



Andrew Bond
Honorary Editor



Editorial

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1. BRIEFINGS

Recruitment of geotechnical engineers has become a serious problem for the UK construction industry. Despite an apparently gloomy economic outlook, the number of job adverts for geotechnical engineers grows week in, week out. At the same time, the number of students graduating in civil engineering continues to fall at an alarming rate: down a third over the past five years to 1600 per annum.¹

Is one of the causes the way that geotechnical engineers are educated? Are our universities producing the students the geotechnical profession needs? Should industry play a greater role in the education and training of geotechnical engineers?

In this issue, we start a series of briefings that look at education and training. Professor John Atkinson kicks off the series by asking, 'What is the matter with geotechnical engineering?' The article is contentious and thought-provoking. I hope it will stimulate others in academia and in industry to contribute to a debate on the future of geotechnical education.

Also, in this issue, we have the first of a series of briefings from our corresponding members, looking at aspects of geotechnics around the world. In this case, Professor Rowe *et al.* summarise two cases in Canada where gassy soils were a problem during ground excavation.

2. PAPERS

Embedded retaining walls are routinely designed using methods that assume plane strain conditions, whereas in reality the walls' behaviour is truly three-dimensional. Gourvenec *et al.* describe a finite element study that investigates 'end effects' on wall movements and suggest ways in which the results could be used to minimise ground movements.

Newman and Ingle present a case study in which the primary support of a road tunnel was provided by a system of pre-vaults followed by installation of unreinforced concrete linings (see Fig. 1). Unstable ground conditions during the early phases of construction were solved using an iterative grouting method, details of which are given in the paper.

The effectiveness—after five years—of auger mixing treatment of a contaminated site is discussed by Al-Tabbaa and Boes, in the fourth part of a series of papers that debuted in

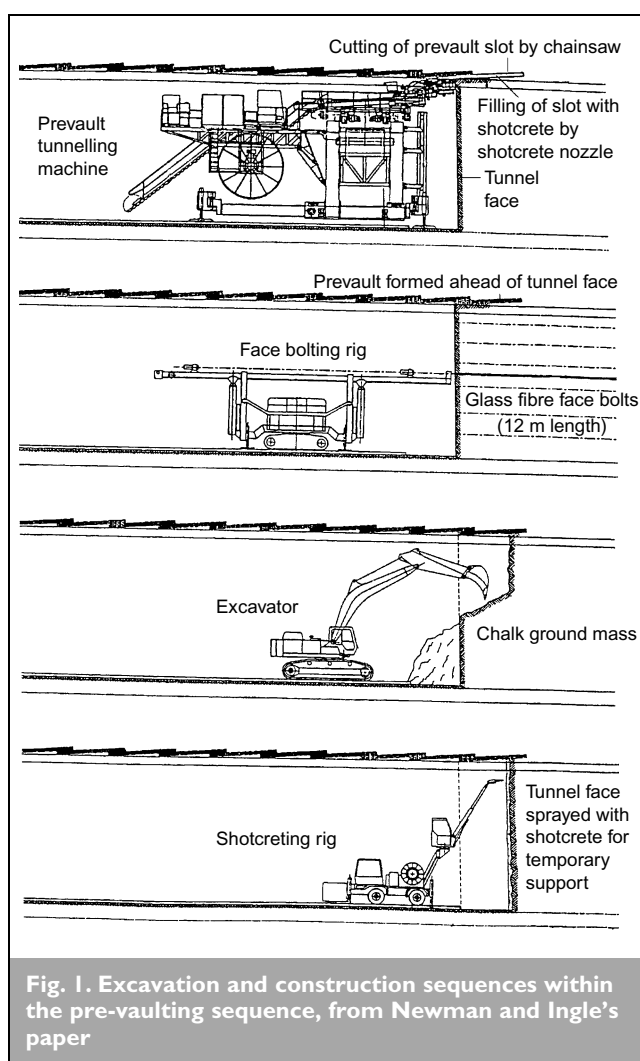


Fig. 1. Excavation and construction sequences within the pre-vaulting sequence, from Newman and Ingle's paper

Geotechnical Engineering in 1998.² The paper looks at physical and chemical properties of the ground, such as strength, leachability, leachate pH, permeability, freeze-thaw and wet-dry durability, and microstructure.

3. DISCUSSION

Dawson's briefing³ on why we should be using steel to replace concrete in foundations has garnered discussion from Manhas.

4. MONITOR

Continuing with our regular reviews of publications of interest to practising geotechnical engineers, we have a review of the *Canadian Geotechnical Journal* and a round-up of papers that have appeared elsewhere in the *Proceedings of the Institution of Civil Engineers* during the past nine months.

5. NEXT ISSUE

We have briefings on the education and training of geotechnical engineers and on retaining walls built with scrap tyres; papers on ground and structure movements during site redevelopment in Dublin, preparation techniques for clay index

properties, and modelling of particle breakage of coarse aggregates.

REFERENCES

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2. AL-TABBAA, A. and EVANS C. W. Pilot *in situ* auger mixing treatment of a contaminated site: Part 1. Treatability study. *Proceedings of the Institution of Civil Engineers, Geotechnical Engineering*, 1998, 131, 52–59.
3. DAWSON, R. Foundation piling-steel to replace concrete, *Proceedings of the Institution of Civil Engineers, Geotechnical Engineering*, 2001, 149, 205–207.