terrestrial laser scanning

3D laser scanning of landscapes and outdoor structures such as **farm-land**, **coastal assemblies**, and **monuments**. Allowing for environmental monitoring, preservation and restoration work.

- ✔ Statues & sculptures
- ✔ Archaeological sites
- ✔ Mining
- ✔ Gardens, parks & forestry

## 3D laser scanning solutions we offer

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AS-BUILT MEASURING SERVICES





these measurements to create missing as-built documentation including floor plans, roof plans, lease plans, elevations, and cross sections.

Our point cloud data can be post-processed into whichever format best suits your needs, such as 2D & 3D CAD drawings. Essential for informed decision-making and compliance in construction and property management.

## SCAN TO BIM (REVIT)

Our experts transform 3D laser scan data into textured BIM (Building Information Modelling) models, created in Revit. We can provide LOD 100 to 500 models to match your required level of detail.

BIM facilitates seamless collaboration across various disciplines, enabling more coordinated and integrated project management. It also significantly reduces construction errors and discrepancies, leading to cost savings and enhanced efficiency in building projects.

## DESIGN VERIFICATION & CLASH DETECTION

Our 3D laser scanning service provides exact spatial dimensions for brown-field and greenfield developments. Architects can use this information to generate dimensional callouts, order prefabricated panels, assess structural integrity, avoid design clashes and ensure that all planned features fit inside the space.

Compare the data with your design models to validate whether the construction is aligned with the design plans and identify any discrepancies for





they become a serious issue.

## DIGITAL TWIN

We quickly gather full-field 3D data of your premises to be used as a starting point for digital twin creation. This can then be uploaded to your digital twin software and integrated with other data sources like cameras, sensors, and additional IoT devices.

In the shift towards Industry 4.0, digital twins are becoming increasingly popular for asset and facility management. They allow for real-time data monitoring, predictive maintenance analysis, and factory layout optimisation.

## 4D ANALYSIS & INSPECTION

Scan data can be used to perform valuable simulations and tests, revealing structural or equipment failures not apparent to the naked eye. Employ stress analysis to track and visualize structural performance changes over time. Early detection of potential issues prevents further complications, saving time and reducing costs.

- ✔ **Deformation monitoring**
- ✔ **Finite element analysis**
- ✔ **Floor flatness and levelness**
- ✔ **Deviation analysis**
- ✔ **Volume calculations**

## 3D VISUALISATION AND VIRTUAL TOURS





through, 360 VR tour, panoramic imaging, or TruView display. 3D visualisation presents a more immersive way for both team members and clients to view your location.

- ✔ **Real estate & property marketing**
- ✔ **Video game assets**
- ✔ **Film CGI & set-design**
- ✔ **Tours of historical sites**
- ✔ **Showcase famous landmarks**

## Ready for your 3D laser scanning quote?

Fill in this form to receive a free, no-obligation quotation. Please attach images of the space that needs scanning and a basic outline of what you hope to achieve.



  
  
 No file chosen

SEND

## Meeting industry-specific demands

### AEC (Architecture, Engineering & Construction)

Having accurate, up-to-date 3D information at your fingertips offers immense benefits throughout the lifecycle of an engineering or construction project. It ensures that the final structure aligns precisely with the design plans, significantly reducing the risk of deformations and structural flaws. This technology not only streamlines large-volume calculations and geometrical checks but also aids in early detection of potential design clashes, reducing rework costs and minimising risk of change orders.

3D laser scanning excels in inspecting complex shapes and façade components, outperforming traditional methods with its precision and efficiency. It also fosters enhanced collaboration among project teams, with shared data improving communication and decision-making in hand-offs. Furthermore, the speed of data capture translates to considerable time and cost savings, particularly valuable in projects involving renovations or extensions where accurate as-built documentation is crucial.









WE CAN 3D PRINT MODELS OF YOUR BUILDING FOR VISUALISATION





## FACTORY, PLANT & INDUSTRIAL

Our 3D laser scanning services enable the creation of precise digital twins, crucial for planning and verifying factory layouts, HVAC & piping, and as-built documentation of plant and MEP systems. This technology allows for accurate measurements of tie-in points and clearances, essential for modular exchanges like SKID assemblies. In challenging environments like oil and gas facilities, digital twins facilitate remote and collaborative work, enhancing safety and efficiency.

For your company, this means the ability to virtually deploy equipment, machinery, and vehicles, optimizing space use without physically moving anything. For example, robotic arms and CNC machines can be properly aligned. This approach results in significant time savings and cost reductions, with millimeter accuracy providing a solid foundation for effective and error-free operations.





## Civil Engineering & Infrastructure



Our technology aids the development and upkeep of bridges, tunnels, highways, mines, and dams among other infrastructure



with powerlines, perform wind turbine and solar inspection, and hydro, gas, and nuclear power plant scanning.

