



ARCHITECTURAL SERVICES DEPARTMENT 建築署

QUEENSWAY GOVERNMENT OFFICES, 66 QUEENSWAY, HONG KONG. 香港金鐘道六十六號金鐘道政府合署

來函檔號 Your Ref. : CB4/PAC/R73
本函檔號 Our Ref. : 10/1-125/38
電話號碼 Tel. No. : 2867 3882
傳真號碼 Fax No. : 2877 0594

By fax 2543 9197 and e-mail
(ahychu@legco.gov.hk, kmho@legco.gov.hk & pkwlai@legco.gov.hk)

29 January 2020

Mr. Anthony CHU
Clerk to the Public Accounts Committee
Legislative Council
Legislative Council Complex
1 Legislative Council Road
Central, Hong Kong

Dear Mr. CHU,

Public Accounts Committee
Consideration of Chapter 1 of the Director of Audit's Report No. 73
Planning, provision and management of public toilets by
the Food and Environmental Hygiene Department

Thank you for your letter dated 24 December 2019 requesting response / information to facilitate the Public Accounts Committee's consideration of the above Chapter. Please find our reply in the Appendix.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Allen Leung'.

(Allen LEUNG)
for Director of Architectural Services

Encl. as stated

- c.c. Secretary for Food and Health (fax no. 2526 3753)
- Director of Food and Environmental Hygiene (fax no. 2524 1977)
- Commissioner for Tourism (fax no. 2801 5792)
- Director of Water Supplies (fax no. 2827 8400)
- Secretary for Financial Services and the Treasury (fax no. 2147 5239)
- Director of Audit (fax no. 2583 9063)

Part 2 – Planning and provision of public toilets

Item (a)

as additional funding of \$600 million would be allocated under the Enhanced Public Toilet Refurbishment Programme, please advise what additional resources would be allocated to the Food and Environmental Hygiene Department (“FEHD”) and the Architectural Services Department (“ArchSD”), including the number and rank of new staff created, and how and the extent the new resources could expedite the refurbishment of public toilets;

To take forward the Enhanced Public Toilet Refurbishment Programme (Enhanced PTRP), additional manpower including 20 professional/site supervisory/technical/clerical staff and 6 officers have been or will be deployed to the Architectural Services Department (ArchSD) and the Food and Environmental Hygiene Department (FEHD) respectively to plan, coordinate and implement various refurbishment and facelifting projects under the Enhanced PTRP. With the additional resources in place, the two departments are able to speed up planning of the refurbishment and facelifting works, monitoring of the performance of the project consultants/contractors and works progress, submissions and vetting of the design proposals, and ensure timely commencement and completion of the project works. ArchSD will closely monitor the progress and the implementation of the programme. If needed, additional manpower resources will be considered at appropriate junctures.

Item (b)

with reference to paragraph 2.49 of the Audit Report, please advise:

- (i) for the 263 toilets which had been considered in the Retrofitting Programme for barrier-free facilities but found infeasible, whether FEHD and ArchSD have come up with any measures to provide accessible unisex toilets to facilitate the use of these public toilets by persons with disability, wheelchair users and the elderly. If yes, details of these measures; and
- (ii) regarding the studies of providing accessible unisex toilets in the 139 toilets:
 - what are the scope of the further studies and why these studies could not be conducted at earlier stages;
 - the progress, timelines and results (if any) of the studies; and
 - the timeline and costs (if any) of providing accessible unisex toilets in these toilets;

263 public toilets had been considered in the Retrofitting Programme for provision of accessible unisex toilets but found infeasible due to various reasons including site constraints, local objections and complicated land issues. Accessible urinals, braille and tactile signs for toilets and handrails with braille and tactile information were provided as far as practicable to facilitate people

Item (b) (Cont'd)

with disability and the elderly to use the public toilet facilities. FEHD and ArchSD will continue to make the best endeavours to explore the feasibility of providing accessible unisex toilets in these toilets under the Enhanced Public Toilet Refurbishment Programme.

Upon our further checking of records, for the 139 public toilets mentioned in para 2.49 of the Audit Report, it was verified that the provision of accessible unisex toilet for 134 of them had been found infeasible when they were studied in either Phases 6 or 7 of the aqua privy conversion programme, the Public Toilet Refurbishment Programme, or the Retrofitting Programme. FEHD will collaborate with ArchSD to complete feasibility study to the remaining 5 public toilets within 6 months.

The Working Group on Upgrading of Public Toilets (Working Group) will regularly review the situation of those public toilets for which the provision of accessible unisex toilets had been found infeasible. If there is any change in the external factors or situation which might make the provision of accessible unisex toilets possible, the Working Group will proceed and review the feasibility study again.

Item (c)

regarding the Cabinet Wash Hand Basin System stated in paragraph 2.56 (a) of the Audit Report, the procurement cost of the system and its individual components (i.e. cabinet, wash hand basin, soap dispenser and hand drier);

The one-stop provision of wash hand basin, soap dispenser and hand dryer in the form of a Cabinet Wash Hand Basin System was installed in Tak Wah Park Public Toilet and Tsuen Wan Multi-storey Car Park Building Public Toilet on a trial basis during the recent toilet refurbishment works. The refurbishment projects, which encompassed renovation of the external facade, lighting and ventilation system, internal fittings, fixtures and finishes, were procured through lump sum quotation contracts with a contract sum of approximately \$3.36 million and \$3.50 million respectively for the two aforesaid public toilets. Nevertheless, as a rough indication based on a rudimentary market research on similar integrated wash hand basin system available locally as conducted by consultant in 2018, the procurement cost of the Cabinet Wash Hand Basin System (per wash hand basin) is approximately \$18,000 to \$26,000, excluding associated plumbing, drainage and electrical installations.

Part 3 – Management of public toilet works projects

Item (d)

with reference to paragraph 3.2 of the Audit Report, the number of meetings the Working Group on Upgrading of Public Toilet held in last three years and role and responsibility of ArchSD in the Group;

In the recent three years from 2017-18 to 2019-20 (up to 31 December 2019), 26 meetings of the Working Group were held. As members of the Working Group, representatives from ArchSD offer technical advice on the design and layout proposals as well as the colour/material schemes of the public toilet projects proposed by the project consultants/contractors from design and maintenance perspectives to ensure that FEHD's standards and requirements on the provision of toilet facilities as well as relevant barrier free access requirements are complied with as far as practicable.

Item (e)

with reference to paragraph 3.6 of the Audit Report:

- (i) explain in detail how the term contract system operates;

A term contract covering specific scope of works, normally straddles over a period of time (e.g. three years), during which works orders, each detailing specific items of works to be carried out, are issued to the contractor from time to time. Most term contracts are re-measurement contracts under which payments are made based on the actual quantities of works performed.

