

LCQ4: Preventing coastal and low-lying locations from being affected by storm surges and flooding

Following is a question by the Hon Kwok Wai-keung and a reply by the Secretary for Development, Mr Michael Wong, in the Legislative Council today (October 24):

Question:

Super typhoons Hato and Mangkhut hit Hong Kong respectively in August last year and September this year, with the concomitant storm surges and rainstorms causing severe flooding in a number of coastal and low-lying locations and inflicting serious damages. The affected locations included Heng Fa Chuen, Tseung Kwan O South and Lei Yue Mun. Some scientists have pointed out that global warming has resulted in the sea level rising continuously and extreme weather conditions being increasingly common. As a result, occasions of coastal and low-lying locations being affected by storm surges and flooding will become increasingly frequent. In this connection, will the Government inform this Council:

(1) of the respective locations which were affected by storm surges and flooding during the periods when Hato and Mangkhut hit Hong Kong, and set out by location the names of those affected public housing developments, private housing estates and villages;

(2) whether the Drainage Services Department will examine placing the locations mentioned in (1) onto its List of Flooding Blackspots, and carry out improvement works thereat; and

(3) whether it has plans to carry out flood prevention works such as constructing breakwaters, floodwater storage tanks and seawalls, placing dolosse, and undertaking dredging works, at the aforesaid locations which are susceptible to storm surges and flooding; if so, of the details of such plans; if not, the reasons for that?

Reply:

Acting Madam President,

The geographical position of Hong Kong makes it susceptible to weather-related threats such as tropical cyclone, rainstorm and storm surge. In particular, some low-lying coastal or windy locations are vulnerable to seawater inundation caused by extreme storm surges and/or huge waves.

After the passage of severe typhoon Hagupit in 2008, the Government has identified several locations vulnerable to serious seawater inundation and established an early alert system with a view to alleviating their impact on

the local residents. The Drainage Services Department (DSD) has formulated action plans for these locations, which mainly involve deployment of contingency response teams to handle flooding, provision of temporary pumping facilities and carrying out temporary flood-proofing measures. Besides, the Government has installed rock-armoured bund, concrete walls, gabion walls and water-stop boards in some low-lying areas. After the super typhoon Hato last year, the DSD has reviewed the action plans and enhanced them as necessary. In response to the extreme storm surge caused by the Super Typhoon Mangkhut, the DSD and the Home Affairs Department kept close liaison with the affected residents to understand how they were affected by the flooding, and to review and enhance the existing flood-relief measures as necessary.

As climate change goes drastic, threats induced by extreme weathers are expected to be more frequent and severe. The Government takes the topic of climate change seriously, and established in April 2016 the Steering Committee on Climate Change under the chairmanship of the Chief Secretary for Administration. Besides, the Civil Engineering and Development Department (CEDD) has established the Climate Change Working Group on Infrastructure to co-ordinate the work among various works departments on tackling climate change, actively conduct relevant studies, align design standards, and uplift the resilience of major public infrastructures.

Having consulted relevant departments, I provide a consolidated reply to the three parts of the Hon Kwok's question as follows:

(1) During the passage of typhoon Hato last year, some low-lying coastal or windy locations were exposed to the threat of seawater inundation caused by extreme storm surges and/or strong waves. Under typhoon Mangkhut, many places experienced their record-high water levels (e.g. 3.88 metres and 4.69m above the Chart Datum at Quarry Bay and Tai Po Kau respectively), which are even higher than the records set by typhoon Hato (3.57m and 4.09m above the Chart Datum at Quarry Bay and Tai Po Kau respectively). Besides, during the passage of a typhoon, waves approaching shores may even overtop seawalls (in particular vertical seawalls). The wind speed of Mangkhut was higher than that of Hato (Note), intensifying the severity of overtopping waves. As a result, the number of areas affected by storm surges during the passage of Mangkhut is more than that of typhoon Hato. Locations where flooding reports were received during the passages of the aforementioned two typhoons are listed in Annex.

