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No. 1 Legislative Council Road
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(Attn.: Mr. Anthony CHU)

1 June 2018

Dear Mr. CHU,

Public Accounts Committee

Consideration of Chapter 4 of the Director of Audit's Report No. 70

Government's Efforts in Managing Excavation Works on Public Roads

Thank you for your letter of 21 May 2018 regarding questions raised by the Public Accounts Committee on Chapter 4 of the Director of Audit's Report No. 70. I enclose herewith a consolidated reply of this Bureau, Highways Department and Lands Department.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Vitis NG'. Below the signature, the name '(Vitis NG)' is printed in a smaller font.

for Secretary for Development

Public Accounts Committee
Consideration of Chapter 4 of the Director of Audit's Report No. 70
Government's efforts in managing excavation works on public roads

For the Development Bureau

Part 2: Management and monitoring of road excavation works

- 1) While according to paragraph 2.5, the Environment, Transport and Works Bureau Technical Circular (Works) No. 17/2004 ("the Technical Circular") specified that project officers should arrange to carry out all necessary site investigations and satisfy themselves that sufficient ground information had been made available prior to commencement and during the detailed design, paragraph 2.4 indicated that of the excavation permits ("XPs") issued in 2016, 1 061 were granted extensions of permit periods. Among such XPs, 49% were related to government projects, and of the three cases with the longest extension, the Water Supplies Department and the Housing Department were involved in these projects with extension ranging from 446 days to 502 days. Please advise:
- (a) reasons why the departments concerned had not confirmed the underground situation prior to applying for XPs according to the Technical Circular, and whether mismanagement and manpower shortage were some of the reasons;
 - (b) whether the Administration has formulated any penalty or demerit point system to prevent unreasonable extension of permit periods; if so, of the details; if not, of the reasons for that; and
 - (c) measures to be put in place by the Administration to ensure its works departments will confirm the underground situation prior to applying for XPs?

Ans1(a) The purpose of carrying out site investigation is to collect information and data about the underground utilities and ground condition within a project area to facilitate detailed design and preparation of technical specification of tender documents. Site investigation is usually carried out in small parts of the project area and is not a full survey of the area taking into consideration the

practical need and circumstances, for instance, to refrain from closing certain stretch of busy road sections for a long period, or from conducting site investigation work in a larger area so as to minimise inconvenience to the public.

Government works departments have been observing the guidelines stipulated in the Environment, Transport and Works Bureau Technical Circular (Works) No. 17/2004 on carrying out all necessary site investigations before and during the detailed design stage. As a matter of fact, during the period of time between the site investigation and actual construction, different utility undertakings (UUs) may continue to undertake laying and maintenance works of underground utilities, resulting in the actual underground utilities differing from the records of the site investigation. As such, it is not uncommon for contractors to encounter unforeseen ground condition or underground utilities after commencing the construction work.

In general, the reasons for applying for extension to XPs are due to circumstances unforeseen during the design stage of a project such as uncharted underground utilities, unanticipated obstructions, unforeseen rectification works, change in construction methods, delay in material delivery, new site constraints identified, works suspension caused by accidents and/or adverse weather conditions, extra coordination with another excavation plan nearby, and traffic impact assessment, etc, but not related to maladministration or shortage of manpower.

Ans1(b) Pursuant to the Land (Miscellaneous Provisions) Regulations (Cap. 28A) (LMPR), a permittee is required to pay the relevant fees when applying to Highways Department (HyD) for extension to an XP due to works delay, and if the reason for the delay is insufficient, the permittee is also required to pay an additional fee being the economic cost for the disruption to traffic.

Ans1(c) Development Bureau agrees with the recommendation made by the Director of Audit, and will remind Government works departments observing the requirements as stipulated in the Environment, Transport and Works Bureau Technical Circular (Works) No. 17/2004 and request the departments to enhance site investigation on a risk-based approach with a view to improving the degree of accuracy prior to the application for XPs.

Part 3: Control of underground utility installation and space occupation

2) According to the consultancy report referred to in paragraph 3.3, there was currently no standard mechanism to manage space occupation by utility undertakings ("UUs") underneath public roads. Does the Administration agree that ineffective underground space management may cause improper use of underground space, damage to existing utilities, and delays in emergency repairs and excavation works? How will the Administration solve the related problems?

Ans2) Under the current mechanism, different Government departments will in accordance with the relevant legislations issue licences and permits to UUs for excavation works to lay and operate their underground utilities. The density of underground utilities in Hong Kong, particularly in developed areas, is extremely high. Maintaining accurate records and ensuring their timely update are difficult in practice, especially for those underground utilities laid many years ago with incomplete records. Besides, with the current technology, utility information is mainly recorded and kept on record plans. It is difficult to use these plans for managing occupation of underground space by UUs. Development Bureau agrees with the recommendation made by the Director of Audit on the need to develop an effective management and control system for underground space occupation. Development Bureau is coordinating with HyD, Lands Department (LandsD), and other bureaux with policy responsibility in UUs to explore the development of an effective management and control system, including the feasibility of using innovative technologies such as the Consolidated Utility Installation Modelling System (CUIMS) as mentioned in Ans21), or making use of Building Information Modelling (BIM) and 3D Geographic Information System (3D GIS), etc.

3) As per paragraph 3.13, the Administration did not maintain as-built records on utility installations beneath public roads/unleased government land. What are the reasons for that and how the Administration will improve the situation?

Ans3) The density of underground utilities is extremely high in the

developed areas of Hong Kong. There are on average about 50 kilometres (km) of underground utilities per km of public road involving eighteen UUs, who maintain their records with their own systems. As laying and maintenance works on the underground utility continue, the associated records may differ from the actual condition. Maintaining accurate as-built records of underground utilities is therefore very difficult in practice.

As a matter of fact, HyD has specified in the XP conditions the depth level standards of underground utilities and the related installations. The various public utilities coordination forums set up by HyD can effectively coordinate UUs' space requirements and different construction standards. The XP conditions issued by HyD have also required all UUs to keep as-built records in respect of the level and alignment of the newly laid underground services and associated installations. The form of records has been standardised amongst UUs.

As mentioned in Ans2), Development Bureau is coordinating with HyD, LandsD, and other bureaux with policy responsibility in UUs to explore the development of an effective management and control system.

4) Regarding Audit's recommendations as set out in paragraph 3.17(e) to (f), please advise details of such measures and their implementation time frame?

Ans4) Development Bureau agrees with the recommendation made by the Director of Audit on the need to develop an effective management and control system for underground space occupation. Development Bureau is coordinating with HyD, LandsD, and other bureaux with policy responsibility in UUs to explore the development of an effective management and control system, and aims to formulate a preliminary proposal and programme in several months' time.

Part 4: Exploring the use of common utility enclosures

5) Regarding paragraph 4.12, does the Development Bureau agree that it has taken an excessively long time to explore the possible use of common utility enclosures ("CUEs")? How will the Administration expedite the study?

Ans5) At present, the density of underground utilities is extremely high in Hong Kong. If common utilities enclosures (CUE) are to be constructed, re-provisioning a huge amount of the existing underground utilities would be unavoidable and would cause widespread nuisance and inconvenience to the public for a long period of time as a result.

The Government adopts a positive attitude on the construction of reasonably cost-effective CUE in new development areas. HyD will commence a consultancy study by mid-2018 to review the feasibility of constructing CUEs in new development areas, and resolve possible issues in constructing CUEs such as construction, operation and management, maintenance, safety and legal responsibilities with a view to proposing a practicable implementation framework. The consultancy study is expected to be completed by 2019. Development Bureau will consider the relevant proposals as soon as possible and discuss with stakeholders.

For the Highways Department

Part 2: Management and monitoring of road excavation works

- 6) As per paragraph 2.9, for excavation works at the same location which had not been grouped together, the Highways Department ("HyD") did not require justifications from applicants which had included a time break of three months or more in their revised works schedules for not adopting a common trench approach. In these cases, the concerned excavation works were only deferred and there was no reduction in the number of road openings. Please advise:
- (a) reasons why HyD had not required justifications from applicants for not adopting a common trench approach;
 - (b) measures to be put in place by HyD to ensure that coordination arrangement would be made by XP applicants to reduce the need for repeated road openings in close proximity; and
 - (c) regarding Audit's recommendations as set out in paragraph 2.12(b), whether HyD will reject the granting of XPs to applicants failing to offer justifications for not adopting a common trench approach?