For each term contract let by the ArchSD, the standard "Schedule of Rates for Term Contracts for Building Works" (SoR) containing estimated unit rates for items of works grouped under different trade sections is a pricing document for adjustments to be proposed by tenderers during the tender stage.

In the tender documents of a term contract, the estimated values of works to be performed under each trade sections of the SoR are specified by the ArchSD. Tenderers are required to propose adjustments in the form of "plus" or "minus" percentages (contract percentages) for each trade section of the SoR. The sum of the tender prices for all the trade sections will become the tenderer's total tender price for tender evaluation purpose. The term contract is normally awarded to a tenderer who has obtained the highest combined score in respect of a host of factors including the tenderer's technical proposals, capability and past performance as well as the tender prices, etc.

Item (e) (Cont'd)

The tender percentages proposed by the successful tenderer for each trade sections of the SoR will form part of the contract, which serves as the basis for payments to be made to the contractor. During the contract period, works orders, each specifying the details of the works to be carried out, are issued to the term contractor from time to time. Upon satisfactory completion of works under a works order, the works carried out will be measured in accordance with the method of measurement specified in the term contract and the contractor will be paid according to the rates of the relevant SoR items and the respective contract percentages.

(ii) regarding the list of term consultants/ term contractors/ term design-and-build contractors kept by ArchSD:

- please advise which works category, group and the respective contract value limit of the List of Approved Contractors for Public Works do the term consultants/ contractors/ term design-and-build contractors for public toilet projects belong to;
- whether any standard assessment/ scoring forms are in place for the tendering process. If yes, a copy of the forms; and
- will ArchSD review the performance of the term consultants/ term contractors/ term design-and-build contractors. If yes, the frequency; if not, why not;

(i) Term consultants:

Consultants on the “List of Consultants of the Architectural and Associated Consultants Selection Board (AACSB)” maintained by the AACSB¹ are normally invited to submit tenders for the consultancies for public toilet projects.

In bidding for a term consultancy, tenderers are required to submit technical and fee proposals for assessment by the tender assessment panel in accordance with DEVB TC(W) No. 2/2016 (Annex A). The tenderer who obtains the highest combined technical and fee scores will normally be awarded the consultancy.

¹ The AACSB is appointed by the Secretary for Financial Services and the Treasury to look after consultant selection, appointment and performance review matters of architectural and associated consultants. There are two Bands of consultants under the list, namely Band 1 and Band 2. Band 1 consultants are eligible to undertake consultancies with an estimated project value exceeding \$300 million, whereas Band 2 consultants are eligible to undertake consultancies with an estimated project value not exceeding \$300 million.

***Note by Clerk, PAC: Refer to Development Bureau's website for Annex A.**

Item (e) (Cont'd)

Project teams will closely monitor the performance of the term consultant during the course of the consultancy, which will be duly reflected in its performance reports to be issued quarterly in accordance with the “AACSB Hand book” issued by the AACSB.

(ii) Term contractors/ term design-and-build contractors

Contractors on the List of Approved Contractors for Public Works under the "Buildings" Category are normally invited to submit tenders for the Term Contract/Design and Build Term Contract for public toilet projects. The Group of contractors under the “Buildings” Category invited to tender for public toilet projects are as set out in paragraphs 2.2 and 2.3 of Contractor Management Handbook published by DEVB (Annex B).

Tender evaluation method is as set out in DEVB TC(W) No. 4/2014 (the Circular) on Tender Evaluation Methods for Works Contracts. Depending on the complexity of the contract, either the ‘Formula Approach’ (which takes into account the tenderers’ performance ratings and tender prices) in Appendix B of the Circular or the ‘Marking Scheme Approach’ (which takes into account the technical scores of the tenderers’ technical proposals and tender prices) in Appendix C/ C1 of the Circular will be adopted. The standard assessment/ scoring forms can be found in the copy of the Circular in Annex C.

Project teams will closely monitor the contractor’s performance during the contract period, which will be duly reflected in its performance reports to be issued on a quarterly basis in accordance with the Contractor Management Handbook published by DEVB.

(iii) what criteria will ArchSD take into account when deciding whether the public toilet projects should be implemented by term consultants, term contractors, term design-and-build contractors or engaging the contractors through open tender; and

ArchSD will normally assign toilet projects with higher degree of complexity and more design input to a term design consultant that possesses suitable experience and resources in handling designs and administration of public toilet projects to facilitate the design vetting process and overall project delivery. For toilet projects which require less design requirements, ArchSD will assign them to a design and build term contractor. For projects assigned to a term design consultant, the construction works will be executed by a term contractor or a contractor via open tendering depending on the scale of the works.

***Note by Clerk, PAC: Refer to Development Bureau's website for Annexes B and C.**

Item (e) (Cont'd)

For toilet projects which are straightforward and do not involve design input (e.g. toilet facelifting or maintenance), they are normally assigned to a term contractor for execution of the construction works.

- (iv) for the term consultant/ contractors/ design-and-build contractors which ArchSD considers their performances unsatisfactory, details of follow-up actions that can be taken by ArchSD;

(i) Term consultants

For term consultants with unsatisfactory performance, follow-up actions that can be taken by ArchSD include interviewing the consultant, issuing warning letters and/or adverse reports to the consultant, taking regulating actions (e.g. suspension from tendering) and/or other actions in accordance with Sections 10.7 and 10.8 of the AACSB Handbook (Annex D).

(ii) Term contracts/term design-and-build contracts

For term contractors/term design and build contractors with unsatisfactory performance, follow-up actions that can be taken by ArchSD include issuing warning letters and/or adverse reports to the contractor, taking regulating actions (e.g. suspension from tendering) and/or other actions in accordance with Sections 4 and 5 of Contractor Management Handbook published by DEVB (Annex E).

Item (f)

with reference to paragraphs 3.4 and 3.7 of the Audit Report, a flow chart to illustrate the workflow of and time required for each procedure in the construction, reprovisioning, full-scale refurbishment and smaller-scale facelifting of public toilets. Please clarify the discrepancy between the target works period for construction or reprovisioning of a public toilet as advised by Director of Architectural Services at the public hearing (one year) and as stated in the Audit Report (nine months);

Please refer to the attached flow chart illustrating workflow for construction and reprovisioning of public toilet.

