

RAMBOLL

# GEOMATIC SERVICES

FIELD AND DESK CAPABILITIES FROM LEADING EXPERTS.

[WWW.RAMBOLL.CO.UK/GEOMATICS](http://WWW.RAMBOLL.CO.UK/GEOMATICS)



# GEOMATIC SERVICES

Field and desk capabilities from leading experts. We work in a range of market sectors including energy, environment, buildings, archaeology, civil engineering and oil and gas.

## KEY SERVICES

### Laser Scanning

- Facades
- Building refurbishment
- Point cloud data sets
- Limited access structures
- Refineries/Power Stations
- Highway gantries
- Plant rooms
- Rock faces
- Volumetric
- Unmanned Aerial Vehicle (UAV)

### BIM

- LAM® (Laser Aided Modelling)
- 3D Geometry Modelling
- Visualisations and animations
- Asset management data capture

### Engineering Surveys

- Highways and bridges
- Railway infrastructure
- Pipelines and sewers
- Marine works
- Construction surveys
- Building developments
- Coastal protection
- Cliff monitoring
- Deformation monitoring
- Steel structures
- Flood risk assessments
- Volumetric surveys
- Landfill sites

### Land Surveys

- Topographical
- 3D ground modelling
- Precise levelling
- Airfield Infrastructure
- Proof surveys
- GPS surveys
- Setting out
- Services tracing

### Historic Structures and Archaeology

- Measured surveys
- Laser scanning
- Plans and elevations
- Excavations
- Earthworks and landscapes
- Presentation drawings

Ramboll offers a wide range of surveying and field data gathering services to industry in the UK and overseas. We undertake bespoke commissions for external clients and also work alongside our Ramboll colleagues from the Engineering, Environmental and Transport disciplines. Our philosophy is one of adding value in all that we do and of continuous knowledge sharing.

It is this constant sharing of knowledge that allows us to fine-tune our survey procedures to precisely address the requirements of particular situations economically and reliably - time after time. Our aim is always to add tangible value, at local level, whilst giving our clients the ongoing assurance of a world-class engineering consultancy, with accreditation to ISO 9001 and 14001.

Our Geomatics and Engineering Simulation teams have enhanced processes to effectively link point clouds with BIM. This is particularly useful for analysis where we are using point cloud data to accelerate modelling activities.

One of our early applications of 3D laser scanning and point clouds was on the Tudor warship Mary Rose, famously raised from the sea bed before a worldwide television audience of 60 million in 1982. Now in the final stages of conservation, she takes her place in a stunning and unique museum with amazing views of the ship. To aid the analysis and design for the Mary Rose Museum, the ship's hull was laser scanned early

in the conservation process and we used the resultant point cloud to develop a 3D geometry model.

The term LAM® coined by Ramboll is now gaining wide acceptance as the name for this family of hybrid CAD processes. LAM® is revolutionizing the way the existing environment is integrated into design space & BIM.

We provide specialist surveying services, in all market sectors including construction, energy, environment, buildings, archaeology, civil engineering, oil and gas and expert witness. We have clients who include developers, contractors, local authorities, government agencies and major institutions.

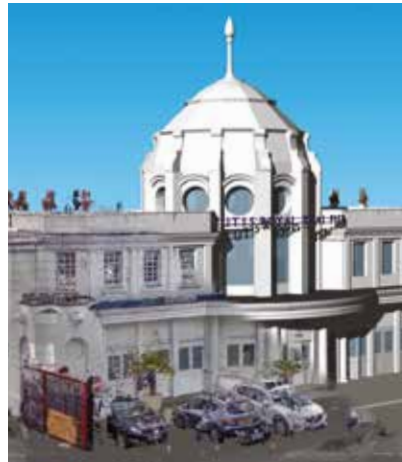
Our team of highly qualified and field-experienced surveyors are able to advise on all aspects of analysis: from a simple topographic feature to complex infrastructure projects involving high definition laser scanning and 3D modelling including the latest technologies with the use of a UAV.

**“Laser Aided Modelling (LAM®) is a phrase used to define the process of integrating the application of Laser scanning survey technology within the project BIM environment.”**





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02

**01 Gibraltar runway - Gibraltar**

The runway surface at RAF Gibraltar had reached the stage where it was near the end of its serviceable life. Although in military ownership, the airfield has a joint civilian and military usage and the majority of air traffic actually comprises civilian aviation activities. The aim of the survey project was to provide a full topographical survey of the runway and dispersals to enable the re-surfacing design.

**02 Royal Pier Waterfront, Southampton**

Royal Pier Waterfront is a £400m world-class development which will incorporate restaurants, leisure attractions, apartments, office space and hotels; all linked by pedestrian promenades and piers. There will also be a permanent and improved home for the PSP International Boat Show.



03

**03 DRAX Power Station, Yorkshire**

In order to maintain a cost effective power station, DRAX needed to change some of their boilers from coal fired to biomass fuelled. Working closely with the client and the contractor, Ramboll laser scanned some of existing areas within the operational power station facility to accurately capture the existing environment. A 3D geometry model was built to fully understand the spatial constraints within areas of congested pipework and retained structures, and advise how the facility needed to be altered to accommodate the new boilers.

**04 Winchester Cathedral Monitoriong, Winchester**

Modification to a medieval stone vault within Winchester Cathedral for the construction of a new lift built from a steel framed glass shaft. Work involves surveying, movement monitoring, engineering analysis, structural design and heritage consultancy. The main activity will be to cut a large opening through the floor and vault. It is believed to be the first time this has ever been done.



04

## CONTACT

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**Geomatic services are available from  
Ramboll through local offices across the UK.**

[www.ramboll.co.uk/geomatics](http://www.ramboll.co.uk/geomatics)

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