

# 立法會 *Legislative Council*

LC Paper No. CB(2)1866/15-16(02)

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## **Special House Committee meeting on 11 July 2016**

### **Updated background brief on lead in drinking water incidents**

#### **Purpose**

This paper provides updated background information on the lead in drinking water incidents, and the major views and concerns expressed by Members of the Legislative Council ("LegCo") on the subject.

#### **Background**

##### Excess lead found in drinking water samples taken from the public rental housing ("PRH") estates

2. Between April and June 2015, the Democratic Party ("DP") collected drinking water samples from 13 public and private buildings in Kowloon West to test their contents of heavy metals including lead. According to the test results announced by DP on 5 July 2015, four water samples taken from Kai Ching Estate in Kowloon City contained lead that exceeded the World Health Organization ("WHO")'s provisional guideline value<sup>1</sup> of not more than 10 micrograms per litre ("µg/l") for lead ("the WHO value").

3. Between 9 to 11 July 2015, the Administration announced that the lead content of seven water samples from Kai Ching Estate exceeded the WHO

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<sup>1</sup> As defined under WHO's Guidelines for Drinking-water Quality published in 2011, a health-based guideline value represents the concentration of a constituent that does not exceed tolerable risk to the health of the consumer over a lifetime of consumption. For the contaminant of lead, the guideline value is designated as provisional because calculated guideline value is below the achievable quantification level as well as the level that can be achieved through practical treatment methods, source control, etc.

value, and that lead was found in two samples of solder used on water pipe joints. On 13 July 2015, water samples were then taken from four other PRH estates where the fresh water plumbing systems were installed by the same licensed plumber. The lead content of five samples from Kwai Luen Estate (Phase 2) as well as one sample from a vacant unit of Shui Chuen O Estate were found to be above the WHO value, and lead was found in samples of solder. On 24 July 2015, the Administration announced that water sampling tests would cover PRH estates completed in or after 2005, after which consideration would be given to how to conduct water sampling tests for PRH estates completed before 2005, based on experience and data. The Administration announced on 18 November 2015 that the water sampling tests for all PRH estates had been completed. Water samples from 11 PRH developments were found to contain lead content above the WHO value.<sup>2</sup>

#### Measures to assist affected tenants

4. For PRH estates where water samples were found to have exceeded the WHO value, the Housing Department ("HD") and Water Supplies Department ("WSD") arranged for temporary water supply, including the supply of bottled water<sup>3</sup> and the installation of temporary water tanks and pipes outside each block, to facilitate access to drinking water in each affected estate. HD also asked the main contractors concerned to take necessary actions to remedy the situation, including extension of connection pipes from the roof-top water tanks to each floor of the building, installation of lead-reducing water filters for affected tenants, and rectification of the non-compliant water pipes in the affected PRH developments. From 1 January 2016, tenants in the affected 11 PRH developments would receive a subsidy amount of \$660 for offsetting part of the water charges and sewage charges payable.<sup>4</sup>

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<sup>2</sup> The 11 PRH developments were Kwai Luen Estate Phase 2, Kai Ching Estate, Wing Cheong Estate, Lower Ngau Tau Kok Estate Phase 1, Shek Kip Mei Estate Phase 2, Tung Wui Estate, Hung Hom Estate Phase 2, Yan On Estate, Choi Fook Estate, Un Chau Estate Phase 2 and 4, and Ching Ho Estate Phase 1. The full test results are available at the Government's "Lead in drinking water incidents" website: [www.isd.gov.hk/drinkingwater/eng/faq.html](http://www.isd.gov.hk/drinkingwater/eng/faq.html)

<sup>3</sup> According to the Administration's paper provided for the meeting of the Panel on Housing on 1 February 2016, the distribution of bottled water to the 11 affected developments was ceased on 28 December 2015.

<sup>4</sup> The subsidy involved some \$20 million and would be provided by the four contractors concerned, namely China State Construction Engineering (Hong Kong) Limited, Paul Y General Contractors Limited, Shui On Building Contractors Limited and Yau Lee Construction Company Limited.

