

19 April 2024

To : All Authorized Persons
Registered Structural Engineers
Registered Geotechnical Engineers
Registered Inspectors
Registered General Building Contractors
Registered Specialist Contractors
Registered Minor Works Contractors

Dear Sir/Madam

**Prevention Measures at Construction Sites
during Rainy and Typhoon Seasons**

With the approach of rainy and typhoon seasons, I am writing to solicit your co-operation in paying special attention to the prevention measures at construction sites in respect of safety of scaffolding and tower crane as well as flood prevention as stated in the Appendix.

Yours faithfully,



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Chief Officer/Technical Services
for Director of Buildings

c.c. Real Estate Developers Association of Hong Kong
AD/O&M, DSD

**Prevention Measures at Construction Sites
During Rainy and Typhoon Seasons**

(A) Safety of Scaffolding and Tower Cranes

With the approach of typhoon season, authorized persons (AP)/ registered structural engineers (RSE)/ registered geotechnical engineers (RGE)/ registered inspectors (RI)/ registered general building contractors (RGBC)/ registered specialist contractors (RSC)/ registered minor works contractors (RMWC) are reminded to pay special attention to the safety of scaffolding and tower crane in construction sites.

Safety of Scaffolding

2. From past experience, most of the incidents involving the collapse of or related to scaffolding could have been avoided if the following site measures had been taken:

- (a) sufficient ties of adequate strength are provided to secure the cantilever portion at the topmost floor;
- (b) the height above the topmost floor should not be over-extended (maximum one floor);
- (c) adequate putlogs, ties, struts, bracing and steel brackets are provided to secure the scaffolding framework;
- (d) plastic sheeting should be removed and the scaffolding above the topmost floor should be lowered to not more than half of the floor height under safe circumstances when a tropical cyclone warning signal or a strong monsoon signal is announced; and
- (e) no loose materials should be placed on/near any scaffolding, or near the periphery of the site.

3. The site supervision staff should be impressed upon on the importance of the safety of scaffolding and ensure that the above site measures are taken in all scaffolding. When the building works have been completed, the related scaffolding should be dismantled as soon as possible. Also, any scaffolding which remains idle should be promptly removed.

Safety of Tower Crane

4. With regard to the safety of tower cranes in construction sites during typhoon, suitable safety precautionary measures should be drawn up with regard to the types of crane towers being used, surrounding site conditions and the tower crane manufacturers' recommendations. In general, the following safety precautionary measures against strong wind may be taken:

/4(a). ...

- (a) The main jib should be slewed to the side of the tower away from the wind, and then put into free slew. However, care must be taken to ensure that the jib would not collide with adjacent structures or overhead power cables;
- (b) The trolley of the crane with horizontal trolley jib should be placed near to the tower at minimum radius and the hook should be raised to its highest position;
- (c) The jib of luffing jib crane (including the articulated jib crane) should be brought to a position at 15° to the horizontal or other position according to the manufacturer's recommendation and the hook should be raised to its highest position;
- (d) If the manufacturer recommends to tie the jib and/or the hook to the specified anchorage points above the slewing ring, it should be made sure that the tie wires are of adequate strength and are tightened up properly; and
- (e) If situation warrants, the height of the crane tower above the topmost floor should be lowered as far as practicable.

5. With consideration of construction conditions, works progress and special constraints, tailor-made precautionary measures should be drawn up for different construction sites and the necessary arrangement should be made as early as possible (in particular when extra costs are involved for implementing those measures). Before the approaching of the typhoons, AP/RSE/RGE/RI/RGBC/RSC/RMWC should make sure that the precautionary measures in place are properly implemented and timely completed.

Updated Contact Information for Emergency Situations

6. If there are emergency incidents happened on site during the course of typhoon, staff of Buildings Department (BD) may need to contact the AP, RSE and/or RGE for timely handling those situations. Hence, these registered building professionals are requested to inform BD as soon as possible if there are any changes of their emergency contact telephone number or fax number, by using the letter attached to Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers ADM-3.

Follow up Action after Lowering of Typhoon Signals

7. After lowering of the typhoon signals, the registered contractors should inspect all areas of their construction sites as early as possible, and carry out necessary remedial works immediately if damages are found. Before the resumption of the construction works, it should make sure that the sites are in a safe condition.

/8. ...

