THE GOVERNMENT MINUTE

in response to the

REPORT OF THE PUBLIC ACCOUNTS COMMITTEE No. 70A

of November 2018

THE GOVERNMENT MINUTE IN RESPONSE TO THE PUBLIC ACCOUNTS COMMITTEE REPORT NO. 70A DATED NOVEMBER 2018

REPORT ON THE RESULTS OF VALUE FOR MONEY AUDITS (Report No. 70)

Chapter 1 – Management of restored landfills

The Government generally accepts the views and recommendations made by the Audit Commission (Audit) and the Public Accounts Committee (PAC) on the management of restored landfills.

2. Given its former use as waste disposal facility, restored landfill cannot be treated in the same manner as ordinary land pieces. We need to engage specialist contractors with relevant expertise to carry out the landfill restoration works and 30-year aftercare work by way of a design-build-operate (DBO) contract to mitigate the environmental risks associated with landfill gas and leachate generated by closed landfills. However, development of other uses on the restored landfill land pieces is a very challenging and difficult task owing to numerous development constraints and technical difficulties that need to be overcome before appropriate areas within the restored landfills can be put to beneficial use. We will take appropriate follow-up actions on the PAC's recommendations with a view to further improving our work on the management of restored landfills. The progress made is reported below.

Aftercare of restored landfills

- 3. To strengthen the monitoring of contractors' aftercare works, the Environmental Protection Department (EPD) will expedite the progress of installing advanced equipment at various restored landfill sites with leachate treatment plants, with a view to automating the monitoring work and detecting cases of non-compliance in a more timely manner. The EPD will continue to supervise the contractors' operation on restoration facilities and their compliance with relevant statutory and contractual requirements to ensure that restored landfills are maintained in a safe condition and are environmentally acceptable for appropriate beneficial uses in future. Moreover, the EPD will urge the contractor to complete early its proposed mitigation measures against the leachate management problem at Pillar Point Valley Landfill, and monitor their effectiveness.
- 4. With a view to enhancing the demerit point system in DBO contracts, the EPD will review the feasibility of including non-compliance with the relevant statutory environmental requirements under the demerit point system of the DBO contracts for the restoration and management of closed landfills in future.

Development of government recreational facilities at restored landfills

- 5. The Kwai Chung Park (the Park) covers a very large area of over 25 hectares surrounded by slopes on restored landfills, which is unique in Hong Kong and much different from other open space projects. Over the past years, progress was mainly impeded by complicated site conditions, technical constraints and competing priorities for comprehensive development. While there was no shortfall of open space in Kwai Tsing District as a whole according to the recommendations of the Hong Kong Planning Standards and Guidelines, the Leisure and Cultural Services Department (LCSD) has spared no effort to press ahead with the planning work for the Park to the extent possible under the prevailing mechanism. To show government's commitment to develop the Park, the Kwai Chung Park project was included in the Five-Year Plan for Sports and Recreation Facilities as announced in the 2017 Policy Address. The Home Affairs Bureau issued the revised Project Definition Statement on 18 May 2018. The Architectural Services Department (ArchSD) has taken immediate action afterwards, and submitted the Technical Feasibility Statement to the Development Bureau (DEVB) in November 2018 for approval. LCSD and relevant bureaux and departments will make the best efforts to implement the Kwai Chung Park project to meet the Five-Year Plan. We aim to finish the preparatory work such as detailed design and consultation with the Kwai Tsing District Council on the design etc., and seek funding approval from the Legislative Council (LegCo) in the legislative year 2020-2021 for commencement of works by end-2021.
- Regarding the development of Wan Po Road Pet Garden, if the Home Affairs Department (HAD) is to take up in future any works project in restored landfills as the works department, it will draw from the experiences of Wan Po Road Pet Garden project and take extra care and additional steps in implementing such projects, for example, critically reviewing the experiences and expertise of the term consultant before assignment of the project, and imposing additional requirements for the consultant to ascertain up-to-date site conditions before tendering. To address the potential risk of unusual ground settlement at Tseung Kwan O Stage I Landfill, when a new afteruse project is to be implemented at this landfill site, the EPD will consider conducting a review on the ground settlement at the area to be occupied by the new project for reference by the project proponent in planning and designing the project. The HAD stands ready to share with the EPD its experience in the construction of Wan Po Road Pet Garden if needed.
- 7. The ArchSD had also shared the experience in the construction of the Jordan Valley Park with relevant organisations with a view to enhancing the management of projects at restored landfills in future.

Monitoring of non-governmental bodies' afteruse facilities at restored landfills

- 8. The EPD will continue its efforts to facilitate and monitor the development progress of afteruse facilities, including reviewing and updating the existing EPD's inspection forms to incorporate essential inspection items specific to the land licences, so as to enhance further the monitoring of the licensees' compliance with the licence conditions. The EPD will also consult the relevant bureaux and departments to: (i) monitor the licensees' compliance with licence conditions; (ii) explore the feasibility of incorporating quantifiable/objective criteria when preparing new land licences in the future; and (iii) formulate guidelines on the circumstances under which licensees will be requested to submit audited financial information for monitoring their operational and financial viability.
- 9. For the Restored Landfill Revitalisation Funding Scheme (the Funding Scheme), the EPD is working closely with the organisations selected under Batch 1 of the Funding Scheme with a view to taking forward the revitalisation projects as soon as possible. The EPD will also review Batch 1 of the Funding Scheme in 2019 so as to enhance the operation of subsequent batches of the Funding Scheme.

Conclusions and recommendations

10. The progress made on actions taken by the Government, in light of Encl. 1 the recommendations of the Audit and the PAC, is set out in Enclosure 1.

Chapter 2 – Sha Tin Section of Route 8

11. The Government accepts the views and recommendations made by the Audit and the PAC on the Sha Tin Section Route 8 and has taken follow-up actions as appropriate. The progress made is reported below.

Administration of Contract A

12. Both the Audit and the PAC are concerned about the administration of Contract A of Sha Tin Section of Route 8. In particular, the Government has been demanded to take measures to strengthen vetting of a consultant's design and handling responses to tender queries and to ensure that post-completion reviews on consultancy agreements and work contracts can be conducted in a timely manner in the future.

- 13. Regarding the vetting process of project designs, the Highways Department (HyD) amended the Structures Design Manual for Highways and Railways (SDM) in August 2006 with enhanced guidelines on new highway structures, providing that appropriate level of independent checking on the design of new highway structures and the modification of existing highway structures should be carried out. In light of the recommendations made by the Audit and the PAC, the HyD reminded its staff to continue to strictly comply with the relevant requirements of the SDM in May 2018. For handling tender queries, a new measure has been included in the Project Administration Handbook for Civil Engineering Works (PAH) updated in August 2018, requiring the consultants of all works departments to consult the works department concerned before issuing official replies to tenderers. The HyD has also further updated its relevant internal guidelines to incorporate principles for checking the responses to tender queries prepared by the consultants in order to ensure that the contents of responses are clear and accurate. At the same time, the HyD has reminded its staff to continue arrangements with consultants and contractors for conducting post-completion reviews on major consultancy agreements and major works contracts in a timely manner.
- 14. In addition, the Audit and the PAC have expressed serious concern over contract negotiation process involved in Contract A. In this regard, the PAC has demanded the DEVB to set up a mechanism to report to the LegCo on claims and extra-contractual settlement for public works projects.
- 15. Currently, the Government has put in place a comprehensive monitoring mechanism for vetting and approving works departments' solutions to contractual settlements, including extra-contractual settlement. Approved Project Estimates are not exceeded in the solutions, works departments are required to follow the prevailing government guidelines/requirements and seek approval from the relevant delegated authorities. Furthermore, works departments should provide copies of approved settlements to the Audit for reference. If the situation warrants, the Audit will conduct audits and where necessary report the cases to the PAC. The DEVB considers that the aforesaid monitoring and reporting mechanism has been working well, and will continue to monitor its operation in order to conduct a review in a timely manner. Based on the experience of contract negotiation in respect of Contract A, the HyD has reminded its staff to strictly comply with the aforesaid mechanism, especially the relevant requirements on contract negotiation set out in the Stores and Procurement Regulations, and seek relevant approving authority's prior agreement to the strategy or bottom line for the contract negotiation before engaging in negotiation with contractors or consultants.

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Administration of Contract B and Contract C

- Regarding the administration of Contract B and Contract C of Sha Tin Section of Route 8, the Audit and the PAC have made recommendations on investigation works prior to tender invitation as well as the relevant procedures for preparing contracts and tender documents. The relevant Technical Circulars of the DEVB and the PAH, which were updated in August 2018, have provided clear guidelines on the works concerned.
- 17. For site investigation, works departments, including the HyD, should submit site investigation plans and schematic design proposals with relevant information (including site investigation data) to the Geotechnical Engineering Office of the Civil Engineering and Development Department (CEDD) for checking, so as to obtain more accurate site condition information for subsequent works designs and tendering exercises. Regarding the preparation of contracts and tender documents, as set out in the relevant Technical Circulars and the PAH, works departments and their consultants are required to handle the contents of contracts prudently to avoid ambiguity, to check and ensure the consistency of time programmes for interface works in all relevant contracts, to conduct careful checking and pre-tender cross-checking procedures in the preparation of Bills of Quantities, and to use the Building Information Modeling technology for checking where appropriate, etc. To further enhance the effectiveness of document checking in the HyD, the internal guidelines were updated in December 2018 to improve the process of checking of contract clauses and drawings, including requiring a project team to assign the checking of related sections amongst different parts of tender documents to the same officer in order to increase the accuracy of checking. The HyD has reminded its staff and consultants to strictly comply with the relevant Technical Circulars and guidelines.

Usage and management of Sha Tin Section

- 18. The Sha Tin Section of Route 8 was commissioned in 2008 for alleviating the traffic congestion at Lion Rock Tunnel and Tate's Cairn Tunnel. To enhance the usage of the Sha Tin Section of Route 8 and thus achieve the desirable result of relieving the congestion of the connecting road links between Kowloon and Sha Tin, the Transport Department (TD) has conducted detailed analysis and assessment. The key issue is to address the bottleneck problem at the existing approach roads to Route 8. To this end, the TD, in collaboration with relevant works departments, has been striving to push ahead with the necessary road works projects, including
 - (i) construction of an additional lane at the approach road from Tai Po Road (Sha Tin Section) southbound leading to Route 8 near Scenery Court¹;

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The relevant works were completed in 2015.

- (ii) widening of Tai Po Road (Sha Tin Section) to a dual three-lane carriageway²; and
- (iii) taking forward the strategic highway project of Road T4³.
- 19. The Government is progressively taking forward the above-mentioned road projects with a view to attracting more motorists heading for the urban areas to use Route 8.
- 20. In addition, the TD commissioned a consultancy study in January 2017 on rationalising the traffic distribution among the three road harbour crossings (viz. Cross Harbour Tunnel, Eastern Harbour Crossing and Western Harbour Crossing) and the three land tunnels connecting Kowloon and Sha Tin (viz. Lion Road Tunnel, Tate's Cairn Tunnel and Eagle's Nest and Sha Tin The Transport and Housing Bureau and the TD consulted Heights Tunnel). the LegCo Panel on Transport on the proposal recommended by the study on 16 November 2018. Broadly speaking, since there is a bottleneck at Tai Po Road (Sha Tin Section) which could only be alleviated upon the anticipated completion of the respective widening project by 2023, it is not advisable at this stage to adjust the tolls of the three land tunnels so as to avoid a substantial increase in the number of motorists using Eagle's Nest Tunnel and Sha Tin Heights Tunnel for assess to Kowloon, which may result in lengthened traffic queue along Tai Po Road (Sha Tin Section) or even up to Tolo Highway and in turn affect the overall traffic conditions of New Territories East.
- In the meantime, the TD will keep under review the bus and minibus services passing through Sha Tin Section, and the basket of factors for the introduction of new services as stated in paragraph 4.7 of the Audit Report, and will enhance the services having regard to the passenger demand for better utilisation of this road section. The TD has proposed seven improvement items for bus routes passing through Sha Tin Section under the Bus Route Planning Programme 2018-19, including the introduction of new routes and enhancement of existing services. Two of them were implemented on 5 November 2018 and the remaining five items will be implemented by phases from early 2019 onwards. Besides, the TD is reviewing whether the restriction on red minibuses to operate on Tsing Sha Highway can be relaxed for some of the road sections.

