

The Geologists Act 2008 and Its Impact on Practising Engineers

by Ir. Yee Thien Seng

INTRODUCTION

Subsequent to the establishment of the Geologists Act 2008 (hereinafter referred to as "The Act") on 27 August 2008, several issues of concern have emerged amongst practising engineers, especially in terms of professional responsibility and accountability. This is taken in view of the fact that the provisions of the Act seem to offer stout protection to the geological fraternity. To address these issues of concern, the Geotechnical Engineering Technical Division had recently organised a forum on the Act at the Tan Sri Professor Chin Fung Kee Auditorium, Wisma IEM.

The forum was chaired and moderated by Ir. Dr Chin Yaw Ming, a former Committee Member of the IEM Geotechnical Engineering Technical Division. There were four (4) the panellists in this forum, namely Ir. Dr Ooi Teik Aun, Chairman of IEM Consulting Engineers Special Interest Group and Committee Member of IEM Geotechnical Engineering Technical Division and Consultant, Ir. Dr Mohd. Farid bin Hj. Ahmad, Chairman of IEM Tunneling and Underground Space Technical Division and Consultant, Ir. Dr Abdul Majid bin Dato' Abu Kassim, Immediate Former President of the Association of Consulting Engineers Malaysia and Consultant, and Mr. Seet Chin Peng, Vice-President of the Institute of Geology Malaysia. They have brought forward several interesting opinions related to the grey area created by the provisions of the Act.

SCOPE OF GEOLOGICAL SERVICES

Ir. Dr Ooi first provided a quick overview of 'geological services' as listed in the Act which would pose some significant impacts on the work of engineers. He also highlighted some of his personal experiences on them, which include the following:

- i. Feasibility studies;
- ii. Planning;
- iii. Geological surveying;
- iv. Implementing, commissioning, operation, maintenance and management of geological survey works or projects;
- v. Any other services approved by the Board.

He cautioned that the provisions are very wide in coverage and, although the Act does declare that none of its provisions should be construed as permitting geologists to practise engineering under the Registration of Engineers Act 1967 (REA), they would inevitably have led to numerous instances of geologists encroaching into the engineer's areas of work.

In planning, such practices are condoned by Local Authorities which require the inputs of geologists as a condition to be fulfilled during the processing of submissions for approval of development schemes in spite of Clause 27(6) in the Act which clearly stipulates that it is not mandatory to have geological services for the practice of



The forum panellists from left to right: Ir. Dr Chin Yaw Ming (moderator), Ir. Dr Abdul Majid bin Dato' Abu Kassim, Ir. Dr Mohd. Farid bin Hj. Ahmad, Mr. Seet Chin Peng and Ir. Dr Ooi Teik Aun

engineering unless so requested by a professional engineer. Thus, in the course of providing their inputs, it would be difficult for geologists to totally avoid making comments on the engineering aspects of the work, and this could lead to an infringement of the REA.

As illustrated in Figure 1, Ir. Dr Ooi showed the flow process practised by some Local Authorities in receiving applications for Planning Approval for new hill slope developments, where the Jabatan Mineral dan Geosains Malaysia (JMG) approval of construction suitability on the basis of 'terrain mapping for land classification' and prescribed policy guidelines prevails over all other technical departments' or professionals' opinions.

THE NEED TO SAFEGUARD PUBLIC INTERESTS

According to Ir. Dr Ooi, the Act as well as the constitution of the Board of Geologists do not have the necessary

safeguards to protect public interests, and appear to have been formulated to preserve the interests of geologists. Ir. Dr Ooi also highlighted that the Act empowers an inspector to apply for a magistrate's warrant authorising him to enter and search the premises, as and when there is suspicion that an offence under the Act is being or has been committed, or in connection with any business carried on any premises.