***Note by Clerk, PAC: Refer to Architectural Services Department's website for Annex D, and Development Bureau's website for Annex E.**

Item (f) (Cont'd)

		Construction/ Re provision of Public Toilets	
(1)	3.4(a) Consultation and feasibility study	FEHD to conduct local consultation and define scope of works FEHD to apply for land allocation (if necessary)	3-6 months
(2)		ArchSD to conduct technical feasibility study and preliminary design	3-4 months
(3)	3.4(b) Funding approval	FEHD to submit funding application to the Minor Building Works Committee through ArchSD (Item 703 (Building) Sub-head 3101 GX)	Approx.12 months
(4)	3.4(c) Detailed design [Note: Additional consultations will be carried out by FEHD on an ad hoc basis in case there are concerns raised by local bodies or changes in user's requirements. In these cases additional time may be required.]	ArchSD/Consultant to conduct detailed design (including layout of toilet and recommended materials)	4-6 months
(5)		ArchSD/Consultant to submit the design to the Pre-Vetting Committee on Public Toilet Projects for vetting	2-3 months
(6)		ArchSD/Consultant to submit the design and recommended materials to the Working Group on Upgrading of Public Toilets for vetting	1-2 months
(7)	3.4(d) Implementation of works and handover	ArchSD/ Consultant to finalize the design and issue works order to Term Contractors or conduct separate tender exercise	2-10 months
(8)		Pre-construction arrangement by ArchSD/ Consultant and FEHD (e.g. Site inspection, desludging/ removal of existing facilities (if applicable), negotiation of works commencement date and arrangement of portable toilets, etc.)	1-2 months
(9)		Construction (with general allowance of slippage (e.g. inclement weather))	Approx. 9-12 months
		Total	Approx. 3.5-5 years

Item (f) (Cont'd)

The target works period for the construction or reprovisioning of a public toilet of 9 months as mentioned in paragraph 3.7 of the Audit Report is the anticipated duration for carrying out the works which does not include any allowance for slippage (e.g. inclement weather). From the perspective of project management of the toilet projects, ArchSD normally allow an overall construction period of 12 months for the construction of a public toilet, which includes a general allowance for possible slippage due to unforeseen site constraints and inclement weather.

For full scale refurbishment and smaller-scale facelifting of public toilets under Enhanced Public Toilet Refurbishment Programme, the workflow is tabled below.

Project planning stage	Refurbishment Projects (2 – 3 years)	Facelifting Projects (1 – 1.5 years)
1	FEHD to confirm the scope of works; ArchSD/Project Consultant to conduct technical feasibility study and prepare design proposals (including layout and proposed materials); and FEHD to handle land allocation issues with District Lands Office (if necessary) (4 – 6 months)	FEHD to confirm the scope of works with ArchSD/Contractor (1 month)
2	ArchSD/Project Consultant to present the layout design and materials proposals to FEHD's Pre-vetting Committee for vetting (3 months).	Not applicable
3	ArchSD/Project Consultant to present the layout design and materials proposals to FEHD's Working Group on Upgrading of Public Toilets for consideration and approval (1 – 2 months)	Not applicable
4	FEHD to conduct public consultations (3 – 4 months). Additional consultations will be carried out by FEHD on an ad hoc basis in case there are concerns raised by local bodies or changes in user's requirements. In these cases additional time may be required.	FEHD to conduct public consultations (3 – 4 months)

5	ArchSD/ Project Consultant to prepare detailed drawings and make tender arrangements (6 – 10 months)	Not applicable
6	ArchSD/Project Consultant and FEHD to make arrangement (e.g. finalization of the works scope and works programme, selection of installations and materials, arrangement of temporary toilets, etc.) prior to commencement of site works (1 – 2 months)	ArchSD/Term Contractor and FEHD to make arrangement (e.g. finalising the works scope and works programme, selection of installations and materials, arrangement of temporary toilets, etc.) prior to commencement of site works (3 – 5 months)
7	Site works and reopening of public toilets for public use after works completion (6 – 9 months)	Site works and reopening of public toilets for public use after works completion (3 – 8 months)

Item (g)

according to note 20 of paragraph 3.7 of the Audit Report, there are various causes for a construction contract or works order to be completed beyond the target completion date stated in the contract or works order. For the cases which are outside the control of the contractors, extensions of time will be granted to the contractors and contracts completed beyond the original target completion dates due to the encountering of such events cannot be regarded as delay. In this connection, please provide/advise;

- (i) whether there are guidelines on the granting of extensions of time, and whether such guidelines and the duration of the extension are stipulated in the contracts; and;

The events which will give rise to extensions of time being granted to contractors and the relevant procedures are detailed in the contract, e.g. Clause 53 of the General Conditions of Contract for Term Contracts for Building Works 2004 Edition² (Annex F).

- (ii) in what cases the extension of time will not be granted. It was mentioned at the public hearing that a penalty could be charged for delay in completion of projects under some specific conditions. Details, such as the amount of penalty and the specific conditions;

² The General Conditions of Contract for Term Contracts for Building Works 2004 Edition is one of the standard contract forms commonly used in ArchSD for government projects including the construction and reprovisioning of public toilets.

***Note by Clerk, PAC: Refer to Development Bureau's website for Annex F.**

Item (g) (Cont'd)

When delays are caused by events not covered by item (g)(i) above (e.g. delay due to contractor's inadequate resources or poor planning), extension of time will not be granted. For such delays, the Government is entitled to recover from the contractor liquidated damages calculated using the daily rate stated in the contract. A typical contract clause on liquidated damages is at Annex G. The liquidated damages stipulated in a public works contract represent the genuine estimate of the financial losses of the Government due to delays caused by the contractor. The calculation of liquidated damages is detailed in DEVB TC(W) No. 4/2003 issued by DEVB (Annex H).

Item (h)

according to paragraph 3.7 in the Audit Report, there were 7 to 11 months delay in five public toilet reprovisioning projects and they were all carried out by the same term contractor. Whether any sanctions had been imposed on the contractor concerned. If not, why not;

All delays in the completion of the construction contract/works order after taking into account all extension of time incidents have been duly reflected in the contractor's performance reports.

Liquidated Damages will also be imposed on the contractor for delays due to the contractors' faults.

Item (i)

with reference to Case 1 in paragraph 3.7 of the Audit Report, please explain/ advise;

- (i) why ArchSD decided to issue the works order to Contractor A in October 2016 while ArchSD was already aware that Contractor A had a labour shortage problem before issuing the works order to it;

It is Contractor A's obligation under the contract to provide adequate resources in carrying out works ordered in accordance with the terms of the contract. When ArchSD noticed in July 2016 that Contractor A had encountered the labour shortage problem, the project team held immediate discussions with Contractor A on the scope and programme for the construction of Toilet F with a view to achieving a more reasonable and balanced workload on Contractor A. At the discussions, the project team was given to understand that if the commencement of works for Toilet F was deferred to October 2016, Contractor A would be able to deploy enough resources for executing the works. Considering that a separate tendering exercise would cause an even longer delay, ArchSD issued a works order to Contractor A in October 2016. The project team had in fact taken reasonable measures in handling Toilet F prior to issuing the works order.