## Public health measures adopted by the Administration

5. As advised by the Administration at the special meeting of the Panel on Health Services ("the HS Panel") on 24 August 2015, if lead is absorbed into the body in excessive amount, many organs and functions in the body will be affected. Depending on the level of lead inside the body, the effects of lead exposure include neurodevelopmental effects, anaemia, high blood pressure, gastrointestinal symptoms, impaired renal function, neurological impairment, impaired fertility and adverse pregnancy outcome.

6. To ease residents' concerns on the health effects arising from lead found in drinking water, the Department of Health ("DH") has provided free blood tests for the more easily affected groups, namely infants, young children under six years of age (including those who were under six years old when moving into the PRH estates concerned), pregnant women and lactating women and developed care plan for tenants whose blood lead level exceeds the reference value<sup>5</sup>. Details of the care plan are set out in **Appendix I**. According to established measures under the care plan, the Hospital Authority will continue to monitor the blood lead levels of citizens whose blood lead levels are found to be borderline raised in the first blood test. As of 29 June 2016, the blood lead levels of a total of 156 citizens have been reviewed in batches.

## Investigation into the incidents

7. The Development Bureau established the Task Force on Investigation of Excessive Lead Content in Drinking Water, led by WSD, to ascertain the causes and recommend measures to prevent recurrence of similar incidents in future. The Task Force submitted its final investigation report to the Secretary for Development on 31 October 2015.<sup>6</sup> In addition, the Housing Authority ("HA") formed the Review Committee on Quality Assurance Issues Relating to Lead in Fresh Water of Public Housing Estates to review the quality assurance issues relating to fresh water supply of PRH estates. The

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<sup>5</sup> On 18 July 2015, the Secretary for Food and Health convened an inter-departmental meeting with experts of DH and the Hospital Authority to establish the reference value of lead in blood and care plan for residents of the affected PRH estates. The reference value of blood lead level for the more easily affected groups is 5µg per deciliter ("dL") and for adults aged 18 or above is 10 µg/dL.

<sup>6</sup> The full report (in English only) with a Chinese summary is available at the Development Bureau's website:  
[www.devb.gov.hk/filemanager/en/Content\\_3/TF\\_Final\\_Report.pdf](http://www.devb.gov.hk/filemanager/en/Content_3/TF_Final_Report.pdf) (full report);  
[www.devb.gov.hk/filemanager/tc/Content\\_3/TF\\_Report\\_Chi\\_Summary.pdf](http://www.devb.gov.hk/filemanager/tc/Content_3/TF_Report_Chi_Summary.pdf) (Chinese summary)

Review Committee submitted its final report to the HA Chairman on 8 January 2016.<sup>7</sup>

8. The Commission of Inquiry into Excess Lead Found in Drinking Water under the Commissions of Inquiry Ordinance (Cap. 86) was set up to inquire into the incidents of excess lead found in drinking water. The Terms of Reference of the Commission were to (a) ascertain the causes of excess lead found in drinking water in PRH developments; (b) review and evaluate the adequacy of the present regulatory and monitoring system in respect of drinking water in Hong Kong; and (c) make recommendations with regard to the safety of drinking water in Hong Kong.

### **Major views and concerns expressed by Members**

9. The views and concerns expressed by LegCo Members on the subject at various meetings of LegCo and its committees since July 2015 are summarized in the ensuing paragraphs.

#### Ascertaining the source of excess lead found in tap water

10. Members in general considered it a top priority for the Administration to find out the source of excess lead in the drinking water samples taken from PRH estates concerned, and identify residential developments for which lead was used in the soldering materials of fresh water supply systems. Noting that the relevant government departments/public bodies had undertaken to investigate the incidents, some Members urged the Administration to publish the relevant investigation reports in full. The Administration was also urged to release the findings of the investigation and review as soon as practicable. While some Members considered that CoI, chaired by a judge and empowered to compel persons to give evidence and disclose documents, would conduct the investigation independently and comprehensively, some other Members opined that LegCo should in parallel appoint a select committee to investigate the incidents.

