

# Leica Geosystems **TruStory**

## Power Plastics Use Leica TCR410C for Climbing Wall Flooring



### ■ Task

Measuring large irregular shaped rooms for flooring mats.

### ■ Customer

Power Plastics

### ■ Date

November 2005

### ■ Project Summary

Producing floor matting to go beneath climbing walls, Mason decided that Laser Scanning provided the most comprehensive data capture method

### Instruments

TCR410C

### ■ Benefits:

- Saves time
- Reduces costs
- Achieve a premium rate for their service

**Power Plastics are a Yorkshire based manufacturer of covers and tarpaulins; recently they have won several contracts with leisure centres to produce the flooring mats to go beneath climbing walls. Traditional methods of measuring for these mats, often up to 100 metres square but of an irregular shape, proved to be an arduous task. With their new Leica TCR410C total station, this process is much more simple and efficient.**

Power Plastics tried and tested process of producing the flooring mats would begin with a visit to the site armed with a tape measure and a sheet of polythene. Measurements would be taken of the area and drawn onto the polythene. Upon returning to the factory, the polythene template would be laid over the factory floor; this template would then be reproduced in CAD. Transferring the data into a CAD package could take up to eight hours, and would completely halt production as the template would fill the factory floor. To avoid cutting into operational time this stage would often be carried out after

the usual working day, whilst this increased productivity it also increased costs, with overtime being paid to staff, as well as the operational costs associated with keeping the factory running out of hours.

With their reputation in the field of climbing wall matting growing, Power Plastics received a call from Newcastle City Council requiring new matting for a climbing wall. The Eldon Square Leisure Centre in the centre of Newcastle's shopping district opened its climbing wall in 1991 and it was the UK's first Berghaus sponsored indoor climbing wall.

- when it has to be **right**

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*The finished flooring mat. The mat had to be cut to fit round complex obstacles.*

At Eldon Square Phil Sellars, Technical Manager, used the Leica TCR410C total station to capture just 250 points round the perimeter. "After taking these measurements we returned to the office where we simply downloaded the data straight into CAD. This alone saved us 15 hours of measuring time. The indirect time and cost savings come from the fact that this method does not interfere with production in any way, unlike the previous method" explains Sellars. The Eldon Square measuring was fairly complex due to three freestanding walls as well as the main climbing wall, in addition the flooring mat had to be butted up to adjoining slopes where two walls met.

The total station gives a 3D picture; this is loaded into the CAD system to produce a 2D template. This in turn is communicated electronically to the computer-controlled cutter to produce a final PVC mat that is correct to within millimeters. For Eldon Square the mat measured 35 metres by 5.75m and was made up of almost 40 smaller mats that are attached together. The data available from the Leica TCR410C is also sent through to Kay-Metzeler, the partner with whom Power Plastics work on the flooring mats. Aston-Under-Lyme based Kay-Metzeler produce the foam that goes inside the flooring mats, and it is imperative that the two are made to the same meas-



*Phil Sellars taking shots around the perimeter of the climbing wall.*

urements. The process from measuring the points to Kay-Metzeler's team fitting the flooring mats takes approximately 4 weeks.

"The investment we made in the Leica TCR410C is really beginning to pay off," states Sellars "We work faster so we can use our time more efficiently, we reduce error, we no longer have to pay overtime and we can now charge a premium for the fact that we offer a bespoke measuring service. We are now beginning to incorporate the total station in the measuring of swimming pool liners and coverings and are already starting to make savings in this area too."