

# Case Study

**Customer:**  
Atlantic Geomatics

**Project:**  
Surveys of buildings and structures

**Solution:**  
Trimble VX Spatial Station



▲ Trimble VX Spatial Station

## Atlantic Geomatics - Applications for the Trimble® VX™ Spatial Station

### Who are Atlantic Geomatics?

Atlantic Geomatics (UK) Ltd has been based near Penrith, Cumbria for over thirty years. We have evolved out of a traditional land survey company and have now grown to become the largest independent surveying practice supplying multidisciplinary surveying services in the Scottish Borders and the North of England. We offer particular experience in topographic surveys, laser scanning surveys, underground utility mapping, measured building surveys, river and coastal surveys, boundary surveys, establishing GNSS control networks and GIS development and spatial data management.

### Why did you decide to invest in a Spatial Station?

At the moment, the buzz word associated with spatial information is '3D'. There is a lot of demand for 3D products for example in visualisation and planning, accurate volume calculations and deformation surveys. With

the VX we use the supplied 3D data software Trimble Realworks to produce 3D models of buildings and other structures for clients who need it, and for those who don't, we process the scans to produce outputs such as material volume reports, cross

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sections, building elevations and deformation reports. helping us to save time on revisits and reworking of the data.

### Why was the Trimble VX selected?

**KOREC** has supplied Atlantic Geomatics with Trimble instruments for many years and sticking with new Trimble equipment and a trusted supplier means that all staff

are familiar with the software, company and its people.

The VX is a total station (based on the Trimble S6) and laser scanner hybrid. The scanning capabilities are limited based on its speed, but to produce small scale scans it is a perfect tool, while its effectiveness as a standard total station is superb. This means that we have very little time where the VX isn't being used for something, be it a scan or a survey. We are therefore benefitting from a fast return on our investment.

### How have you utilised the VX?

We have used it to undertake surveys of several buildings and structures. It has been used to produce building and bridge elevations and undertake deformation surveys of structures such as retaining walls.

When utilising the VX for producing elevation surveys, the process becomes

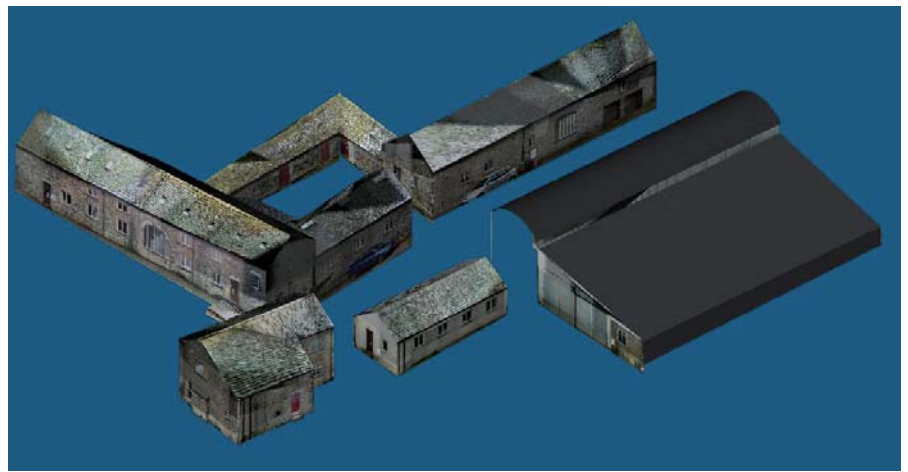
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more efficient and reduces site time compared to more traditional methods. On site, the instrument is used to take a series of images covering the building faces which

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are then geo-referenced. To provide reference planes, reflectorless points are measured on any flat surfaces such as walls, roofs, window frames and doors. In the office, the data is correlated and used to construct line work onto the planes in order to produce an accurate representation of the building face

to scale. All data processing is undertaken using Trimble RealWorks software with data



▲ 3D model processed with RealWorks software

▼ Elevations Scan



then exported to AutoCAD for any final presentation requirements.

For deformation monitoring we have used the VX to scan and produce profiles of collapsing retaining walls in the Lake District. In this situation higher density scans were used to produce a 3D model of the walls. From this we were able to extract cross sections through the deformed areas providing the client with an accurate representation of the deviation of the wall from its original state, and determine quantities for the restoration project.

**What are your overall impressions of the VX as part of the surveying portfolio?**

As a scanner and total station hybrid, we are impressed with the speed and accuracy of the VX. The features it brings to

land surveying, and as an entry into the 3D modeling market, makes it invaluable as a survey tool, speeding up our productivity and reducing site visit time. The most valuable aspect of the VX is its multi-functionality as a scanner and total station, allowing the instrument to earn money at all times. ■ ■ ■

[www.atlanticgeomatics.co.uk](http://www.atlanticgeomatics.co.uk)



◀ Trimble VX Spatial Station

**Contact us:**

Please do get in touch for further information on any products or services, a copy of the latest Synchronize, a demonstration, support or just a chat about your requirements.

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