The 3D laser scan data can be used for inspection reports, computer visualisation and various simulations. Confidently complete tasks such as pothole detection, overhead cable clearance, damage assessment, track monitoring, or analysing potential collision events where moving parts are involved. The non-invasive nature of the scanners minimizes disruption in public spaces and operational environments.



REALITY CAPTURE FOR EVERYTHING FROM AIRPORTS TO RAILWAYS

## Commercial Real Estate

3D laser scanning in commercial real estate transforms the way properties are developed, managed, and viewed. As well as new builds, it presents a fast way to acquire measurements of spaces that are currently in use without having to shut down for extended periods. Minimise the need for frequent site visits during the planning and design phase.

Having precise spatial dimensions and a pliable 3D model assists shopfitters in creating innovative retail spaces and eye-catching store-



used for BIM, detailed inspection, and jobs like staircase, elevator shaft, and wall plump analysis. Create 360 virtual tours to give customers and stakeholders a unique way to explore your property, and allow team members to collaborate remotely.











# Cultural Heritage & Archaeology



Rewriting the way we preserve and interact with historical sites and artifacts. Generate orthographic images, 3D tours, and VR experiences, enabling detailed documentation and digital preservation of listed buildings, churches, ships, and other cultural landmarks. Our data facilitates pre-emptive repairs, recovery from unforeseen damage and natural disasters, and complete restoration of heritage sites.

Combine this with our [reverse engineering](#) and [3D printing solutions](#) to produce replica design features and realistic physical models. By precisely capturing structural details, we remove any bias from your renovation decision-making process. Additionally, our non-contact, non-destructive equipment offers a safe way to acquire this geospatial information without risking any damage or deterioration.





## Film, gaming & VR



We can help film and TV teams with location scouting, pre-visualisation, and planning of scenes, significantly enhancing the production and post-production processes. With our highly detailed data, you can create exact copies of locations and assets, reducing the time and cost of visualisation and enabling more realistic visual effects (VFX). The technology also supports the creation of virtual sets and LED walls, projecting 3D environments in real-time behind actors to simulate physical locations.

Working in video game development? Capture real-world environments and objects to build detailed 3D models for game engines, enhancing the realism and engagement of virtual environments. In virtual reality, the combination of 3D laser scanning and VR technology means immersive experiences, with applications extending





educational purposes.

BRING REAL-WORLD LOCATIONS TO LIFE IN YOUR FILM SETS & VIRTUAL ENVIRONMENTS

## What our customers say...

Paul Startin ★★★★★



a month ago

On behalf of Balustrade Components UK Ltd: Exceptional customer service from Angela. We paid for the rapid-turnaround option. Surface Scan performed, Royal Mail did not! They...

[Read More »](#)

Raymond Jubb ★★★★★



7 months ago

Great first experience with SurfaceScan. Communication with Angela throughout the process was top notch. I sent the guys 3 small intricate items for SLS printing...

[Read More »](#)





Hamish Menzies ★★★★★



5 months ago

Bravo! Terrific service. Its not easy to find a reliable, professional cost effective 3D Print solution company. Believe me we have tried UK and USA....

[Read More »](#)

Chris Chattaway ★★★★★




a month ago

Review on behalf of Control Station Limited Cannot fault this company. Best price, delivery exactly as quoted, great product and excellent communication. Cannot recommend highly enough.

## How does 3D laser scanning work?

Our scanners work by emitting an infrared laser beam, which is directed into the surrounding environment by a rotating mirror. This process captures scattered light from objects, reflecting it back into the scanner. They use phase-shift technology to measure distances, where constant infrared light waves are sent out and reflected back. The phase shifts in these waves are analysed to accurately determine the distance to objects.

The scanners assess the reflectivity of surfaces by measuring the intensity of the returned laser beam. This reflectivity data, combined with the distance measurements, is used to generate a detailed point cloud. This 



ronment, comprising millions of points, depending on the chosen resolution.

### Recent jobs

## We scanned a dinosaur!

The famous 'Leonasaurus Rex' giant dinosaur statue in Milton Keynes had fallen into disrepair. We conducted a comprehensive 3D laser scan and reverse engineered the data to help the local council with the restoration project.



### Our process

## What to expect





## 3D laser scanning services.

### 01.

## Quote.

Send us some pictures, a brief description of your project and what you'd like to achieve. We'll get back to you with a no-obligation quote.

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### 02.

## Scan.

We come to site and conduct the 3D laser scanning. We'll usually have a telephone or video meeting beforehand to discuss the details.

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### 03.

## Post-processing.

Once we have captured the raw data, our experts back at HQ will use a specialist suite of software to produce your desired output.

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### 04.

## Delivery.

Receive your deliverables in the requested format. Let us know of any iterations that need to be made. We want you to be 100% satisfied.

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