

# LCQ11: Engagement of land surveying personnel

Following is a question by the Hon Tony Tse and a written reply by the Secretary for Development, Mr Michael Wong, in the Legislative Council today (June 5):

Question:

Some works departments have issued guidelines specifying that contractors must engage, according to a project's scale and needs, a certain number of land surveyors and land surveying technicians with relevant professional qualifications and experience. However, such requirements do not apply to engineering consultants who are responsible for supervising, on behalf of the Government, contractors' carrying out the works. Some members of the surveying sector have pointed out that an engineering consultant's failure to engage a sufficient number of surveying personnel will render a project more prone to flaws (e.g. errors in setting out exact positions), thus necessitating last-minute changes to the design and even resulting in problems such as settlement, delay of works and cost overruns. Moreover, currently quite a number of engineering consultants have not yet employed the most advanced surveying equipment, technology and software for conducting surveying work, and they often carry out inspections only occasionally during the construction process, making it difficult for the Government to identify construction issues early and demand rectifications by the contractors. In this connection, will the Government inform this Council:

(1) regarding the relevant advance engineering infrastructure works at the Kwu Tung North and Fanling North New Development Areas, of the details of the Government's requirements in respect of the engagement of land surveying personnel by engineering consultants (set out, by works contract, the number of such personnel, the qualification and experience required of them, as well as whether such personnel are required to be resident on site);

(2) whether it will formulate guidelines specifying the requirements concerning the engagement of land surveying personnel by engineering consultants, e.g. that engineering consultants must (i) engage, for every public works contract, at least one land surveyor who possesses qualifications of being a member of the Hong Kong Institute of Surveyors in the Land Surveying Division or equivalent, and (ii) engage, according to the project's scale, a corresponding number of land surveying technicians with relevant qualifications and experience; and

(3) whether it will require engineering consultants to (i) employ the most advanced equipment, technology and software for conducting surveying work, and (ii) monitor, continuously during each stage of construction until completion, if deviations from the design and settlements have occurred in the works carried out?

Reply:

President,

The Government has been implementing public works in a moderate and orderly manner to enhance people's quality of living, to promote Hong Kong's economic development and to sustain Hong Kong's long term competitiveness. We accord high priority to the site supervision and construction quality of public works. The Development Bureau and works departments will ensure proper supervision of public works by specifying in the relevant contracts appropriate supervision requirements for different types of works procedures, and providing necessary resident site staff (RSS) establishment. From time to time, we also introduce innovative technologies to reinforce project management and improve construction efficiency, including Building Information Modelling and new technologies for individual types of works. We are also promoting the digitisation of the works supervision system.

My consolidated reply to the Hon Tony Tse's question is as follows:

(1) The construction of infrastructure works for the first phase development of Kwu Tung North and Fanling North New Development Areas, including advance and first stage site formation and engineering infrastructure works, will be implemented under seven construction contracts. The consultant responsible for managing the project will need to employ RSS to supervise the works under the contracts, which include one senior land surveyor, three land surveyors, 10 senior survey officers (engineering) and 13 survey officers (engineering). The senior land surveyor/land surveyors will supervise the relevant land surveying work, while the senior survey officers (engineering)/survey officers (engineering) will assist the land surveyors for carrying out the related day-to-day duties. The qualification and experience requirements for the respective positions of land surveying RSS are tabulated below:

Position	Qualification and experience requirements
Senior Land Surveyor	Member of the Hong Kong Institute of Surveyors in Land Surveying Division or equivalent with at least five years relevant post qualification experience.
Land Surveyor	Member of the Hong Kong Institute of Surveyors in Land Surveying Division or equivalent with relevant experience.

Senior Survey Officer (Engineering)	Diploma or Higher Certificate from the Construction Industry Council in Hong Kong/ Hong Kong Institute of Construction/ Hong Kong Institute of Vocational Education/ technical institute/ technical college/ a Hong Kong polytechnic university/ polytechnic or equivalent in an appropriate discipline; and at least seven years' relevant post qualification experience; or at least seven years' relevant experience as Resident Survey Officer (Engineering) or equivalent in public works projects.
Survey Officer (Engineering)	Diploma or Higher Certificate from the Construction Industry Council in Hong Kong/ Hong Kong Institute of Construction/ Hong Kong Institute of Vocational Education/ technical institute/ technical college/ a Hong Kong polytechnic university/ polytechnic or equivalent in an appropriate discipline.

(2) The Development Bureau has clear guidelines requiring consultants to propose appropriate RSS establishment for each works contract with regard to its nature, scope, complexity, etc. before the commencement of the works. In addition to land surveying, the proposed RSS establishment will also include staff of other professional fields such as civil engineering, geotechnical engineering, electrical and mechanical engineering, architecture, landscape architecture and quantity surveying. The proposed RSS establishment will be subject to the approval of the relevant works department. Take the construction of infrastructure works for the first phase development of Kwu Tung North and Fanling North New Development Areas as an example. Its RSS establishment was proposed and approved with regard to the actual need of the project as a whole. In view of varying characteristics of different projects, we consider that the afore-mentioned mechanism will provide the project team with flexibility in formulating a RSS establishment to suit specific project needs.

(3) The Development Bureau encourages works departments to adopt suitable new technologies in public works projects. The survey divisions of works departments would keep abreast of the development of land surveying technologies in the market, and will conduct reviews and update the relevant technical requirements if considered necessary. In general, works departments will consult their respective survey division in determining the technical and monitoring requirements for land surveying work in order to ensure that appropriate equipment, techniques and software are used to meet specific project needs. The consultant is also required to formulate an appropriate monitoring regime for continuous checking of any deviation from design and occurrence of settlement, displacement, etc. at every stage of construction, and taking appropriate follow-up actions when specified limits are exceeded.