A serious penalty of up to a RM10,000 fine or a prison term of up to one year, or both, may be imposed on any person who obstructs or impedes an inspector in the exercise of his duties. A similar penalty may also be imposed on any person found to have employed a person not registered under the Act to render any geological services. Further, any person found impersonating a registered geologist or a registered practitioner under the Act can be fined up to RM20,000 or imprisoned for up to two years, or both. He cautioned that engineers working on dams, tunnels and

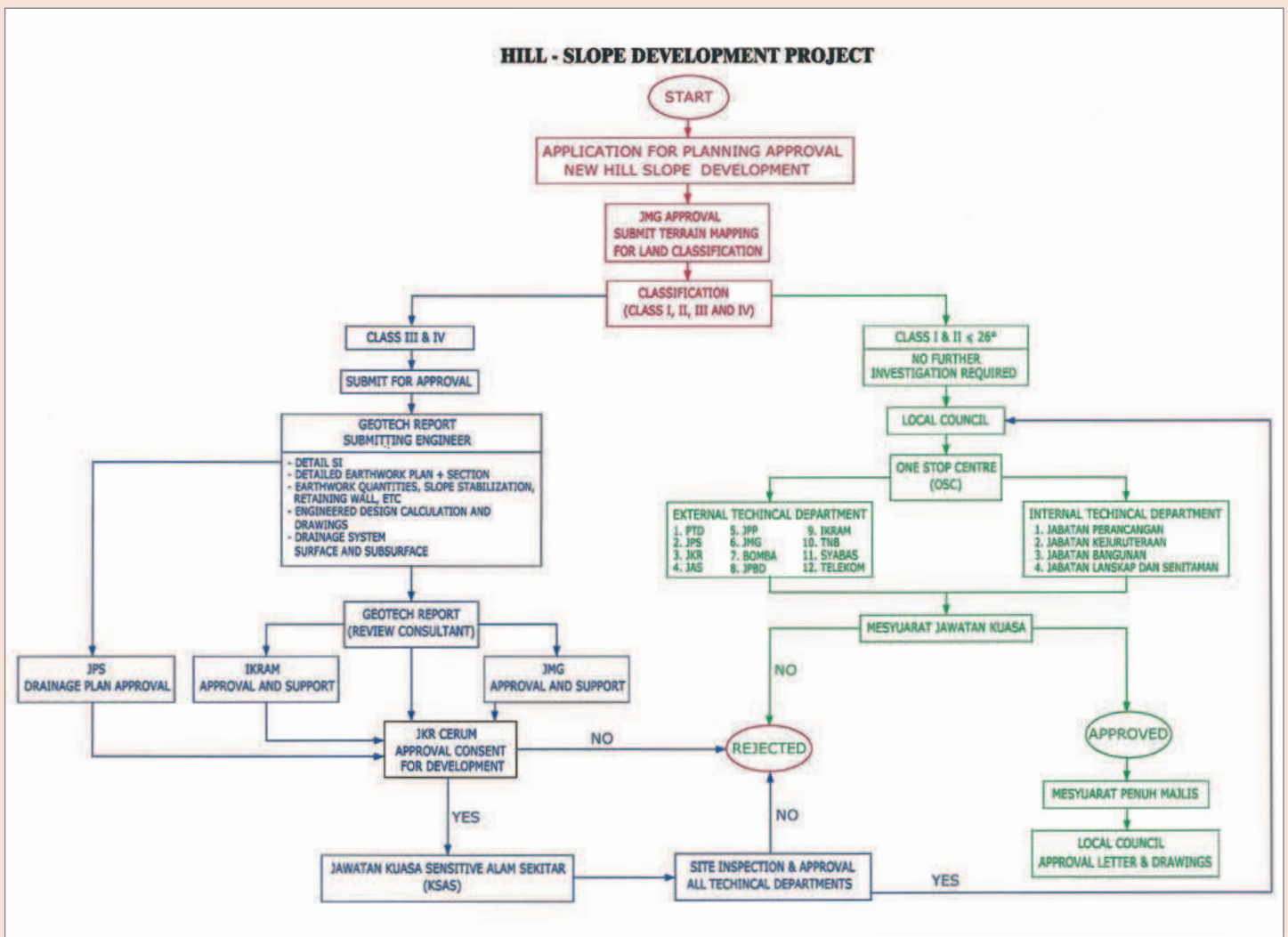


Figure 1: Flow Chart for Approval of New Hill Site Developments

hillslope development projects can unwittingly commit actions that transgress into the fields gazetted for geologists and thereby fall foul of the Act.