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Funding approval for the project was obtained from the Legislative Council Finance Committee in May 2018. The CEDD has commenced the works to widen the section of Tai Po Road (Sha Tin Section) between Sha Tin Plaza near Sha Tin Rural Committee Road and Man Wo House of Wo Che Estate near Fo Tan Road from a dual two-lane carriageway to a dual three-lane carriageway for anticipated completion in 2023.

The project comprises construction of a strategic road connecting Tsing Sha Highway and Shing Mun Tunnel Road in the west and Sha Tin Road in the east, so as to provide a road link with dual two-lane carriageway between West Kowloon/Tsuen Wan and Ma On Shan/Sai Kung. The CEDD commenced the investigation study in June 2018.

Management of Management, Operation and Maintenance (MOM) Contract for Sha Tin Section

- 22. For effective and efficient traffic control and incident management, Sha Tin Section and Tsing Yi Section of Route 8 form one single control area (i.e. Tsing Sha Control Area (TSCA)). Since commissioning of Sha Tin Section in March 2008, the MOM of the TSCA has been outsourced to an operator through open tender. The TD awarded the current MOM contract to an operator in June 2013 for a term of six years. The operator is responsible for the proper MOM of the TSCA, including ensuring safe and efficient traffic movement, collecting tolls and fees, regulating and controlling vehicular and pedestrian traffic, managing and patrolling the area, removing any vehicle or thing causing obstruction, carrying out highway and building maintenance, and providing electrical and mechanical (E&M) services etc.
- 23. A Government Monitoring Team (GMT), comprising officers from the TD, the HyD, the Electrical and Mechanical Services Department (EMSD) and the ArchSD, has been formed to monitor the TSCA operator's performance. The TD oversees TSCA's daily operation as well as traffic and incident management; the HyD oversees the maintenance of bridges, viaducts and tunnel structures; the EMSD oversees the maintenance of all E&M systems and equipment; and the ArchSD oversees the maintenance of building structures. Since the award of the MOM contract to an operator for the management of TSCA in 2008, the GMT members have been monitoring and supervising the Operator's performance on MOM of the control area on issues under their respective purview to ensure the safe, efficient, stable and reliable operation of the control area and equipment. Through vetting of various documents submitted by the Operator, site inspection of the control area and participation in working group meetings, GMT members constantly monitored the performance of the Operator. If any irregularities are found, GMT members will instruct the Operator to take follow up actions forthwith and closely monitor the progress.
- 24. In response to the recommendation of Audit, the TD, in collaboration with the HyD, the EMSD and the ArchSD, has effected a series of improvement measures. Amongst them, the HyD and the ArchSD have started to compose regular assessment report on TSCA Operator's performance since December 2017 which was provided to TD for compilation of an overall assessment reports on performance. Several improvements measures were also implemented in the 1st Quarter of 2018 including clearly specifying in the contract the monitoring responsibilities of the GMT members on maintenance issues, timely monitoring of Operator's compliance with the manning level requirement for all staff by each GMT member, as well as timely collecting liquidated damage (LD) and implementing mitigation measures for any staff shortfall arising, etc. GMT members will continue to take forward the improvement measures.

25. Apart from the above improvement measures, the TD will also address the recommendations in the next TSCA MOM contract commencing in September 2019 by clearly specifying the manning level requirement in the tender document and the MOM contract, modifying LD's clauses on staff shortfall to enhance efficiency of calculation and collection of LD as well as strengthening contract clauses to impose penalty on the Operator for non-compliance with the manning level requirement. In the long term, the TD will continuously work with other GMT members in concerted effort to enhance the efficiency and effectiveness of the management of TSCA's MOM contract.

Progress made in implementing Audit's and PAC's Recommendations

26. A summary of the progress of implementing Audit's and PAC's recommendations is set out at Enclosure 2.

Management of restored landfills Progress in implementing the Audit's and PAC's Recommendations

Para. No.	Audit's/PAC's Recommendations	Progress to Date
Ineffective n	nonitoring of contractor's aftercare we	ork
Para. 124 (Page 63) of PAC Report	(a) expedite the progress of installing the advanced equipment at restored landfills as recommended by the 2016 Environmental Protection Department (EPD) Review, and keep under review the operation	The EPD has implemented a number of improvement measures to strengthen the management and supervision of contractors' aftercare work at restored landfills, including the following — 1. installing advanced equipment, the
Para. 2.42 (a) and (b) of Audit Report	of the installed equipment to assess their effectiveness in monitoring of contractors' aftercare work; and (b) before automated data monitoring systems are in place, ensure that the contractors properly maintain the site records, and strengthen the EPD's monitoring actions on the contractors' compliance with the statutory and contractual requirements and the related record-keeping requirements.	Data monitoring system — (i) the Leachate Treatment Plants (LTPs) at Tseung Kwan O Landfills (TKOL) and Gin Drinkers Bay Landfill (GDBL) were proprietary-built some 20 years ago and all instrumentation and data logging systems are old and analogue based. To enable real-time monitoring, we need to source successfully the appropriate type of advanced equipment so as to ensure the compatibility of the advanced equipment with the existing LTPs before procuring such equipment.
		(ii) the EPD is currently assessing the proposal recently submitted by the restored landfill contractor of TKOL and GDBL. We aim to have the system installed by 2nd Quarter of 2019.
		Automatic sampling device – (i) to ensure the sampling location is representative and that the EPD staff can collect the samples safely as well as to prevent tampering of samples by trespassers, we have

Para. No.	Audit's/PAC's Recommendations	Progress to Date
		carefully assessed the appropriate locations for installing the automatic sampling devices at respective restored landfills.
		(ii) the automatic sampling devices are now in operation in the restored landfills.
		2. stepping up the frequency of irregular inspections and conducting surprise checks during weekends; and
		3. ensuring that the contractors will keep proper site records/daily log sheets.
		Apart from checking the performance data in the Aftercare Monthly Report submissions, the EPD has arranged its site staff at the landfills to check the contractors' site records at their site office regularly to ensure the records are clearly and properly maintained.
		As the recommendations have been implemented and will be carried out on an on-going basis, we recommend that this part be deleted from the next progress report.
Para. 2.42(c) of Audit Report	Strengthen monitoring of contractors' overhaul works of restoration facilities.	\mathcal{E}
		(i) the EPD has requested the contractor to carry out regular condition survey of the LTPs at restored landfills, and to repair or replace the specific parts or instruments according to the

Para. No.	Audit's/PAC's Recommendations	Progress to Date
		condition survey report; (ii) during the EPD's inspections, if there is any part or instrument that is damaged or not functional, the EPD will request the contractor to repair or replace the specific part or instrument as soon as possible; and
		 (iii) for any future overhaul works of restoration facilities at restored landfills, the EPD will request the contractors to submit detailed overhaul implementation plan for vetting and will carry out inspection of the progress of the overhaul works according to the programme schedule and update the maintenance record. The EPD will also increase the inspection frequency during the overhaul works so as to ensure the works are done properly. As the recommendation has been
		implemented and will be carried out on an on-going basis, we recommend this part be deleted from the next progress report.
Para. 124 (Page 63) of PAC Report	PAC expressed concern about the EPD choosing the terminal foul water manhole of Pillar Point Valley Landfill (PPVL) as the sampling point of collecting treated leachate discharge for testing.	In the 2016 EPD Review, it was concluded that although the effluent in the sampling point could reflect the quality of effluent discharge into the public sewer, it might not be able to reflect accurately the quality of treated leachate discharge from the leachate treatment plant. Hence, after the Review, the EPD proactively changed the sampling point, so as to ensure the treated leachate discharge would comply with both licence and contract requirements and at the same time, allow the EPD to effectively monitor

Para. No.	Audit's/PAC's Recommendations	Progress to Date
		the performance of the LTP at PPVL and other restored landfills. As the follow-up actions on this PAC's concern has been implemented and will be carried out on an on-going basis, we recommend this part be deleted from the next progress report.
Need to expl	ore the feasibility of setting up an inte	erdepartmental working group
Para. 124 (Point (a) of page 69) of PAC Report	For developing afteruse facilities in restored landfills in future, explore the feasibility of setting up a working group between the client departments and the works agents to strengthen inter-departmental coordination in addressing the site constraints and speeding up the development process.	Currently, the Leisure and Cultural Services Department (LCSD) conducts and attends regular and ad hoc project meetings with departments concerned and contractors for development of sports and recreational facilities throughout the planning and development stages. To further enhance inter-departmental coordination in addressing the site constraints of restored landfills in future, the LCSD will formalise the communication channel by setting up a working group comprising the client department, the works agent (normally the Architectural Services Department (ArchSD)), consultants and/or contractors, the EPD and departments concerned to address complicated site constraints and speed up the development process. As the recommendation will be implemented upon the implementation of future projects on restored landfills, we recommend that this part be deleted from the next progress report.

Para. No.	Audit's/PAC's Recommendations	Progress to Date	
Need to cons	sider hiring an external consultant		
Para. 124 (Point (b) of page 69) of PAC Report	Consider hiring an external consultant to assist in identifying all viable development options for the restored landfills having regard to each landfill's characteristics and limitations, so as to facilitate consultation with District Councils (DCs) and relevant stakeholders to avoid unnecessary delays.	As the LCSD projects on restored landfills have either been completed or have the project scope confirmed, the LCSD would, in consultation with the relevant works agent and technical departments, consider hiring an external consultant for future restored landfill projects when situation warrants, noting that viable development options may not be exhaustive due to a wide range of possible sports, recreational and leisure facilities.	
		With lessons learnt from Kwai Chung Park project, the LCSD may also seek preliminary comments from the ArchSD and EPD, as an alternative to hiring external consultant, on proposed development options in restored landfills before consultation with DCs and issue of the Project Definition Statement in future so as to facilitate more effective consultation with DCs.	
		As the recommendation will be implemented upon the implementation of future projects on restored landfills, we recommend that this part be deleted from the next progress report.	
Need to asce	Need to ascertain the suitability of using a term consultant		
Para. 124 (Point (c) of page 69) of PAC Report	Ascertain the suitability of using a term consultant in supervising the development of afteruse facilities in restored landfills having regard to the extent of technical difficulties involved. In addition, it should	Drawing from the experiences of Wan Po Road Pet Garden project and noting that carrying out works project on restored landfill site requires special attention, the Home Affairs Department (HAD) would consider the experiences	

Including Jordan Valley Park, Ma Yau Tong Central Sitting-out Area, Ma Yau Tong West Sitting-out Area, Ngau Chi Wan Park, Sai Tso Wan Recreation Ground and Wan Po Road Pet Garden.

Including Kwai Chung Park, for which the Project Definition Statement defining the project scope was issued by Home Affairs Bureau on 18 May 2018.