Ans6(a) Currently, HyD considers the length, depth, alignment, programme and exact location of the proposed excavations to determine whether adopting a common trench approach is feasible by assessing the nature of works concerned as well as the coordination report submitted by applicant. In appropriate circumstances, HyD will proactively encourage the applicant to adopt a common trench approach by providing all necessary assistance to tackle the problems. Since the applicant has to resolve problems such as liabilities, technical difficulties and insurance, etc. before adopting a common trench approach, there are not many cases that can implement common trench approach. To further encourage the applicant to adopt a common trench approach, we will amend the part for case coordination in the Excavation Permit Processing Manual (XPPM) to require the applicants to provide justifications for not adopting a common trench approach.

Ans6(b) HyD explicitly specifies in the XPPM that it is the applicant's responsibility to provide accurate coordination report. Currently, the Excavation Permit Management System (XPMS) automatically sends emails to other applicants of un-coordinated plans when an applicant submitted a case coordination report. If other applicants do not agree with the coordination report or HyD has doubts on the information provided in the coordination report, HyD will discuss with the relevant applicants under the coordination case to arrive at a reasonable coordinated programme.

Ans6(c) HyD will amend the part for case coordination in the XPPM to require the applicants to provide justifications for not adopting a common trench approach. Undoubtedly, applicants need to resolve many problems such as the liabilities, technical difficulties and insurance, etc. when adopting a common trench approach. These problems can only be resolved by mutual agreements/coordination among the UUs. If an applicant cannot provide justifications for not adopting a common trench approach, HyD will consider not granting XP to him. HyD may seek legal advice from Department of Justice (DoJ) when amending the XPPM, if necessary.

7) As per paragraph 2.10 which indicated that 4 093 cases had remained uncoordinated for over two years, please advise the reasons why the responsible departments failed to coordinate plans for such a prolonged period (e.g. whether mismanagement and manpower shortage were some of the reasons), and the number of outstanding cases that had become obsolete or had been abandoned due to unresolved difficulties?

Ans7) Applicants are required to provide necessary data in XPMS such as the extent of excavation, the proposed commencement and completion dates. HyD will identify other applications in the vicinity and group them into an un-coordinated case. Besides, we will assign one of the applicants as the leading applicant, who is responsible for the coordination among other applicants. HyD will then vet the coordination report submitted by the applicant. Out of 4 093 un-coordinated cases pending processing for over two years, we found that the proposed commencement dates of 3 935 of the cases have lapsed. It indicates that most of these applications have either abandoned or temporarily suspended but the applicants are yet to timely cancel or renew (and also inform HyD) their applications.

According to the current operating procedures, applicants must take the initiative to cancel the XP application in the XPMS and coordination task if they intend to give up or the plan has become obsolete before the plan is removed from the system. Otherwise, the plan will still be classified as un-coordinated and remain in the XPMS. The applicant may also choose to update the start date or completion date that already expired and then carry out coordination again. Therefore, although there are 4 093 un-coordinated cases in the system, this does not relate to maladministration or insufficient manpower.

In spite of this, HyD has from time to time removed some abandoned or obsolete plans when necessary to enhance the efficiency of coordination. However, the above procedures have not been automated in the system.

To further improve the situation, HyD will follow the Audit's recommendation to regularly carry out periodic review and clearance of long-outstanding obsolete/abandoned plans in XPMS to reflect those plans that require coordination more effectively.

- 8) Regarding the demerit point system mentioned in paragraph 2.19, please provide details of the system with concrete examples to illustrate the operation of the system, including:
- (a) the respective numbers of demerit points that will be assigned against the four frequently observed non-compliant ("NC") items mentioned in paragraph 2.22 and the substandard reinstatement works mentioned in paragraph 2.24;
 - (b) number of cases with 4 or more demerit points in the past three years;
 - (c) the effective period of the demerit points;
 - (d) circumstances under which the overall demerit points may be reduced; and
 - (e) given that when the overall demerit point level of a contractor reaches a certain level, the relevant contractor will not be

approved as a nominated permittee in any new application for at least three months, will HyD impose penalties other than the above sanction on such contractors, and review whether the above practices have sufficient deterrent effect?

Ans8) In August 2012, HyD implemented a Demerit Point System (DPS) with sanctioning measures to reflect the performance of the permittee/work office/contractor party-combination in complying with the XP conditions.

The DPS covers different aspects of non-compliance (NC) in which demerit points will be assigned to the permittee/work office/contractor party-combination accordingly if any NC is identified. These aspects include demerit point for:

- NC items identified during audit inspection (DPL1);
- Delayed rectification of rejected permanent reinstatement (DPL2A & DPL2AA);
- Failure to submit site photos (DPL2B); and
- Overdue submission of test certificates/reports (DPL2C).

Since 30 September 2017, the following new demerit point categories were implemented:

- Delayed rectification of shallow depth services (DPL2D);
- Delayed rectification of damaged/deteriorated manhole and drawpit covers (DPL2E); and
- Abuse of emergency XP (DPL2F).

Please refer to **Annex 1** for the details of the Demerit Point System.

Sanctioning measure will be imposed on a party-combination if its overall Demerit Point Level (DPL) is at 4 or above. When a party combination is being sanctioned, the relevant contractor will not be approved as a nominated permittee in any new application for at least three months and until its overall DPL drops below 4.

From 1 January 2019 onwards, HyD will further strengthen the sanctioning measures that the relevant party-combination will be immediately sanctioned for at least three months for any outstanding rectification of rejected permanent reinstatement with prolonged period over two years, until the rectification work is completed to the satisfaction of HyD.

Ans8(a) The four frequently observed NC items as mentioned in para. 2.22 of the Audit Report will be counted as DPL1 with the respective risk weightings as follows:

Four frequently observed NC items	Category	Risk Weighting
No continuous barriers to fence off obstruction/excavation from pedestrian flow	Major	2
Minimum clear footway width not provided and maintained for pedestrians	Major	2
Permit not displayed	Minor	1
Signs not provided in accordance with the approved temporary traffic arrangement	Major	2

For the delayed rectification of rejected permanent reinstatement as mentioned in para. 2.24 of the Audit Report, demerit points will be counted as DPL2A if the rectification is not completed within two months, or counted as DPL2AA if the outstanding period is more than nine months.

Ans8(b) The number of cases with DPL of 4 or above over the past three years:

Year	Number of party-combination with DPL of 4 or above
2015	4
2016	4
2017	16*

Remark*: The enhanced DPS and strengthened sanctioning measure were implemented on 30 September 2017.

Ans8(c) DPL is generated weekly on Saturday.

Ans8(d) Different types of DPLs have different conditions for reduction. The details are as follows:

DPL1 – For NC items which are classified as “rectifiable”, the demerit points attracted may be reduced by half (risk weighting = 0.5) if the permittee or the nominated permittee rectifies the NC item to HyD’s satisfaction within 48 hours. Otherwise, the demerit point gained will be accumulated for three months.

DPL2A – The demerit point gained will be accumulated for seven months without reduction mechanism.

DPL2AA – The demerit point will be recorded until the relevant rectification is completed to the satisfaction of HyD.

DPL2B, DPL2C and DPL2F – The demerit point gained will be accumulated for three months without reduction mechanism.

DPL2D and DPL2E – The demerit point will be recorded until the relevant rectification is completed to the satisfaction of HyD.

Ans8(e) HyD uses the DPS as an administrative measure to control the performance of the XP permittee and/or nominated permittees in road opening works. The DPS can tackle the construction arrangement by violating parties directly and effectively, therefore, it has considerable deterrent effect. Since its implementation in August 2012, HyD has constantly reviewed the effectiveness of the DPS in response to actual situation in which the DPS and the sanctioning measure have continuously been enhanced (the last enhancement of DPS and sanctioning measures was implemented on 30 September 2017; the upcoming enhancement of sanctioning measure will be implemented on 1 January 2019). In addition, serious cases and repeated non-compliance with XP conditions cases will be referred to the Enforcement Team (ET) of HyD for independent investigation. The ET will make recommendations to the DoJ for instituting prosecutions if there is sufficient evidence.