***Note by Clerk, PAC: Refer to Development Bureau's website for Annex H.**

Item (i) (Cont'd)

- (ii) why ArchSD certified that the works as substantially completed while there were 21 items of defective or critical outstanding works, the rank of the authorized persons to certify completion of works, and whether any mechanism was in place to ensure that Contractor A would finish the outstanding works as undertaken in time;

In Case 1, the defects and outstanding works (such as defective wall partition and outstanding testing and commissioning works of electrical system) identified upon the substantial completion of the works order were minor in nature and would not affect the subsequent handover inspections with FEHD. Therefore, upon receipt of an undertaking from Contractor A for completion of the defects and outstanding works, the chief project manager, a D1 officer, issued a letter certifying that the works order had been substantially completed in accordance with the terms of the contract (please refer to Clause 56 of the General Conditions of Contract for Term Contracts for Building Works 2004 Edition at Annex I). Such an arrangement facilitated handing over the completed toilet to FEHD at the earliest opportunity. It should be noted that it was Contractor A's obligation under the contract to complete all outstanding works and rectification of defects timely. Payments for the non-completed works had been withheld until they were satisfactorily completed. Contractor A's progress in completing the outstanding works and rectification of defects were also duly reflected in his performance report. In fact, all defects and outstanding works for the new toilet had been rectified/completed before the completed facilities were handed over to FEHD.

- (iii) regarding the consultation with villagers and their requests for beautification works of Toilet F:

- details of the beautification works (both in 2017 and 2018), a breakdown of the costs and the time taken for these works; and

In March 2017, in response to an objection raised by villagers, beautification works were planned for Toilet F. In December 2018, after further liaison with the villagers' representative, FEHD updated the scope of the beautification work as follows:

- (a) Erection of fence wall of wooden print pattern along the Eastern and northern boundaries;
- (b) Planting of four number of Juniperus Chinensis var. kaizuka (龍柏) along the Northern and Eastern façade of the public toilet and climbers on the Eastern fence; and

***Note by Clerk, PAC: Refer to Development Bureau's website for Annex I.**

Item (i) (Cont'd)

(c) Fencing off the entrances to the new toilet temporarily to prevent entry.

In addition to the above, some minor painting works were carried out at the base platform of the building upon the villagers' further request raised during subsequent liaison with FEHD in September 2019.

The estimated costs of the above building works and planting works were approximately \$350,000 and \$20,000 respectively.

- while the beautification works were substantially completed in May 2019, why was Toilet F not handed over to FEHD until July 2019;

After the beautification works of Toilet F were substantially completed on 24 May 2019, ArchSD immediately arranged handover inspections with FEHD. During the inspections, defects that FEHD considered should be completed before the opening of the toilet were identified for urgent follow up by the contractor. Upon rectifying the defects to the satisfaction of FEHD, the beautification works were handed over to FEHD on 9 July 2019. FEHD then arranged a site visit by the villagers' representative on 15 July 2019. Following the satisfactory completion of the minor painting works further requested by the villagers' representative, the toilet was opened for use by the public on 11 October 2019.

- (iv) whether any sanctions had been imposed on Contractor A for its unsatisfactory performance. If yes, the details; if not, why not;

Please refer to response for items (h) and (i)(ii) above.

- (v) Director of Architectural Services said at the public hearing that a "two-envelope system" was adopted for tender assessment under which both tender price and technical proposal would be given due consideration in procuring contracts. Please advise how the unsatisfactory performance of Contractor A will be taken into account under this system for future tenders under ArchSD or other works departments;

According to DEVB Technical Circular (Works) No. 4/2014 (Annex C), under the two-envelope system, a tenderer shall submit its tender in two parts, i.e., the technical submission and the tender price documents. During the tender assessment stage, the technical submission will be evaluated in accordance with a marking scheme in which the tenderers' past performance is one of the attributes to be assessed in deriving the tenderer's technical score. For tenderers with unsatisfactory past performance, their overall technical score will be affected which will in turn affect their combined technical and price score and hence the opportunity of being awarded the contract.

***Note by Clerk, PAC: Refer to Development Bureau's website for Annex C.**

Item (i) (Cont'd)

- (vi) Director of Architectural Services said at the public hearing that Contractor A is listed under the List of Approved Contractors for Public Works, which is managed by the Development Bureau. Please advise whether there is a mechanism for ArchSD to report the performance of Contractor A for the reference of other works departments in their tendering processes; and

In accordance with the Development Bureau (DEVB)'s Contractor Management Handbook, all works departments, including ArchSD, are required to prepare reports on contractor's performance for all works contracts under their purview on a quarterly basis and upload the reports to DEVB's computerised Contractor Management Information System (CMIS), through which the performance reports of contractors are available to all works departments for reference during tender assessment.

- (vii) this case revealed that there was deficiencies of ArchSD in monitoring the contractors to carry out works projects, causing delays to the projects. What lessons has ArchSD learnt from this case;

ArchSD proposed the following improvement measures on contractor's performance monitoring in handling future construction, reprovisioning and refurbishment of toilet projects:

1. ArchSD will remind its staff and consultants to pay particular attention to ensure that sufficient resources are deployed by a term contractor to carry out the projects.
2. When it is found that the progress of works is unsatisfactory due to lack of resources, measures including issuance of warning letters, conducting high-level management interviews with the contractor and reflecting their inadequate resources in the contractor's performance reports will be implemented timely
3. Although it is the contractor's obligation under the contract to provide adequate resources to execute the works detailed in each works order, ArchSD will request the term contractors to advise their resources level from time to time and coordinate with them as far as possible before issuance of works orders to facilitate the contractors to plan ahead their resource requirements so as to minimise the risk of project delay due to insufficient resources of the contractors.

Item (j)

with reference to Table 6 in paragraph 3.9 of the Audit Report, please explain why the 25 public toilets included in the Public Toilet Refurbishment Programmes between 2011-2012 and 2015-16 were still under design as of August 2019, and has ArchSD taken any measures to expedite the works progress. If yes, the details, timelines and expected completion dates; if not, why not; and

For public toilet projects included under the Public Toilet Refurbishment Programme prior to the implementation of the improvement measures following the completion of a review on the workflow of the projects in 2016, it normally took about four to five years to complete the projects. Some individual projects, particularly those included in the Public Toilet Refurbishment Programme in earlier years, might require a longer lead time for completion and are still under design as of August 2019 due to special circumstances or factors, such as site constraints and additional user requirements requiring detailed technical assessments; complications involving land issues or private land; planning and interface issues involving other works or development projects; and the need to obtain stakeholders' support of the design proposals, etc.. ArchSD has been working in collaboration with FEHD to expedite the refurbishment projects and a shortened timeline of 2 to 3 years for implementing a refurbishment project would apply to the Enhanced Public Toilet Refurbishment Programme.

