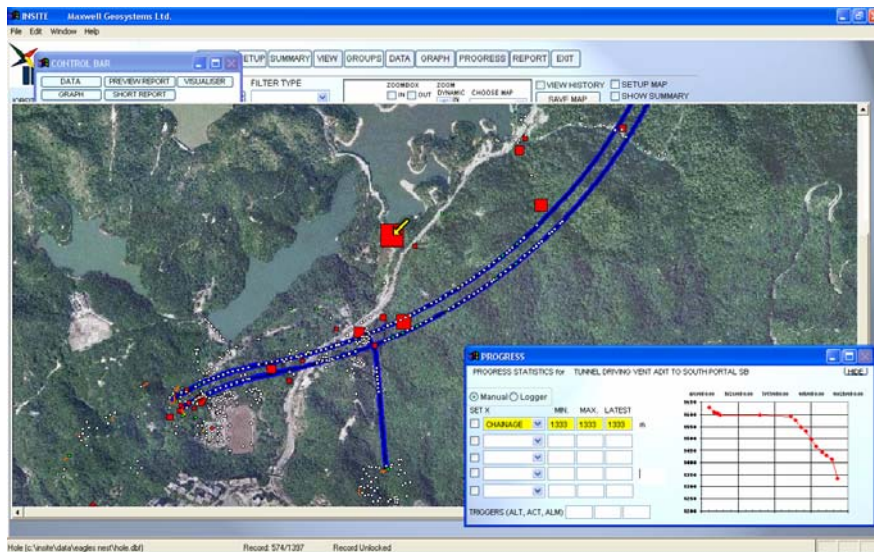


## INSITE CASE HISTORY:

## EAGLES NEST TUNNEL, HONG KONG



*Eagles Nest Tunnels and Approaches*

The INSITE system was used by Leighton Kumagai Joint Venture on their Route 10 Eagles Nest Tunnel Project. The project comprised twin 2km tunnels at 17m span with a ventilation duct driven from an adjacent valley. The tunnels were driven through sheared granite with dykes close to a regional fault line with sensitive reservoirs and water transfer structures nearby.

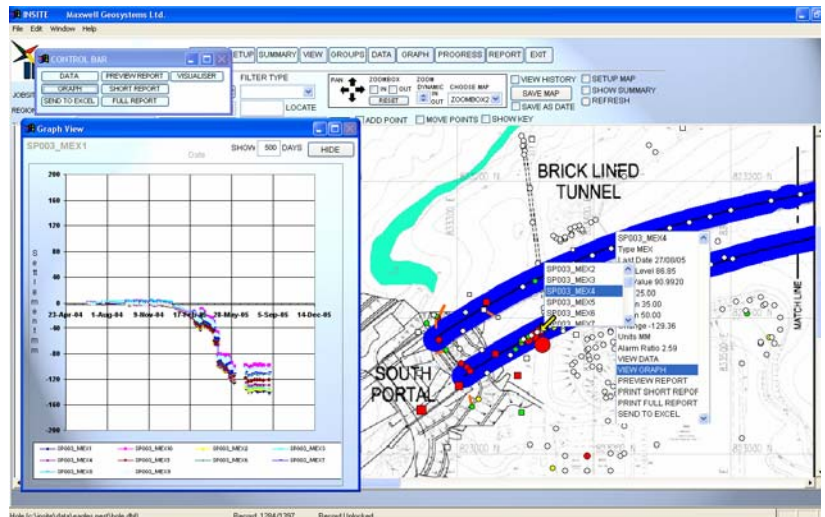
Some 4500 instruments were installed to measure slope and portal movements, ground water drawdown and in-tunnel convergence.

The contractor benefited from INSITE's highly interactive display enabling many instruments to be displayed along with the construction progress.

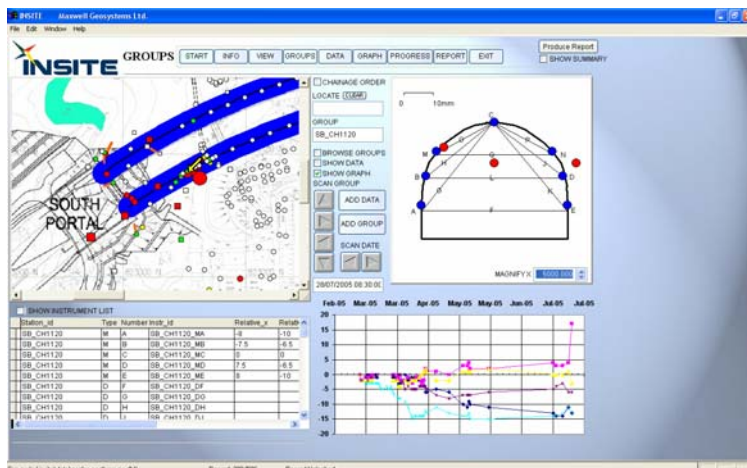
The use of air photos and construction drawings helped to bring out the relationships between the instrumentation results and the works being constructed.

With very low cover at the portals and a brick lined water tunnel in close proximity the contractor needed to take great care with the drill and blast excavation. INSITE helped to bring all the data together so that trends could be identified and action taken. INSITE reports were written to reflect exactly the needs of the client and deliver the key information in a small number of pages.

INSITE replaced an existing Excel based system in place on the project and reduced the size of the data storage by 95%.



*Zoom boxes enable the key data to be analysed*



**Bespoke Development** Maxwell Geosystems designed an interactive tool to take the result of surveyed convergence measurements and display them pictorially and through time. Survey results were taken every 2m along the tunnel and were accumulating into a large data set. INSITE's convergence group viewer facilitated the analysis of the data in relation to the works carried out on site.

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