(2) The DSD's list of flooding blackspots is maintained for monitoring locations vulnerable to flooding during heavy rainstorms. This list facilitates formulation of improvement measures and strengthening of routine inspections and maintenance of the drainage systems. Before the onset of rainy season, the DSD will complete the clearance of drainage system at the locations concerned to ensure the drains be free from blockage. During heavy rainstorms, the DSD will deploy contingency teams to carry out inspections of flooding blackspots and standby thereat to ensure swift clearance of any blockage, hence reducing flooding risk. After each rainstorm, the DSD will ensure the proper functioning of drainage system at flooding blackspots to prepare for the next rainstorm. Regarding the areas that are prone to

seawater influx, they are mostly low-lying coastal areas, where seawater infusion and inundation may occur when the sea level rises. In view of the difference in their causes of flooding, the location of storm surge spots at low-lying coastal areas should not be confused with that of flooding blackspots under heavy rainstorms.

As revealed from previous severe or super typhoons, the Government has identified some low-lying locations vulnerable to seawater inundation (including Luen On San Tsuen, Kar Wo Lei, Sham Tseng San Tsuen, Lei Yue Mun Praya Road, Nam Wai in Sai Kung, Tai O, and low-lying areas along the seaside of Deep Bay in western Yuen Long) and some locations prone to wave impacts (such as Heng Fa Chuen, South Horizons and Tseung Kwan O South). The Government is reviewing relevant data collected during the passage of Mangkhut, with a view to identifying further low-lying locations vulnerable to seawater inundation.

(3) Generally speaking, provisioning of flood walls and demountable flood barriers or installation of flap valves at the drainage outlet are able to prevent seawater from flowing into the low-lying coastal areas, and construction of such marine structures as breakwaters and dolosse can reduce the intensity of waves, thus lowering the risk of flooding. Apart from the above preventive and relief measures, the Government implements other non-structural measures, including establishment of flood alert system, formulation of emergency and evacuation plans, enhancement of publicity and public education to heighten public awareness of flood prevention and staying away from floods. Besides, the Government has set up storm-surge warning systems at various low-lying areas that are vulnerable to seawater inundation. Upon the issuance of warning on storm surge by the Hong Kong Observatory, the DSD will, at the relevant locations, deploy pumping facilities, install water-stop boards, or provide sandbags for the residents' and shop operators' use, in order to minimise the flooding risk arising from storm surge.

The CEDD will commission a consultancy study for a period of 18 to 24 months to conduct a comprehensive review of the low-lying coastal and windy locations, and to carry out relevant investigations on storm surge and wave, so as to assess the impacts of extreme weather. Based on the outcomes of the study, the Government will formulate appropriate protection measures, including options of improvement works and management measures, to strengthen the resilience to wave impacts at the coastal areas. The Government will carry out a multi-pronged assessment on the suggestions of flood prevention strategy to identify long term solutions to the flooding problem caused by huge waves.

Note: When the Hong Kong Observatory issued the No. 8 storm signal in the early morning of September 16, the maximum sustained winds near the centre of Mangkhut was 195 kilometres per hour, higher than the same of 1962's Wanda, 1971's Rose and last year's Hato (which were all 185 km/hr).

Suspected MERS case reported

The Centre for Health Protection (CHP) of the Department of Health today (October 24) reported a suspected case of Middle East Respiratory Syndrome (MERS), and again urged the public to pay special attention to safety during travel, taking due consideration of the health risks in the places of visit. The case is detailed below:

Sex	Female
Age	59
Affected area involved	Dubai, United Arab Emirates
High-risk exposure	Nil
Hospital	Prince of Wales Hospital
Condition	Stable
MERS-Coronavirus preliminary test result	Negative

"Travellers to the Middle East should avoid going to farms, barns or markets with camels; avoid contact with sick persons and animals, especially camels, birds or poultry; and avoid unnecessary visits to healthcare facilities. We strongly advise travel agents organising tours to the Middle East to abstain from arranging camel rides and activities involving direct contact with camels, which are known risk factors for acquiring MERS Coronavirus (MERS-CoV)," a spokesman for the CHP said.

