



Andrew Bond
Honorary Editor



Editorial

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I write this Editorial on a balmy summer day, warmed not only by the heat of the sun but also by the quality of the papers that I have the pleasure to summarize for you in this editorial.

1. BRIEFINGS

This issue of *Geotechnical Engineering* sees the first installment of Dr Arthur Penman's essay on the foremost British government soil mechanics laboratory—the Building Research Station (BRS)—from earliest times to 1957. Dr Penman has kindly undertaken to set out the history of the BRS in a series of briefings that will appear in this journal over the coming year. His essay focuses on the personalities who helped shape the original soil mechanics centre of excellence—such as Jenkin, Cooling, and later Skempton—and the work they did to establish soil mechanics as a science and not just an art.

Our next briefing, by Carder and Bush, discusses the development and testing of a self-boring load cell pressuremeter, which the authors claim to give a significantly improved measurement of in situ lateral stresses in stiff clay.

Much valuable geotechnical information appears in other journals published by the Institution. Elsewhere in Proceedings summarizes papers that have appeared over the past six months on geotechnical topics such as feasibility studies for a large reservoir and building damage caused by tunnelling.

My apologies to those who were hoping to read more about the Observational Method, following Professor Peck's briefing last time. Owing to a lack of space, we have had to delay the continuation of this series until next issue.

2. PAPERS

With brownfield developments requiring greater knowledge of the compressibility of fill, Charles and Skinner report the results of a programme of laboratory oedometer tests on three materials: colliery spoil; an opencast mining mudstone backfill; and a boulder clay fill. Their tests show that the most significant hazard for buildings founded on fill is inundation of water leading to collapse compression.

The City of Tilburg in Holland was faced with ongoing remediation costs caused by historic spillage of trichloroethylene (TCE) from a textile factory, since demolished to make way for housing. The groundwater pumping scheme installed to remediate the problem had failed to reduce significantly the

annual extraction of TCE. Dyer, van Zutphen, and Hetterschijt present findings from the back-analysis of the seven year pump-and-treat operation, which allowed the remediation strategy to be refocused on the main source of pollution.

Day revisits the problem of determining earth pressures acting on cantilever embedded retaining walls. He claims that a rectilinear net pressure distribution gives good predictions of the complete bending moment profile for walls in service conditions and offers support for the design method first proposed by Padfield and Mair in CIRIA Report 104.¹

The Bandra Influent Pumping Station, servicing India's largest city Mumbai (formerly Bombay), will be among the largest of its kind in the world, with a pumping capacity of nearly 22m³/s. Antonio and Adams describe the rock support scheme used to enable widening and deepening of three existing shafts, discuss the alternatives considered, and highlight the limitations of existing design methods.

Returning to the subject of brownfield sites, Wilson, Langdon and Walden investigate the effect of hydrocarbons on the strength of foundation concrete. They show that the strength of hardened pre-cast concrete is largely unaffected by petroleum hydrocarbons, but is susceptible to deterioration when in contact with creosote. The authors suggest practical ways of overcoming this problem.

3. DISCUSSION

We are pleased to have two discussion pieces on papers that have been appeared in previous issues of this journal.

The discussion by Long of Clayton and Siddique's award-winning paper on Tube sampling disturbance—forgotten truths and new perspectives² is particularly interesting, since the authors disagree with the findings of the discussor! Read on...

Finally, Consoli and Thome provide evidence that both supports and contradicts the findings of Rogers, Glendinning, and Roff's paper on Lime modification of clay soils for construction expediency.³

While on the subject of discussion, I would like to encourage readers to write to me with comments on any aspect of the journal, such as the balance between: short/briefing and long papers; practical and academic subjects; and UK and

international coverage. Are we getting the balance right? Do we need more papers in a particular area or of a particular style? Your feedback will have a positive influence on the editorial policy we adopt for future issues of this journal. Please send your comments direct to me at the email address given below.

4. HOUSEKEEPING

I'm pleased to welcome Steve Smith of Bechtel to our Editorial Panel.

Our apologies go to Professor Ralph Peck for the production error that lead to his surname being miss-spelt on the back cover of the last issue of Geotechnical Engineering. I trust readers, glancing at the table of contents, will automatically convert 'Beck' to Peck when they see the name attributed to a paper on the Observational Method.

5. NEXT ISSUE

Read the next installment of Dr Penman's essay on the early days of soils mechanics at the Building Research Station; learn more about the Observational Method; study papers on global positioning systems, the behaviour of infilled rock joints, and

design of a large soil retaining structure; and debate whether factored material properties and limit state loads are an unlikely extreme or impossible pretense.

REFERENCES

1. PADFIELD C. J. and MAIR R. J. Design of retaining walls embedded in stiff clays. *Construction Industry Research and Information Association Report 104*, CIRIA, London, 1984.
2. CLAYTON C. R. I. and SIDDIQUE A. Tube sampling—forgotten truths and new perspectives. *Proc. Instn. Civ. Engrs Geotechnical Engineering*, 1999, 137, 127–135.
3. ROGERS C. D. F., GLENDINNING S. and ROFF T. E. J. Lime modification of clay soils for construction expediency. *Proc. Instn. Civ. Engrs Geotechnical Engineering*, 1997, 125, 242–249.

