

**Advisory Committee on Water Supplies**  
**Minutes of Meeting No. 8**

**Date:** 5 July 2018 (Thursday)

**Time:** 2:00 p.m.

**Venue:** Room 4819, Water Supplies Department, 48/F, Immigration Tower,  
7 Gloucester Road, Wan Chai, Hong Kong

**Present**

Ir Dr CHAN Hon Fai	Chairman
Prof KWAN Kai Cho, Joseph	Vice-Chairman
Prof CHAN Yan Keung, Thomas	Member
Prof CHENG Man Chung, Daniel	Member
Prof CHIU Pauline	Member
Prof WONG Wing Tak	Member
Prof WU Xun	Member
Dr WONG Siu Wing, Eric	Member
Ir NG Chun Keung	Member
Mr LAU Che Feng, Edwin	Member
Miss LEE Pik Yee, Peggy	Member
Mr TAM Kwok Wing, Ivan	Member
Sr Prof. WONG Bay	Member
Ms WONG Chi Shun, Carol	Member
Mr YEUNG Wai Sing	Member
Mr NG Vitus	Member (Development Bureau)
Mr WONG Tak Wai, David	Member (Environmental Protection Department)
Mr WONG Chung Leung	Member (Water Supplies Department)
Dr FUNG On Yee, Connie	Member (Department of Health)
Mr CHAN Yiu Keung, Oliver	Member (Housing Department)
Mr MAK Ka Chun	Member (Architectural Services Department)
Mr LAW Yuk Fat, Robin	Secretary (Water Supplies Department)

**Water Supplies Department Representatives in Attendance**

Mr CHAU Sai Wai	Assistant Director, Water Supplies Department
Mr KWOK Yau Ting, Kelvin	Chief Chemist, Water Supplies Department
Mr LAU Cheuk Fung Calvin	Senior Engineer, Water Supplies Department
Mr LAW Tak Chi, George	Senior Engineer, Water Supplies Department
Mr LEE Kwun Chung, Johnson	Senior Engineer, Water Supplies Department
Mr TSANG Chung Man, Alex	Senior Engineer, Water Supplies Department
Ms LAW Ming Chu Cecilia	Engineer, Water Supplies Department (Notes Taker)

### **Absent with Apologies**

Prof CHU Wei	Member
Dr HO Shu Kwong, Raymond	Member
Dr LAU Wai Neng, Michael	Member
Dr WONG TAAM Chi Woon, Vivian	Member
Ms KAM Kin	Member
Mr WONG Kwun Kit, William	Member

### **Item**

#### **1. Opening Remarks**

- 1.1 The Chairman welcomed all Members and representatives of Water Supplies Department (WSD) to the meeting.
- 1.2 The Chairman informed the meeting that Prof CHU Wei, Dr HO Shu Kwong, Raymond, Dr LAU Wai Neng, Michael, Dr WONG TAAM Chi Woon, Vivian, Ms KAM Kin, and Mr WONG Kwun Kit, William were unable to attend the meeting and had sent in their apology.
- 1.3 The Chairman reminded Members to follow the “Guidelines for a One-tier Reporting System” for declaration of interest, which was distributed to the Members on 26 March 2018.

### **Agenda Items**

#### **2. Confirmation of Minutes of Last Meeting**

- 2.1 The Chairman advised that the draft minutes of the Meeting no. 7 were circulated to the Members on 27 June 2018 and no comment was received. There being no further amendment proposed at the meeting, the draft minutes of the Meeting No. 7 were confirmed.

#### **3. Matters Arising**

##### **Membership for Working Groups for the New Terms (2018-2020)**

- 3.1 The Chairman invited the Secretary to brief the Members on the membership of

the Working Groups (WGs). The Secretary advised that an email summarizing the membership of the three WGs was sent to the Members on 9 May 2018. The Secretary reminded the Members that they were always welcome to join the meetings of the WGs if they wished, even though they were not members of the WGs.

#### **4. Working Group on Operational Matters**

- 4.1 The Chairman invited Prof WONG Wing Tak, Chairman of WG on Operational Matters, to report the key issues discussed in the 1<sup>st</sup> WG meeting which was held on 22 June 2018.

##### **Work Plan for 2018 – 2020**

- 4.2 Prof WONG reported that the proposed work plan of the WG for 2018-2020 was discussed in the meeting. The plan was accepted by the WG Members.