GEOLOGISTS AND ARCHIVED LANDSLIDES

Ir. Dr Ooi then pointed out that the geologic fraternity enjoyed considerable media coverage following the occurrences of a number of highly dramatic landslides in recent times, starting with the Highland Towers collapse in 1993, which helped to trigger the creation of the Board of Geologists.

However, he also pointed out that all those landslides were simply the consequence of poor engineering and construction practices and had little connection whatsoever with geology. Instead, Ir. Dr Ooi revealed that in 2003 a large rock slope collapse within the reserve of the New Klang Valley tolled expressway actually had gone through an extensive geological study during its design; and yet it had failed to avert the collapse of the slope which resulted in the closure of the affected section of the expressway for several months.

Ir. Dr Ooi also provided towards the end of his presentation a short account of the one-day Seminar on Hill Site Development organised by the Board of Engineers Malaysia on 14 February 2009 along with the activities that followed. This included the updating of the IEM Position Paper on Hill Site Development in the same year.

DIFFERENTIATING GEOLOGICAL SCIENCE FROM ENGINEERING

Ir. Dr Mohd. Farid briefly recapped the salient provisions in the Act presented earlier by Ir. Dr Ooi Teik Aun. He highlighted that the Act allows any person, irrespective of academic qualification, who has been practising or carrying on business in any of the fields of geology before its gazette date, to continue doing so provided he registers as a practitioner under the Act within twelve months from that date.

Ir. Dr Mohd. Farid noted that the Board of Geologists essentially could accept any individuals as registered practitioners of geology, whether or not they possess a university degree in geology, so long as these individuals were working as geologists prior to the gazette date.

He also shared his experience in encountering cases whereby the geologists were required to prepare feasibility study reports for housing and condominium development projects. Ir. Dr Mohd. Farid remarked on the minor roles the geologists had, and yet their inputs were made to carry such great weight in the planning approval process by Local Councils. He also highlighted the limited nature of geological inputs in tunneling work and as a result the geologists employed in these project sites were trained to do geotechnical engineering work instead.

Ir. Dr Mohd. Farid then presented side-by-side comparisons of the university course contents for mining engineers and geologists. He commented that mining engineers work on processes culminating with the extraction of mineral resources from sources in the ground for downstream applications; yet the fields of geology listed in the Act cover many areas of their work. Whilst the geology course dealt with minerals in a clearly qualitative or descriptive manner, the mining engineers have to cover the same with very rigorous mathematics, reinforcing the treatment of the subject with engineering material science and engineering mechanics. It is such quantitative evaluations by mining engineers that make possible meaningful conclusions, and this holds true for all other disciplines of engineering.

Ir. Dr Mohd. Farid also warned fellow engineers that based on the manner in which the Act has been formulated, there lies the possibility that engineers may be charged with practising unlicensed geology in future given the rising trend in Malaysia towards a litigious society.

ORIGINAL OBJECTIVE OF REGULATING GEOLOGICAL PRACTICE

According to Mr. Seet, the work on the Act started in the 1980's and has taken 28 years to accomplish; yet its main objective is to regulate the geological profession and its practice. The Highland Towers collapse was an initiating factor in its creation. He also emphasised that the Act was not intended to intrude into the engineers' domain. Although it listed engineering geology as one of its fields; it is more concerned with geological projects.

However, now that geologists have gotten involved in engineering projects, it could only mean that they have strayed from the Act's intended objectives. Feasibility studies for housing development or construction projects do not constitute geological projects. Geological projects include feasibility studies for mineral exploration and for mine operations.

He explained that the Act recognises an individual who has been doing geological work before the Act was enforced, although he may not possess a university degree in geology. Through registration as a Registered Practitioner, he is permitted by the Act to continue working as before. However, Mr. Seet said that a non-geologist foreigner who undertakes geological work in this country would not be permitted under the Act to practise once his term has expired. He explained that this was aimed at protecting the livelihood of local geologists and practitioners.