Para. No.	Audit's/PAC's Recommendations	Progress to Date
	review the manpower and competence of its Works Section in undertaking development projects in restored landfills.	and expertise of term consultant before assignment of such projects in future, and ensure that there would be sufficient manpower for handling such projects.
		Currently, the HAD has no minor works project involving restored landfills. As the recommendation will only be implemented if HAD is to take up any works project in restored landfills in future, we recommend that this part be deleted from the next progress report.
	sider conducting a review on Existing quirements to Central Tender Board	g Mechanism of Reporting Changes in
Para. 124 (Point (d) of page 70) of PAC Report	Consider conducting a review on its existing mechanism of reporting changes in contract requirements to Central Tender Board, setting out clearly circumstances under which government bureaux/departments (B/Ds) should, as the situation warrants, report changes in tender requirements at the tender stage, or changes at the post-tender stage through contract variation(s) with explanation, so as to adhere to the principle of maintaining open and fair competition for all tenderers.	As laid down in the Stores and Procurement Regulations (SPRs), procuring B/Ds are responsible for drawing up tender specifications to meet their specific procurement needs, defining the contract requirements and conducting tender exercises in a manner meeting the government procurement principle of maintaining open and fair competition. Procuring B/Ds are also responsible for project implementation and contract management. In general, when considering whether to initiate a change to the tender requirement at the tender stage by issuing a tender addendum/conducting tender negotiations, or to pursue the change at the post-tender stage through a contract variation, the procuring B/Ds should take into account the need to maintain open and fair competition, as well as relevant operational considerations. In accordance with SPR 375(a), upon conclusion of tender evaluation, procuring B/Ds should prepare a tender report containing a clear recommendation in the standard format

Para. No.	Audit's/PAC's Recommendations	Progress to Date
		for consideration by the relevant tender board/committee. As set out in the standard tender report format at Appendix III(I) to SPRs, apart from the usual information required, procuring B/Ds should also include in the tender report any special circumstances governing the tender recommendation, to facilitate the consideration of the relevant tender board/committee. We would keep in view the need of providing more detailed guidelines on the circumstances under which B/Ds should report to the tender board/committee any substantial changes in tender requirements at the tender stage and the follow up actions taken.
		Regarding changes to the contract requirements after contract award, SPR 520 has set out clearly that contract variations should be avoided as far as possible and should normally be used as a stop-gap measure. SPR 520(e) has further reminded B/Ds that contract variations, especially those which are not provided for in the original contract, may amount to new procurements. For contract variations amounting to new procurements covered by the Agreement on Government Procurement of the World Trade Organization (WTO GPA), procuring B/Ds shall ensure that all relevant requirements of WTO GPA are complied with and should seek legal advice if in doubt. Procuring B/Ds should execute variations to contracts according to the authority provided in Appendix V(B) of SPR. For contract variations involving an increase in the contract value exceeding the departmental limits, B/Ds are required to submit their applications to the

Para. No.	Audit's/PAC's Recommendations	Progress to Date
		Financial Services and the Treasury Bureau, with full justifications, for consideration and approval. Since an established mechanism is already in place, there is no need for B/Ds to report the approved contract variations to the relevant tender board/committee.
Aftercare of	restored landfills	
Para. 125 (Page 70) of PAC Report and Para. 2.42 (d) and (e) of Audit Report	 (d) take measures to ensure early implementation of mitigation measures to resolve the leachate inflow/overflow problem at PPVL; and (e) monitor the effectiveness of the leachate pre-treatment system for improving the LTP treatment efficiency at PPVL. 	The PPVL contractor had completed the installation of advanced real-time monitoring equipment at PPVL's LTP to monitor the LTP performance round-the-clock on a real-time basis. This will enable early detection of any sign of deterioration in plant performance and ensure that swift maintenance action would be taken. The contractor had also conducted a trial on the use of a pretreatment system to remove metallic and silty matters before leachate entered into the LTP and reviewed the respective effectiveness. In August 2018, the contractor reported the findings of the trial to the EPD. According to the contractor's findings, the system had not brought about much improvement to the LTP operation, as the
		pre-treatment system could only remove less than 1% of the scaling matters. The system was therefore terminated.
		The contractor has engaged a hydrogeological consultant to conduct a geophysics survey to identify suitable locations for groundwater well installation so as to intercept groundwater from entering into the waste mass, i.e. reducing leachate generation in the long run. The installation was

Para. No.	Audit's/PAC's Recommendations	Progress to Date
		completed in mid-May 2018. Additional groundwater wells are being installed. The installation works are expected to complete in early 2019. As the recommendations have been implemented and will be carried out on an on-going basis (the pretreatment system had not brought much improvement and therefore was terminated), we recommend that this part be deleted from the next progress report.
Para. 125 (Page 70) of PAC Report and Para. 2.42 (f) and (g) of Audit Report	 (f) conduct a review on whether a landfill restoration contractor's conviction results can be used as evidence for deducting points under the demerit point system and deducting contract payments from the contractor in future contracts; and (g) review the feasibility of incorporating non-compliances with the relevant statutory environmental requirements in the demerit point system of a landfill restoration contract in future. 	The design-build-operate contracts for all the restored landfills were awarded some 10 to 20 years ago. Any amendment to the contract shall require mutual agreement between the EPD and the contractor. Unilateral decision may lead to potential litigation, and hence the EPD cannot implement such a change unilaterally as there is no contractual basis to do so. However, the EPD will review the feasibility of incorporating non-compliance with the relevant statutory environmental requirements in the demerit point system and using conviction results as evidence for deducting points under the demerit point system of landfill restoration contracts in the future. As the recommendations have been implemented and will be carried out on an on-going basis, we recommend that this part be deleted from the next progress report.
Para. 125 (Page 71) of PAC Report	Consider taking further measures to improve security at restored landfills.	The EPD has requested the contractors to step up inspections of fencing at the boundary, and if necessary install CCTV at conspicuous locations to deter damage to the fencing.

Para. No.	Audit's/PAC's Recommendations	Progress to Date
Para. 2.42(h) of Audit Report		Parts of the existing fencing at Ma Yau Tong Central Landfill will be upgraded to more heavy duty and robust construction to prevent damage and entry by trespassers. The upgrading works commenced in late October 2018 and will be completed by mid-2019. As the recommendation has been implemented and will be carried out on an on-going basis, we recommend that this part be deleted from the next progress report.
Developmen	t of government recreational facilities	at restored landfills
Para. 125 (Point (c) to (e) of page 72) of PAC Report	(a) complete the revision of the project scope for the Kwai Chung Park as early as possible;	The LCSD has completed the revision of the project scope for the Kwai Chung Park and submitted the revised draft Project Definition Statement to the Home Affairs Bureau (HAB) on 11 May 2018 for consideration.
and Para. 3.18 of Audit Report	(b) expedite the revision of the Project Definition Statement of the Kwai Chung Park and issue it to the Director of Architectural Services for preparing a Technical Feasibility Statement for the project; and	The HAB issued the revised Project Definition Statement to the ArchSD on 18 May 2018. As the follow-up actions on the recommendations above have been implemented, we recommend that this part be deleted from the next progress report.
	(c) upon receipt of the revised Project Definition Statement for the Kwai Chung Park, complete the Technical Feasibility Statement in a timely manner.	The ArchSD has taken immediate action to prepare the Technical Feasibility Statement upon receipt of the revised Project Definition Statement in May 2018, including engagement of consultancy for the Landfill Gas Hazard Assessment, and consultation with relevant departments for opinions. The Technical Feasibility Statement was completed and submitted to the Development Bureau (DEVB) in November 2018 for approval.

Para. No.	Audit's/PAC's Recommendations	Progress to Date
Para. 125 (Point (f) of page 72) of PAC Report	When implementing works projects at works sites susceptible to ground settlement (e.g. restored landfills) in future, take measures to ascertain up-to-date site conditions for design work before tendering.	The HAD requires the consultants to conduct topographical surveys for sitting out area projects, including pet gardens, at the outset upon funding approval. The HAD will continue to do so.
Para. 3.38(a) of Audit Report		For future works projects involving sites susceptible to ground settlement, the HAD will, where time and resource permit, request its consultants to ascertain up-to-date site conditions before tendering (particularly in situations where ground settlement has already been observed in a topographical survey carried out by a consultant at an early stage and the design stage lasts for a long duration). As the recommended follow-up actions
		will only be implemented if HAD is to take up works projects involving sites susceptible to ground settlement in future, we recommend that this part be deleted from the next progress report.
Para. 125 (Point (f) of page 72) of PAC Report	When implementing works projects (including those at restored landfills) in future, take measures to enhance the accuracy in estimating the project cost and time allowed for tender stage.	Independent quantity surveying consultants have been engaged to provide comprehensive cost advice for all consultant-led projects. Sufficient and realistic time has also been allowed for the tender stage of projects. The HAD will continue to do so.
Para. 3.38(b) of Audit Report		As the follow-up actions on this recommendation will be carried out on an on-going basis, we recommend that this part be deleted from the next progress report.

Para. No.	Audit's/PAC's Recommendations	Progress to Date
Para. 125 (Point (f) of page 72) of PAC Report and Para. 3.39 of Audit Report	Conduct a review on the unusual ground settlement of the project site of Wan Po Road Pet Garden with a view to identifying whether other areas of the Tseung Kwan O Stage I Landfill (TKOL-I) have such settlement problem and ascertaining whether such settlement would lead to any adverse impacts on the EPD's restoration facilities and aftercare work.	According to the TKOL-I Contractor's settlement monitoring data and the EPD's on-site observations, no unusual settlement has been found at the TKOL-I. Nonetheless, the EPD will consider conducting a review on the ground settlement at TKOL-I, when a new afteruse project is to be implemented at this site, for reference by the project proponent in planning and designing the project. The HAD will provide the necessary assistance to the EPD in carrying out the review. As the recommendation has been implemented and will be carried out on an on-going basis, we recommend that this part be deleted from the next progress report.
Para. 125 (Point (c) and (f) of page 72) of PAC Report and Para. 3.40 of Audit Report	When implementing works projects (including those at restored landfills) in future, take measures to ensure that all works requirements are incorporated into the tender documents and avoid making changes to works requirements after contract award.	In general, works departments have to circulate the draft tender documents to the client departments for confirmation of incorporation of all user requirements before tender invitation. The HAD, as works department, has followed such practice and will continue to follow such practice to ensure the incorporation of works requirements in tender documents. The established mechanism to control the project scope under District Minor Works Programme should be strictly adhered to. Any additional work after award of contract has to be endorsed by DC and approved by the relevant authority in the Government. If the request is made by DC, the Administration's intent for budgetary control shall also be clearly communicated to DC. Apart from this, the LCSD has reminded relevant staff

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		of the need to consider carefully the detailed user requirements and incorporate them into the tender documents to avoid unnecessary variation of orders after award of contract.
		For additional works arising after contract award, the HAD will critically assess the additional scope of works and tender advice to client departments on whether the proposed additional works are essential and necessary and on how to deliver the works in a cost-effective way.
		As the follow-up actions on this recommendation will be carried out on an on-going basis, we recommend that this part be deleted from the next progress report.
Monitoring (of non-governmental bodies' afteruse	facilities at restored landfills
Para. 125 (Point (c) to (e) of page 73) of PAC Report	PAC notes that – (c) it is beyond the EPD's expertise to maintain the standards and quality of sports facilities or to monitor a licensee to do so and to ensure that a licensee would	(i) work with the relevant B/Ds to monitor the licensees' compliance
	operate a high-quality facility and maximize the facility utilization;	with licence conditions; (ii) consult the relevant B/Ds and explore the feasibility of
	(d) as some land licence conditions are qualitative in nature, it is difficult for the EPD to assess if the licensees meet such	incorporating quantifiable/ objective criteria when preparing new land licences in future; and
	conditions; and (e) the EPD has not requested all of the licensees to submit audited financial statements.	(iii) consult the relevant B/Ds in formulating guidelines on the circumstances under which licensees will be requested to submit audited financial information for monitoring their

Para. No.	Audit's/PAC's Recommendations	Progress to Date
		operational and financial viability.
		As the recommendations have been implemented and will be carried out on an on-going basis, we recommend that this part be deleted from the next progress report.
Para. 125 (Point (c) of page 74) of PAC Report and Para. 4.19 (a) and (b) of Audit Report	 (a) keep under review the licensees' development progress of afteruse facilities with a view to completing the afteruse facilities in a timely manner; and (b) take measures to monitor the licensees' compliance with licence conditions, including seeking the assistance and support of the relevant B/Ds (e.g. the HAB and the LCSD) if necessary. 	The EPD will continue its efforts to facilitate and monitor the development progress of afteruse facilities. The football training centre commenced its operation on 3 August 2018 while the temporary cricket grounds commenced its operation on 1 September 2018. The EPD will also work with the relevant B/Ds to monitor the licensees' compliance with licence conditions. As the recommendations have been implemented and will be carried out on an on-going basis, we recommend that this part be deleted from the next progress report.
Para. 125 (Point (c) of page 74) of PAC Report and Para. 4.19(c) of Audit Report	Incorporate in the EPD's inspection form specific inspection items related to monitoring of the licensees' compliance with licence conditions.	Apart from regular monitoring and inspections at the restored landfills, the EPD staff also visit the afteruse facilities from time to time to verify the conditions in the licence area. We agree to Audit Report's recommendation and will review and update the existing EPD's inspection form to incorporate essential licence-specific inspection items, so as to further enhance the monitoring mechanism to ensure the licensees' compliance with the licence conditions. As the recommendation will be carried out on an on-going basis, we recommend that this part be deleted from the next progress report.