9) As per paragraph 2.21 and Table 4, the overall coverage of the Audit Inspection Team ("AIT") inspections on active permit sites up to December 2017 was only 43%, while the inspection coverage rates of normal excavation permits and capital works excavation permits sites were only 89% and 95% respectively. Please advise:

(a) detailed procedures for conducting inspections;

- (b) reasons why the inspection coverage rate was on the low side, and whether human errors or mismanagement were some of the reasons for it, or whether the situation was attributable to manpower shortage or arrangement problem; and
- (c) reasons why HyD had not reviewed the problem of low inspection rate in the past and measures taken by HyD to enhance its inspection rate?

Ans9(a) &(b) The reason for the overall inspection coverage rate of 43% is that when computing the above inspection coverage, the inspections of emergency excavation permits (EXPs) and small scale works excavation permits (SSWXP) were also included. The sites of these two types of permits were in large number (the total number of active sites under these permits in 2016 was 37 926) and with short durations (less than two days for SSWXP sites and usually completed within seven days for EXP sites), many of these site works of EXPs and SSWXPs had already been completed before inspection could be arranged by the Audit Inspection Team (AIT) using the established sampling mechanism. In fact, in view of the small scale and short duration nature of the road works for EXPs and SSWXPs, the impact to road users was relatively small. As such, the above did not involve any human errors, maladministration nor insufficient manpower or arrangement.

For sites under other types of XP, HyD would inspect the permit sites as far as possible and the overall inspection coverage had reached 89% with the existing AIT establishment. Among the permit sites which were not covered by inspection, about 30% of which the permittees did not carry out any excavation works, and others were generally permits with short construction period. Nonetheless, the AIT is reviewing the inspection mechanism in an effort to improve the overall inspection coverage.

Daily operation of the AIT:

- The AIT site audit staff compile a daily inspection list of active permit sites from the XPMS with the following order of priority:
 - permit sites with poor performance records;
 - permit sites not inspected in the past 10 active permit days;
 - new permit sites;

- existing permit sites without Advance Notice (AN) submission;
 - permit sites with consistently good performance records.
- The AIT carries out audit inspection according to the daily inspection list compiled, and records any NC item observed on site. The permittee will also be notified of any NC item observed so that rectification can be arranged as early as possible.
- The inspection results will be available for viewing by the permittee or his nominated permittee through the Audit Inspection Management System (AIMS) after 1pm of the following working day.

Ans9(c) If the permittee does not make AN submission before commencement of works, such permit sites may not be fully covered on random checks. Nevertheless, HyD inspects those permit sites as far as possible taking into consideration the number of active excavation works and the available resources. We are also arranging to review the random checking mechanism for permit sites without AN submission in order to enhance timely inspections of these sites in an effort to improve the overall inspection coverage.

10) Regarding issues relating to the checking of completion of works as referred to in paragraphs 2.23 and 2.24, please advise:

- (a) reasons why there has been an increase in substandard reinstatement works in recent years, given that the number of Completion Notices ("CNs") rejected by HyD increased from 5 294 in 2011 to 6 191 in 2017;
- (b) reasons why the rectification works for the 2 581 cases mentioned in paragraph 2.24(b) had remained outstanding for over two years, and among such cases, the number of cases in which it was confirmed that the relevant contractors would not be approved as nominated permittees; and among the 6 779 rejected CNs, the number of cases in which the defect liability period might not be enforceable given the lapse of long time after CN submission;

- (c) whether HyD will, if defective rectification is found, continue to enclose the works site until the works are confirmed in order? Given that it is the responsibility of the contractor to undertake rectification works, whether the Administration will consider amending the relevant requirements so that contractors must continue to provide the defect liability after the completion of the necessary rectification works;
- (d) the time required for the CN acceptance work mentioned in paragraph 2.24(c). Although HyD had undertaken some exercises in the latter half of 2017 which affected the processing of CNs as at the end of 2017, CN inspections and acceptance in respect of 64% of cases were overdue. This reflected the seriousness of the problem. Whether dereliction of duty was involved in such cases, and of the reasons why one of such cases was overdue by five months;
- (e) regarding paragraph 2.24(d), as of December 2017, 483 site photographs and 771 test reports had been pending for submission to HyD for over three years, of the reasons why HyD had allowed the delay and what were the recovery procedures and the progress of the relevant recovery work; and
- (f) regarding paragraph 2.24(e), as of December 2017, 4 842 photographs and 2 523 test reports had been pending for review for over three years, of the reasons for that?

Ans10(a) The number of rejected Completion Notices (CNs) in 2011 was around 9% [5 294 cases] of the total number of CNs with first submission in the same period, such percentage slightly increased to around 10% [6 191 cases] in 2017. Thus, the situation of rejected CNs in 2017 was similar to that in 2011. HyD has already enhanced the DPS in September 2017 to strengthen sanctioning of the permittees with unsatisfactory performance and would continue to urge UUs to comply with the requirement of reinstatement works in the monthly Road Opening Co-ordinating Committee (ROCC) meetings.

Ans10(b) The 2 581 cases mentioned in para. 2.24(b) of the Audit Report were those CNs submitted and rejected in 2010 till 2015. There were 330 744 CNs complying with the relevant requirements of

reinstatement works and accepted by HyD in the same period. Thus, the above 2 581 cases were around 0.8% of the total number of CNs accepted in the same period, and they did not involve road safety issue.

Notwithstanding the above, HyD has always attached great importance to the abovementioned rejected CNs, and has been urging UUs to clear these cases soonest possible. For instance, out of the 2 581 cases mentioned above, 1 035 cases were related to normal XPs and the number of rejected CNs has dropped to 244 cases as in early April 2018.

In order to avoid long outstanding unsatisfactory permanent reinstatement and tighten control on road opening works, HyD has already enhanced DPS in September 2017 which included raising the demerit point levels for unsatisfactory reinstatement and strengthened the sanction on permittees with unsatisfactory performance. Under the enhanced DPS, from 1 January 2019 onwards, sanction will be immediately imposed on relevant permittee/work office/contractor party-combination for at least three months for any outstanding rectification of rejected permanent reinstatement with prolonged period over two years. The concerned contractor of the responsible party-combination will be removed from the relevant pre-approved nominated permittee list during the sanction period. HyD will keep monitoring the effectiveness of the above enhancement measures and would further review the relevant DPS and strengthen the sanctioning measure if found necessary.

In addition, the Defect Liability Period (DLP) will last for twelve months starting from the CN submission for which the permanent reinstatement works have to comply with the relevant HyD standards. Thus, the DLP could still be implemented even the CN for the 6 799 cases concerned had been submitted for some time.

Ans10(c) In general, public roads affected by road opening works should be re-opened to the public as soon as the works are completed to minimize the impact on traffic. On the other hand, the XP permittees have the obligation to comply with the established reinstatement standards and XP conditions to ensure that the reinstatement fulfills the relevant safety and quality standards and

XP conditions. After receiving a CN from a permittee, HyD will arrange site inspection the soonest possible within seven working days. In case of unsatisfactory reinstatement, HyD will reject the CN and request the relevant permittee to carry out rectification. If there is safety concern affecting road users, HyD will immediately arrange with the permittee or if found necessary directly instruct HyD's own contractor in consultation with Transport Department and the Police to temporarily close the relevant section of the road until it is rectified satisfactorily. Furthermore, the DLP will last for twelve months starting from the CN submission for which the permanent reinstatement works have to comply with the relevant HyD standards.

Ans10(d) After receiving a CN from a permittee, HyD will arrange site inspection the soonest possible within seven working days. In addition, HyD has established an internal target time period of vetting CN.

