Talk on 'Limestone Hills, Rockfalls and the Developers'

By: Engr. Dr Ooi Teik Aun, FIEM, P Eng.

The talk on 'Limestone Hills, Rockfalls and the Developers' was delivered by Tan Boon Kong, formerly Associate Professor from Engineering Geology at Universiti Kebangsaan, Bangi, on 16 January 2008 at the IEM lecture hall in Petaling Jaya at 5.30 p.m. *(see Figure 1)*. The presentation started with a review of limestone hills and rockfalls in and around Ipoh and Kuala Lumpur.

Natural limestone hills are very picturesque *(see Figures 2 and 3)*. However, hidden in these limestone hills are potential geohazards that can occur in the form of rockfalls. Figures 4 and 5 show the diagrammatic sketch of a rockfall and overhanging limestone hill respectively. Several case histories of rockfalls in limestone hills were presented and discussed.

It is important to keep development at a safe distance away from potential rockfalls. In this respect, as a rule of thumb, design engineers have been using a safe distance of two times the height of the cliff. This distance is known as a buffer zone in which there should be no development.

This criterion has been adopted by the Department of Minerals and Geoscience Malaysia (JMG) amongst its other guidelines. The speaker's opinion is, without a detailed geological study, the JMG's guidelines generally resulted in the loss of large tracts of valuable land for development.

The stability of a limestone cliff is dependent on the nature of its joints and whether there is any daylighting of the joint system. Tan showed examples of several structures, such as water tanks and condominiums, which were built close to the limestone cliff in the Batu Caves area. Although these developments did not comply with the JMG guidelines, investigation has shown that they are safe.

The talk on 'Limestone Hills, Rockfalls and the Developers' was indeed very informative and attracted more than 100 participants. Figure 6 shows a section of the participants at the talk. The talk ended at 7.30 p.m. with numerous interesting questions from the floor. Engr. Dr Ooi, on behalf of the Geotechnical Engineering Technical Division, presented Tan with a memento as a token of appreciation. ■

Figure 1: Assoc. Prof. Tan Boon Kong delivering his lecture

Figure 2: Picturesque limestone hills in Ipoh

Figure 3: View of the elegant 'Tambun Tower'

Figure 4: An overhanging cliff; a potential rockfall

Figure 5: Diagrammatic sketch of a potential rockfall

Figure 6: View of section of the participants