##### **Control Measures of Materials Installed/Used in Fresh Water Tanks of Inside Service**

- 4.3 Prof WONG reported the following:
- WSD had presented the proposed control measures of materials installed/used in fresh water tanks of inside service.
  - The body, lining and accessories for fresh water tanks would be subject to material control by the Water Authority and his approval had to be sought before using them in the construction and maintenance/repair of fresh water tanks.
  - WSD would review whether testing standard and requirements should also be introduced for tile adhesive used in fresh water tanks. The review would assess the leaching of tile adhesive and the risk to the drinking water safety.

##### **Dongjiang (DJ) Water Quality received in Hong Kong at Muk Wu Raw Water Pumping Station for the Period from April 2017 to March 2018**

- 4.4 Prof WONG reported the following:
- WSD had reported the DJ water quality received in Hong Kong at Muk Wu Raw Water Pumping Station for the period from April 2017 to March 2018.

- The DJ water quality received during the period complied with the national standard “Environmental Quality Standards for Surface Water (GB 3838-2002)” Type II standard (applicable to the abstraction for human consumption in first class protection area) stipulated in the DJ water supply agreement.
- There were occasional deviations of DJ water quality from the GB3838-2002 Type II standard due to the discharge of floodwater from Shawan River into the Shenzhen Reservoir as a result of heavy rainstorms. Nevertheless, in accordance with the international practice that compliance of standard would be based on annual average of water quality, the average DJ water quality for the reporting period complied with the GB3838-2002 Type II standard.
- Members noted that WSD had contingency measures in place in case there was deterioration in DJ water quality.

4.5 In response to Chairman’s enquiry, Mr KWOK Yau Ting, Kelvin of WSD advised that there was well-established mechanism to handle raw water quality issues including DJ water and WSD would adopt the most effective measure including reduction of raw water in-take or switching of the raw water sources in treatment works.

#### **Implementation of Water Safety Plan for Buildings (WSPB)**

4.6 Prof WONG reported the following:

- WSD had reported the progress of implementation of WSPB. Pilot trials of water safety plan for hospitals would be launched while those for public rental housing estates (at Sai Wan Estate and Chun Shek Estate) had been completed and the result was satisfactory.
- During the pilot trials of WSPB for public rental housing (PRH) estates, HD had raised three suggestions. Firstly, HD suggested that their officers of all disciplines in the Maintenance Surveyor(MS) and Building Services Engineer (BSE) Grades should be acceptable as Qualified Persons (QP) under the WSPB. Secondly, technical staff who worked under the supervision of MS and BSE should be acceptable to carry out routine inspection on maintenance works. Thirdly, HD suggested that the prevailing cleansing arrangement for water storage tanks at 3-month

intervals should obviate the need of monthly inspection of water storage tanks required under the WSPB.

- Having considered that HD had a comprehensive management and maintenance system for PRH estates under which the officers proposed by HD had adequate experience and knowledge to carry out the tasks under the first two suggestions, WG Members considered that the suggestions were acceptable. For the third suggestion in relation to the monthly inspection of water storage tanks, WG Members considered that this preventive measure could not be replaced by the quarterly cleansing of the water storage tanks as it provided a better protection and the suggestion should not be acceded to.
- WG Members suggested that the preventive maintenance approach adopted in the WSPB should be further publicized through education as the public might not be fully aware of and understand the rationale of WSPB.
- The Hong Kong Private Hospitals Association and WSD had set up a Working Group for development of water safety plan for hospitals with a view to working out the template for the water safety plan for hospitals.
- WSD had given a presentation on the “Quality Water Supply Scheme for Buildings – Fresh Water (Management System)” (QMS) which incorporated the WSPB into the previous “Quality Water Supply Scheme for Buildings – Fresh Water (Plus)”. The QMS was launched on 6 November 2017 with an aim to promoting the adoption of WSPB in buildings to safeguard the water quality in the internal plumbing system of buildings.
- WSD had collaborated with Social Welfare Department (SWD) and jointly organized a seminar to promote QMS to residential care homes for the elderly (RCHE) in early June 2018 and about 60 RCHEs had attended the seminar.

## **5. Working Group on Government Network and Inside Services**

5.1 The Chairman invited Mr TAM Kwok Wing, Ivan, Chairman of WG on

Government Network and Inside Service, to report the key issues discussed in the 1<sup>st</sup> WG meeting which was held on 29 June 2018.

### **Work Plan for 2018 – 2020**

- 5.2 Mr Ivan TAM reported that the proposed work plan of the WG for 2018-2020 was discussed in the meeting. The plan was accepted by the WG Members.