Locally, the CHP's surveillance with public and private hospitals, with practising doctors and at boundary control points is firmly in place. Inbound travellers and members of the public who recently visited the Middle East and developed fever or lower respiratory symptoms within 14 days will be classified as suspected MERS cases. They will be taken to public hospitals for isolation and management until their specimens test negative for MERS-CoV.

Travellers to affected areas should maintain vigilance, adopt appropriate health precautions and take heed of personal, food and environmental hygiene. The public may visit the MERS pages of the [CHP](#) and its [Travel Health Service](#), MERS statistics in [affected areas](#), the CHP's [Facebook Page](#) and [YouTube Channel](#), and the World Health Organization's [latest news](#) for more information and health advice. Tour leaders and tour guides operating overseas tours are advised to refer to the CHP's [health advice on MERS](#).

[Appeal for information on missing woman in Wong Tai Sin \(with photo\)](#)

Police today (October 24) appealed to the public for information on a woman who went missing in Wong Tai Sin.

Lam Choi-wan, aged 65, went missing after she left her residence in Tung Tau Estate yesterday (October 23) morning. Her family made a report to Police on the same day.

She is about 1.52 metres tall, 50 kilograms in weight and of thin build. She has a pointed face with yellow complexion and short black curly hair. She was last seen wearing a blue and white long-sleeved shirt with stripe pattern, black sweater, blue jeans, light grey and pink shoes, and carrying a red plastic bag and a watch.

Anyone who knows the whereabouts of the missing woman or may have seen her is urged to contact the Regional Missing Person Unit of Kowloon East on 3661 0321 or 9886 0060, or email to rmpu-ke-2@police.gov.hk, or contact any police station.



[LCQ17: Public works projects on public hospitals](#)

Following is a question by Dr the Hon Kwok Ka-ki and a written reply by the Secretary for Food and Health, Professor Sophia Chan, in the Legislative Council today (October 24):

Question:

Regarding public works projects for the construction, expansion and redevelopment of public hospitals, will the Government inform this Council of:

(1) the following information on each of the projects completed in the past five years (set out in a table according to the date on which funding approval was granted by the Finance Committee ("FC") of this Council):

- (i) the name of the project,
- (ii) the date on which funding approval was granted,
- (iii) the amount of approved funding for the advance works,
- (iv) the consultancy fees for conducting advance works study,
- (v) the name(s) of the consultant(s) responsible for carrying out the advance works study,
- (vi) the commencement date of the works,
- (vii) the completion date of the works,
- (viii) the name(s) of the works consultant(s),
- (ix) the name(s) of the works contractor(s),
- (x) the initial cost estimate, and
- (xi) the actual cost;

(2) the following information on each of the projects intended to be submitted to FC in the coming year (set out in a table according to the date on which funding application is intended to be submitted):

- (i) the name of the project,
- (ii) the date on which funding application is intended to be submitted,
- (iii) the amount of funding to be sought for the advance works,
- (iv) the name(s) of the consultant(s) responsible for carrying out the advance works study,
- (v) the anticipated commencement date of the works,
- (vi) the anticipated completion date of the works, and
- (vii) the cost estimate; and

(3) the tendering procedures for such type of works projects; the specific criteria adopted for selecting consultants and contractors, and whether such criteria include the past performance of the relevant companies (e.g. whether the projects in which they participated experienced cost overruns or delay); whether it will consider drawing up a blacklist of consultants and contractors or setting up a demerit point system in this respect; if so, of the details; if not, the reasons for that?

Reply:

President,

My reply to the various parts of the question raised by Dr the Hon Kwok Ka-ki is as follows:

(1) Projects with construction works completed from the financial years of 2013-14 to 2017-18 are listed in the Annex.