In order to expedite the implementation of projects already included under the Public Toilet Refurbishment Programme (PTRP) and step up the monitoring efforts to ensure their timely completion, the following improvement measures have been implemented to shorten the time required for the refurbishment projects following the completion of the review on workflow of the projects in 2016:

- (1) Applications for land allocations from Lands Department (LandsD) would be made at early stages as soon as the public toilets are shortlisted for inclusion in the PTRP pending funding approval or when the site boundaries are confirmed. Action would be taken by FEHD to closely monitor the progress of the applications for land allocations;
- (2) Once the designs of the toilets to be refurbished are available, early public consultations on the refurbishment works would be arranged by FEHD;
- (3) Monitoring of the performance of the project consultants/contractors would be stepped up to expedite the submissions of the design proposals for vetting. The performance of consultants and contractors in public toilet refurbishment projects will also be critically reflected in their performance reports; and
- (4) Action has been taken to expedite the vetting of the design proposals submitted by project consultants/contractors in order to commence the works as soon as possible. Regular review of approved projects will be conducted in the Working Group

Item (j) (Cont'd)

meeting so as to expedite the progress of projects. Should there be any projects with progress hindered by persistent external factors, e.g. objections by the local community, another project will be considered to be injected into the Programme to replace the problematic one so as not to affect the overall delivery programme.

In 2018, FEHD has reviewed the overall progress of the PTRP and considered that more public toilets meeting the basic criteria should be included in the PTRP. FEHD has then introduced the Enhanced PTRP in August 2018. Apart from securing additional resources to take forward more public toilet refurbishment projects, FEHD has further divided the improvement works of the public toilets into two subtypes of works, namely refurbishment and facelifting under the Enhanced PTRP. The overall timeline for refurbishment would be shortened to about 2 to 3 years. The scope of works under facelifting mainly includes replacement of aged facilities and installation of new features, with the prevailing layout and exterior wall remaining unchanged. In this connection, the overall timeline to take forward a facelifting project would be about 1 to 1.5 years in general. FEHD has also made use of the latest utilisation rates collected to prioritise the public toilets for inclusion in the Enhanced PTRP.

Apart from the above-mentioned improvement measures, ArchSD is exploring the use of “Design for Manufacture and Assembly” (DfMA) method, which is an innovative approach to minimise on-site assembly works by means of off-site construction works such as prefabrication of wall panels with urinals, and integrated manufacturing of wash basins with sanitary fittings and modular cabinets, etc. so as to shorten the closure period in public toilet refurbishment and facelifting projects, and better ensure that the projects will be completed on time.

Item (k)

with reference to Case 2 in paragraph 3.9 of the Audit Report, please advise:

- (i) the duties and the cost of the assignment for Consultant Y;
- (ii) whether ArchSD considered the visual inspection on the structural integrity of Toilet G conducted by Consultant Y sufficient, and whether ArchSD had conducted any site investigations to confirm that Toilet G was structurally feasible. What lessons has ArchSD learnt from this case;
- (iii) whether ArchSD considered the performance of Consultant Y unsatisfactory. If yes, had any sanction been imposed on Consultant Y. If no, the reasons;
- (iv) has ArchSD enquired with Contractor B on the cost of \$1.35 million for the replacement of defective bricks of structural brick walls and explored whether other measures could be adopted at a lower cost; and
- (v) whether the refurbishment works of Toilet G have been completed;

Item (k) (Cont'd)

The duties of Consultant Y in this project mainly comprise conducting feasibility studies and project design, carrying out the tender phase work and supervising the works at construction stage till handover of the works to the user. The final cost of the assignment is \$153,110.37.

The visual inspection to assess the structural feasibility for refurbishment of Toilet G conducted by Consultant Y was considered in line with general professional practice, i.e., the practice that other building professionals normally would adopt in both Government projects and private practice, based on the fact that no additional load would be imposed by the project scope and no major defects were observed during the time of site inspection. In addition, to avoid conducting destructive tests which would affect the normal use of the toilet, visual inspection instead of destructive test is a preferred practice for toilet refurbishment projects at the preliminary feasibility study stage. ArchSD had drawn lessons from this case and will assess as early as possible the conditions of the structural brick walls, if any, after the public toilets are included in Enhanced PTRP. In this connection, ArchSD will complete a stock taking exercise to identify the existence of structural brick walls for about 850 public toilets and aqua privies by the first quarter of 2020.

The performance of Consultant Y in this project was generally acceptable in view that its recommendation to ArchSD in this project was in line with general professional practice.

ArchSD had explored with Contractor B on the cost of \$1.35 million for the necessary remedial works with a view to proceeding with the works at a more reasonable cost. Contractor B originally submitted a quotation at approximate \$1.46M for replacement of the brickwork. ArchSD held a meeting on 18 February 2019 with Contractor B and Consultant Y, and requested Contractor B to review its quotation which was considered on the high side. After further discussions, Contractor B revised the quotation on 1 March 2019 to \$1.35M but declined to offer any further reduction. As ArchSD and Consultant Y still considered the quotation too high, they explored with Contractor B at another meeting on 5 March 2019 the possibility of terminating the works with the latter. Contractor B agreed on 12 March 2019 to terminate the contract with payment of \$0.3M for the works that had already been carried out.

The refurbishment works of Toilet G were assigned to another contractor by a works order of \$1.5 million for carrying out the remaining works. The works were completed and handed over to FEHD on 29 November 2019.

Item (l)

with reference to paragraphs 3.8 and 3.10 of the Audit Report, apart from new resources, what other measures/ new technologies have been adopted to shorten the overall timeline for taking forward a refurbishment project and how can the Administration ensure that the projects will be completed on time;

Please refer to the measures and new technology to shorten the overall timeline of refurbishment projects in item (j) above.

Item (m)

referring to Table 7 in paragraph 3.19 and Table 8 in paragraph 3.20 of the Audit Report about Phase 7 of the aqua privy conversion programme, please explain/ advise:

- (i) reasons for not converting the remaining 21 aqua privies into flushing toilets (only 124 of the targeted 145 aqua privies were converted);

The aqua privies in question were not converted into flushing toilets mainly due to lack of water supply and/or sewerage system, complicated slope or land issues and local objections. In fact, some of the aqua privies were demolished or pending demolition due to low usage.

