

SENSITIVE BUILDING

HONG KONG - CHINA

Monitoring of building settlements during remedial works

In Hong Kong, a large building experienced structural problems: 116 out of 128 large diameter bored piles were constructed incorrectly.

Remedial works consisted of carrying out extensive piling from the third level basement : 400 pre-bored 508 mm H piles were inserted 10 m into the rock and linked to the existing pile with a special cap.

The works were a high profile and technically challenging civil engineering project.

- **The monitoring system**

SolData installed a round-the-clock real-time monitoring system with automatic alarms sent to pagers and permanent remote data display in the engineer's office.

3 CYCLOPS were installed within the first basement level. Reference prisms were fixed on the diaphragm walls.

Alarm levels were defined at settlements of 2 mm and 5 mm.

The CYCLOPS total stations were subject to settlement without any effect on the accuracy thanks to automatic correction from references prisms.



DATE OF WORKS:	1998
WORKS CARRIED OUT:	
	<ul style="list-style-type: none">• Installation of 3 Cyclops and 142 prisms in the first basement• Real-time monitoring, alarms and reporting.