(2) The hospital works projects, which are anticipated to be submitted to the Finance Committee (FC) of the Legislative Council (LegCo) for approval in the 2018-19 LegCo session include the redevelopment of Kwai Chung Hospital (phases 2 & 3), the preparatory works for the expansion of Lai King Building in Princess Margaret Hospital, the preparatory works for the expansion of North District Hospital and the demolition and foundation works for the redevelopment of Prince of Wales Hospital, phase 2 (stage 1). These projects are still under planning. Upon completion of the planning work, we will submit the funding applications for the works projects to the Panel on Health Services, Public Works Subcommittee and the FC of LegCo and provide the anticipated commencement and completion dates, as well as the cost estimates of the works projects to the LegCo members.

(3) The Hospital Authority (HA) and Architectural Services Department (ArchSD) select consultants and contractors for their works projects based on the Government's procurement mechanism for public works projects and in accordance with the principles of openness, fairness and impartiality, conforming to the Agreement on Government Procurement of the World Trade Organization and the procurement regulations promulgated by the Government.

For consultancy agreements, the HA and ArchSD publish tender notices on their websites and invite relevant consultants in the market to make expression of interest submissions. After a shortlisting process, suitable consultants will be invited to submit detailed proposals to bid for consultancy agreements. In the process of assessment, the HA and ArchSD will consider their technical approach, expertise, manpower input, past performance and bid prices for the contracts to ensure that the most cost-effective tender is selected.

For works contracts, the HA and ArchSD normally only invite contractors who are on the List of Approved Contractors for Public Works or the List of Approved Suppliers of Materials and Specialist Contractors for Public Works to submit tenders, and publish tender notices on their websites.

To select the best value-for-money tender, the HA and ArchSD adopt the Development Bureau (DEVB)'s "Formula Approach" or "Marking Scheme" in tender evaluation. The tender evaluation takes into account the tender prices, returned tender proposals and the past performance of the tenderers in the works contracts to calculate an overall score for each tender according to the established criteria.

Normally, the tender with the highest overall score will be recommended for acceptance. However, the tenderer is subject to financial checking to ensure that the tenderer is financially capable of fulfilling the contract requirements. Besides, tenders with unreasonably low prices will not be recommended.

After tender evaluation, the HA and ArchSD will submit a tender report to the relevant tender board for consideration of acceptance of tenders.

For details of the procedures for tender invitation and evaluation for works contracts and consultancy agreements, please refer to the following documents which have been uploaded to the websites of DEVB and the relevant government departments:

- (1) Development Bureau Technical Circular (Works) No. 4/2014 and 4/2014A "Tender Evaluation Methods for Works Contracts";
- (2) Engineering and Associated Consultants Selection Board Handbook; and
- (3) Architectural and Associated Consultants Selection Board Handbook.

The HA and ArchSD will monitor and evaluate the contractors' performance throughout the construction period. The performance reports cover various aspects, including works progress and whether there are works delays or claims from the contractors. Should the contractor perform unsatisfactorily, regulating actions (such as mandatory suspension from tendering, downgrading or even removal of the contractor from the relevant Approved Lists) may be considered. In addition, the ratings given to a contractor in his performance report will affect his performance rating, and directly affect his chance of securing tenders in future.

As for consultancy agreements, the HA will evaluate the performance of consultants at quarterly intervals, having regard to considerations including whether the agreements concerned have involved additional expenditures and whether the consultants have failed to meet target completion dates. Under the current system, a consultant's past performance is also a selection criteria.

Tender awarded for site in Tuen Mun

The Lands Department announced today (October 24) that the tender for a site, Lot No. 2883 in Demarcation District No. 130 at Fuk Hang Tsuen Lane, Lam Tei, Tuen Mun, New Territories, has been awarded to the highest tenderer, Jantix Realty (Hong Kong) Limited (parent company: Jantix Renewal Development Limited), on a 50-year land grant at a premium of \$83.19 million.

The tenderers, other than the successful tenderer, in alphabetical order, with the name of the parent company where provided by the tenderer in brackets, were:

- (1) Sky Castle Limited (Sino Land Company Limited); and
- (2) Success City (Hong Kong) Limited.

Lot No. 2883 in Demarcation District No. 130 has a site area of about 1 748 square metres and is designated for private residential purposes. The minimum gross floor area and the maximum gross floor area are 566.4 sq m and 943.9 sq m respectively.