

**Legislative Council Panel on Development**

**Pilot Study on Underground Space Development  
in Selected Strategic Urban Areas  
Stage 2 Public Engagement**

**Regarding the written enquiries submitted by Hon Tanya CHAN  
for the meeting on 25 June 2019**

Our responses to Questions (7) to (12) of the written enquiries submitted by Hon Tanya CHAN on the Stage 2 Public Engagement of the Pilot Study on Underground Space Development in Selected Strategic Urban Area (hereafter “the Study”) (LegCo Paper No. CB(1)1181/18-19(07)) on 24 June 2019 to the Legislative Council Panel of Development are as follows:

**Question (7) : It is stated in the Study Programme in Enclosure 2 of the meeting paper that technical assessments have been undertaken. Would the Government release the relevant assessments? Please provide the reasons if not.**

**Response (7) :** We have considered the public and stakeholders’ views collected in the Stage 1 Public Engagement, and formulated suitable conceptual schemes for underground space development based on the results of relevant preliminary technical assessments. In the ongoing Stage 2 Public Engagement, we will consult the public and stakeholders on the proposed conceptual scheme for underground space development at Kowloon Park (hereafter ‘proposed conceptual scheme’) for priority implementation, with a view to further refining the conceptual scheme and the associated technical assessments.

A summary of the preliminary technical assessments carried out during the formulation of the proposed conceptual scheme is enclosed for reference (see **Enclosure 1**, English version only). The summary is also attached to an open document for consulting the Town Planning Board on 28 June in this year.

- Question (8) : There are several declared monuments in the vicinity of the proposed underground space. Did the Government conduct Heritage Impact Assessment or consult the Antiquities and Monuments Office to ensure that the concerned declared monuments will not be affected? and**
- Question (10) : Even the facilities within the Kowloon Park with high usage rate are excluded from the proposed development footprint of the refined scheme, would the Government promise that the concerned facilities will not be affected during the construction stage?**

**Reponses to (8) and (10) :** The Study has considered the declared monuments in the vicinity of the Kowloon Park, as well as the historic buildings and facilities with high usage rate within the Park. In formulation of the proposed conceptual scheme, we have consulted the relevant government departments including the Antiquities and Monuments Office with a view to avoiding affecting the historic buildings within the Park and relevant park facilities with high usage rate.

We suggest fencing off the works site with hoardings during the construction period in the future, with provision of proper mitigation and monitoring measures, with a view to protecting the structural safety of the concerned historic buildings and facilities with high usage rate within the Park.

If the feasibility of the proposed conceptual scheme is established for taking a step forward, we will carry out detailed technical studies in the next stage, including Heritage Impact Assessment and impact assessments of various aspects. We will also maintain close communication with relevant government departments and stakeholders in setting out the detailed construction guidelines, and mitigation and monitoring measures for the future construction stage, so as to minimise the impact to the concerned facilities and protect the structural safety of the historic buildings.

**Question (9) : In formulating the Kowloon Park conceptual scheme, did the Government estimate the development cost and construction time? and**

**Question (11) : It is noted that recreational uses such as community facilities have been included in the refined scheme, and 40% of the area are community facilities, pedestrian passages and public space. What is the proportion of the community facilities? Would the Government consider increasing the ratio of community facilities? In fact, there are sufficient retail/food and beverage facilities on the streets and shops above the underground space. Can the ratio of these facilities be reduced or allocated for other purposes?**

**Reponses to (9) and (11) :** According to the comments/views received during the Stage 1 Public Engagement, the public wish to utilise the created underground space for diverse and beneficial uses (including community facilities and retail/food and beverage facilities) through holistic planning, for the convenient use of the public. In the proposed conceptual scheme, the community facilities accounts for about 28% of the “Community Facilities, Pedestrian Passages and Public Space” area. Regarding the retail/food and beverage facilities, we have made reference to the popular implementation modes of overseas development of underground space and preliminarily proposed to introduce modest retail/food and beverage elements with a view to providing a comfortable and attractive underground space environment for the convenience of the people using underground space and the Park.

At this stage, the Study is consulting the public on the exploitable underground space underneath Kowloon Park, the uses and their proportions with an open-minded attitude, and therefore it is premature to estimate the development cost. Regarding the anticipated construction time, it is estimated that if the proposed underground space is to be developed in a single phase, the required construction time is about 3 to 4 years. If phased development is adopted, the park area

affected at a particular time will be smaller than the former case, but the construction time will be about 6 to 7 years. On completion of the Stage 2 Public Engagement, we will examine the public views received to refine the conceptual scheme. If the feasibility of the proposed conceptual scheme is established for taking a step forward, we will carry out detailed technical studies in the next stage.

**Question (12) : Even though the impact to trees has been minimised in the refined scheme, removal of 300 nos. of trees is still required. Please advise how would those trees be dealt with, including the method and location of transplantation. Would the Government promise that the trees will not be felled without thorough consideration?**

**Response (12) :** If the feasibility of the proposed conceptual scheme is established for taking a step forward, a detailed tree assessment will be carried out during the detailed design stage and before commencement of works, to determine the numbers, species and treatment of the trees affected by the development, including transplantation. Meanwhile, sustainable tree planting and landscape proposal will be formulated, by using native species as far as possible and providing adequate growing space and environment for trees.