The Audit Report quoted that 64% cases of CN processing (1 297 cases) were overdue. However, such figure was based on the number of CNs pending processing (2 019 cases) as at 31 December 2017. The figure did not include the number of CNs already processed. The submission of CNs surged in the second half of 2017 resulting from the enhancement exercise of the XPMS carried out by HyD on 21 August 2017, which in turn dragged on the processing CNs in late 2017, and the above was considered to be a short-term transition period of enhancement exercise. According to the findings in para. 2.24(c) of the Audit Report, HyD could process 80% of these CNs in a timely manner if it was based on the total number of 67 988 CNs submitted in 2017. In addition, as at 30 April 2018, 19 561 CNs were submitted in 2018 of which HyD could process 86% in a timely manner. As observed from the above figures, the performance of HyD in processing CNs timely had improved. HyD would keep close monitoring of the situation of CN processing to ensure its timely completion.

Besides, as there were surges of submission of CNs in the second half of 2017 as mentioned above, the single CN processing case overdue for five months as stated in the Audit Report was just one among all the CN submissions. We therefore consider that this was an isolated case, and it has since been approved.

Ans10(e) HyD has reminded UUs to timely submit site photos and test reports in the monthly ROCC meetings. Demerit points have also been imposed on those UUs with overdue submissions according to the DPS.

HyD keeps reminding permittees about their obligations to timely submit site photos and test reports, and would strictly implement the DPS to tackle the situation of overdue submissions.

Ans10(f) HyD will redeploy internal resources with a view to complete the outstanding works as far as possible. Besides, we have already reminded the responsible officers to expedite the processing of the submitted site photos and test reports. We will continue to closely monitor the early completion of these works to ensure that they will be timely completed and checked. HyD has already completed the processing and checking of the 4 842 site photos and 2 523 test reports.

11) As per paragraph 2.27(c), AIT encourages permittees to rectify NC items at an early opportunity by issuing an advisory letter if any contravention is found. Will HyD consider empowering AIT to take enforcement actions immediately after a contravention is found?

Ans11) The AIT of HyD is an establishment independent of the Regional Offices and the ET, providing independent and impartial audit inspection service. As recommended by the Efficiency Unit in their review in 2009, HyD has adopted a compliance-led approach where permittees are encouraged to comply with XP conditions and to rectify an NC item observed during AIT inspection as soon as possible so as to minimize disturbance to the public. Prudent consideration on efficiency and effectiveness should be taken for adopting an enforcement-focused approach by authorizing the AIT to take enforcement actions, as the enforcement procedures may require more time and human resources for meeting the stringent standard on collecting and proofing evidence. Notwithstanding the above, we will review the effectiveness of the existing mechanism and the compliance-led principle from time to time. If necessary, we will strengthen the sanctioning measures to enhance the awareness of the industry in complying with the relevant provisions.

12) The compliance-led approach in handling NC items was adopted by HyD in 2009. With a lapse of nine years, permittees should have been familiarized with the XP system and relevant statutory requirements. Does HyD agree that it is necessary to strengthen law enforcement actions to cope with the increasing trend in serious and repeated non-compliant cases as mentioned in paragraph 2.29? If yes, what measures will be adopted? If not, what are the reasons for that?

Ans12) HyD has been adopting a compliance-led approach for managing excavation works on streets maintained by the Department. Through regulatory checking and instant notification to permittees for rectification in the event of non-compliance, the compliance-led approach aims to trigger immediate rectification actions to minimize potential risk to the public. However, serious and repeated non-compliance with XP conditions cases have all along been our main focus of enforcement work. Upon receipt of case referrals, the ET of HyD conducts in-depth investigations on the referred cases and if sufficient evidence is collected, the ET will make recommendations to the DoJ for instituting prosecutions. We have been stepping up our prosecution efforts in recent years. As illustrated in Table 10 of the Audit Report, the number of prosecution cases increased from 15 in 2013 to 65 in 2016. HyD will continue to focus enforcement actions against serious and repeated non-compliance with XP conditions cases. We are also regularly reviewing the case referral mechanism so that cases of this category will be followed up promptly.

13) As per paragraph 2.33, Audit sample checked 10 cases of suspected breaches of section 10T of the Land (Miscellaneous Provisions) Ordinance (Cap. 28) detected by the AIT's inspections. Among five of such cases, AIT referred the suspected-breach cases to the Enforcement Team ("ET") through advisory letters three to six days after its inspections. In the event, there was a time gap of six to eight days between AIT's inspections and ET's inspections. In this regard, ET could not obtain sufficient evidence of the suspected breaches for taking prosecution actions. Please advise under the established procedures, of the number of days within which AIT should refer suspected-breach cases to ET after detection of such cases? Given that the above five cases had been deferred by three

to six days before referral, did the cases involve government officials not acting according to established procedures or statutory requirements? In relation to the above question, given the time required for referral, how will HyD enhance the referral process between the two teams, such as merging the two teams so as to enhance the efficiency of its law enforcement work?

Ans13) Under the current referral mechanism, if there is any suspected violation of Section 10T on Provision of Safety Precaution and Support of the Land (Miscellaneous Provisions) Ordinance (Cap. 28) (LMPO) identified by AIT, AIT will issue Advisory Letter to notify the permittee to provide relevant safety provisions and supports on site as soon as possible. The ET will also be notified for follow up actions at the same time. There is no referral time limit stipulated under the current referral mechanism. To expedite the notification to the ET, the referral procedures have been enhanced so that the case is referred to the ET by email to enable ET's prompt follow-up action.

14) As per Audit's Report, contractors of some road works did not undertake rectification works after a relatively long period of time (paragraphs 2.24 and 3.9 refer), and some NC items were frequently observed (e.g. problems as mentioned in paragraph 2.22). Apart from implementing the demerit point system, will HyD implement other measures, such as increasing the penalty imposed on non-compliant contractors, in order to tackle the aforesaid problems?

Ans14) HyD enhanced the DPS in September 2017 to strengthen the sanction on permittees with unsatisfactory performance, in particular strengthening the control of reinstatement works and the minimum depth requirement of underground services. HyD would keep urging UUs to comply with the XP conditions in the monthly ROCC meetings such that the above problems can be improved soonest possible. HyD would consider strengthening the sanction on contractors' non-compliance with the requirements to further improve the situation if necessary.

Part 3: Control of underground utility installation and space occupation

15) According to the consultancy report referred to in paragraph 3.3, there was currently no standard mechanism to manage space occupation by UUs underneath public roads. Does the Administration agree that ineffective underground space management may cause improper use of underground space, damage to existing utilities, and delays in emergency repairs and excavation works? How will the Administration solve the related problems?

Ans15) At present, apart from the infrastructure and maintenance works from government departments, road excavations in Hong Kong are mainly due to the installation and maintenance of utility services provided by UUs. In general, the government regulates the installation of utility services underneath public roads by the UUs in three statutory aspects. The first one is to regulate the provision and operation of the service providers. The second one is to regulate the underground space occupation in government land, including public roads by utility services.

Afterwards, if the relevant UU has already fulfilled the above requirements and is preparing to install utility services, HyD will be responsible for supervising the excavations on public roads. HyD establish the XPMS in accordance with Part III of the LMPO for the planning and coordination of road excavation works and through the permit conditions, require permittee to fulfill its responsibilities including the proper supervision and execution of road excavations, provision of safety precautions, reasonable construction period, site cleanliness and proper road reinstatement works so as to reduce the impact of excavations on road users. In addition, if HyD suspects an excavation without a valid permit through inspection or reporting, upon confirmation, HyD will initiate prosecution in accordance with the law.

In order to prevent excavation work from damaging underground utilities and installations, the XP conditions stipulate that the permittee shall make all reasonable effort to obtain relevant utility record plans from UUs prior to commencement of excavation. Before any excavation including excavation for trial pits, the permittee shall use suitable non-destructive underground services detectors, in conjunction with any available plans, to determine as

accurately as possible the location of the underground services within or in the vicinity of the proposed excavation area. The permittee shall also carry out any suitable investigation such as hand-dug trial pits to ascertain the exact positions and levels of underground services prior to using mechanical plant for road breaking and excavation.

At present, the Government adopts the above-mentioned legal framework and system to regulate the occupation of government land and underground space without specific control system for managing the occupation of underground space underneath public roads by UUs. HyD has been closely liaising and communicating with UUs so as to manage excavations effectively using administrative means apart from legislation.