### **Risk Based Improvement Works to Water Mains and Main Burst Hot Spots**

- 5.3 Mr Ivan TAM reported the following:

- WSD had given a presentation on “Risk Based Improvement Works to Water Mains and Main Burst Hot Spots”. WSD would assess the risk of all existing water mains and improvement works would be implemented for water mains of high risk. WSD also introduced the criteria of designating a location as “Main Burst Hot Spot”.
- WG Members concurred that the risk-based approach allowed effective deployment of resources to improve the water supply networks.

- 5.4 Sr Prof. WONG Bay appreciated the proactive approach taken by WSD to handle the high risk water mains. He further suggested WSD to perform preventive measures of regular valve exercising so that any pipe burst could be geographically controlled to save wastage and faulty valves could be timely replaced. Mr CHAU Sai Wai of WSD replied that WSD had established a valve exercising and maintenance programme.

### **Proposed Network Monitoring Scheme for Estates (“屋苑管網監測計劃”)**

- 5.5 Mr Ivan TAM reported the following:

- WSD had introduced the framework of the proposed “Network Monitoring Scheme for Estates” which was a voluntary reward scheme to encourage housing estates to implement measures for tackling water loss from their private water mains.
- WG Members in-principle supported the proposal, and suggested WSD to refine the details of the proposed reward scheme so as to encourage higher participation from housing estates, especially those mediocre performers for maximizing the effect of the scheme on water loss reduction in private water mains.

- WSD would refine the reward scheme taking into account the suggestions from WG Members and the refined scheme would be presented to ACWS for endorsement before launching.

## **6. Report of Working Group on Water Conservation and Education**

- 6.1 The Chairman invited Mr LAU Che Fung, Edwin, Chairman of WG on Water Conservation and Education, to report the key issues discussed in the 1<sup>st</sup> WG meeting which was held on 27 June 2018.

### **Work Plan for 2018 - 2020**

- 6.2 Mr Edwin LAU reported that the proposed work plan of the WG for 2018-2020 was discussed in the meeting. The plan was accepted by the WG Members.

### **"Cherish Water Campus" Integrated Education Programme (IEP) (《惜水學堂》教育計劃)**

- 6.3 Mr Edwin LAU reported the following:
- To promote water conservation through education and publicity, WSD had been implementing various education programmes in secondary schools, primary schools and kindergartens.
  - For secondary schools, WSD had been arranging meetings with principals/teachers of some secondary schools to collect their views on how to promote water conservation to secondary students. WSD also planned to revamp the existing teaching kit for liberal studies of secondary schools entitled "Water: Learn and Conserve" for launching in 2020/21 School Year.
  - For primary schools, WSD reported that the IEP was being implemented smoothly with over 40% of the primary schools joining the programme. WSD had arranged training workshops for teachers on 21 and 22 June 2018 for experience sharing and feedback collections on implementation of IEP. WSD planned to introduce a new teaching kit for the programme in 2019/20 School Year.
  - For kindergartens, WSD had implemented the pilot education programme in 82 kindergartens in 2017/18 School Year, and was planning to launch the programme in full in 2018/19 School Year. WSD had engaged a consultant to enhance the teaching kit for kindergartens.

### **Permanent Water Resources Education Centre (WREC) (水資源教育中心)**

- 6.4 Mr Edwin LAU reported that the temporary WREC at Mong Kok was closed in mid-June 2018 with the relocation of the WSD New Territories West Regional Office to Tin Shui Wai. WSD targeted to commission the permanent WREC at Tin Shui Wai in early 2019 to further enhance public education on water resources and water sustainability. The detailed design of the WREC had been completed and its construction was scheduled for commencement in July 2018.

*[Post meeting note: The construction works for the WREC was commenced on 6 July 2018.]*

### **Collaboration and Partnership with Green Groups and Other Relevant Stakeholders**

- 6.5 Mr Edwin LAU reported that WSD co-organized, supported or participated in around 15 events / activities organized by green groups and NGOs annually (18 in 2017 and 11 so far in 2018). The events / activities co-organized, supported or participated by WSD in 2018 were set out below.