We will follow the relevant tree preservation guidelines if transplantation is required and the number of compensated trees will not be less than the trees to be removed. We will also enhance the landscape design of Kowloon Park at the same time.

**Development Bureau  
Civil Engineering and Development Department  
Planning Department  
July 2019**

**Pilot Study on Underground Space Development  
in Selected Strategic Urban Areas  
Summary of Broad Technical Assessments**

To assess the potential impacts arising from the proposed development, various preliminary technical assessments, including traffic, environment, drainage, fire safety, geotechnics, sewerage and utility infrastructures, had been conducted. The preliminary findings of the relevant assessments are summarised as follows:

***Traffic Impact Assessment***

2. According to the preliminary Traffic and Transport Impact Assessment (PTTIA), vehicular traffic conditions were assessed by means of junction capacity assessment. The assessment results of vehicular traffic conditions for the design year of 2031 and 2036 show that the operating performance of all study junctions are within capacity for the scenarios with or without Kowloon Park Conceptual Scheme (the Scheme).

3. Pedestrian traffic conditions were assessed by means of pedestrian Level-of-Service (LOS)<sup>1</sup> in the assessment. The PTTIA also showed that at present, the pedestrian LOS of existing pedestrian traffic is acceptable at all assessed footpaths, with exception of northern footpath of Haiphong Road, Canton Road and Nathan Road. The pedestrian LOS assessment for the design year of 2031 and 2036 shows that, with the proposed east-west and north-south pedestrian network interconnecting between Nathan Road, Canton Road, Austin Road, Haiphong Road and the MTR Tsim Sha Tsui Station, pedestrian would be diverted to use the underground connections. As such, the LOS of Haiphong Road and Nathan Road would experience significant improvement, of which the LOS would be improved from LOS “D” to the desirable level, i.e. LOS “C”. Thus, the pedestrian LOS of all the footpaths surrounding Kowloon Park would be maintained not worse than LOS “C”. Since the other assessed footpaths are far away from Kowloon Park, including eastern

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<sup>1</sup> Pedestrian LOS is used to assess the performance of footpaths. The assessment of the LOS depends on the pedestrian flows and the width of the footpaths by making reference to the Transport Planning and Design Manual (TPDM), published by the Transport Department. LOS defines the walking environment in six levels by measuring the pedestrian flow rate in terms of the effective width of footpath. According to TPDM, a dead area of 0.5m along building frontages and 1m along shop frontages was deducted in order to obtain the effective width for LOS assessment. LOS “A” and “B” are considered very good and LOS “C” is desirable for most design with predominantly dynamic pedestrian activities, whereas LOS “D”, “E” and “F” are not desirable.

and western sections of Canton Road (adjacent/opposite to Harbour City), the pedestrian impact generated from the proposed development would be insignificant. The LOS of these sections would be maintained at Level “D”.

4. Construction traffic impact assessment has been conducted for the year before the completion year at all junctions affected by road works during construction stage. The assessment result concluded that the operation performance of all assessed junctions is within capacity.

### ***Environmental Review***

#### Ecology

5. According to the preliminary environmental review, Kowloon Park is considered as a generous habitat for avifauna in urbanised area. With wooded areas, pond areas, grassland, mature trees and developed areas, migratory birds and winter bird visitors are attracted to the park, of which the Bird Lake was identified as a breeding ground for wild birds. Considering the ecological importance, a number of mitigation measures will be adopted to minimise the potential environmental impact:

- areas with ecological values such as the Bird Lake, areas with OVTs and dense vegetation, are excluded from development boundary;
- trenchless excavation construction methods will be adopted in constructing underground passages where applicable;
- construction programme will be planned to avoid breeding seasons of the avifauna species for the site area within buffer distance from the identified ecological important trees;
- noise barriers, site hoarding / protective fencing will be provided to delineate of works limit and reduce the disturbance from excavation works; and
- tree preservation, compensatory tree planting and transplanting will be implemented as far as practicable

With proper mitigation measures, the ecological impacts arising from the Scheme during construction and operation stage are considered acceptable.

#### Tree and Landscape Impact

6. A preliminary broad brush tree group survey was conducted to estimate the quantities and assess the general conditions of the existing trees and tree groups within and around the Scheme. According to the survey, among the total of about