With the dense population and the advancement in technology, the underground utilities (especially the telecommunication services) are becoming more crowded. This is indeed a problem that needs to be addressed. HyD recognizes that an effective underground space control mechanism assists in better utilization of scarce underground space, reduce the possibility of damaging existing underground utilities during excavation, and shorten the time required for emergency repairs and excavations. The effectiveness in the management and control of the occupation of underground space shall depend on the accuracy and the consistency of standard/structures of utility records kept by UUs. HyD will collaborate with the LandsD and Development Bureau as well as the relevant bureaux with policy responsibilities on utilities, to explore the development of an effective management and control system over underground space occupation and seek the LandsD's assistance in developing the consolidated utility installation modelling system for better utilization of underground space in areas with congested underground utilities. The trial modelling system aims to allow UUs to visualize the underground space condition, and assist them in identifying and planning a viable route to accommodate their proposed utility services.

- 16) As per the situation as described in paragraph 3.11, will HyD explain:
- (a) reasons why under the existing control mechanism, there is no documented standard on checking the detailed alignment and disposition of the system, and why HyD does not require the XP

applicants to ascertain and confirm whether the related alignment and disposition of the proposed installations will be in conflict with other existing installations or proposed installations; and

- (b) how HyD can ascertain that the alignment and disposition of underground utility systems are in compliance with land licence conditions?

Ans16(a) &(b) If an UU plans to conduct excavations on a public road, the XP applicant shall submit a works plan showing the scope of excavation, including the location, length, width and depth, as well as the temporary traffic arrangements for approval. At present, all plans will be kept in the computer system for the use of audit inspection, reinstatement inspection and records. However, the plans are used for the approval of excavation works and do not include details of the utilities services to be installed under the road excavation works.

During an inspection, if HyD reveals that the excavation works have deviated from the approved scope of the permit or approved temporary traffic arrangements, HyD will issue an advisory letter to the permittee according to the severity of the breach or consider proceeding to prosecution.

Different government departments/bureaux are responsible for regulating different trade of UUs to install their utility services underneath public roads in accordance with the relevant laws and regulations. In addition, the LandsD will, under Part II of the LMPO, issue land licence to UUs with conditions requiring them to submit master plans of their utility services for endorsement. If a UU deliberately conceals the information on their installed services or alignment, or installs services outside the approved scope of master plan, thus breaching the licence conditions, then the relevant government departments/bureaux may take enforcement actions according to relevant regulations or licence conditions.

With regard to the Audit Commission's recommendations, we will consider making reference to the licence condition issued by the LandsD to the UUs, to consider enhancing the procedures and requirements on checking the alignment and depth before the road surface is reinstated. We will also discuss with the LandsD the feasibility of sharing the annual updated master plan on strategic

installations submitted by the power and gas supply UUs to explore the usefulness of such information in facilitating HyD to better control road excavation.

- 17) As per Case G in paragraph 3.11, please advise the reason for HyD to have approved the CNs of 180 poles inadvertently. Have similar cases occurred previously? If so, please provide the number of such cases and reasons for granting approvals inadvertently, and whether human errors were involved.

Ans17) Case G involved the misuse of the mechanism of the SSWXP. In fact, the SSWXP was introduced by HyD for UUs to arrange their small scale excavation works more efficiently. Therefore, the applicant is not required to submit the details of utilities (e.g. the configuration, alignment and size) before the commencement of the works by using SSWXP (i.e. each excavation area does not exceed 4 square metres and the length of excavation does not exceed 6 metres). By making use of the simplified procedure of SSWXP, the company in Case G did not provide any submission to seek the consent of the HyD and erect the poles above ground. After the submission of the CN by the company, HyD approved the CN in accordance with the established procedure, i.e. approval based on the condition of the reinstatement of the road surface. However, after due investigation, the relevant approval was withdrawn.

Based on the experience gained from Case G, HyD had improved the mechanism of the SSWXP in 2011. Now, UUs can only use the SSWXP to carry out pre-defined standard works. For non-standard works (such as the erection of poles on roads), UUs must provide additional information on the installation works before applying for XPs and obtain the consent of HyD.

Except Case G, no similar event has occurred in the past.

- 18) According to paragraph 3.12, as excavation works proponents were not required to obtain HyD's consent for their underground utility installations, there was no assurance that the alignment and disposition would be up to HyD's satisfaction. How will HyD resolve the aforesaid situation?

Ans18) UUs manage and update their own underground utility records in accordance with the relevant regulations on operation and land licences. Since 2002, the major UUs and government departments will upon request, share their underground utility information in an unified standard and format through the jointly established Electronic Mark Plant Circulation System (EMPC).

There is no incentive for UUs to purposely withhold information of their own underground utility installation. Such withholding will lead to the failure of project proponents to identify the existence of underground utilities. Hence, it will greatly increase the risk of causing damage to UU's underground utilities which is disruptive to both parties. Besides, if the excavation works result in an accident (such as in contact with live electrical facilities or pipelines of flammable gas, etc.) due to unavailable utility information, the responsible UU may be legally liable for its action.

With regard to the Audit Commission's recommendations, we will consider making reference to the licence condition issued by the LandsD to the UUs, to consider enhancing the procedures and requirements on checking the alignment and depth before the road surface is reinstated. We will also discuss with the LandsD the feasibility of sharing the annual updated master plans on strategic installations submitted by the power and gas supply UUs to explore the usefulness of such information in facilitating HyD to better control road excavation.

19) As per paragraph 3.13, the Administration did not maintain as-built records on utility installations beneath public roads/unleased government land. What are the reasons for that and how the Administration will improve the situation?

Ans19) When UUs install their underground utilities, they are required taking into account the underground space available and their respective technical requirements and standards of utility services. HyD has specified a minimum depth requirement of underground utility installations under the XP conditions. The various public utility coordination forums set up by HyD can effectively coordinate UUs' space requirements and different construction standards. The XP conditions issued by HyD have required all UUs to keep as-built records in respect of level and alignment of the underground services

and installations laid or placed. The form of records has been standardized amongst UUs. In addition, UUs as the owners of their underground utility information have the legal rights to determine whether to disclose such information and these rights should be respected. In spite of this, the major UUs and government departments, upon request have agreed to share their own underground utility information in an unified standard and format through the jointly established EMPC.

20) As per paragraph 3.16, some UUs criticized that the trial Consolidated Utility Installation Modelling System ("CUIMS") was not user friendly. Please advise:

(a) whether the Administration had consulted the stakeholders when CUIMS was first put in place; and

(b) responses made by HyD to the above criticism and whether HyD would consult UUs on the improvements measures?

Ans20(a) HyD commissioned a collaboration study with the Hong Kong University of Science and Technology in early 2013. Through close liaison and discussion with different government departments and UUs, the prime objective of the study is to enable UUs to better visualize the condition of underground space occupation, to assess the feasibility of their proposed installations' alignment in details and to better utilize the remaining underground space so as to face and tackle the congestion problem of underground utilities. As such, UUs should be able to better handle the difficulties and challenges before commencement of road excavation work and as a result minimizing the disturbance to road users after commencement of the work. Before the implementation of the trial CUIMS, HyD had obtained the consent and support of all participating UUs.

Ans20(b) One of the objectives of the subject trial of the CUIMS is to collect UUs' opinions on the operation of the system and to identify areas for improvement. HyD will consolidate all UUs' suggestions for improvement and seek the LandsD's assistance to develop a more effective and user friendly CUIMS. We will also continue to invite UUs to give opinions on the design of the system.

21) Regarding Audit's recommendations as set out in paragraph 3.17(e) to (f), please provide details of such measures and their implementation time frame?

Ans21) In view of the increasingly congested condition of underground utilities in Hong Kong, we agree that there is a need to tighten control of excavations works at road sections with congested underground utilities. We have made effort to explore management mechanisms to improve the condition of underground utilities in occupying underground space. We conducted a collaboration study with the Hong Kong University of Science and Technology in early 2013 to establish the CUIMS. The trial modelling system aimed to allow UUs to visualize the underground space condition, and assisted them in identifying and planning a viable route to accommodate their proposed utility services for better utilization of the remaining underground space. As such, UUs should be able to better handle the difficulties and challenges in carrying out excavation work at congested road sections, and as a result minimizing the disturbance to road users. The CUIMS is still under trial and the trial will be completed in end 2018. Taking into consideration the trial results on CUIMS, we will seek the LandsD's assistance to review the development of the CUIMS for better utilization of limited underground space, mainly cover those areas with congested underground utilities.