#### Scope and validity of water sampling tests

11. With a view to alleviating public concern, Members considered that the Administration should conduct water sampling tests for all public housing

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<sup>7</sup> The report is available at HA's website: [www.housingauthority.gov.hk/en/about-us/news-centre/press-releases/final\\_report.html](http://www.housingauthority.gov.hk/en/about-us/news-centre/press-releases/final_report.html)

estates and subsidized housing estates, and requested the Administration to draw up a timetable in this regard. The Panel on Housing passed a motion at the special meeting on 22 July 2015 urging the Administration to, inter alia, carry out the suggested water sampling tests expeditiously. The wording of the motion is in **Appendix II**.

12. According to the Administration, the work of water sampling tests was constrained by the number of accredited laboratories in Hong Kong. The Administration also advised that water pipes that joined WSD's water mains to the connection point at the lot boundary were maintained by WSD, the communal service including the service pipes from the building's lot boundary to the building as well as those communal pipes inside the building were maintained by the agent (usually the property management agent or the owners' committees), and the inside service of a flat or property was maintained by the property owner. HD and HA would conduct water sampling tests for PRH developments, and other agents concerned could employ accredited laboratories to take water samples and carry out the tests.

13. When discussing the public health measures for the lead in drinking water incidents at the special meeting of the HS Panel on 24 August 2015, some Members raised concern about the media reports that excessive lead was found in the water samples of drinking water taken at a primary school. At the special HC meeting on 1 September 2015, the Administration advised that it would take drinking water samples by batches from kindergartens as well as public sector and direct subsidy scheme primary and secondary schools built with government funding in 2005 or after.<sup>8</sup>

14. Some Members queried the validity of the water sampling tests conducted by the Administration as the water samples were collected after running the tap for a few minutes, and requested the Administration to collect and test samples of stagnant water in pipes as well. The Administration explained that the water sampling means and procedures varied across countries/cities depending on their unique situations. The current practice of collecting samples after running the taps for two to five minutes complied with the WHO standard, whereas samples of stagnant water in pipes were only indicative of the quality of drinking water upon remaining in the water pipes for a period of time, and did not reflect the quality of the water to be taken by an individual daily.

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<sup>8</sup> The test results are available at the website of the Education Bureau:  
[www.edb.gov.hk/attachment/en/news009/Test\\_Results\\_of\\_Water\\_Samples\\_en.pdf](http://www.edb.gov.hk/attachment/en/news009/Test_Results_of_Water_Samples_en.pdf)

## Measures to assist affected tenants

### *Water supply for the affected PRH estates*

15. Members stressed the need for the Administration to ensure that the quality of temporary water supply to the affected PRH estates was up to standard, and to assist the elderly, infirm and persons with disabilities to get water from the temporary water supply points. Members also urged the Administration to ensure that connection pipes would be extended from roof-top tanks to each floor of each block for all affected PRH estates.

16. In order to alleviate the concerns of PRH tenants about the quality of drinking water, some Members suggested that the Administration should install lead-reducing water filters for affected tenants. The Administration advised that all the main contractors would install, for affected households, filters with U.S. National Sanitation Foundation's NSF 53 certification for lead reduction, and replace the filter cores for them free-of-charge within two years. Members also urged the Administration to replace sub-standard water taps/pipes of the affected PRH estates as soon as practicable.

### *Blood tests and medical follow-up for affected tenants*

17. Members strongly urged the Administration to expand the scope of free blood tests to ease the health concerns of the residents of those PRH estates affected by the incidents. They considered that on top of the existing three easily affected groups, consideration should be given to covering also children who were under six years old when moving into the concerned PRH estates and residents suffering from chronic diseases. Some Members further considered that blood tests should also be provided for people who belonged to the three easily affected groups and were residing in the affected PRH estates even though they were not the family members of the PRH tenants of the affected estates.

