



CASE STUDY:

Victorian Comprehensive Cancer Centre

OVERVIEW

The Victorian Comprehensive Cancer Centre (VCCC) is a \$1 Billion project to consolidate the research and treatment of cancer into one major facility. The VCCC is being built on the site of the former Melbourne Dental Hospital in Parkville. AAM was engaged by the builder, Grocon, to undertake complete construction control for the project including monitoring of the structure and the surrounds.

SITUATION

In October 2012, with excavations being 25m deep a major slippage occurred at the site and this manifested itself in gaps opening up in the adjacent roadways. Accordingly there was a suspension of all works on site and a requirement to monitor the retention systems 24 hours a day seven days a week.



East Wall Piling along Elizabeth Street

RESULT

The monitoring of the structural retention system at the VCCC was an exemplary example of the benefits of using surveying and spatial solutions in a challenging environment. The client, government and other stakeholders were provided with real time monitoring results in a potentially dangerous situation.

ACTION

The immediate challenge was to put in a monitoring regime that was continuous and 24/7 with the results being progressively supplied to the geo technical engineers. Although logistically challenging, the response was organised two/three hours after the problem was identified. This was achieved initially by establishing monitoring points on the retention system and providing staff 24 hours a day to undertake round the clock surveys.

Results were required in a concise and timely manner (every hour) to determine the size and rate of movement. This continued for a period of two weeks and was labour intensive for AAM and costly for the client.

The longer term solution was to provide a fully automated solution with results streamed in real time to the project team and alerts sent if the movement was outside set parameters. The system included Leica “GeoMos” software, the establishment of a stable base station, and telemetry and hardware to stream results to stakeholders via 3G.

External control marks were established on surrounding buildings and 50 monitoring targets were placed on the retention system. These targets would have about 100 readings taken to them during a 24 hour period.

The initial rapid response followed by the longer term “GeoMos” solution offered an outcome that delivered safe, reliable and timely results for the use of the engineers, clients and a range of other stakeholders. This in turn allowed decisions to be made based on the latest information and the results of these actions could then be measured by the ongoing monitoring.