- (ii) reasons for the delays in completing 23 (17% of 135) works orders and what improvement measures will the Administration take in future; and

The delays in completing 23 (17% of 135) works orders were mainly due to events for which the contractor was responsible, e.g. inadequate input of resources, poor planning, etc. Liquidated damages had been imposed on the contractor for such delay. In the future, ArchSD will take appropriate measures to closely monitor the works progress, which include issuance of warning letters, conducting high-level management interviews with the contractor and reflecting their inadequate resources in their performance reports.

- (iii) whether any measures will be taken to ensure more accurate estimates for the expenditure of the aqua privy conversion programme and other public toilets projects could be made, so that excessive reserve of funding will not occur;

In view of the tight delivery programme and large amount of aqua privies (AP) involved, a design-and-build term contract was deployed to carry out the works under the Phase 7 aqua privy conversion programme. Since the design, actual scope of works and exact numbers of aqua privy to be converted were still uncertain, the approved project estimate could only be based on (i) a standard prototype scheme for each type of conversion work and (ii) the estimated target numbers of aqua privy under each prototype scheme. In most cases, the best

Item (m) (Cont'd)

way to deliver this kind of minor building works with uncertain amount of works involved should be through the issuing of works orders under term contracts / design and build term contracts when funding is approved.

Owing to the highly uncertain scope of the works, it is in fact difficult, if not impossible, to have a very accurate estimate of the project expenditure. For future aqua privy conversion projects, ArchSD will make every endeavour to update the project estimates from time to time when the actual scope of works for each aqua privy is known upon completion of detailed design, so that any excessive reserve could be released as soon as possible. That said, for future projects involving conversion of aqua privies, reprovision and construction of public toilets, sufficient desktop and site studies will be carried out to ensure the technical feasibility and to ascertain the scope of works as far as practicable, such that more accurate estimates for the expenditure can be obtained prior to application for funding.

Item (n)

according to Case 3 in paragraphs 3.22 of the Audit Report, Toilet H had not fully conformed to the Waterworks Ordinance (Cap. 102) for nearly five years since its opening in April 2013. Please provide a chronology and the following details:

- (i) details of the non-compliance with Cap. 102 and the difficulties encountered by ArchSD (such as the land and substantial geotechnical issues mentioned in paragraph 3 and 4 of Case 3);

As mentioned by WSD, the Waterworks Ordinance (WWO) (Cap. 102) does not apply to Government premises and hence Toilet H. Notwithstanding, it has been the practice that ArchSD will follow the requirements of WWO in the delivery of projects including seeking approval of WSD for the plumbing works.

The chronology is attached at Annex J.

In August 2012, WSD approved Contractor C's design proposal to install a new watermain (25mm dia.) for the supply of fresh water for general ablution, cleansing and flushing purposes (with three water meters) to Toilet H.

In February 2013, fresh water supply via the new watermain (25mm dia.) was outstanding. To facilitate early opening of Toilet H for public use, the flushing water supply to the toilet was temporarily connected to an existing watermain (20mm dia.) previously serving the aqua privy.

Subsequently, WSD conducted an inspection in August 2013 and confirmed the plumbing works in order. WSD therefore urged ArchSD/Contractor C to complete the new watermain connection (25mm dia.) as soon as possible since there was no water supply to the newly installed plumbing works during WSD's

Item (n) (Cont'd)

In September 2016, it was found that there was no feasible alignment for the new watermain (25mm dia.) connection. Therefore, FEHD, ArchSD and Contractor C negotiated with WSD to call off the originally proposed new watermain connection. Subsequently, application to adopt the existing watermain (20mm dia.) as the permanent watermain connection was submitted to WSD in January 2017 for flushing supply.

During WSD's inspection conducted in February 2017, it was observed that there was an extension of the existing fresh water main after the meter position to provide supply to the new plumbing works. As no prior approval had been given on such uses and hence it was considered as not conforming to the requirement of WWO from procedural point of view.

[Remark: As mentioned above, the original application (new 25mm watermain) was withdrawn in September 2016 and replaced by the application for flushing water supply connection from the existing watermain (20mm dia.) submitted in January 2017. Since the application was not yet approved by WSD in February 2017, the inspection was carried out based on the original layout of the Aqua Privy before March 2012, thus resulting in the observation of an alteration.]

In September 2017, WSD had no objection to its proposal for providing flushing water supply for Toilet H, including water supply to be branched off from the existing fresh watermain (20mm dia.) with a separate water meter. Finally in February 2018, WSD inspected and authorised the water supply for flushing upon receipt of all the related documents and minor modification at the connection point from Contractor C.

Although the non-compliance lasted for nearly five years (counting from opening of the toilet in April 2013 to authorization of flushing water supply in February 2018), it was essentially a procedural non-compliance as the plumbing works installed for flushing water supply when Toilet H was completed in 2013 technically complied with the requirement of WWO.

In most aqua privy conversion cases, WSD's approved connection point would be very close to the lot boundary of the aqua privy. However, according to the proposed alignment accepted by WSD in October 2013 for Toilet H, the routing of the new water main would be about 60m long and encroached into private lot and slopes. Therefore, the water supply connection for Toilet H was much more complicated than those normally encountered in other aqua privy conversion projects.

Item (n) (Cont'd)

- (ii) site investigations conducted by ArchSD and/or Contractor C before submitting the proposed alignment of water main to WSD and the results. If no investigations were made, why not;
- (iii) the Water Supplies Department approved the proposed alignments of the water main in October 2013 and the revised one in October 2014 but why did the alignments in both cases were later considered not feasible;

Before submitting the original and revised proposed alignments of new watermain (25mm dia.) to WSD, Contractor C had carried out a site survey to confirm the constructability of the new watermain. These two alignments were also accepted by WSD in October 2013 and October 2014 respectively.

Subsequently, FEHD submitted application to District Lands Office for carrying out excavation and pipe laying works for the new watermain (25mm dia.), which was eventually not accepted due to encroachment into private lot and underlying geotechnical issues (stability of adjacent slope might be affected in case of leakage of the watermain).

- (iv) for the temporary measure mentioned in paragraph 8(a) of Case 3, whether ArchSD has informed the Water Supplies Department of this temporary arrangement. If yes, what was the reply of the Water Supplies Department? If not, did ArchSD have any obligation to inform the Water Supplies Department the arrangement;

As ArchSD originally planned to complete the new watermain connection (25mm dia.) as soon as possible and only considered the temporary arrangement in paragraph 8(a) of Case 3 as an interim measure to facilitate early opening of Toilet H, WSD had not been informed.