18. Members were deeply concerned about the long waiting time of around three to four weeks for the blood testing services provided by the Hospital Authority and DH. The Administration advised that as at the end of August 2015, the Hospital Authority had arranged seven public hospitals to provide blood taking service at weekends, and made arrangement with two private hospitals in providing additional blood taking service. The Hospital Authority had endeavored to enhance the throughput of blood taking and testing with the purchase of new blood testing equipment, sending of blood samples to overseas laboratories for testing, and the deployment of the

Hospital Authority healthcare personnel to work overtime. The weekly quota of blood testing had been increased from 360 to 820 at the end of August.

19. Some Members were concerned that the current blood test might not be able to detect residue of lead contamination in the body, given that the half-life of lead in blood was approximately 30 days once the source of contamination had been eliminated. They suggested that other than blood test, hair and urine tests for lead should be considered. The Administration advised that whole blood lead level was internationally recognized as the most accurate and reliable method for screening and diagnosis to assess the risk of lead on health. Hair and urine tests for lead were not suitable for screening and diagnosis.

20. Given the concerns about the potential health risks on PRH tenants arising from prolonged intake of drinking water with excess lead, Members considered that the Administration should explain clearly to tenants the potential health impacts associated with taking lead-contaminated water, and provide medical assistance to affected tenants with an elevated blood lead level.

#### *Supporting services and compensation*

21. Members opined that the Administration should centralize dissemination of information by various bureaux/departments about the findings of water sampling tests and progress of follow-up measures. There was a suggestion that counselling and emotional support should be provided to affected tenants by setting up one-station service counters at the PRH estates concerned and stationing social workers thereat.

22. Some Members expressed concerns about the inconvenience caused to and expenses incurred by the affected tenants as they had to take water from temporary water supply joints and/or purchase bottled water for consumption. Besides, the tenants might use more water than the average households as they were advised by the Administration to run tap water for a few minutes to flush faucets before using water for drinking or cooking. The Administration was requested to consider waiving the water charges and/or rentals of the households concerned for a certain period of time. Some Members also suggested that the Administration should bear the medical expenses for the affected tenants with an elevated blood lead level.

#### Monitoring of waterworks

23. Members considered that the incidents of excess lead found in drinking

water reflected inadequacies in respect of waterworks monitoring and inspection, and urged the Administration to take rectification measures to ensure that the supply of water in new housing developments would be up to standard. In this connection, Members suggested the Administration reviewing the Waterworks Ordinance (Cap. 102) and the licensing requirements for Authorized Persons and licensed plumbers. At its meeting of 28 October 2015, the Council passed a motion on "Legislating for safety of drinking water", moved by Dr KWOK Ka-ki as amended by Mr CHAN Han-pan, urging the Government to, among others, immediately legislate for the safety of drinking water. The wording of the motion is in **Appendix III**.

24. The Administration advised that subsequent to the incidents, HA had put in place measures to incorporate in all relevant HA contracts additional water sampling requirements and the checking of lead content, and to step up inspection on soldering materials used at water pipe joints of public housing estates. Depending on the findings of relevant investigations, the Administration would initiate legislative amendments to WO if necessary.

#### Responsibilities of relevant parties

25. Members noted at the special HC meeting on 8 October 2015 that HA decided on 30 September 2015 to take regulatory actions against the four main contractors (and two related companies) involved in the construction of the 11 PRH estates where excess lead in drinking water was found.<sup>9</sup> Some Members, however, considered that government officials concerned should also be held responsible for the incidents. The Administration advised that while the incidents pinpointed that there were systemic problems in the regulatory system on drinking water quality, there was no evidence indicating that any individual government officials should bear personal responsibility.

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<sup>9</sup> The Tender Committee of HA would not consider any new works tenders submitted by the six contractors (i.e. China State Construction Engineering (Hong Kong) Limited, Paul Y. General Contractors Limited, Shui On Building Contractors Limited, Yau Lee Construction Company Limited, China Overseas Building Construction Limited, and Paul Y. Construction Company, Limited) from 1 March to 30 September 2015 (i.e. seven months). The Tender Committee of HA also decided to remove China State Construction Engineering (Hong Kong) Limited, Shui On Building Contractors Limited, and Yau Lee Construction Company Limited from HA's Premier League of contractors with effect from 1 October 2015.