In addition, the establishment of an effective system for managing and controlling the occupation of underground space is a very complicated and arduous task. In fact, the effectiveness of the management and control of the underground space occupation depends on the accuracy of underground utility records kept by UUs. It involves many different factors and requires consultation with the stakeholders of different trades. For example, different UUs currently have their own independent and different systems to keep their underground utility information. To enable the sharing of utility records amongst UUs, it is necessary to align the standards and forms of record kept by UUs. This task may require resolving the possible problems encountered in design, management, maintenance, related data security and legal responsibilities. Therefore, at this stage, it is not yet possible to set a definite timetable for this task. We will collaborate with LandsD and relevant policy bureau to explore the possibility to develop an effective management and monitoring system on underground space occupation.

Part 4: Exploring the use of common utility enclosures

22) As per paragraph 4.15(a) and (b), please advise:

- (a) reasons why HyD had not consulted the relevant UUs on the selection of locations before constructing the two trial CUEs in 2006;
- (b) reasons for constructing trial CUEs in low-density residential areas;
- (c) reasons for low utilization of the two trial CUEs; and
- (d) experience drawn from the above trial schemes?

Ans22(a) The construction of the above trial CUE for public utilities aimed at collecting the response of UUs on such infrastructure and to gain experience in resolving problems in different aspect such as construction, management, maintenance, operation, security, safety and legal liability issues. In addition, there are certain constraints on site selection. Therefore, there was no particular involvement of UUs during the time of site selection. However, we have discussed the subject issue on the construction of trial CUE with UUs at the regular meetings of the Joint Utilities Policy Group (JUPG) during this period.

Ans22(b) If CUEs were built in a highly congested urban area in Hong Kong, large scale utilities diversion would be inevitably required, which would incur significant and long-term public nuisance. These constraints limited the choice of suitable sites for CUE implementation.

Ans22(c) The decision of UUs to place their utility services in the CUE involves many different factors, such as the demand for services, planned alignment, installation method and site constraints, etc. The participation of CUE trial is on voluntary basis as there is no legislation to govern the use of CUE by UUs. This may result in a relatively low usage of the trial CUE in 2006. However, during this period, we have repeatedly encouraged UUs to participate in the trial during the JUPG meetings.

Ans22(d) The construction of a CUE in Hong Kong's densely developed area is extremely difficult and the construction cost would be enormous. To build a CUE in the new development areas, it is necessary to resolve the issues like construction, management, operation, maintenance, and related security, safety and liabilities. In view of the recent experience on the use of CUE in overseas countries and the Mainland (e.g. Qianhai), the Government considers it worthwhile to review the implementation of CUE in new development areas. HyD is arranging to commission the relevant consultancy study in mid-2018.

23) As per paragraph 4.15(c), in 2004, the then Environment, Transport and Works Bureau requested HyD to review the operation and users' comments on the two trial CUEs, and reported the condition in a year. Had HyD reported the situation after one year? Separately, while HyD mentioned in 2010 that it would prepare a report after reviewing the results of the trial CUEs, the report had not been submitted so far. Please explain why.

Ans23) In October 2004, the Environment, Transport and Works Bureau expressed its support for the allocation of funds to HyD to build two trial CUEs. HyD was suggested to report the review of operations and users' comments in approximately one year after the completion of the CUEs.

Two trial CUEs were completed in 2006. With regard to the review of the operation of the CUEs, HyD reported to the Transport and Housing Bureau the operation and status of the trial CUEs in September 2007.

At the meeting of the JUPG held in May 2010, HyD stated that it would prepare a report after the completion of the above-mentioned review of the trial CUEs.

In September 2012, the HyD also reported to the Transport and Housing Bureau on the operation and update status of the trial CUEs. Thereafter, the policy matter in relation to the subject was transferred to Development Bureau. In May 2014, we discussed with Development Bureau the direction of further development of CUE. In conclusion, the Government is open to any proposed use of CUE in

new development areas where it is cost-effective and justified to do so.

In view of the recent experience on the use of CUE in overseas countries and the Mainland (e.g. Qianhai), the Government considers it worthwhile to review the implementation of CUE in new development areas. HyD will commence the relevant consultancy study in mid-2018. The purpose and objective of the study include reviewing and summarizing the effectiveness of the above two trial CUEs, and study the implementation of CUE in new development areas. It is expected that the study report will be completed in 2019 for reporting to the JUPG accordingly.

- 24) In relation to the above question, while HyD could not produce reports on or records of its review of the trial CUEs, paragraph 4.8(a) indicated that HyD considered that the trial CUE proposals in the Kai Tak Development project would only bring about limited benefits. Please explain the basis upon which HyD came to the above conclusion.

Ans24) The Civil Engineering and Development Department (CEDD) is the works department which was responsible for the Kai Tak Development (KTD) Project. A meeting between CEDD and HyD was held in September 2010 to discuss the feasibility to adopt CUE in the KTD Project. CEDD pointed out after the meeting that sufficient space along the footway has been reserved for laying of underground utilities in the design of the KTD Project. The benefit of implementing CUE in the KTD Project may be just limited to reducing the nuisance to the pedestrians. In addition, the roadworks of the KTD Project had already commenced, and had to complete the construction by mid-2013 in order to tie in with the public housing development programme. Given that compacted programme for construction, suitable location for constructing the proposed trial CUE was limited. Moreover, as two trial CUEs were already constructed in 2006, it was considered that the benefits of implementing the third trial CUE was limited. After considering the above factors, and in order to avoid delaying the KTD and the associated public housing development projects, the implementation of trial CUE in the KTD Project was not pursued at that time.

25) As per the situation mentioned in paragraph 4.16, please explain why HyD had not communicated with the Civil Engineering and Development Department at an earlier stage regarding the construction of trial CUEs. How will HyD strengthen its communication with other departments so that the planning for implementing trial CUEs in future can dovetail with the construction programme of a new development area?

Ans25) Regarding the issue on the trial of CUE, HyD had kept close communications with CEDD and related departments. For example, HyD had discussed with CEDD in writing on this subject in August 2009, September 2009, September 2010, November 2010 and February 2011. In addition, HyD had continual discussion with LandsD, DoJ, the then Environment, Transport and Works Bureau and relevant UUs on matters relating to the operation, legal and contractual arrangements of the trial CUE between 2005 and 2008.

To promote the implementation of CUE, HyD is arranging to employ consultants to commence a feasibility study on the implementation of CUE in new development areas in mid-2018. The main objectives of the consultancy study are to address the construction, management, operation, maintenance, security, safety and legal liability issues for recommending a practical implementation framework of CUEs for consideration by Development Bureau with a view to early implementation of CUE in new development areas. During the study period, HyD will communicate closely with the relevant departments (including CEDD) and UUs so that the construction of a trial CUE can be tied in with the future construction plan of new development areas.

Others

26) Some members of the public pointed out that on certain roads sections, albeit not at the same location, road excavation works are conducted frequently to the extent that the accumulated duration of road opening works on the road sections may add up to more than one year, thus adversely affecting road users of the sections concerned. Has the Administration reviewed the situation, such as whether it is a result of conducting the works in phases? If not, has the Administration imposed any restrictions and requirements regarding

repeated road opening works carried out within a certain area with short time breaks in between?

Ans26) Hong Kong is a densely developed city. In order to cope with the community development, UUs and government departments are required to carry out road works from time to time to improve, repair or renovate their facilities installed underground to maintain or enhance their service quality. Due to geographical, traffic, engineering and other constraints, some road works (such as the road works of large extent) have to be carried out in phases to reduce the impact on the traffic and operation of utility services. When approving these applications for XPs, HyD will assess the length, depth, alignment, duration and exact location of the proposed excavation works, and determine whether the proposed road works are reasonable considering the actual environment of the relevant road sections, the nature of works and the coordination report submitted by the applicant.

