



UNIVERSITY OF
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Midlands Geotechnical Society Newsletter

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Honorary Secretary:

Alan Turner

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Meeting Venue

Lectures start: 7pm

Location:

HAWORTH BUILDING,
University of Birmingham B15 2TT

Refreshments are available prior to the meeting in the Shell lounge, Department of Mechanical and Civil Engineering, from 6:15 onwards

Registered Charity Number: 514610

March 1st Meeting John Mitchell Lecture 2010 Deep Excavations in Dublin : Recent Developments

The purpose of this paper is to provide an update on recent developments in deep excavations in the Dublin area.

The recent period of sustained economic growth in Ireland has led to an increase in the use of underground space, with some development now including 4 underground levels. This period has also seen the development of marginal sites, for example areas of Dublin docklands, which previously would have been considered unsuitable for deep basement construction. The purpose of this paper is to provide an update on recent developments in deep excavations in the Dublin area.

Case history data, presented in the paper, confirms retaining wall behaviour in Dublin glacial till is extremely stiff. This applies to excavations up to 25 m deep. It will be shown that important insights into the above can be gained from observations of steep slopes in Dublin boulder clay, where pore water suction plays an important role. It appears that current approaches over predict walls deflections and the use of overall current design practice is clearly conservative. An alternative method of design and construction will be outlined.

Cantilever walls have been successfully constructed up to 7.5 m high. These walls show smaller movements than expected, though the development of movement with time is very important. It seems there is scope for the greater use of cantilever walls and possibly also higher retained heights, at least for temporary works purposes.

Mike Long

Following graduation Mike Long spent 11 years in engineering practice mainly with Ove Arup and Partners. Since 1996 he has been at UCD and was promoted to Senior Lecturer in 2006. His research work mostly comprises the characterisation of natural soils and the application of this work to structures such as deep excavations, embankments on soft soils and geothermal systems. He is also a visiting lecturer at NTNU Trondheim, Norway.

This lecture has been supported
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