## **Latest development**

26. The Chief Executive received on 11 May 2016 the report submitted by the Commission of Inquiry into Excess Lead Found in Drinking Water. The report was published on 31 May 2016 in redacted form.<sup>10</sup> The recommendations of the report are in **Appendix IV**.

27. The Chief Secretary for Administration and relevant government officials will attend the special HC meeting scheduled for 11 July 2016 to discuss with Members lead in drinking water incidents.

## **Relevant papers**

28 A list of relevant papers is set out in **Appendix V**.

Council Business Division 2  
Legislative Council Secretariat  
7 July 2016

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<sup>10</sup> The report is available at the Government website:  
[www.gov.hk/en/theme/coi-drinkingwater/](http://www.gov.hk/en/theme/coi-drinkingwater/)

**Care plan for different blood lead levels developed by the Department of Health ("DH") and the Hospital Authority ("HA")**

**(I) Persons below 18-year-old, pregnant women and lactating women**

Whole blood lead level (microgram/dL)	Health risks	Care plan
< 5	<ul style="list-style-type: none"> <li>• Normal level</li> <li>• No significant health risk</li> <li>• No follow-up required</li> </ul>	<ul style="list-style-type: none"> <li>• DH will inform the residents concerned by phone and by mail about the results</li> </ul>
5 - 44	<ul style="list-style-type: none"> <li>• Borderline raised level</li> <li>• Potential health risk</li> <li>• Health evaluation and follow-up required</li> </ul>	<ul style="list-style-type: none"> <li>• DH will perform exposure assessment</li> <li>• HA will arrange health evaluation and follow-up</li> <li>• Blood lead level will be monitored</li> </ul>
> 44	<ul style="list-style-type: none"> <li>• Significantly raised level</li> <li>• Risk of lead poisoning</li> <li>• Need medical assessment and follow-up</li> </ul>	<ul style="list-style-type: none"> <li>• DH will perform exposure assessment</li> <li>• HA will arrange medical assessment and follow-up</li> <li>• Blood lead level will be monitored</li> </ul>

**(II) Adults**

Whole blood lead level (microgram/dL)	Health risks	Care plan
< 10	<ul style="list-style-type: none"> <li>• Normal level</li> <li>• No significant health risk</li> <li>• No follow-up required</li> </ul>	<ul style="list-style-type: none"> <li>• DH will inform the residents concerned by phone and by mail about the results</li> </ul>
10 - 50	<ul style="list-style-type: none"> <li>• Borderline raised level</li> <li>• Potential health risk</li> <li>• Health evaluation and follow-up required</li> </ul>	<ul style="list-style-type: none"> <li>• DH will perform exposure assessment</li> <li>• HA will arrange health evaluation and follow-up</li> <li>• Blood lead level will be monitored</li> </ul>
> 50	<ul style="list-style-type: none"> <li>• Significantly raised level</li> <li>• Risk of lead poisoning</li> <li>• Need medical assessment and follow-up</li> </ul>	<ul style="list-style-type: none"> <li>• DH will perform exposure assessment</li> <li>• HA will arrange medical assessment and follow-up</li> <li>• Blood lead level will be monitored</li> </ul>

房屋事務委員會

在2015年7月22日的特別會議上  
就議程項目I"公共租住屋邨食水樣本被發現含鉛過量"  
通過的議案

近日有公共屋邨的食水被驗出含鉛量超標，直接影響居民健康，並令市民感到非常憂慮。雖然政府當局已擴大檢驗食水範圍至由 2011 年起落成的屋邨，惟各區居民仍然擔心屋邨食水未符標準。為釋除公眾疑慮，令居民可以安心用水，本委員會要求政府當局儘快全面為本港所有公共屋邨及資助房屋屋苑，包括近年經"全方位維修計劃"更換新喉的舊屋邨，進行食水檢驗工作，並為所有曾驗出食水含鉛量超標的屋邨(包括水泉澳邨)，用水車或其他有效方法提供清潔食水，直至維修正常供水系統完成為止。