Para. No.	Audit's/PAC's Recommendations	Progress to Date
Para. 125 (Point (c) of page 74) of PAC Report and Para. 4.19(d) of Audit Report	Explore the feasibility of incorporating quantitative/objective measures (e.g. Key Performance Indicators) in land licences when issuing or renewing licences in future.	To facilitate the monitoring of quality of the recreational facilities provided under the land licences, safeguard the public interest and enable the licensees to better understand the licence requirements, the EPD agrees to Audit Report's recommendation and will consult the relevant B/Ds with a view to exploring the feasibility of incorporating quantifiable/objective criteria when preparing new land licences in the future. As the recommendation will be implemented on an on-going basis, we recommend that this part be deleted from the next progress report.
	 mulate guidelines on the circumstan ncial information	ces for requesting licensees to submit
Para. 125 (Point (c) of page 74) of PAC Report and Para. 4.19(e) of Audit Report	Formulate guidelines on the circumstances for requesting licensees to submit audited financial information for monitoring their operations and financial viability.	The EPD will consult the relevant B/Ds in formulating guidelines on the circumstances under which licensees will be requested to submit audited financial information for monitoring their operational and financial viability. As the recommendation will be carried out on an on-going basis, we recommend that this part be deleted from the next progress report.
Delays in im	plementing Restored Landfill Revitali	sation Funding Scheme
Para. 125 (Point (f) and (g) of page 73 and Point (c) of page 74) of PAC Report	Make additional efforts in implementing the Restored Landfill Revitalisation Funding Scheme (Funding Scheme) with a view to achieving the objective of expediting the development of gainful use at restored landfills so that the community can benefit from them at the earliest opportunity.	The EPD is working closely with the two organisations selected under Batch 1 of the Funding Scheme with a view to taking forward the revitalisation projects as soon as possible. For the revitalisation project at the TKOL-I, the Tung Wah Group of Hospitals (TWGHs) has prepared a Technical Feasibility Statement which has been approved by the DEVB. The

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and Para. 4.36		TWGHs has commenced the process of engaging consultants to carry out the necessary pre-construction work.
of Audit Report		For the revitalization project at the Ma Yau Tong Central Landfill, the Christian Family Service Centre is expected to submit the detailed proposal soon, which will then be considered and assessed by the Steering Committee (SC) on the Funding Scheme.
		The SC considered that the restored landfills under the Funding Scheme should be launched in batches for application by eligible organisations so that the operating details of the Funding Scheme may be refined after taking account of the experience gained from the first batch. The EPD has commenced the initial review of Batch 1 of the Funding Scheme, and aims to report the outcome of the review and recommend proposed refinements to the SC for consideration within 2019.
Need to cond	duct review on measures to address de	velopment constraints at PPVL
Para. 124 (Point (h) of page 73 and Point (c) of page 74) of PAC Report and	Conduct a review on measures to address the development constraints at PPVL as early as possible.	The EPD is actively investigating the feasibility on the provision of necessary infrastructure for the PPVL, and has already started liaising with the relevant Government departments and utility undertakers. In addition, the EPD has started a preliminary engineering appraisal study on how to overcome the development constraints and facilitate the after-use of PPVL in future.
Para. 4.37(a) of Audit Report		As the follow-up actions on this recommendation will be carried out on an on-going basis, we recommend that this part be deleted from the next progress report.

Para. No.	Audit's/PAC's Recommendations	Progress to Date	
Need to cons	Need to consider formulating guidelines on related party transactions		
Para. 125 (Point (i) and Point (c) of page 74) of PAC Report and Para. 4.37(b) of Audit Report	Formulate guidelines for the EPD officers to assess whether related party transactions of a licensee under the Funding Scheme are reasonable and appropriate.	Prior to the commissioning of the Batch 1 revitalisation projects, the EPD will formulate guidelines to assist the EPD staff to assess whether related party transactions proposed by a licensee are reasonable and proper.	
	e lessons learnt from construction of	the Pet Garden	
Para.	In collaboration with the	The HAD stands ready to share the	
3.38(c) of Audit Report	departments concerned, share the lessons learnt from the construction of the Wan Po Road Pet Garden project with the relevant B/Ds and non-governmental bodies with a view to avoiding recurrence of the encountered problems in future afteruse projects at restored landfills.	lessons learnt from the construction of the Pet Garden project with the relevant B/Ds and non-governmental bodies upon referral by the EPD. As the recommendation will be implemented on an on-going basis, we recommend that this part be deleted from the next progress report.	
Need to allo	w sufficient time to consult the EPD b	efore inviting tenders	
Para. 3.58(a) of Audit Report	When implementing works projects at restored landfills (with specific construction requirements and restrictions) in future, allow sufficient time for seeking EPD's advice on design and layout plans before inviting tenders.	The ArchSD has shared its experience in the construction of the Jordan Valley Park (JVP) within the department in July and November 2018 to remind colleagues that when implementing a works project at restored landfills (with specific construction requirements and restrictions) in future, sufficient time should be allowed for seeking EPD's advice on design and layout plans before inviting tenders.	
		As the recommendation will be implemented on an on-going basis, we	

Para. No.	Audit's/PAC's Recommendations	Progress to Date
		recommend that this part be deleted from the next progress report.
Need to info	rm Central Tender Board of subseque	nt substantial design changes
Para. 3.58(b) of Audit Report	When substantial subsequent design changes are found after issue of tenders, report the changes and provide suggested course of actions with justifications to the Central Tender Board for consideration.	The ArchSD has shared its experience in the construction of the JVP within the department in July and November 2018 to remind colleagues that substantial design changes found after issue of tenders should be reported to the Central Tender Board with suggested course of actions and justifications provided. As the recommendation will be implemented on an on-going basis, we recommend that this part be deleted from the next progress report.
Need to shar	re lessons learnt from construction of	JVP
Para 3.58(c) of Audit Report	Identify the lessons learnt from the construction of the JVP and share with the relevant B/Ds and non-governmental bodies with a view to enhance the management of projects at restored landfills in future.	The ArchSD has shared its experience in the construction of the JVP with the relevant organisations in May 2018, so as to enhance the management of projects at restored landfills in future. As the recommendation has been implemented, we recommend that this part be deleted from the next progress report.

Sha Tin Section of Route 8 Progress in implementing the Audit's and PAC's Recommendations

Para. No.	Audit's/PAC's Recommendations	Progress to Date
Part 2: Adm	ninistration of Contract A	
Para. 2.25 of the Audit Report	Audit has recommended that, in implementing a works project in future, the Director of Highways should –	
	(a) take measures to strengthen vetting of a consultant's design, including carrying out appropriate level of independent checking on the design of highway structures (e.g. construction and erection loadings of structures); and	The Highways Department (HyD) amended the Structures Design Manual for Highways and Railways (SDM) in August 2006 setting out appropriate level of independent checking on the design of different categories of new highway structures and the associated modification of existing highway structures by consultants or contractors employed by the Government. The HyD reminded its staff and consultants in May 2018 to continue to strictly follow the requirements of the SDM.
		The Project Administration Handbook for Civil Engineering Works (PAH), which is applicable to all works projects overseen by works departments, was updated in August 2018. One of the revisions is that the consultants are required to seek the works departments' comments on the responses to tenderers' questions or requests before replying to the tenderers. Furthermore, the HyD updated the document entitled "HQ/GN/02 Guidelines for Checking Submissions of Consultants" (HQ/GN/02) in December 2018 to incorporate principles for checking the responses to tender queries prepared by the consultants. The HyD also reminded its consultants in December 2018 to provide a clear and accurate response to tender query and

Para. No.	Audit's/PAC's Recommendations	Progress to Date
		will continue requiring its staff and consultants to strictly follow the relevant requirements and guideline for handling tender queries.
Para. 2.26 of the Audit Report	Audit has recommended that the Director of Civil Engineering and Development should consider providing further guidelines for handling tender queries, including the need to provide a clear and accurate response and the need for a consultant to seek the responsible project department's comments on the response before issue.	For handling tender queries, in August 2018, the guidelines of the PAH was amended to enhance the procedure of handling tender queries under the contracts administered by consultants, which is applicable to all works projects overseen by works departments. The consultants shall seek the works departments' comments, and when necessary, works departments' shall consult policy bureau on the response to tenderers' questions or requests prior to formal issuance to the tenderers.
Para. 2.40 of the Audit	Audit has recommended that the Director of Highways should –	
Report	(a) strictly follow the SPR requirements for contract negotiation and seek the relevant authority's prior agreement to the strategy or bottom line for the contract negotiation before entering into negotiation with contractors or consultants in future; and	
	(b) take measures to ensure the timely conduct of post-completion reviews on major consultancy agreements and major works contracts in future.	The HyD reminded its staff in December 2018 to continue to arrange with the consultants and contractors to timely conduct post-completion reviews on major consultancy agreements and major works contracts.
Para. 97 of the PAC Report (8 th bullet)	The Committee strongly demands the DEVB to explore setting up a mechanism through which the Finance Committee (FC) and/or other appropriate committees of	Under normal circumstances, details of extra-contractual settlement of claims and/or other forms of settlement agreements contain commercially sensitive information, the disclosure of

Para.	Audit's/PAC's Recommendations	Progress to Date
No.	Legislative Council (LegCo) should be informed about details of any extra-contractual settlement and/or other forms of settlement agreements exceeding a certain threshold sum that have been made in respect of major public works projects in order to enhance transparency and monitoring by LegCo on the public works expenditures.	which in the public domain might harm the competitive or financial positions of contractors and can result in the Government's breach of its obligation to not divulge information as provided in contracts. Such disclosure might also prejudice the Government's position in defending against similar claims in legal proceedings. The reporting of extra-contractual settlement of claims in public works contracts to the LegCo would potentially give rise to the above concerns.
		Currently, there is a check-and-balance mechanism in place for approving settlement of any contractual claims including extra-contractual ones. Works departments are required to follow and comply with the other prevailing Government guidelines/ requirements, including the SPRs, and seek approval from the relevant delegated authorities in making any contractual claim settlement even if the Approved Project Estimates of the projects are not exceeded. Furthermore, approved contractual claim settlements will be copied to the Audit for information. If the situation warrants, the Audit will conduct audits and where necessary report the cases to the Public Accounts Committee of the LegCo. We consider that the present mechanism of reporting settled contractual claims including extra-contractual ones to the Audit has
		been working well. That said, we will continue to closely monitor the situation and where necessary carry out review to explore any room for further tightening the control on handling contractual claims.