1,400 trees in Kowloon Park, about 44 trees are Old and Valuable Trees (OVTs) including *Albizia lebbbeck* (大葉合歡), *Ficus microcarpa* (榕樹) and *Cassia fistula* (臘腸樹), etc. In scheme formation, all OVTs and densely vegetated areas have been excluded from the development footprint. The development footprint mainly focuses on the hard pavement areas occupied by some existing facilities, including maze garden, pedestrian footpath and children's playground. According to the broad-brush tree survey, about 300 trees (no Old and Valuable Trees), would be affected. Based on aerial photos taken in 1963, 1973, 1982 and 1993, most of the trees were planted in late 1980s after construction of Kowloon Park. Among the affected trees, while approximately 80% are common exotic species, for example, *Acacia confusa* (台灣相思), *Archontophoenix alexandrae* (假檳榔), *Caryota maxima Blume* (魚尾葵) and *Lagerstroemia speciosa* (大花紫薇), approximately 20% are native species, for example, *Bauhinia x blakeana* (洋紫荊), *Cinnamomum camphora* (樟樹) and *Celtis sinensis* (朴樹). In terms of tree growth, there is about 10% of the affected trees with DBH larger than 500mm while the remaining trees are considered relatively small trees. The general condition and aesthetic value are also considered fair, given that some trees are over-plant in the area without proper growth space. For the general quality of the affected trees, over 90% of trees are fair in form and health condition while less than 5% of trees are good in form. A detailed tree impact assessment will be carried out in detailed design stage to explore the mitigation measures and arrangements for the affected trees in accordance with the prevailing guideline including DEVB TCW No. 7/2015 – Tree Preservation, the latest Guidelines on Tree Preservation during Development issued by Development Bureau and ETWB TCW No. 29/2004 - Registration of Old and Valuable Trees, and Guidelines issued by Environment, Transport and Works Bureau. Tree preservation and transplantation would be accorded priority and implemented as far as practicable. A holistic landscape design, including the adoption of native plant species, will be established to foster better growing environment for trees in the Park. As for the compensatory plantings, the compensatory trees will be no less than the number of trees to be fell down, and planting will be implemented in accordance with the prevailing guidelines so as to uplifting the landscape and design at Kowloon Park.

### Visual Impact

7. Besides, potential visual impacts arising from the development are anticipated during the construction and operation stages. With proper mitigation measures, including provision of green roof and buffer planting, reinstatement of landscape areas, aesthetical pleasing design of man-made structures etc., it is anticipated that the visual impact would remain slight to moderate during both stages.

### Air and Noise Impact

8. Preliminary assessments on air and noise showed no insurmountable air quality impact and noise impact arising from the proposed development is anticipated. As for the air quality aspect, mitigation measures, for example, dust suppression measures in accordance with the Air Pollution Control (Construction Dust) Regulation and provision of sufficient buffer distance stipulated in Hong Kong Planning Standards and Guidelines are recommended.

9. As for the noise aspect, noise mitigation measures, such as good site practices, movable noise barriers and noise enclosures are recommended to minimise the noise impact. Quantitative construction noise impact assessment would be conducted in detailed design stage.

### ***Cultural Heritage***

10. According to Antiquities and Monuments Offices (AMO), a total of twenty-two cultural heritage resources, including six Declared Monuments, six Grade 1, two Grade 2 and two Grade 3 historic buildings as well as a total of six resources without grading/not to be assessed, are identified within the 500m study area of the Scheme. All heritage resources identified have been excluded from the development boundary, with the only exception of the disused air raid tunnels. These tunnels are classified as other cultural heritage resources and proposed to integrate into the Scheme for public display in response to public comments received from PE1. There are indirect impacts on some heritage resources which are located close to the development boundary due to the construction, for example, ground-borne vibration and excessive dust. Regular monitoring will be carried out during construction stage and necessary assessment on the heritage impact on these heritage resources, for example, Heritage Impact Assessment, would be conducted in accordance with Development Bureau Technical Circular (Works) No. 6/2009 in detailed design stage.

### ***Fire Safety Design***

11. In view of various natures of proposed usages at the Scheme, different fire safety strategies such as fire engineering and code-compliant design approach would be adopted at different areas. The code-compliant approach would be adopted in full



accordance to relevant fire safety codes and code of practice issued by Buildings Department (BD) and Fire Services Department (FSD). When there is genuine difficulty to comply with the codes, fire engineering approach will be adopted, subject to confirmation with relevant government departments, including BD and FSD in detailed design stage. Meanwhile, Fire Safety Management Plan will also be established to assist occupants to reach the ultimate place of safety and maintain the condition of fire safety provisions. Detail fire safety design and relevant assessment(s) will be conducted in detailed design stage.

### ***Geotechnical Impact***

12. According to the preliminary assessment results, the bedrock level within the proposed development is relatively shallow and around 20 – 30m below ground level. The proposed development layout is planned in order to avoid large amount of rock excavation and disturbance to park users. Three historic buildings in the vicinity of the proposed development are founded on shallow foundation and the stability of these buildings shall be maintained by adopting suitable geotechnical design. In addition, considering part of the proposed development falls within the MTR protection zone and a few registered man-made slopes and retaining walls are identified within/in the vicinity of the proposed development, construction works and geotechnical design shall follow relevant guidelines including Works Bureau Technical Circular (WBTC) No. 19/2002 and Environment, Transport and Works Bureau (ETWB) Technical Circular (Works) No. 29/2002.

### ***Drainage, Sewerage, Water Supply and Utilities Impact***

13. According to the preliminary drainage, sewerage, water supply and utilities impact assessment, it is concluded that the proposed development will not cause adverse and insurmountable impacts on the existing drainage, sewerage, water supply and utilities systems.