原議案動議 : 郭偉強議員  
原議案附議 : 王國興議員, BBS, MH  
修正案動議 : 張超雄議員

(Translation)

**Panel on Housing**

**Motion passed under agenda item I on "Excessive lead found in tap water samples from public rental housing estates" at the special meeting on 22 July 2015**

Recently, tap water at some public housing estates was tested and found to contain excessive lead. Such an incident has direct impacts on the residents' health and has aroused serious public concern. Although the Administration has extended the coverage of water testing to include public housing estates completed since 2011, residents in various districts remain concerned that water at public housing estates is not up to standard. To address the public concern and enable the residents to feel at ease in using water, this Panel requests the Administration to conduct comprehensive water testing expeditiously for all the public housing estates and subsidized housing estates in the territory, including old housing estates where water pipes have been newly replaced under the "Total Maintenance Scheme" in recent years; and to use water wagons or other effective means to provide clean drinking water for housing estates where tap water has been found to contain excessive lead (including Shui Chuen O Estate), until repair works to restore the water supply system to normal have been completed.

Original motion moved by : Hon KWOK Wai-keung  
Original motion seconded by : Hon WONG Kwok-hing, BBS, MH  
Amendments moved by : Dr Hon Fernando CHEUNG Chiu-hung

(Translation)

**Motion on  
“Legislating for safety of drinking water”  
moved by Dr Hon KWOK Ka-ki  
at the Council meeting of 28 October 2015**

**Motion as amended by Hon CHAN Han-pan**

That the safety of drinking water is an important livelihood issue, yet since the discovery of excess lead in drinking water at consumers' taps in some public rental housing estates in Hong Kong in early July this year, more and more cases of excess lead in drinking water samples have been uncovered, including samples taken from Home Ownership Scheme flats, private housing estates, hospitals and even schools, but the Government has shown its ineptitude in handling lead in drinking water incidents, causing distress to nearly 30 000 households in the public rental housing estates confirmed to have excess lead in drinking water, and also seriously affecting their daily lives, hence shattering Hong Kong people's confidence in the safety of drinking water; in addition, the relevant legislation on water supply in Hong Kong is outdated and unable to effectively regulate the drinking water quality in Hong Kong; in this connection, this Council urges the Government to immediately legislate for the safety of drinking water, so as to ensure that Hong Kong people are able to consume safe and reliable drinking water; in order to restore people's confidence in the safety of drinking water in the short run and compensate the affected public rental housing tenants, this Council also urges the Government to introduce the following measures:

- (1) to reasonably waive water charges and rents for all the affected public rental housing tenants;
- (2) to conduct drinking water sampling tests for the affected public rental housing tenants who have installed water filters, so as to ensure the effective functioning of such water filters;
- (3) to expand the scope of priority blood testing for the affected public rental housing tenants to household members aged below six when moving into their flats;
- (4) to clearly advise the affected public rental housing tenants of a timetable for the replacement of problem pipes and/or fittings, as well as the relevant arrangements and progress, and to assist the affected tenants in seeking compensation; and
- (5) to put forward proposals for assisting the affected schools and hospitals, etc. in replacing problem pipes and/or fittings.

**Extract from the Report of the Commission of Inquiry into Excess Lead Found in Drinking Water**

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**VI. RECOMMENDATIONS**

487. The following are measures we would recommend in order to prevent the recurrence of similar incidents in future –

- (1) Given the inadequacy of the sampling protocol adopted by WSD and in order to put the minds of all PRH residents at ease, the Government should undertake to test the drinking water of all PRH estates again using an appropriate sampling protocol that would include the testing of stagnant water as well.
- (2) Given the ever increasing complexity of modern buildings, the Government should, at the policy level, review the adequacy of the existing legislative framework and regulatory regime in safeguarding the safety and quality of drinking water in Hong Kong. The review should cover :
  - (i) the need for delineating the role of WA (as regulator of water quality) and the role of WSD (as water supplier); and
  - (ii) WSD's roles and responsibilities in effectively safeguarding the quality and safety of drinking water in Hong Kong, in particular whether its responsibilities are only confined to the quality of drinking water up to the connection points.

