

MALAM JURUTERA/Engineers Nite 2003
(Slope Engineering)
25 September, 2003
Geology Department
University of Malaya
Report

A case study of a landslide in Johore

EDDIE NG, T.S.

How do we learn from failures and prevent recurrence in slope engineering? — some case studies

LIEW, S.S.

Geological aspects in site investigations for slope stabilisation design

NEOH, C.A.

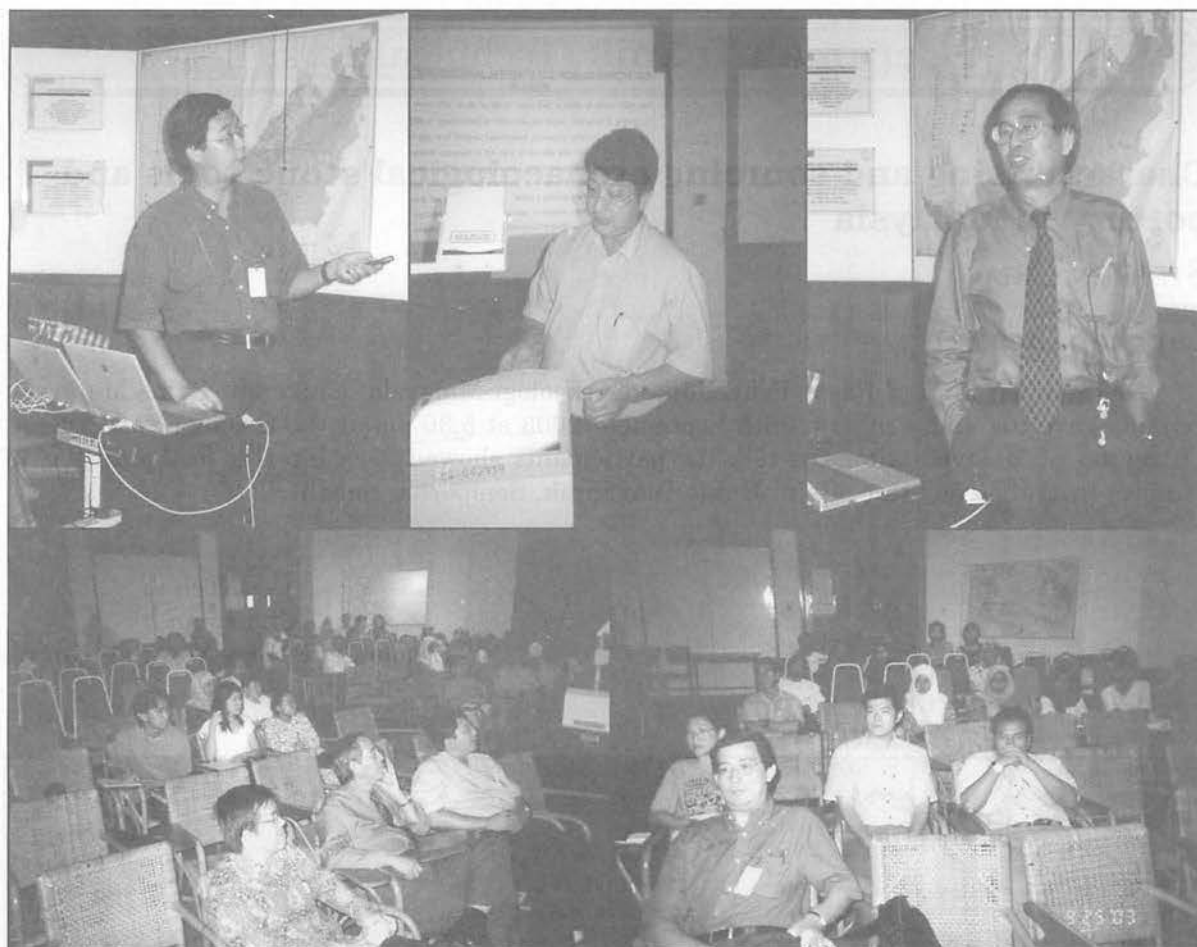
Laporan (Report)

Three consultant engineers presented talks on various aspects of slope engineering and slope failures to members of the Society on Thursday 25th September 2003, at the Department of Geology, University of Malaya.

Ir. Eddie Ng, T.S. gave a case study of a massive slope failure involving residual soils of gabbro in southern Johore. The failure planes are bilinear and controlled by relict joints. Remediation works via an observational approach include rockfill toe with compacted backfill, and subsoil horizontal drains.

Ir. Liew, S.S. presented two case studies of slope failures, one in northern Peninsular Malaysia, and the other in southern Johor. The first case involved materials of shale, mudstone and sandstone of weathering grades III to V, and the failure involved soil nailed slope as well. Analysis using limiting equilibrium method gave factor of safety close to unity. Analysis using the finite element method showed development of a shear band propagating to full slip surface. The second case involved residual soils of gabbro. Inclinometers used successfully detected the multiple, rotational slip planes. Shear strength parameters, both peak and residual, from laboratory tests, back analyses using limiting equilibrium and finite element methods, are in good agreements.

Ir. Neoh, C.A. gave a comprehensive account of the investigations, analysis and design of slope remediation works, including geological features or adversities relevant to such works. Numerous case histories were shown via a series of colour slides. Materials prone to failures, e.g. the graphitic schist soils, were highlighted. The possibility of lightning as one of the causes of rock slope failure/rockfall was mentioned, to the amusement of the audience.



As usual in this series of Malam Jurutera talks, active discussions followed each presentation, and the event must have been very educational for all present.

Tan Boon Kong
Chairman
Working Group on Engineering Geology & Hydrogeology
26th September 2003

GSM