Para. No.	Audit's/PAC's Recommendations	Progress to Date
Part 3: Adm	ninistration of Contract B and Contr	act C
Para. 3.18 of the Audit Report	Audit has recommended that the Director of Highways should, in preparing documents for a works contract in future –	
	(a) take measures to strengthen the checking of consistency between contract clauses and contract drawings;	The HyD updated the HQ/GN/02 in December 2018 to enhance the checking procedures for contract clauses and drawings, including requiring project team to assign the same officer to carry out checking of related sections amongst different parts of tender documents, with the aim of improving accuracy of the checking. Furthermore, the HyD reminded its staff and consultants in December 2018 to continue to strictly follow the requirements as stipulated in the PAH on Bills of Quantities (BQ) preparation work, including the independent checks required to be conducted by the consultants. Where appropriate, the HyD will consider adopting computer tools e.g. Building Information Modelling in carrying out the checking.
	(b) strengthen the vetting of tender documents regarding contract clauses for the measurement of works (e.g. for tunnelling works); and	See (a) above.
	(c) take measures to ensure compliance with the requirements for preparation of BQ as stated in the Project.	See (a) above.
Para. 3.25 of the Audit Report	Audit has recommended that the Director of Highways should consider conducting more thorough preliminary site investigations for works at critical locations with a view to incorporating more accurate	The Geoguide 2 – "Guide to Site Investigation" published by the Geotechnical Engineering Office (GEO) under the Civil Engineering and Development Department (CEDD) gives guidance on good site

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	information on site conditions for design and tender purposes as far as practicable.	investigation practice for works departments to plan and carry out investigation of the sites. In addition, in accordance with technical circulars – Environmental, Transport and Works Bureau Technical Circular (Works) No. 29/2002 and DEVB Technical Circular (Works) No. 3/2018, works departments are required to submit the ground investigation plan to the GEO for checking, and to submit to GEO and copy to the Project Cost Management Office of the DEVB, the schematic design proposal with relevant information, such as ground investigation data, for review and comment. The HyD will continue to follow the above requirements and guidance to conduct thorough site investigations as far as practicable with a view to incorporating comprehensive and adequate information for design and tender purposes.
Para. 3.38 of the Audit Report	Audit has recommended that the Director of Civil Engineering and Development should – (a) in preparing documents for a works contract in future, take measures to ensure that contract clauses for time programmes (e.g. for facilitation works) are carefully checked to ensure their accuracy and consistency; and	For a works contract involving interfacing works with other contracts, the PAH amended in August 2018 had enhanced the guidelines in expressly requiring the works departments/ consultants to carefully check that the time programmes for interfacing works in all contracts concerned are consistent when preparing tender documents for works contracts involving interface with other contracts. The PAH also requires the consultants to seek the responsible works departments' comments on the time programmes prior to incorporation of the relevant information in the tender documents. When preparing tender documents for

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		such type of contracts in future, the CEDD will continue to comply with the requirements in the PAH and check carefully to ensure that the programmes of the interface works in all the contracts are consistent with one another.
	(b) consider including a requirement in the PAH that, for multi-contract projects, the time programmes for interface works in all contracts concerned should be carefully checked to ensure consistency.	Ditto.
Para. 3.39 of the Audit Report	Audit has recommended that, in preparing documents for a works contract involving interface with other contracts (e.g. facilitation works) in future, the Director of Civil Engineering and Development and the Director of Highways should take measures to ensure that the time programmes for interface works in all contracts concerned are carefully checked to ensure consistency.	The PAH was updated in August 2018, requiring the works departments or their consultants, in preparing tender documents for a works contract involving interface with other contracts, to carefully check that the time programmes for the interfacing works in all the contracts concerned are consistent. The CEDD and the HyD will continue require their staff and consultants to strictly follow all the requirements for interfacing works, including the update of the PAH requiring the consultants to seek the works departments' comments on the relevant time programmes prior to incorporation of such information into the tender documents. The HyD also reminded its staff and consultants in December 2018, in preparing tender documents relating to interfacing works, to strictly follow the above requirements.
Para. 97 of the PAC Report (6 th bullet)	The Committee strongly demands the works departments, in particular the HyD, to review the existing mechanism in vetting the tender documents and consultants' outputs,	Civil engineering construction contract is a very complex legal document containing several inter-related documents each of which plays an important role in defining the

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No.	including but not limited to the designs, accuracy of the tender documents and contract clauses, drawings and responses to tender queries, so that any discrepancies, omissions and irregularities could be identified in time. Consideration should also be given to exploring the use of latest and advanced information technology to assist the relevant staff and consultants in conducting the preparation, vetting and checking processes in the tendering exercises for public works projects.	obligations and responsibilities of the parties concerned or in providing information on the works to be constructed. In recognition of its importance, the Administration highlights in the synopsis of Chapter 5 of the PAH to remind project offices that it is essential to (i) prepare the contract documents of each contract with great care and by an experienced professional who has thorough knowledge of the works to be constructed, and (ii) scrutinize the contract documents for comprehensive coverage, accuracy and consistency with one another before tenders are invited. Sections 1.3 to 1.5 of Chapter 5 also require project offices to exercise care to avoid any ambiguities or discrepancies in tender documents, seek advice from contract advisers on tender documents when genuine doubts emerge and submit tender documents for contracts estimated to exceed \$300M in value to the Legal Advisory Division (Works) of the DEVB for legal vetting prior to calling for tenders. In particular, Section 7.2 of Chapter 5 gives guidance on preparation of Bill of Quantities (BQs). The Administration has also updated this section to specify the need of minimising omitted items as far as practicable and the BQs should undergo a checking process to ensure the completeness and accuracy of the BQ and elimination of major errors. To enhance the accuracy of the BQs prepared by the consultants, the Administration highlights in Section 3.12 of Chapter 6 of the PAH and DEVB Technical Circular (Works)
		No. 7/2017 requesting project offices and consultants to conduct a pre-tender

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		preparation of BQs and use Building Information Modelling technology in project design stages, which can enhance the preparation and/or checking of the BQs. Also, the Administration keeps reminding project offices to duly reflect consultants' performance in their performance reports in accordance with Appendix A and B of DEVB Technical Circular (Works) No. 3/2016 if deficiencies in the quality of tender documents prepared by them are identified. Copies of relevant part of the guidelines are enclosed in Appendix A.		
Part 4: Usage and management of Sha Tin Section				
Para. 4.8 of the Audit Report	Audit has recommended that the Commissioner for Transport should –			
	(a) explore measures to make better use of the spare capacity of Eagle's Nest Tunnel (EN Tunnel) and Sha Tin Heights Tunnel (STH Tunnel) of Sha Tin Section (e.g. whether enhancement of the connecting			
	roads to the two tunnels is needed) to alleviate the traffic congestion at the existing road links between Kowloon and Sha Tin, in particular Lion Rock Tunnel and Tate's Cairn Tunnel;	(i) construction of an additional lane at the approach road from Tai Po Road (Sha Tin Section) southbound leading to Route 8 near Scenery Court and the construction works were completed in 2015;		
		(ii) widening of Tai Po Road (Sha Tin Section) to a dual three-lane carriageway. Funding approval for the project was obtained from the LegCo FC in May 2018. The CEDD has commenced works to widen the section of Tai Po Road		

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		(Sha Tin Section) between Sha Tin Plaza near Sha Tin Rural Committee Road and Man Wo House of Wo Che Estate near Fo Tan Road from a dual two-lane carriageway to a dual three-lane carriageway, for anticipated completion in 2023; and
		(iii) taking forward the strategic highway project of Road T4. The project comprises the construction of a strategic road connecting Tsing Sha Highway and Shing Mun Tunnel Road in the west and Sha Tin Road in the east, providing a road link with dual two-lane carriageway between West Kowloon/Tsuen Wan and Ma On Shan/Sai Kung. The CEDD commenced the investigation study in June 2018.
		The Government is progressively taking forward the above-mentioned road projects with a view to attracting more motorists heading for the urban areas to use Route 8.
	(b) keep under review the progress of the toll rationalisation study with a view to meeting the target of finalising the proposals for the rationalisation of traffic distribution among the six tunnels, including the three land tunnels between Kowloon and Sha Tin, for briefing LegCo Panel on Transport by mid-2018; and	The Transport and Housing Bureau and TD consulted the LegCo Panel on Transport on the proposal to rationalise the traffic distribution among three road harbour crossings and three land tunnels between Kowloon and Sha Tin (including Sha Tin section of Route 8) on 16 November 2018. Since there is a bottleneck at Tai Po Road (Sha Tin Section) which could only be alleviated upon the anticipated completion of the widening works of Tai Po Road (Sha Tin Section) by 2023, it is not advisable at this stage to adjust the tolls of the three land tunnels so as to avoid a substantial increase in the number of

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		motorists using EN Tunnel and STH Tunnel for access to Kowloon, which may result in lengthened traffic queue along Tai Po Road (Sha Tin Section) or even up to Tolo Highway, and in turn affect the overall traffic conditions of New Territories East.
	(c) keep under review the bus and minibus services passing through Sha Tin Section and the factors for introduction of new services as stated in paragraph 4.7, with a view to enhancing the services for better utilisation of this road section.	The TD has proposed seven improvement items for franchised bus routes passing through Sha Tin Section under the Bus Route Planning Programme 2018-19, including introduction of a new special route and service enhancement of six existing routes that pass through the road section concerned. Two of them were implemented on 5 November 2018 and the remaining five items will be implemented in phases from early 2019 onwards. Besides, the TD is studying whether the restriction on red minibuses to operate on Tsing Sha Highway can be relaxed for some road sections.
Para. 4.36 of the Audit Report	Audit has recommended that the Commissioner for Transport should –	
	(a) in collaboration with the Director of Highways, the Director of Electrical and Mechanical Services and the Director of Architectural Services, set out clearly the responsibilities of each member of the Government Monitoring Team (GMT) in monitoring the Tsing Sha Control Area (TSCA) operator's performance;	The TD, in collaboration with other GMT members, has consolidated a list of "GMT Members Monitoring Responsibility for TSCA" on maintenance issues, which was attached to the current TSCA management, operation and maintenance (MOM) contract in March 2018. The TD will also incorporate the monitoring responsibility of GMT members on maintenance issues in the next MOM contract.