- (3) The Government should set up an independent body to overlook the performance of WSD and water quality in Hong Kong generally. This body should be empowered to conduct independent inspections and auditing when necessary.
- (4) We support WA/WSD's proposal to set up an international expert panel on water safety to provide expert advice to Hong Kong on matters including water quality standard, water quality regulatory and monitoring regime, water sampling protocol etc.
- (5) WA/WSD should undertake a comprehensive study with a view to establishing the "Hong Kong Drinking Water Standards", taking into account overseas experience and practices.
- (6) WA/WSD should define, preferably by way of legislation, the roles, involvements and responsibilities of other parties such as developers, contractors and APs who are in practice involved in the design, construction and maintenance of inside service but are currently not prescribed with any duties under WWO and WWR.
- (7) With the involvement of all relevant stakeholders including experts, professionals of different related disciplines and the general public, WA/WSD should establish and implement a WSP for Hong Kong in general and WSPs specifically for other developments in Hong Kong (e.g. public and private housing

developments, hospitals, elderly homes, schools), with clear indication of :

- (i) how to identify potential hazards and conduct risk assessment of contamination at different sections of the water distribution system, i.e. waterworks, communal service and inside service; and
  - (ii) the responsibilities of stakeholders at different sections of the water distribution system.
- (8) WA/WSD should set out clearly, in the legislation or appropriate medium, the latest approved pipes and fittings as well as the latest standards for all plumbing material and components to be used in the construction of inside service, and update the same regularly and periodically.
- (9) WA/WSD should devise and uphold a robust licensing / registration regime for parties responsible for plumbing installations, including to:
- (i) define the duties of LPs under WWO, taking into account the relevant provisions of the Construction Workers Registration Ordinance (Cap. 583) (CWRO) which allows skilled workers to perform plumbing installations;
  - (ii) review the adequacy of the existing arrangement where an individual LP can be responsible for

plumbing installations of any scale (e.g. up to thousands of household units) at any given time;

- (iii) review the competency and manpower development of LPs, and consider the need for continuous professional education for LPs on a compulsory basis as part of the conditions for renewal of licences;
  - (iv) ensure that LPs and skilled plumbing workers under CWRO would be taught in their training, certification and professional development the potential causes and hazards of drinking water contaminations, and precautionary measures; and
  - (v) consider the need and feasibility to include other professionals (such as building services engineers) and specialised contractors (such as in the form of a registration system for plumbing contractors) in the design and construction of inside service.
- (10) HA should review its control mechanism on the construction projects with emphasis not only on the functionality of the plumbing system but also the quality and safety of water.
- (11) HA should equip its CA (Design and Standard) with necessary expertise on plumbing installations and strengthen its research capability to identify the existing



and emerging risks to the quality and safety of water in developing and managing PRH estates.

- (12) HA should, in consultation with WSD, review all the materials to be used in the construction of PRH estates with a view to identifying the potential hazards and contamination in the drinking water, and revising the project specifications as necessary.
- (13) HA should put in place a robust system to monitor the compliance of the plumbing installations with the project specifications by main contractors and their subcontractors.
- (14) We support all the control measures put forward by the Review Committee regarding the purchase, use and testing of solder in the construction of all new PRH projects. It is important not to relegate these control measures into yet another document check exercise.
- (15) HA should contribute proactively to the establishment of a WSP for PRH estates under (7) above.
- (16) At all times and especially before the establishment of a WSP for PRH estates, HA should ensure all its staff, in particular all the CAs who are responsible for signing WWO certifications and documents, are aware of all the potential causes and hazards of drinking water contamination and precautionary measures.