Mr. Seet firmly clarified that it was never the intention of the Act to require an engineer's report to be signed by a registered geologist. However, it does require a contractors' geological report submitted to the engineer to be signed by

a registered geologist. Mr. Seet added that the Act has been worded in very generic terms for ease of administration but its enforcement is intended to be made in conjunction with the accompanying Regulations to the Act. The Regulations which would specifically define the provisions of the Act, however, have yet to be released.

THE REGULATIONS AND ABSENCE OF PROFESSIONAL LIABILITY

Ir. Dr Abdul Majid observed that there are a number of similarities between the Act and the REA. He said that it was encouraging to learn from Mr. Seet that the vague wordings in the Act would be clarified in the Regulations. Ir. Dr Abdul Majid noted that the Regulations had been finalised before consultations with the Board of Engineers.

He also pointed out the Act does not contain provisions that offer public representation on the Board of Geologists and there are no indications that the purpose of the Act is to protect and safeguard the public's interests.

Ir. Dr Abdul Majid also highlighted that there is no professional liability attached to the geological profession, unlike in the case of engineers where the Uniform Building By-Laws specifically require a professional engineer to be the Submitting Person or Qualified Person, and that he shall be held responsible and liable for his work.

QUESTION AND ANSWER SESSION

Ir. Dr Chin opened the session by asking Mr. Seet if engineers should register under the Act. Mr. Seet replied that only a person trained in geological sciences could do so. But their degrees would have to be recognised as admissible by the Board of Geologists before registration can be permitted. At the moment, as the Board of Geologists has yet to be established, registration is not possible.

In response to a question from Ir. Mohd. Jamil b. Ali on the availability of professional geological companies, Mr. Seet explained that the Act does not register companies. It will only register individuals who are practising geologists. Currently, there are no registered geologists in the country since the Board of Geologists has yet to be established.

Ir. Dr Majid reiterated that, unlike in the case of engineers, there is no enabling 'Act' that makes it a requirement to procure the services of registered geologists. Currently, the Local Authorities are imposing the requirement for geological services through their own procedures in addition to their respective local by-laws.

Ir. Look Keman Sahari commented from his personal experience that mining engineers received considerable education in geology to the point of making them more than

half geologists. Mining engineers should have no difficulties working with geologists in the course of their work, and appealed to engineers and geologists to co-operate with each other.

Subsequently, Ir. Dr Abdul Majid opined that an engineer has to recognise the limits of his own capability and not to practise beyond those limits, but to enlist the necessary assistance from individuals with the relevant expertise. This is in line with professional ethics. He suggested that there have been numerous instances of failures in constructed works resulting from incompetent and negligent acts by engineers and this situation has allowed others to claim possession of capabilities that take away specific roles from the engineers.

Mr. Ng Chak Ngoon, a practising geologist, described an example of a geological report which mentioned the existence of non-existent minerals and made a mining company suffer business losses to justify the Act regulating against unauthorised practice. He then asked about the number of geotechnical engineers who have been charged in court for the many landslides that have been reported. Ir. Dr Ooi cited the case of the Highland Towers collapse where a structural engineer was made liable for certifying as-built drainage plans that he did not design nor supervise.

Ir. Yee Thien Seng added that no geotechnical engineer had been charged so far as none had been involved in any of those events as the Submitting Person or Qualified Person, although engineers have certainly been charged and found liable in other cases. Ir. Dr Abdul Majid recounted a case where a consulting engineer was successfully sued for negligent conduct, though not under the REA.

Mr. Seet also explained that the Act would protect employees from being forced against their will by their employers to sign geological reports. Meanwhile, an engineer from Dewan Bandaraya Kuala Lumpur (DBKL) talked about the receipt of unreliable site investigation reports by her department and revealed DBKL's practice of requiring geologists to review geotechnical engineering reports. She also considered this practice unusual, which was agreed by the panellists as well.

Mr. Ng Chak Ngoon likened the way the Act was being used by the Local Authorities (which require the services of geologists in applications for development approval) as a form of Development Tax since the services provide no value-added benefit to the proposed projects. To this, another practising geologist, Mr. Tan Boon Kong, pointed out that the Local Authorities' requirement for geological evaluations is a condition imposed by JMG and not a requirement of the Act. ■