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		As the recommendation has been implemented and will continue to be carried out on an on-going basis, we suggest deleting this part from the next progress report.
	(b) take measures to ensure that the TSCA operator complies with the manning level requirement in the MOM contract for all staff under TD's purview, including the administrative and supporting staff;	The TD has started monitoring the Operator's compliance with the manning level requirement for administrative and supporting staff as specified in the TSCA MOM contract since February 2018.
		As the recommendation has been implemented and will continue to be carried out on an on-going basis, we suggest deleting this part from the next progress report.
	(c) in collaboration with the Director of Architectural Services, take timely actions to monitor the building maintenance staff manning level of the TSCA operator;	ArchSD has started monitoring the Operator's compliance with the manning level requirement for building maintenance staff since January 2018. ArchSD also checked the manning level of building maintenance staff since the contract commencement (there was a shortfall in building maintenance staff subject to liquidated damage (LD) between 1 March 2014 and 14 September 2014) and the TD correspondingly collected LD amounting to about \$120,000 from the Operator in March 2018. There was no shortfall of building maintenance staff subject to LD in other contract period up to September 2018. As the recommendation has been implemented and will continue to be carried out on an on-going basis, we

Para. No.	Audit's/PAC's Recommendations	Progress to Date
	(d) keep under review the TSCA operator's performance as assessed by other GMT members for overseeing the overall performance of the operator and providing reference for evaluating its future bids of government MOM contracts;	The TD and Electrical and Mechanical Services Department (EMSD) have been making quarterly assessment on TSCA operator's performance since contract commencement. The HyD and ArchSD have also started composing assessment report of the TSCA operator's performance on aspects under their respective purview on a quarterly basis since December 2017. The assessment results have been passed to the TD for compilation of an overall quarterly performance assessment report. The overall performance reports on the Operator will provide reference for evaluating the past performance of the Operator in its future bids for government MOM contracts.
		of TSCA, the GMT members have made it a practice to regularly meet approximately every three months starting from July 2018 to discuss the MOM issues of the control area. The GMT members also hold review meeting with the Operator roughly on a quarterly basis to discuss the Operator's performance with regard to the MOM contract.
		As the recommendation has been implemented and will continue to be carried out on an on-going basis, we suggest deleting this part from the next progress report.
	(e) clearly specify whether the staff manning level requirement is for mandatory compliance by operators or for reference purpose in future tender documents and MOM contracts;	In future tender documents and MOM contracts to be prepared in or beyond 2019, the Government will clearly stipulate that the manning level of "leave relief" staff is for reference only whereas the manning level of

Para. No.	Audit's/PAC's Recommendations	Progress to Date
Para. No.	(f) in collaboration with the Director of Electrical and Mechanical Services, strengthen monitoring actions to ensure that the TSCA operator fully complies with the electrical and mechanical (E&M) staff manning level requirement in the MOM contract;	on-duty staff is for mandatory compliance by the Operator. As the recommendation will be addressed in the next MOM contract, we suggest deleting this part from the next progress report. The TD and EMSD have been taking various measures including imposing LD for staff shortfall as well as urging the Operator to take follow up action such as conducting recruitment exercises and increasing staff salary and benefits. Besides, the TD and EMSD have implemented a number of measures in new MOM contracts for Government tunnels since 2017, including introducing a technical apprentice rank to bring new blood to the industry as
		well as reviewing the work experience requirement of E&M staff to suitably reflect entry requirement. These changes will be included in the next TSCA's MOM contract commencing in September 2019. At the same time, the Government will introduce new contract clauses for levying administrative charge on the Operator for its failure to meet the required manning level for staff subject to LD in order to better manage and regulate the Operator. As the recommendation has been implemented and will continue to be carried out on an on-going basis, we suggest deleting this part from the next progress report.

Para. No.	Audit's/PAC's Recommendations	Progress to Date
	(g) in collaboration with the Director of Electrical and Mechanical Services and the Director of Architectural Services, take timely actions in calculating and imposing LD for the TSCA operator's shortfall of E&M staff and building	The TD, in collaboration with the EMSD and ArchSD, has taken vigorous follow-up actions and will regularly complete checking of relevant records submitted by the Operator for imposition of LD (if any) on the Operator's staff shortfall.
	maintenance staff; and	As at November 2018, the TD has already collected LD for shortfall of E&M staff up to August 2018 while the ArchSD has already checked relevant attendance records submitted by the Operator up to September 2018. Except for the period between 1 March 2014 and 14 September 2014, there was no shortfall of building maintenance staff subject to LD in other contract period up to September 2018.
		As the recommendation has been implemented and will continue to be carried out on an on-going basis, we suggest deleting this part from the next progress report.
	(h) set out clearly the methodology for calculating LD for an operator's staff shortfall in future MOM contracts.	The TD has already set out clearly the methodology for calculating LD for an operator's staff shortfall in recently renewed MOM contracts for Government tunnels. The Government will build in appropriate LD clauses in future MOM contracts for government tunnels and control area, including the next TSCA MOM contract commencing in September 2019 which will clearly set out the calculation methodology of LD on operator's staff shortfall.
		As the recommendation will be addressed in the next MOM contract, we suggest deleting this part from the next progress report.

Para. No.	Audit's/PAC's Recommendations	Progress to Date
Para. 4.37 of the Audit Report	Audit has recommended that the Director of Highways and the Director of Architectural Services should evaluate the performance of the TSCA operator in the area of work under their departments' respective purview at least once every six months, and inform the TD of the assessment results.	The HyD and ArchSD have started conducting quarterly assessment of TSCA Operator's performance on aspects under their respective purview since December 2017. The assessment results have been provided to the TD for compilation of the overall quarterly assessment reports on Operator's performance. The HyD and ArchSD will continue to conduct the assessment. As the recommendation has been implemented and will continue to be carried out on an on-going basis, we suggest deleting this part from the next progress report.
Para. 97 of the PAC Report (11 th bullet)	The Committee strongly urges the TD to – (a) consult the respective DCs and relevant stakeholders thoroughly in advance on proposed new traffic arrangements before a major transport network and infrastructure is opened in order to ensure that these new arrangements could be implemented in a timely manner to address the needs of the local population; and	Under the established practice, the TD and the responsible departments will duly consult the respective DCs and relevant stakeholders on any proposed new traffic arrangements before the commissioning of a major transport network and infrastructure project.
	(b) regularly review the usage of any new transport network and infrastructure and update the respective DCs and the LegCo Panel on Transport of the usage figures. In case of persistent under-utilization, more frequent consultation with the respective DCs and the LegCo Panel on Transport should be made on the need of additional improvement measures.	The TD has been closely monitoring the traffic conditions of the transport network and major roads, so that improvement works and planning for new road infrastructure projects can be taken forward in a timely manner to alleviate traffic congestion and cope with new traffic demands. As for newly built roads, ample design capacity will be provided to allow for further traffic growth in the longer term. The TD noted the

Para. No.	Audit's/PAC's Recommendations	Progress to Date
		recommendation and will consider updating the respective DCs and the LegCo Panel on Transport on the road usage situation where necessary and on a case-by-case basis.
Para. 98 of the PAC Report (3 rd bullet)	The Committee strongly urges the TD, HyD, EMSD and ArchSD to review MOM contracts and other similar contracts under their respective purview which have stipulated the manning level requirements of staff to ensure that the contractors comply with such requirements and, in cases of non-compliance, to take follow-up actions in a timely manner in order that the services will not be adversely affected.	
		with such requirements in respect of building maintenance and, if necessary, will take appropriate actions with other

Para. No.	Audit's/PAC's Recommendations	Progress to Date
		GMT members against contractor's non-compliance according to contract provisions.
		EMSD's comments –
		The EMSD has reviewed MOM contracts and other similar contracts under its purview, which have stipulated manning level requirements of E&M staff, and has been implementing monitoring measures to ensure the contractor's compliance with such requirements. If shortfall of E&M staff is found, the EMSD will take appropriate follow-up actions with relevant government department according to the contract provisions.

2016 Edition

CHAPTER 5

CONTRACT DOCUMENTS

The parts of the PAH shown in blue and bold should only be updated by Works Branch of Development Bureau.

Rev	Issue Date	Amendment Incorporated
First Issue	December 2016	NA
1	27 February 2017	Amd No. 1/2017
2	25 August 2017	Amd No. 3/2017
3	19 December 2017	Amd No. 5/2017
4	16 July 2017	Amd No. 2/2018

- (h) General Specification (GS) (see Paragraph 6.1),
- (i) Particular Specification (PS) (see Paragraph 6.2),
- (j) Standard Method of Measurement (SMM),
- (k) Particular Preambles (if any),
- (1) Bills of Quantities (BQ) (see Paragraph 7.1)
- (m) Drawings (see Paragraph 8.1), and
- (n) Any relevant pre-contract correspondence with the Contractor (e.g. tender addendum, circular letters to tenderers) (see Paragraphs 5.2, 6.14.4, 7.2.1, 7.3, 7.6 & 8.1.1 of PAH Chapter 6).

Usually, only documents (d) to (n) listed above, the letter of acceptance of the tender and the Articles of Agreement form the contract documents (see Paragraph 8.1.1 of PAH Chapter 6).

The type or edition of document used shall be the current version as promulgated by DEVB TCWs or other appropriate circular. Reference should also be made to the current corrigenda issued to the GS and the SMM (see Paragraph 5.2 of PAH Chapter 6).

1.3 CONSISTENCY AMONGST DOCUMENTS

Care should be taken to avoid any ambiguities or discrepancies in the documents which form a contract as contractual claims and disputes are often caused by inconsistencies in or between the documents. If any ambiguities or discrepancies exist, it should be noted that the provisions of the SCC prevail over those of the GCC, which in turn prevail over the PS and the Drawings, which in turn prevail over the GS. GCC Clause 5(1) and GS Clause 1.01 are relevant in this aspect.

In the drafting of SCC or PS clauses, reference should be made whenever appropriate to the GCC and the GS, using phrases such as:

- (a) "Pursuant to General Conditions of Contract Clause", or
- (b) "GS Clause is deleted and replaced by" etc.

1.4 COMMENTS ON DOCUMENTS BY CONTRACT ADVISERS

The responsibility for ensuring that tender documents are properly prepared rests with the professional officers handling the project. They may however seek advice from Contract Advisers on tender documents when genuine doubts emerge. When seeking such advice the officer concerned shall inform the Contract Adviser of the doubts he has and the aspects of the case on which he wants advice (see Paragraph 1.5.1 of this Chapter).

1.5 LEGAL VETTING OF TENDER DOCUMENTS

1.5.1 Contracts Estimated to Exceed \$300M

All tender documents for contracts estimated to exceed \$300M in value must be submitted through the appropriate Contract Adviser to the Legal Advisory Division (Works) of DEVB (LAD(Works)/DEVB) for legal vetting prior to calling for tenders. Before submission to LAD(Works)/DEVB, it is advisable to request the relevant Contract Adviser to comment on the documents. Comments made by the relevant Contract Adviser on the draft should be attached for LAD(Works)/DEVB's information.

The tender documents to be submitted shall include the following:

- (a) Special Conditions of Tender,
- (b) Form of Tender and Appendix thereto (if these have been altered from the standard version shown at Appendix 5.1),
- (c) Articles of Agreement (if these have been altered from the standard printed version),
- (d) Special Conditions of Contract,
- (e) Particular Specification, and
- (f) Bills of Quantities, including General and Particular Preambles.

A memo shall accompany the tender documents, drawing attention to the following:

- (a) SCT clauses and SCC clauses together with reasons for their incorporation,
- (b) alterations, if any, to the standard versions of the Articles of Agreement and the Form of Tender and Appendix thereto, and
- (c) any clause in the PS, any item in the BQ, or any other matter relating to the tender documents or to the Contract which may have significant contractual or financial implications.

LAD(Works)/DEVB will consider these documents (retaining a copy for future reference) and may recommend amendments they consider advisable to the works division/regional office concerned, who should incorporate such amendments as necessary into the documents before calling for tenders. The vetting by LAD(Works)/DEVB will take at least three weeks and provision should be made in the programme for tender preparation.

If owing to urgency, or some other reasons, the documents cannot be submitted through Contract Adviser then the reason for the same should be explained in the covering memo to LAD(Works)/DEVB. However, action should then be taken to forward the comments made by Contract Adviser as soon as they are received.

1.5.2 Design and Build Contract

The Administrative Procedures issued under DEVB TCW No. 4/2015 should be followed as closely as possible. In particular, the procedures laid down in the "Guidance Notes on the Preparation of the Employer's Requirements" (Appendix C of the Administrative Procedures) should be followed in order to avoid any unnecessary design changes after the contract is awarded. Prior approval of DEVB shall be obtained if the Procedures are not to be followed because of special consideration given to individual cases. The legal vetting requirement as described in Paragraph 1.5.1 applies equally to design and build contracts. The Administrative Procedures can be found on the DEVB website (under Publications and Press Releases\Publications\Standard Contract Documents\).

516/70/03 dated 22.11.2013.

