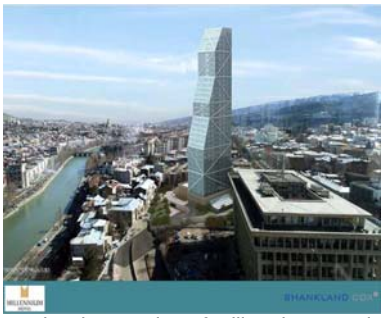
LOADTEST
O-Cell® Technology in Georgia

Project:	**Millennium Hotel in Tbilisi**
Location:	Tbilisi, Georgia.
Client:	Millennium Group Hotel
Contractor:	Shps Khidi Ltd
Consultant:	Lenavi Institution



Artists impression of Millennium Hotel

Location:

Tbilisi is the capital and largest city of Georgia with a population of approximately 1.5 million people. Since 2003, Tbilisi has enjoyed a period of stability leading to a real estate boom. Foreign tourist numbers have also increased. According to the Georgian Border Control statistics, tourism has risen by 56% from 2011 to 2012. As a result, many new projects have been undertaken and hotel room space is at a premium. The Millenium Hotel is one such expansion project and is located in the heart of the city centre of Tbilisi.

Construction Site

Project:

The old city of Tbilisi requires new infrastructure and modernisation but a requirement is that the pattern of the old city should not be damaged by new development. The Millenium project includes both the construction of a new 130 metre tall tower and the reconstruction of the old Russian ministry building. Fugro LOADTEST is delighted to have been involved as part of a modern solution to redevelop the old city of Tbilisi into a city for the future.

Piling in Progress

Project Summary:

The load testing program as specified by consultants from the Lenavi Institution required test one pile to be tested by the Osterberg (O-cell) Bi-directional Load Testing, the first O-cell test to be performed in Georgia.

The pile test was performed on a 1.5 metre diameter, 26.5 metre long, preliminary test pile located within the foundation footprint of the hotel and socketed into hard weathered sandstone. The pile was programmed to be tested to a gross bi-directional maximum load of 10 MN in each direction using a single 510 mm O-cell placed 3 metres above the toe of the pile. During testing, the movements at the maximum required load were small allowing the load to be increased and a combined upward and downward load of 22.4 MN was mobilised.

The single O-cell assembly

Using our patented automated loading system a stable and constant load application was achieved, provided excellent load-movement and time-movement measurements to be reported.

The Osterberg bi-directional static load testing technique is the ideal method of load testing for rock sockets, where the load can be applied directly in the rock, allowing a better assessment of soil parameters within the load bearing strata.