

# Bishopsgate Tower, London



## Project Summary

NAME: Bishopsgate Tower (The Pinnacle )

DATE: 29/07/2009

CLIENT: Arab Investments

CONTRACTOR: Brookfield

SPECIALIST SUB-CONTRACTOR: Site Engineering Surveys Ltd

CONSULTANT: Arup Geotechnics



## Overview

The Pinnacle, also known as The Bishopsgate Tower and The Helter-Skelter, is a 288m, 63-storey skyscraper under construction in the City of London.

When completed (pencilled in for 2013), the building will reach 288m, making it the tallest in the Square Mile and second only to the Shard in stature.

Standing on the deepest piles in the whole of London that are 65.5 metres deep, the building will be clad in ventilated glazing that works like a snakeskin with every single piece of identical size reducing build cost. The inside of the spiral at the top of the building will contain PV panelling to generate power from the sun.

Demolition of the site began in mid-2007 and was completed the following year.

Geosense instrumentation was used in the monitoring of existing basement walls during demolition of the internal basement slabs (3 levels). The existing basement walls were to be retained for the new structure, however not enough information was available on their present condition, therefore extensive monitoring of the walls was proposed.

## Monitoring

Due to the complex nature of the demolition and subsequent re-building adjacent to large structures, conventional monitoring methods were not possible and therefore a tilt meter system was proposed and implemented. By utilising BUSSED MEMS tilt meters considerable savings were made due to the reduction in the amount of cabling required.

In excess of 60 in-place MEMS tilt meters in arrays around the existing retaining walls were installed to monitor for movement continuously even with construction taking place directly above.

In order to protect the tilt meters during demolition they were installed into the walls within cored holes and all wiring was run through heavy duty steel conduit.

Once demolition had been completed and excavation carried out the tilt meters were re-located to monitor the retaining wall along Bishopsgate.

## Products used

- ~ **MEMS In-place tilt meters**  
Used to monitor movement throughout the building.
- ~ **GeoLogger**  
14 channel data logger used to collect data and upload to the internet.



# GEOSENSE

A division of  
Marton Geotechnical Services Ltd