(17) At all times and before WA/WSD has defined the specific roles of all involved parties, the developers and main contractors, when contracting out the plumbing work, should devise and execute an effective management plan for making sure that :

(i) only the approved/compliant materials would be used in plumbing installations; and

(ii) the plumbing work would be carried out under appropriate supervision and inspection by competent personnel;

so that the control measures would not be relegated into another document check exercise.

488. We believe that if these recommendations are implemented, not only PRH estates, but also other developments in Hong Kong and our community as a whole will be benefited.

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## Relevant documents on lead in drinking water incidents

Papers issued for Council and Committee meetings

<b>Committee/ Date of meeting</b>	<b>Relevant papers</b>
Panel on Housing (Special meeting on 22 July 2015)	<p><a href="#">Paper</a> provided by the Administration entitled "Excessive Lead in Fresh Water Supply in Public Housing Estates"</p> <p><a href="#">Background brief</a> prepared by the Legislative Council ("LegCo") Secretariat entitled "Excessive Lead found in Tap Water Samples from Public Rental Housing Estates"</p> <p><a href="#">Speaking note</a> of the Secretary for Transport and Housing (Chinese version only)</p> <p><a href="#">Speaking note</a> of the Acting Secretary for Development (Chinese version only)</p> <p><a href="#">Speaking note</a> of the Secretary for Food and Health (Chinese version only)</p> <p><a href="#">Motion</a> on "Excessive lead found in tap water samples from public rental housing estates" passed at the special meeting</p> <p><a href="#">The Administration's response</a> to the concerns and suggestions raised by Members at the special meeting</p>
Panel on Health Services (Special meeting on 24 August 2015)	<p><a href="#">Paper</a> provided by the Administration entitled "Public health measures for the lead in drinking water incidents"</p> <p><a href="#">Background brief</a> prepared by the LegCo Secretariat entitled "Public health measures for the lead in drinking water incidents"</p>
House Committee (Special meeting on 1 September 2015)	<p><a href="#">Paper</a> provided by the Administration entitled "Lead in drinking water incidents"</p> <p><a href="#">Background brief</a> prepared by the LegCo Secretariat entitled "Lead in drinking water incidents"</p> <p><a href="#">Speaking note</a> of the Chief Secretary for Administration (Chinese version only)</p>
House Committee (Special meeting on 8 October 2015)	<p><a href="#">Paper</a> provided by the Administration entitled "Lead in drinking water incidents"</p> <p><a href="#">Updated background brief</a> prepared by the LegCo Secretariat entitled "Lead in drinking water incidents"</p> <p><a href="#">Speaking note</a> of the Chief Secretary for Administration (Chinese version only)</p>

<b>Committee/ Date of meeting</b>	<b>Relevant papers</b>
	<a href="#">Speaking note</a> of the Acting Secretary for Transport and Housing (Chinese version only)
Legislative Council (Meeting on 28 October 2015)	<a href="#">Motion</a> on "Legislating for safety of drinking water" moved by Dr Hon KWOK Ka-ki  <a href="#">Wording of the motion passed</a> and <a href="#">Progress report</a>
Panel on Housing (Meeting on 2 November 2015)	<a href="#">Paper</a> provided by the Administration entitled "Excess lead in drinking water in public housing estates incident"  <a href="#">Updated background brief</a> prepared by the LegCo Secretariat entitled "Lead in drinking water incidents"  <a href="#">Speaking note</a> of the Under Secretary for Transport and Housing (Chinese version only)  <a href="#">The Administration's response</a> to the concerns and suggestions raised by Members at the meeting
Panel on Housing (Meeting on 1 February 2016)	<a href="#">Paper</a> provided by the Administration entitled "Final report of the Review Committee on Quality Assurance Issues Relating to Fresh Water Supply of Public Housing Estates"  <a href="#">Updated background brief</a> prepared by the LegCo Secretariat entitled "Lead in drinking water incidents"

### Government press releases

Press releases issued by the Government on the lead in drinking water incidents are available on the following website:  
[www.isd.gov.hk/drinkingwater/eng/press.html](http://www.isd.gov.hk/drinkingwater/eng/press.html)

Council Business Division 2  
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