7.2 PREPARATION OF BILLS OF QUANTITIES

The rules for preparing BQ are contained in Part III of the SMM and they should be strictly followed. In accordance with the SMM, a BQ will comprise the following:

- General and Particular Preambles
- Bill No. 1 : Preliminaries
- Bill No. 2:

) for works items,
) see guidance below.
- Bill No. :
- Bill No. : Site Safety and Environmental Management *(a)
- Bill No. : Daywork
- Bill No. : Prime Cost and Provisional Sums
- Grand Summary.
- *(a) This Bill is to be provided for all appropriate tenders as required under ETWB TCW No. 19/2005, the Interim Guidance Note on Administration of Environmental Management and Pay for Safety and Environment Scheme for Public Works Contracts promulgated under SETW's memo ref. (014G7-01-1) in ETWB(W) 517/91/01 dated 19.6.2006.

Separate bills may be considered, at the discretion of the project engineer, for work items charged to different financial votes. When a lump sum form of contract is used, the provisional quantities are included in the Bills wherever it is appropriate and sensible to do so. Individual items to be remeasured can be mixed in with the "firm" items, or a whole section can be shown separately and described as provisional. The items in each bill should be grouped into the appropriate section of Part V of the SMM in the order shown. A sample for the Grand Summary is given at Appendix 5.5.

Copies of the SMM have been issued to all the approved contractors on the DEVB Lists and it needs not be reproduced in contract and tender documents.

Specimen BQ items provided in DEVB TCWs for various subjects such as site cleanliness and tidiness, preservation and protection of preserved trees, Professional Indemnity Insurance for the Works, etc. should be adopted where applicable.

All works items should be included in the BQ and omitted items should be minimized as far as practicable. The BQ should undergo a checking process to ensure the completeness and accuracy of the BQ and elimination of major errors. This would facilitate competitive tendering, reduce resources for valuation of omitted items and minimize the disputes arising from the valuation of omitted items. (Audit Report No. 53 Ch. 3 - http://www.aud.gov.hk/pdf_e/e53ch03.pdf)

7.3 PREAMBLES TO THE BQ

A set of standard clauses for the "General Preambles to the Bills of Quantities" is

CHAPTER 6

TENDER PROCEDURE

The parts of the PAH shown in blue and bold should only be updated by Works Branch of Development Bureau.

Rev	Issue Date	Amendment Incorporated
First Issue	December 2016	NA
1	29 May 2017	Amd No. 2/2017
2	19 December 2017	Amd No. 5/2017
3	16 May 2018	Amd No. 1/2018
4	16 July 2018	Amd No. 2/2018

3.8 LANGUAGES TO BE USED FOR TENDER SUBMISSIONS

Article 9 of the Basic Law stipulates that "in addition to the Chinese language, English may also be used as an official language by the executive authorities, legislature, and judiciary of the Hong Kong Special Administrative Region". It is therefore inappropriate to state in the tender notices and tender documents that tenders should be submitted in English.

3.9 MINIMUM WAGE REQUIREMENTS

The former S for Tsy in his memo ref. (6) in FT 53/88/2 dated 28.2.2000 announces that departments should not stipulate minimum wage requirements in their tender exercises. If departments would like to secure quality services, more effective means should be used, e.g. by specifying in detail the qualifications, experience, training and skills required of the personnel concerned; requesting tenderers to provide references from their previous clients; or using a marking scheme for tender evaluation. Nevertheless, if a department really considers it essential to stipulate minimum wage requirements in a particular tender exercise, it should make a submission with full justifications to the Central Tender Board for prior approval (i.e. before tendering). This will prevent the need to cancel the tender exercise if the Board is not satisfied with the justifications provided.

3.10 NOT USED

3.11 MAXIMUM NUMBER OF CONTRACTS TO BE UNDERTAKEN BY THE SAME CONTRACTOR

There are occasions when procuring bureaux/departments invite tenders for more than one contract in a tender exercise and impose a restriction on the maximum number of contracts each tenderer may secure. Some procuring bureaux/departments have also imposed a restriction on the maximum number of a particular type of contracts (which may be tendered out at one go in the same tender exercise or separately in different tender exercises) that a contractor can undertake simultaneously. SFST in his memo ref. FT 53/88 Pt. 3 dated 18.11.2004 required Controlling Officers to revisit the need and justification for setting such a restriction. In particular, for tendering of contracts covered by WTO GPA, the procuring bureaux/departments should ensure that such restriction is legally in order and seek legal advice when necessary if they wish to impose such a restriction.

3.12 CONTROL OF OMITTED ITEMS AND SUBSTANTIAL CHANGES IN QUANTITIES

To avoid the occurrence of omitted items and substantial changes in quantities during construction, the following quality assurance procedures should be adopted:-

(a) In general, the Standard Method of Measurement (SMM) should be followed in the preparation of the BQ. If it is necessary to amend the method of measurement, a Particular Preamble (PP) to that effect should be prepared and included in the BQ in accordance with Rule 10 in Part III of the SMM. Prior approval for the incorporation of the PP (for any method of measurement

which deviates from the SMM), as well as any drawings clarifying or defining the method of measurement, should be obtained from an officer at D1 rank or above administering the contract according to Section 7.1 of Chapter 5. Such request and approval must be properly minuted and documented in the project file for future reference. Besides, the project officer should confirm such modified method of measurement in writing with the officers responsible for the preparation of the BQ, in case the PP and the BQ are prepared by different officers. Close liaison between the design team and the taking-off team should be maintained to ensure mutual understanding of the documents and any changes made to the SMM.

- (b) A pre-tender cross-checking procedure should be introduced in the preparation of BQ. An officer in the rank of engineer, quantity surveyor, senior engineer, senior quantity surveyor or other equivalent professional ranks, not being the officer who actually prepared the quantities, should make a bulk checking on the quantities of the cost-significant items (items which carry significant implication on contract expenditure) in the BQ against the tender drawings/specifications, or against the quantity of other related items (i.e. items with quantities comparable to or bearing a well recognized ratio to the quantities of the items being checked) to identify possible omitted items and problems arising out of substantial changes in quantities. Examples of 'bulk checking' are (i) volume of excavation against volume of soil disposal and deposition; (ii) area of formwork wall against area of wall tiles; and (iii) number of moving of piling rig against the total number of piles shown in the When drawing up a list of the cost-significant items, the drawings, etc. concerned officer should take into consideration the nature and size of the works, the value of the items and the likelihood of future changes to the relevant items. Sufficient time should be allowed to conduct the bulk checking. Any mistake/problem identified in the checking process should be rectified before the issue of tender documents.
- (c) The above procedures have been prepared mainly for those projects administered by in-house project team. For those projects administered by Consultants, the Consultants shall be required to adopt similar procedures to ensure the quality of BQ and PP and submit their proposed procedures to the Director's Representative for agreement. Besides, if resources permit, project office should conduct spot-checking on the quantities of some selected cost significant items after the BQ has been prepared by the Consultants. Such spot-checking conducted by the project office should be properly documented.
- (d) Apart from the above, an officer of the project office at a rank not lower than D1 should chair a meeting to vet the BQ and PP prepared and to ensure all the checking and cross-checking procedures have been duly completed and documented. For those projects administered by the Consultants, the Consultants shall assign one of their senior managers to attend the meeting.

No tender invitation should be carried out without undergoing the above procedures. Similar review and approval procedures should also be adopted for any subsequent changes made by tender addenda, subject to the need for a formal meeting required in (d) above to be decided by the chairman.

CHAPTER 5

CONTRACT DOCUMENTS

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1	27 February 2017	Amd No. 1/2017
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4	<u>16 July 2017</u>	Amd No. 2/2018

SYNOPSIS

This Chapter provides a handy reference to the various standard documents, forms and information that are regularly used in the preparation of contract documents for civil engineering works. In some cases, standard forms and exact wording to be included in contract documents are reproduced in the Chapter. However, where a printed version of a standard document is available or where the information is contained in a well-known document, the Chapter makes reference to such documents or source rather than reproducing them. Standard documents referred to in this Chapter should be of the latest editions of the General Conditions of Contract for Civil Engineering Works, Standard Method of Measurement for Civil Engineering Works, General Specification for Civil Engineering Works, Sub-contract Articles of Agreement and Conditions for Civil Engineering Works, Contractor Management Handbook and Construction Site Safety Manual. The information in this Chapter would also be useful in the preparation of documents for term contracts.

A contract for civil engineering construction is a very complex legal document containing several inter-related documents each of which plays an important role in defining the obligations and responsibilities of the parties concerned or in providing information on the works to be constructed. It is therefore essential that the contract documents for each contract are prepared with great care and by an experienced professional who has thorough knowledge of the works to be constructed. The documents forming a contract must be scrutinized for comprehensive coverage, accuracy and consistency with one another before tenders are invited.

香港特別行政區政府

The Government of the Hong Kong Special Administrative Region

政府總部 發展局 工務科



Works Branch
Development Bureau
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Ref : **DEVB(W)** 430/80/01

Group : 2, 5, 6

1 December 2017

Development Bureau

Technical Circular (Works) No. 7/2017

Adoption of Building Information Modelling for Capital Works Projects in Hong Kong

Scope

This Circular sets out the policy and requirements on the adoption of Building Information Modelling (BIM) technology.

2. This Circular applies to works either by in-house government staff, consultants or contractors.

Effective Date

3. This Circular takes effect on **1 January 2018.**

Effect on Existing Circulars and Circular Memoranda

4. This Circular has no effect on existing circulars.

Background

- 5. In its meeting in April 2013, Works Policies Coordination Committee (WPCC) endorsed the proposal to adopt an incremental strategy in using BIM in public works projects. Pilot projects with relatively complex building and/or structural works, and of different nature (such as water/sewage treatment plant, various building projects, etc.) were to be selected for trial with a view to obtaining more information on the performance of the technology in public works projects in various aspects.
- 6. In 2014, WPCC endorsed the proposal to promote wider use of BIM in different stages of public works projects of any nature, scale or complexity and explore the use of BIM for asset management so as to enable staff of Works Departments (WDs) from senior management to frontline staff to appreciate the benefits of the technology and acquire the hands-on experience.
- 7. Under the endorsed proposal, WDs should continue to provide training to their staff from introductory level to advanced level for smooth delivery of pilot projects and to establish a pool of colleagues capable of building up and administering BIM models.
- 8. The Government is firmly committed to the promotion and adoption of BIM technology in capital works projects with a view to enhancing the design, construction, project management, asset management and improving the overall productivity of the construction industry. The 2017 Policy Address has stated that Government will actively seek to require consultants and contractors to use this modelling technology when undertaking design of major government capital works projects from 2018 onwards. This Circular sets out the details of this Policy Address initiative.

Policy

9. Capital works projects with project estimates more than \$30 Million¹ shall use BIM technology. The policy is applicable for projects in the investigation, feasibility, planning, design or construction stages in the Capital Works Programme irrespective of the modes of delivery as detailed in the ensuing paragraphs. For entrustment works, subvented capital works projects and works that are undertaken by private parties but will be handed back to the Government for maintenance, the BIM adoption policy is covered in paragraph 16.

BIM Adoption for Government Projects

Investigation, Feasibility and Planning Stage

10. Sometimes a detail information model may not be required at the early stage of a project or has little reference value at subsequent stages. Thus the use of BIM is **optional** for projects in the investigation, feasibility study and planning stage. However WDs should critically review the project technical and information requirements, and if there is benefit of using BIM at this stage, it can be so used.

Design Stage

11. All projects to be designed under Design and Construction consultancy agreements (DC) or Investigation, Design and Construction consultancy agreements (IDC) with technical and fee proposals to be invited on or after 1 January 2018, and all in-house projects submitted in 2017 CWRAE at Cat B- status, the use of BIM technology is **mandatory**.

Project estimate data recorded in the FSTB Capital Works Expenditure database.

12. Existing Cat B- projects with construction work tenders to be invited before 1 January 2019, the use of BIM is **optional** in the design stage. For other existing Cat B- projects, the use of BIM in the design stage is **mandatory**².