WSD conducted several inspections of the plumbing works at Toilet H during August 2013 to February 2018 and WSD's reply after these inspections were listed as follows:

In August 2013, WSD replied that the new internal plumbing works were found generally in order and urged ArchSD/ Contractor C to complete the new watermain connection (25mm dia.) as soon as possible.

In February 2017, WSD found the new watermain (25mm dia.) was still not installed and noticed that the new plumbing works of Toilet H had been connected to the existing 20mm dia. watermain which did not conform to the requirement of WWO and thus requested FEHD/ArchSD to rectify the non-conformance.

Item (n) (Cont'd)

In February 2018, WSD found the plumbing works complied with the latest plumbing installation proposal (i.e. the proposal to use the existing watermain (20mm dia.) for provision of flushing water supply that was approved in September 2017 and authorized the plumbing works.

- (v) whether the Water Supplies Department had exercised any discretion in approving the flushing water supply system for Toilet H in February 2018 and whether Toilet H with flushing water supply to be branched off from existing water main previously serving the aqua privy is now fully conformed to Cap. 102;

The proposal to use the existing watermain (20mm dia.) for provision of flushing water supply to Toilet H was approved by WSD in September 2017. In February 2018, WSD inspected and authorized the flushing water supply system upon receipt of all the related documents and minor modification for meter installation at the connection point from Contractor C. Therefore, ArchSD was not aware that WSD had exercised any discretion in approving the flushing water supply system for Toilet H as the flushing water supply system was fully conformed to WWO.

- (vi) what measures will be taken by ArchSD to ensure that the requirements of Cap. 102 and the hygienic requirements for water supply system are complied with in implementing aqua privy conversion programme in future; and

In implementing future aqua privy conversion projects, ArchSD will pay particular attention to projects with anticipated plumbing connection difficulties to ensure that the requirements of WWO are complied with. ArchSD will remind its staff and consultants to allow reasonable time for the planning of watermain connection works (e.g. to carefully review the site constraints affecting the proposed water main connection routing, to timely negotiate with WSD and LandsD (if land issues are involved) for an alternative solution in case the proposed routing is not feasible) as far as practicable.

- (vii) how many aqua privies are connected to seawater supply network for flushing. Has the Administration reviewed whether it is technically feasible and cost-effective to expand the seawater supply system or explore new water resources in order to reduce the use of fresh water for flushing for aqua privies; and

The aqua privies managed by FEHD are not provided with flushing water (seawater or freshwater). Meanwhile for the previously converted aqua privies, most of them are located in remote areas beyond the seawater supply network. Nevertheless, the plumbing materials used in the flushing systems of these converted aqua privies have already been designed to be resistant to seawater corrosion and are ready for conversion to use seawater for flushing which may be available in future upon extension of the seawater supply network.

Item (n) (Cont'd)

On whether it is technically feasible and cost-effective to expand the seawater supply system or explore new water resources in order to reduce the use of fresh water for flushing for aqua privies, the question was referred to the WSD. According to WSD,

“To save the precious fresh water resources, seawater for flushing has been introduced in Hong Kong since the late 1950's. Up till now, the seawater flushing network has already covered about 85% of the total population of Hong Kong. One of the major initiatives under WSD's latest Total Water Management Strategy released in 2019 is to expand the network coverage of using lower grade water for flushing and other non-potable uses from 85% of the total population to 90% in order to further reduce the fresh water demand. Lower grade water refers to seawater and recycled water comprising reclaimed water (produced by further processing treated sewage effluent), treated grey water and harvested rainwater.

A number of projects for the supply of recycled water for non-potable uses are being implemented. They include supply of reclaimed water in the northeast New Territories in phases starting with Sheung Shui and Fanling from 2022 onward tentatively and construction of a district-based grey water recycling system at the Anderson Road Quarry development site in 2020. The seawater flushing systems for the existing Tung Chung New Town and its extension are also being implemented for commissioning in phases by end 2023.

WSD will continue to review the extension of supply of lower grade water to other new development areas and those areas still being supplied with fresh water for flushing and other non-potable purposes to save the precious fresh water resources.”

Item (o)

with reference to paragraph 3.24(a) of the Audit Report, please advise:

- (i) updated status on the conversion of 45 aqua privies, including the timeline. If they would not be converted, measures to improve the conditions of the aqua privies concerned. Whether the six aqua privies mentioned in paragraph 3.23(e) of the Audit Report have been demolished; and

Please refer to FEHD's reply dated 13 January 2020 item (k)(i).

****Note by Clerk, PAC: See Appendix 12 of this Report for the reply dated 13 January 2020 from Director of Food and Environmental Hygiene.***

Item (o) (Cont'd)

- (ii) whether FEHD and ArchSD will, taking into account the difficulties and complications encountered in converting aqua privies into flushing toilets, enhance the communication with other relevant departments (e.g. the Water Supplies Department and the Lands Department) so as to facilitate the smooth implementation of the works and ensure that the works will comply with existing legislation.

Taking into account the difficulties and complications encountered in converting aqua privies into flushing toilets, FEHD and ArchSD would collaborate to enhance communications with other relevant departments, including LandsD and WSD to implement conversion works of the aqua privies and ensure that the works will comply with the existing legislation. For instance, we would timely discuss with LandsD if land issues are involved, and with WSD for an alternative solution in case the proposed water main connection routing is found technically not feasible.

the Maintenance Surveyor considers it necessary owing to the default, negligence, omission or slow progress of the Contractor.

(3) The Contractor shall not be entitled to any additional payment for complying with any instruction given in accordance with this Clause.

Liquidated
damages for
delay

55. (1) If the Contractor fails to complete the Works within the time for completion or such extended time as may be granted in accordance with Clause 53, then the Employer shall be entitled to recover from the Contractor liquidated damages, and may but shall not be bound to deduct such damages either in whole or in part, in accordance with the provisions of Clause 89. The payment of such damages shall not relieve the Contractor from his obligations to complete the Works or from any other of his obligations under the Contract. .

(2) The liquidated damages per day shall be calculated using the formula prescribed in the Appendix to the Form of Tender.

Provided that, if the Maintenance Surveyor certifies completion under Clause 56 of any part of the Works before completion of the Works then the liquidated damages for the Works shall from the date of such certification be reduced in the proportion which the value of the part so certified bears to the value of the Works. For the avoidance of doubt, the Maintenance Surveyor shall determine the value of the part of the Works completed and the value of the Works both as of the date of certification.

(3) The period for which liquidated damages shall be calculated shall be the number of days from the date for completion as provided in sub-clause (1)(a) of Clause 51 or any extension thereof of the Works until and including the certified date of completion.

Provided that, if the Maintenance Surveyor subsequently grants an extension of time which affects the period described above, then the Employer shall reimburse to the Contractor the liquidated damages for the number of days so affected together with interest at the rate provided for in Clause 82 within 28 days of the granting of such extension of time.