HyD understands that road works will cause a certain degree of nuisance to the public. To minimize the inconvenience cause to the public due to road works, HyD will continue to approve XPs in a prudent manner in accordance with the established mechanism, and will conduct regular inspections on road works.

For controlling excavation works in close vicinity and within a short period of time, HyD uses the XPMS to check whether the relevant excavation works have been carried out on the same road section in the past three to six months. If any repeated road opening works is found, HyD will require the applicant to change the date of commencement of construction in order to shorten the total excavation time and avoid cases of repeated road opening within a short period of time.

By monitoring the time and scope of road works at the time of XP applications by XPMS, together with the XP fee system and the charge of economic costs for delayed excavation works, may induce the project proponents to reduce the scope and time of their proposed works, thereby minimizing the air and noise pollution, and construction waste caused by the excavation.

27) In relation to the above question, the traffic signs on some road sections are subject to frequent revisions as a result of frequent road opening works in the area, causing confusion to road users. Please advise whether regulations are currently in place governing the traffic signs to be displayed during road works, and how the Administration tackles this problem.

Ans27) According to the Road Traffic Ordinance (Cap. 374), HyD has prescribed a “Code of Practice for the Lighting, Signing and Guarding of Road Works” (the Code). The Code is prescribed based on local experience with reference to standards of other countries, including the USA and Europe. When carrying out road works, the contractor should follow the requirements of the Code to safeguard the safety of road users and road works operatives. Pursuant to the Road Traffic (Traffic Control) Regulations (Cap. 374G), the contractor shall, erect signs, road markings, barriers and road hazard warning lanterns at the locations as stipulated in the Code; otherwise, it constitutes an offence. The alteration of traffic instructions as a result of roadworks, e.g. traffic diversion, etc., will vary according to the site conditions in different locations. Contractors will prepare temporary traffic arrangement according to the principle set out in the Code and submit to the Transport Department and the Police for approval. Generally, the arrangement must be clearly displayed in the works area. The contractor must also provide 24-hour telephone contact for public enquiries and complaints. The Code will be reviewed and revised from time to time to meet the latest standards and requirements. The latest version was just published last year.

28) Some members of the public have reported prolonged absence of site staff at road works sites of some road sections after the commencement of works, suspecting that it might have caused works delays. Does HyD monitor the implementation of road works with a view to understanding the reasons for frequent delays, e.g. whether the delays are attributable to excessively low level of permit fees currently charged for XPs (paragraph 1.10(b) refers)? Has HyD previously reviewed the level of permit fees and consulted other relevant departments on the need to adjust the fees to encourage timely completion of road works?

Ans28) During the construction period, HyD will regularly inspect the site to ensure that the relevant works are carried out in accordance with the conditions of the XP. The “unattended site” situation will be treated as a NC to the conditions of XP and unless the unattended situation is due to one of the “Standard Reasons” prescribed by HyD, or prior approval from HyD has been obtained. Otherwise, the person held responsible may be subject to prosecution. In addition, HyD has established a DPS which demerit point will be assigned to the relevant party for any NC observed. Sanctioning measure will be imposed if its overall demerit point is at 4 or above. For a site anticipated to be idle exceeding 14 consecutive working days due to the one of the “Standard Reasons”, the permittee shall, unless prior approval has been granted by HyD, cover the excavation by steel plates or other suitable means in such a manner so as to allow the area to be reopened for the safe and reasonably nuisance-free passage of vehicular or pedestrian traffic. HyD reserves the right to take over the site after giving due notice to the permittee if the excavation remains open without being worked on and without any reason being given to and accepted by HyD.

In respect of the extension of the XP, HyD will charge the applicant the extension fee and the economic cost in accordance with the statutory requirements. The charges are intended to provide incentive to the permittees to complete their works as soon as possible so as to reduce the inconvenience to the public. As regards the extension fees and economic costs, the Government adopts the “user-pays” principle to recover the administrative costs and the economic costs for affected traffic due to the extension of road works. The daily economic cost charged for the extension of the permit for affected traffic on carriageway ranges from \$1,710 to \$21,800 per day, according to the type of road concerned. It is believed that the mechanism can be an incentive to concerned parties to minimise the extension of the XP.

The Government regularly reviews the XP fee. A proposal of revision of fees and economic costs for excavation in 2018 was submitted to the Panel on Development of the Legislative Council for consideration in April 2018.

For the Lands Department

Part 3: Control of underground utility installation and space occupation

29) According to the consultancy report referred to in paragraph 3.3, there was currently no standard mechanism to manage space occupation by UUs underneath public roads. Does the Administration agree that the ineffective underground space management might cause improper use of underground space, damage to existing utilities, and delays in emergency repairs and excavation works? How will the Administration solve the related problems?

Ans29) Under the existing regulatory regime of underground utility installation by UUs, the control over laying works includes the issuance of XP by the HyD and the formulation of appropriate land administration arrangements by the LandsD concerning the occupation of government land by underground utilities. Under established mechanism, there is no requirement for maintaining a specific record of underground space usage and the actual underground location of utility services. Neither do such matters fall under the general purview of the LandsD.

The consultancy report mentioned in the question was published under a consultancy study commissioned by the HyD on the exploration of ways to improve the management mechanism for utilities occupying underground space.

Regarding the problems caused by congested underground utilities, the LandsD will, at the requests of HyD and relevant policy bureaux/departments, and subject to the availability of resources and manpower, provide assistance from land administration angle for better collecting and maintaining records of underground utility installation, including asking licensees to submit regularly-updated and more detailed master plans under the conditions of land licences. The LandsD will also support the collection of relevant information and suitably incorporate such information in its Geographical Information System (GIS).

30) As per paragraph 3.13, the Administration did not maintain as-built records on utility installations beneath public roads/unleased government land. What are reasons for that and how the Administration will improve the situation?

Ans30) As mentioned in Ans 29), under the existing regulatory regime of underground utility installation by UUs, the LandsD is responsible for the formulation of appropriate land administration arrangements on the occupation of government land by underground utilities. In particular, UUs should first obtain land licences from LandsD before laying underground utilities. UUs with land licences, depending on their business needs, may install underground systems and utilities beneath unleased government land (including public roads) across the territory. They may modify and repair their underground systems and utilities as appropriate. The Government may also request licensees to remove or divert their underground utilities for land development or other reasons from time to time under the conditions of land licences. Under established mechanism, there is no requirement for maintaining a specific record of underground space usage and the actual underground location of utility services. Neither do such matters fall under the general purview of the LandsD.

Regarding records showing the coverage and alignment of utility facilities, the LandsD, under relevant land licence conditions, currently requires three UUs (namely the CLP Power Hong Kong Limited, the Hongkong Electric Company Limited and the Hong Kong and China Gas Company Limited) to provide master plans of their utility facilities which take six months or longer to complete removal or diversion annually. As the time required for the removal, diversion or relocation of these facilities, including high pressure power lines and high pressure gas pipe systems, is much longer, and the area being affected by such works is more extensive, there will be more constraints on the use of land for such purposes. For installation of other facilities of the above three UUs, as well as fixed telecommunications and television broadcasting facilities of other companies, since relevant removal or diversion can be carried out within a short period of time without significantly hindering the use of land, the LandsD does not require responsible companies to provide master plans of such facilities. Currently, the master plan only indicates the coverage and general alignment of utilities

occupying government land, but not other details such as the specific use of underground space and the actual underground positions of such utilities.

As mentioned above, the LandsD will, at the requests of HyD and relevant policy bureaux/departments, and subject to the availability of resources and manpower, provide assistance from land administration angle for better collecting and maintaining records of underground utility installation, including asking licensees to submit regularly-updated and more detailed master plans under the conditions of the land licences. The LandsD will also support the collection of relevant information and incorporate such information in its GIS.