Construction Stage

- 13. All construction works contracts with tender to be invited on or after 1 January 2018 shall use BIM. For contracts that do not adopt BIM in the design, the use of BIM shall at least cover the requirement for an as built BIM model.
- 14. For the avoidance of doubt, this requirement applies also to Design-Build and Design-Build-Operate projects.

Asset Management

15. In addition to enhance productivity and reduce risks and costs of our capital works projects, BIM technology can also optimize operation and maintenance. The development of this branch of the technology is fast and handover of information models for operation and maintenance becomes standard practice. WDs should critically review their departmental asset management strategy in order to leverage the technology to enter into the digital built environment.

-

² If detail design for a project has commenced and change to adopt BIM uses may causes substantial delay, WDs may apply exemption from Heads of WDs.

BIM Adoption for Entrustment Projects, Subvented Projects and Private Projects to be Handed Over to Government

16. This BIM technology adoption policy is also applicable to entrusted project within Government departments. For projects entrusted to organizations outside Government (Airport Authority, MTR Corporation Limited, private developer etc.), subvented projects and private projects to be handed over to Government, the scope of BIM implementation should be aligned with the BIM adoption/implementation policy of the organisations. However, WDs shall encourage these organizations to use BIM technology as far as practicable.

Mandatory BIM Uses

17. A number of mature BIM uses have been identified and a list of mandatory and optional BIM uses in **Annex 1** should be implemented in capital works projects. To keep up with the fast BIM technology development, the BIM uses in works projects will be reviewed and updated from time to time.

Exemption

18. On exceptional grounds such as serious contractual implications, substantial impact on project delivery or projects of little technical content³, the Heads of WDs may exempt the adoption of BIM technology as required under this Circular. WDs shall appropriately keep records on the approvals for exemptions with detailed justifications.

DEVB TC(W) No. 7/2017

Project's main scope of work has little technical content such as operation of public fill banks, paving and painting works, slope maintenance works, greening works, maintenance works under term contracts and procurement of vehicles.

Contractual Requirements

19. Contractual provisions adopted in pilot projects may continue to be used until advised otherwise. To cater for cases where small consultant or contractor firms may not be very well equipped with BIM expertise, provisions will be stipulated in the agreement or contract allowing the consultant or contractor to engage BIM sub-consultant or sub-contractor to assist them. The agreement or contract shall also contain terms requiring the consultant or contractor to train up a number of staff of the employer/their staff and their sub-consultant/sub-contractor staff during the assignment. the Construction Industry Council (CIC) has reserved a total of about 380 BIM training places of different levels⁴ in year 2018 for WDs to allocate to their consultants/contractors successfully awarded the Agreements/Contracts, the additional training requirement should also be included. Sample provisions for these requirements are enclosed in **Annex 2** for reference. CIC training provisions for 2019 and onwards will be updated separately by Circular Memoranda.

Enquiries

20. Enquiries on this Circular should be addressed to Chief Assistant Secretary (Works) 4.

(C K HON) Permanent Secretary for Development (Works)

The CIC will provide BIM basic modelling courses and BIM discipline-specific advanced modelling courses of about 380 training places in 2018. These training places will be allocated by WDs free of charge to a limited number of staff of the consultants and contractors and to be approved by the Director/Engineer.

BIM Uses

1. Works Departments shall adopt the stipulated mandatory BIM uses in respective stages of a project. Works Departments may adopt the optional BIM uses as and when necessary.

	BIM Use	Investigation, Feasibility and Planning	Design	Construction
1	Design Authoring	0	M	M
2	Design Reviews	0	M	M
3	Existing Conditions Modelling	0	О	M
4	Site Analysis	О	M	
5	3D Coordination		M	M
6	Cost Estimation	0	О	0
7	Engineering Analysis		O	0
8	Facility Energy Analysis		O	0
9	Sustainability Evaluation	О	О	0
10	Space Programming	О	О	
11	Phase Planning (4D Modelling)		O	M
12	Digital Fabrication		О	0
13	Site Utilization Planning			0
14	3D Control and Planning			0
15	As-Built Modelling			M
16	Project Systems Analysis			0
17	Maintenance Scheduling			0
18	Space Management and Tracking			0
19	Asset Management			0
20	Drawing Generation (Drawing Production)		M	M

Legend:

- M Mandatory BIM Use for the mentioned stage, including that carried forward from previous stage.
- O Optional BIM Use

2. Explanations of each of the above BIM use shall be referred to the latest version of the BIM Project Execution Plan of the Construction Industry Council or that of the Penn State (http://bim.psu.edu/uses/), if it cannot be found in the former document.

Organization, Training and Sub-contracting Requirements

BIM Team Structure

The Consultant/Contractor* shall propose and establish a BIM team that are appropriate for the scale and complexity of the Assignment/Contract*, highlighting key roles and responsibilities of each position, within [14] calendar days after commencement of Assignment/Contract*. The team shall be led by a BIM team leader who holds a key position in the Consultant/Contractor's* project team structure. The BIM team shall include sufficient and technically competent resources in order to complete all BIM tasks and deliverables specified in the Assignment/Contract*. Notwithstanding, the BIM team shall at least comprise [3] staff well trained in relevant disciplines. The BIM team leader shall either have corporate membership of an appropriate professional institution or shall have [5] years relevant post-qualification experience plus university degree or equivalent in an appropriate engineering discipline. The BIM team leader shall have a minimum of [3] years of practical experience in management of BIM projects or a professional member of the Hong Kong Institute of Building Information Modelling (HKIBIM) or equivalent. The disciplinary BIM coordinators shall have [3] years related construction project experience. The coordinators shall have a minimum of [1] year practical experience in BIM projects or an associate member of the HKIBIM or equivalent.

The BIM team leader shall be responsible for the overall BIM managements and process controls. The BIM team leader shall delegate BIM coordinator(s) for handling BIM tasks such as BIM modelling, collaborate information exchange amongst related stakeholders and maintain a drawing/information register to record the information to be incorporated in the model(s).

For any proposed staff movement or change in the BIM team, the Consultant/Contractor* shall provide a CV of the replacement personnel together with evidence of equivalent BIM competency to the Director/Engineer* within [7] calendar days for approval.

BIM Sub-Consultant/Sub-Contractor*

If the Consultant/Contractor* does not have the necessary expertise, the Consultant/Contractor* shall engage a sub-consultant/sub-contractor* with suitable expertise for the performance of BIM related tasks. Consultant/Contractor* intends to or is required to sub-contracts the BIM works to a BIM sub-consultant/sub-contractor*, the Consultant/Contractor* shall obtain approval from the Director/Engineer* before formal engagement and shall indicate this clearly in the project team structure. staff members The positions of the from the BIM sub-consultant/sub-contractor* shall also be indicated clearly in the BIM team organisation structure.

Additional BIM Training Requirements for Courses Offered by the Construction Industry Council

The Consultant/Contractor* is required to nominate his staff or sub-consultant/cub-contractor*'s staff to attend, within [6] months from the commencement of the Assignment/Contract*, training courses organised by the Construction Industry Council as follows:

- [4]#staff members to attend the Building Information Modelling Basic Modelling Courses and
- [4]#staff members to attend the Building Information Modelling discipline-specific Advanced Modelling Courses.

The Consultant/Contractor* shall liaise with the Construction Industry Council for the schedule of the above courses and shall obtain necessary approval of the nomination from the Director/Engineer* before the commencement of the training courses.

- * Delete as appropriate
- # Number will depend on the actual number of assignments/contracts awarded in a year and is subject to change.

CON	SULTANTS PERFO	RMANCE REPOR	T										
Part I	I - Detailed Assessm	ent of Performance											
Item	Aspects of Performance			VG	G	S	P	VP	NA	Max. Score	Applicable Max. Score	Consultant's Score	Weighted Score
A.													
1	Feasibility / Investi	gation Stage (EAC	CSB) or Worksta	age :	1/2 (AA	CSB	5)					
1.1	Recommendations												
(a)	Quality of recomme	ndation		\circ	\circ	0	0	\circ	⊚	8	0	0	
(b)	Technical considerat			\circ	\circ	0	0	\circ	⊚	7	0	0	
(c)	Consideration of envergers of envergers of the consideration of the consideration of the consideration of envergers of the consideration of the consideration of envergers of the consideration of envergers of the consideration of the consid			\circ	\circ	\circ	0	0	\odot	5	0	0	
(d)	Consideration of alte	ernatives and innov	ative ideas	0	\circ	0	0	0	\odot	7	0	0	
1.2	Consultation and pul	olic engagement		0	0	0	0	0	\odot	4	0	0	
1.3	Cost estimates & qua	ality of reports		0	0	0	0	0	⊙	9	0	0	
	Stage period :		month(s)							40	0	0	0
2	Design and Contra	ct Stage (EACSB)	or Workstage 3	3/4 (2	AAC	SB))						
2.1	Design solutions												
(a)	Quality of design	Quality of design			\circ	\circ	\circ	\circ	\odot	8	0	0	
(b)	Technical consideration			0	0	0	0	0	\odot	6	0	0	
(c)	Consideration of environmental friendliness, energy efficiency, health & safety, and life cycle costs			0	0	0	0	0	\odot	5	0	0	
(d)	Consideration of alternatives and innovative ideas			\circ	\circ	\circ	\circ	\circ	\odot	3	0	0	
2.3	.2 Consultation and public organization (9	0	Ø	0	Ø	Ó	~~	~~°	~~	\sim
2.3	Cost estimates & quality of tender documents/drawings (Note 5)			0	0	\circ	0	0	•	10	0	0	
2.4	Tender assessment			्	्	<u>)</u>	\circ)	<u>)</u>	55	0	0	
	Stage period : month(s)						40	0	0	0			
3	Construction Stage	(EACSB) or Wor	kstage 5/6 (AAC	CSB)								
3.1	Supervision of contr	ractors		0	0	0	0	0	\odot	10	0	0	
3.2	Administration of contracts		0	0	0	0	0	\odot	6	0	0		
3.3	Recruitment, supervision and administration of site staff		0	0	\circ	0	0	•	6	0	0		
3.4	Financial control of contracts			0	0	\circ	0	0	•	5	0	0	
3.5	Certification of interim payments/final accounts			0	0	\circ	0	0	•	5	0	0	
3.6	6 Handling of contractor's claims			0	0	0	0	0	•	4	0	0	
3.7	7 Provision of record drawings/manuals/other records			0	0	\circ	0	0	•	4	0	0	
	Stage period : month(s)									40	0	0	0

Consultation materials	Consultation materials including presentation materials,
	models, animation, drawings, plans and figures which are
	legible, appealing to the readers, allowing the readers to
	visualize conceptual schemes proposed and in layman's
	terms which are also suitable for the general public

The assessment should be based on the consultants' performance in the process of consultation and public engagement, i.e. whether the consultant has diligently considered all stakeholders' views and come up with balanced recommendations/design solutions. The assessment on consultants' performance should not be based only on the end results.

(c) <u>Cost estimates & quality of tender documents/drawings</u> (*)¹

Criteria	Description
Cost estimates	Comprehensive, realistic, up-to-date and accurate (excluding factors outside consultants' control) with sufficient details to support the recommendations & deliverables including any cost reduction and expenditure levelling
Contract arrangements	Select the most suitable contract packaging arrangements and types of contract for the works
Consultation	Consult and incorporate as appropriate comments from authorities, government departments and stakeholders
Quality	Contract documents and drawings which are complete, adequate and comprehensive for the works
Timeliness	Submit contract documents in time to meet the construction programme

(*)¹ Become a critical assessment item for Quantity Surveying consultancies.

(d) <u>Tender assessment</u>

Criteria	Description
Compliance	Comply with statutory requirements, tender assessment procedures, etc.
Technical support	Adequate technical support in facilitating a thorough tender assessment
Evaluation and recommendations	Thorough evaluation and sound recommendations with due regard to all relevant factors and considerations