8. You, as a responsible member of the Hong Kong construction industry are reminded your responsibilities under regulations 37(1) and (2) and 41(1) of the Building (Administration) Regulations. For safety issues regarding scaffolding and tower cranes, your attention is drawn to the Code of Practice (CoP) for Bamboo Scaffolding Safety¹, the Guidelines on the Design and Construction of Bamboo Scaffolds², the CoP for Site Supervision 2009 (2021 Edition)³, the CoP for Safe Use of Tower Cranes⁴ and the CoP in Times of Typhoons and Rainstorms⁵.

(B) Flood Prevention Measures

9. With the advent of the rainy season, AP/RSE/RGE/RI/RGBC/RSC/RMWC are reminded to take preventive measures proactively to ensure no adverse drainage impacts would be caused by the construction sites under their supervision on the public drainage systems.

10. In the past, Hong Kong has experienced a number of flooding incidents during severe rainstorms. A few extreme weather events, including the record-breaking rainstorms in September 2023, had led to a considerable amount of flooding cases over the territory, some of which were related to construction sites. Drainage Services Department (DSD) highlighted the following commonly observed impacts on stormwater drainage systems caused by construction activities:

- (a) Some construction works may have interfaces with stormwater drainage systems including enlargement of, diversion of, or connection to existing stormwater drains. These interfaces will inevitably involve temporary works within the drainage systems. If temporary works are not designed properly to accommodate the flow or not constructed in accordance with the agreed plans, such inadequacy will directly reduce the capacity of the drainage systems and the chance of flooding will then be increased;
- (b) Roadside gullies, channels, catchpits and other underground drainage inlets are blocked by unprotected stockpiled excavated materials, misplaced construction and building debris being washed from construction sites, as well as the silt and mud being washed down from the temporary cut/fill slope with inadequate surface protection during heavy rainstorms, resulting in flooding on the roads and causing severe traffic disruption;
- (c) Some silt traps provided inside construction sites are not properly designed/provided, or more importantly, not regularly maintained resulting in large amounts of silt and mud, and in some cases cement slurry, entering the stormwater drainage systems and causing serious blockage and damage to the systems. These blockage and damage will substantially increase the risk of flooding in the area;

/10(d). ...

¹ www.labour.gov.hk/eng/public/os/B/Bamboo.pdf

² www.bd.gov.hk/doc/en/resources/codes-and-references/code-and-design-manuals/GDCBS.pdf

³ www.bd.gov.hk/doc/en/resources/codes-and-references/code-and-design-manuals/SS2009_e.pdf

⁴ www.labour.gov.hk/eng/public/os/B/crane.pdf

⁵ www.labour.gov.hk/eng/public/wcp/Rainstorm.pdf

- (d) Temporary site drains may not have been properly designed or connected to intercept and discharge all runoff from construction sites and, as a result, surface runoff overflows from construction sites and causes flooding to areas near the sites. If surface runoff carried with excessive amounts of silt and mud enters and blocks the stormwater drain inlets, flooding will be further aggravated;
- (e) Temporary traffic arrangements of some construction sites obstructed the normal functioning of the nearby road drainage systems; and
- (f) Discharge of surface water from construction sites through illicit connection into foul sewers. The discharge would contribute to exceptionally high flood flows and deposit of grit and silt at sewage treatment works, causing treatment and pollution problems.

11. In this regard, AP/RSE/RGE/RI/RGBC/RSC/RMWC are obliged to prevent the occurrence of the above-mentioned improper activities at their construction sites. They should ensure proper design, maintenance and functioning of temporary drainage for construction sites under their supervision and take all necessary precautionary measure to prevent discharge of construction debris, silt and sediments or cementitious materials into the public drains or sewers to minimise/mitigate the risk of flooding during rainy and typhoon seasons as a result of their construction activities. Attention is drawn to the provisions of the Water Pollution Control Ordinance.

12. For any improper/illegal discharges arising from construction activities, the incidents should be reported to the DSD or Environmental Protection Department for follow up.

13. In case any private development projects will touch upon the public drainage system, AP/RSE/RGE/RI/RGBC/RSC/RMWC are advised to liaise with DSD's respective district Chief Engineer (i.e. Chief Engineer/Mainland North at 2300 1145, Chief Engineer/Mainland South at 2300 1303 or Chief Engineer/Hong Kong & Islands at 3101 2350) prior to commencement of the works to ensure that drainage impacts are minimised.