Q8 Demerit Point System

Demerit Point Level (DPL)	=	DPL1 + DPL2A + DPL2AA + DPL2B + DPL2C + DPL2D + DPL2E + DPL2F
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$$DPL\ 1 = \frac{\sum \left\{ \begin{array}{l} \text{Rolling 3-month cumulative demerit point of the responsible} \\ \text{party combination revealed from audit inspections} \end{array} \right\}}{\text{Total number of audit inspections carried out for permit sites of that responsible party combination within the 3-month period}}$$

$$DPL\ 2A = \frac{\sum \left\{ \begin{array}{l} \text{Rolling 7-month cumulative demerit point of the responsible} \\ \text{party combination contravened the relevant permit condition} \\ \text{for delayed rectification of rejected permanent reinstatement} \\ \times \text{ corresponding Risk Weighting} \end{array} \right\}}{\text{Total number of permits with rejected permanent reinstatement assessed on the permits of that responsible party combination within the 7-month period}}$$

$$DPL\ 2AA = \sum \left\{ \begin{array}{l} \text{Cumulative demerit point of the responsible permittee,} \\ \text{irrespective of any different Division/Contractor involved,} \\ \text{for rejected permanent reinstatement remaining outstanding} \\ \text{for prolonged period and not yet satisfactorily rectified} \\ \times \text{ corresponding Risk Weighting*} \end{array} \right\}$$

$$DPL\ 2B = \frac{\sum \left\{ \begin{array}{l} \text{Rolling 3-month cumulative demerit point of the responsible} \\ \text{party combination contravened the relevant permit condition} \\ \text{due to overdue submission of certified as-built records} \\ \times \text{ corresponding Risk Weighting} \end{array} \right\}}{\text{Total number of permits requiring submission of certified as-built records assessed on the permits of that responsible party combination within the 3-month period}}$$

$$DPL\ 2C = \frac{\sum \left\{ \begin{array}{l} \text{Rolling 3-month cumulative demerit point of the responsible} \\ \text{party combination contravened the relevant permit condition} \\ \text{due to overdue submission of test certificates/reports} \\ \times \text{ corresponding Risk Weighting} \end{array} \right\}}{\text{Total number of permits requiring submission of test certificates/reports assessed on the permits of that responsible party combination within the 3-month period}}$$

$$\begin{array}{l}
\text{DPL } 2D^{\#} = \Sigma \left\{ \begin{array}{l} \text{Cumulative demerit point of the responsible party} \\ \text{combination contravened the minimum depth} \\ \text{requirements} \end{array} \right\} \\
\text{DPL } 2E^{\#} = \Sigma \left\{ \begin{array}{l} \text{Cumulative number of the responsible permittee,} \\ \text{irrespective of any different Division/contractor involved,} \\ \text{for confirmed case of delayed rectifications of} \\ \text{damaged/deteriorated manhole or drawpit covers X 0.1} \end{array} \right\} \\
\text{DPL } 2F^{\#} = \Sigma \left\{ \begin{array}{l} \text{Rolling 3-month cumulative number of the responsible} \\ \text{party combination for confirmed case of abuse of} \\ \text{emergency excavation permit revealed from audit} \\ \text{inspections X 1.0} \end{array} \right\}
\end{array}$$

Remark * New risk weighting implemented since 30 September 2017

New DPL categories implemented since 30 September 2017

A worked example of the Demerit Point System is available on the HyD website for reference:

https://www.hyd.gov.hk/en/publications_and_publicity/publications/technical_document/xppm/manual/doc/Appendix_9-2-8_V5.pdf

Risk Weightings

Categories		Classification	Risk Weighting																																	
DPL1	Severity of NC	Severe	3																																	
		Major	2																																	
		Minor	1																																	
	Repeated NC within one month	Recurrence of severe NC	5																																	
		Recurrence of major NC	3																																	
		Recurrence of minor NC	2																																	
	Rectification of Immediately Rectifiable NC	Rectified to HyD's satisfaction within 48 hours	0.5																																	
DPL2A	Delayed Rectification of Rejected Permanent Reinstatement	8 months < outstanding time ≤ 9 months	1.5																																	
		7 months < outstanding time ≤ 8 months	1.4																																	
		6 months < outstanding time ≤ 7 months	1.3																																	
		5 months < outstanding time ≤ 6 months	1.2																																	
		3 months < outstanding time ≤ 5 months	1.1																																	
		2 months < outstanding time ≤ 3 months	1.0																																	
DPL2AA	Outstanding time more than 9 months	9 months < outstanding time ≤ 1 year	<table border="1"> <tr> <td>1 year < outstanding time ≤ 2 years</td> <td>2 years < outstanding time ≤ 3 years</td> <td>3 years < outstanding time ≤ 4 years</td> <td>4 years < outstanding time ≤ 5 years</td> <td>Over 5 years</td> </tr> <tr> <td>30/9/2017 to 31/12/2017</td> <td>0.0003</td> <td>0.0004</td> <td>0.0006</td> <td>0.0006</td> <td>0.0006</td> <td><u>0.002</u></td> </tr> <tr> <td>1/1/2018 to 31/3/2018</td> <td>0.0003</td> <td>0.0004</td> <td>0.0006</td> <td>0.0006</td> <td><u>0.002</u></td> <td><u>0.003</u></td> </tr> <tr> <td>1/4/2018 to 30/6/2018</td> <td>0.0003</td> <td>0.0004</td> <td>0.0006</td> <td><u>0.002</u></td> <td><u>0.003</u></td> <td><u>0.004</u></td> </tr> <tr> <td>1/7/2018 to 30/9/2018</td> <td>0.0003</td> <td>0.0004</td> <td><u>0.002</u></td> <td><u>0.003</u></td> <td><u>0.004</u></td> <td><u>0.005</u></td> </tr> </table>	1 year < outstanding time ≤ 2 years	2 years < outstanding time ≤ 3 years	3 years < outstanding time ≤ 4 years	4 years < outstanding time ≤ 5 years	Over 5 years	30/9/2017 to 31/12/2017	0.0003	0.0004	0.0006	0.0006	0.0006	<u>0.002</u>	1/1/2018 to 31/3/2018	0.0003	0.0004	0.0006	0.0006	<u>0.002</u>	<u>0.003</u>	1/4/2018 to 30/6/2018	0.0003	0.0004	0.0006	<u>0.002</u>	<u>0.003</u>	<u>0.004</u>	1/7/2018 to 30/9/2018	0.0003	0.0004	<u>0.002</u>	<u>0.003</u>	<u>0.004</u>	<u>0.005</u>
		1 year < outstanding time ≤ 2 years		2 years < outstanding time ≤ 3 years	3 years < outstanding time ≤ 4 years	4 years < outstanding time ≤ 5 years	Over 5 years																													
		30/9/2017 to 31/12/2017		0.0003	0.0004	0.0006	0.0006	0.0006	<u>0.002</u>																											
		1/1/2018 to 31/3/2018		0.0003	0.0004	0.0006	0.0006	<u>0.002</u>	<u>0.003</u>																											
		1/4/2018 to 30/6/2018		0.0003	0.0004	0.0006	<u>0.002</u>	<u>0.003</u>	<u>0.004</u>																											
1/7/2018 to 30/9/2018	0.0003	0.0004	<u>0.002</u>	<u>0.003</u>	<u>0.004</u>	<u>0.005</u>																														
30/9/2017 to 31/12/2017	0.0003	0.0004	0.0006	0.0006	0.0006	<u>0.002</u>																														
1/1/2018 to 31/3/2018	0.0003	0.0004	0.0006	0.0006	<u>0.002</u>	<u>0.003</u>																														
1/4/2018 to 30/6/2018	0.0003	0.0004	0.0006	<u>0.002</u>	<u>0.003</u>	<u>0.004</u>																														
1/7/2018 to 30/9/2018	0.0003	0.0004	<u>0.002</u>	<u>0.003</u>	<u>0.004</u>	<u>0.005</u>																														

	1/10/2018 to 31/12/2018	<u>0.001</u>	<u>0.002</u>	<u>0.003</u>	<u>0.004</u>	<u>0.005</u>	0.005	
	1/1/2019 onwards	<u>0.002</u>	<u>0.003</u>	<u>0.004</u>	<u>0.005</u>	0.005	0.005	
DPL2D	Delayed rectification of shallow depth services	1 st to 3 rd month after initial rectification period					0.2	
		4 th to 15 th month after initial rectification period					0.5	
		Beyond 15 th month after initial rectification period					2.0	