(4) All monies payable by the Contractor to the Employer pursuant to this Clause shall be paid as liquidated damages for delay and not as a penalty.

Completion of
the Works

56. (1) When the Works have been substantially completed and have passed any final test that may be prescribed by the Contract, the Contractor may notify the Maintenance Surveyor to that effect and give an undertaking to carry out any outstanding work during the Maintenance Period and request the Maintenance Surveyor to issue a certificate of completion. The Maintenance Surveyor shall, within 21 days of the date of receipt of such notice either:

- (a) issue a certificate of completion stating the date on which, in the Maintenance Surveyor's opinion, the Works were substantially completed in accordance with the Contract and the Maintenance Period shall commence on the day following the date of completion stated in such certificate, or
- (b) give instruction in writing to the Contractor specifying all the work which, in the Maintenance Surveyor's opinion, is required to be done by the Contractor before such certificate can be issued, in which case the Contractor shall not be permitted to make any further request for a certificate of completion and the provisions of sub-clause (2) of this Clause shall apply.

(2) Notwithstanding the provisions of sub-clause (1) of this Clause, as soon as in the opinion of the Maintenance Surveyor the Works have been substantially completed and passed any final test which may be prescribed by the Contract, the Maintenance Surveyor shall issue a certificate of completion in respect of the Works and the Maintenance Period shall commence on the day following the date of completion stated in such certificate.

(3) The Contractor shall complete any outstanding work as soon as reasonably practicable after the issue of the certificate of completion or as directed by the Maintenance Surveyor and in any event before the expiry of the Maintenance Period. The Contractor's obligation to provide, service and maintain site offices, latrines and the like, shall continue for as long as may be necessary for the completion of any outstanding work.

(4) The provisions of sub-clauses (1), (2) and (3) of this Clause shall apply equally to any Section.

(5) (a) The Maintenance Surveyor shall give a certificate of completion in respect of any part of the Works which has been completed to the satisfaction of the Maintenance Surveyor and is required by the Employer for permanent occupation or use before the completion of the whole of the Works or any Section.

(b) The Maintenance Surveyor, following a written request from the Contractor, may give

Item (n) - Chronology to Case 3 in paragraphs 3.22 of the Audit Report

	(Mth .Yr)	Description
1	3.2012	Commencement of Conversion Work for Aqua Privy (Toilet H).
2	8.2012	Water Supplies Department (WSD) approved Contractor C's design proposal to install a new water main (25mm dia.) for the supply of fresh water for general ablution, cleansing and flushing purposes (with three water meters) to Toilet H. WSD also requested ArchSD to undertake the design and laying of the water main outside the lot boundary of Toilet H as entrusted works.
3	2.2013	ArchSD certified that the conversion works were substantially completed. [Remark: The new water main (25mm dia.) connection was outstanding but, to facilitate earliest opening of Toilet H for public use, the flushing water supply to the toilet was connected from the existing water main (20mm dia.) previously serving the aqua privy. On the other hand, since the temporary connection was made via an existing WSD supply and adequate measures (e.g. provision of flushing water tank) were already provided to separate the flushing water supply system from the fresh water supply system to prevent contaminations, thus public safety/ hygiene was safeguarded.]
4	4.2013	Toilet H was handed over to FEHD for public use
5	8.2013	WSD requested FEHD to commence the new water main (25mm dia.) connection works as soon as possible [Remark: WSD conducted an inspection in the same month and found that the plumbing works were completed generally in order and there was no water supply to the newly installed plumbing works.] ArchSD submitted drawings to WSD showing the proposed alignment of new water main (25mm dia).

6	10.2013	WSD approved the proposed alignment for the new water main (25mm dia.).
7	11.2013	FEHD submitted application to carry out excavation and pipe laying works for the new water main (25mm dia.) to the District Land Office (DLO), but was eventually not accepted due to encroachment into private lot and underlying geotechnical issues (stability of adjacent slope might be affected in case of leakage of water main).
8	9.2014	Contractor C submitted a revised alignment of the water main (25mm dia.) to WSD. [Remark: the revised alignment would not encroach into private lot.]
9	10.2014	WSD approved the revised alignment for the new water main (25mm dia.). FEHD re-submitted application to carry out excavation and pipe laying works for the new water mains (25mm dia.) to DLO, but was still not accepted due to underlying geotechnical issues (stability of adjacent slope might be affected in case of leakage of water main).
10	8.2015 – 11.2015	Contractor C submitted a proposal of plumbing installation works due to change in layout of Toilet H and the proposal was approved by WSD in November 2015.
11	7.2016	WSD requested Contractor C, ArchSD and FEHD to complete the new water main (25mm dia.) and report completion of plumbing installation works in Toilet H.
12	9.2016	As requested by ArchSD, FEHD informed WSD that it decided to cancel the application of the new water main (25mm dia.) connection. WSD had no objection to the cancellation. [Remark: During 2013 to 2016, FEHD, ArchSD and Contractor C had explored different alignments for the water main (25mm dia) connection but without success. Upon confirmation that all alignments for the new water main connection were eventually found not feasible, FEHD, ArchSD and Contractor C had

		proactively negotiated with WSD to call off the originally proposed new water main connection and re-submit a formal application to adopt the existing 20mm dia. water main as the permanent water main connection.]
13	1.2017	Contractor C submitted a new application to WSD for flushing water supply connection from the existing water main (20mm dia.) for approval.
14	2.2017	<p>WSD carried out an inspection at Toilet H and observed that there was an extension of the existing fresh water main after the meter position to provide supply to the new plumbing works. As no prior approval had been given on such uses, it was considered as not conforming to the requirement of Waterworks Ordinance (Cap. 102) from procedural point of view. WSD requested FEHD/ ArchSD to rectify the non-conformance.</p> <p>[Remark: The original application (new 25mm dia. water main) was withdrawn in Sept 2016 (see item 12) and replaced by the application submitted in Jan 2017 for flushing water supply connection from the existing water main (20mm dia.) as mentioned in item 13 above. Since the application was not yet approved by WSD in Feb 2017, the inspection was carried out based on the original layout of the Aqua Privy before Mar 2012.]</p>
15	9.2017	WSD informed Contractor C that WSD had no objection to its proposal for flushing water supply for Toilet H, including flushing water supply to be branched off from the existing fresh water main (20mm dia.) and provision of a separate meter to the existing water main for flushing purpose.
16	2.2018	Contractor C completed the associated meter installation works and the water supply for flushing was then authorised by WSD. (WSD issued Form WWO46 Pt. V to the licensed plumber to certify that no irregularity was found during WSD's inspection.)