Date	Name of event/activity	WSD's involvement	WSD's Role
10 June	Zero Carbon Fun Fair (「世界環境日」 - 零廢FUN墟) organised by Environmental Campaign Committee	● WSD set up exhibition on water conservation and game booth to promote water conservation.	Co-organiser
5 June & 24 June	Hong Kong Green Day Opening Ceremony and Closing Ceremony cum Green Mission Challenge, organised by Green Council	● AD/Dev attended both events as the guest of honour to show our support.	Supporting organisation
6 May	Walk & Run (點滴搵水行) organised by A Drop of Life	● DDWS (Acting) was the officiating guest and delivered a speech in the event. ● WSD set up a game booth to promote water conservation.	Supporting organisation
5 May	Walk for Living Water (活水行) organised by Amity Foundation (HK)	● WSD involved in the planning and promotion of the event, and set up game booths to promote water conservation. ● DWS was the officiating guest and delivered a speech at the kick off ceremony.	Co-organiser



Date	Name of event	WSD's involvement	WSD's Role
22 April	Hong Kong Water Race (香港水足印定向) organised by Wofoo Social Enterprises	<ul style="list-style-type: none"> <li>● WSD involved in planning and promotion of the event, and set up game booths to promote water conservation.</li> <li>● AD/Dev was an advisor while SE/WCon(1) and PRM/WCon were members of the organizing committee.</li> <li>● DWS was the officiating guest and delivered a speech in the event.</li> </ul>	Co-organiser
22 March	Water Forum 2018 (《水論壇 2018》) organised by Friends of the Earth	<ul style="list-style-type: none"> <li>● WSD gave a presentation on "Climate Change – Water Resilience Development of Hong Kong".</li> <li>● WSD set up exhibition featuring water resources and water conservation.</li> </ul>	Strategic partner
18 March	Race for Water (掙水一戰) organised by A Drop of Life	<ul style="list-style-type: none"> <li>● AD/Dev was the officiating guest and delivered a speech in the event.</li> </ul>	Supporting organisation
4 February	Green Carnival (環保嘉年華) organised by Green Council	<ul style="list-style-type: none"> <li>● WSD set up a game booth to promote water conservation.</li> <li>● Water saving tips were included in the event's booklet.</li> <li>● DDWS(Acting) was the officiating guest and delivered a speech in the event.</li> </ul>	Supporting organisation
4 February	「大地與水」詩詞書畫藝術成果展覽筆會及分享會 organised by 大埔區文藝協進會	<ul style="list-style-type: none"> <li>● SE/WCon(1) delivered a speech and presented prizes to winners at the award ceremony.</li> </ul>	Guest
14 January	Green Run 2018 (著綠狂奔 2018) organised by Green Council	<ul style="list-style-type: none"> <li>● DWS was the officiating guest and presented awards to winners.</li> </ul>	Supporting organisation

## 6.6 Mr Edwin LAU reported the following:

- WSD had been having regular tea gathering with green groups for sharing and exchanging views on various issues (including water conservation). The fourth tea gathering with green groups was held on 22 June 2018. In the tea gathering, WSD introduced the collaboration with different organizations in previous years on water conservation, and welcomed opportunity of collaboration with the green groups in future. Other issues discussed at the tea gathering included (a) supply of recycled water (b) reuse of waterworks sludge in greening (c) biodiversity in waterworks and

(d) touring of waterworks facilities.

- WSD had obtained EPD's agreement for involvement in the Hong Kong Awards for Environmental Excellence (香港環保卓越大獎) (catering and hotel sectors), including enhancing the assessment criteria in respect of water usage and participating in the adjudication process.
- WSD had obtained URA's support to incorporate the use of Water Efficiency Labelling Scheme ("WELS") (用水效益標籤計劃) Grade 1 or 2 products (including water taps, showers for bathing, washing machines, etc.) in their re-development projects.
- WSD had been working with BEAM Society to explore the use of WELS Grade 1 products as a pre-requisite requirement of obtaining BEAM certificate.

6.7 Prof CHENG Man Chung, Daniel suggested WSD could make use of the Eco Expo Asia (to be held from 25-28 October 2018 this year) organized by Hong Kong Trade Development Council to promote water conservation. Mr WONG Chung Leung of WSD welcomed the suggestion and advised that WSD WSD would follow-up on the suggestion.

#### **Water Conservation Initiatives**

6.8 Mr Edwin LAU reported the following:

- WSD had been distributing flow controllers to households joining the 'Let's Save 10L Water' Campaign or switching to the use of e-Bill Service, and had been installing flow controllers for households in public rental housing estates. As at end May 2018, WSD had distributed / installed flow controllers to a total of some 322,000 households.
- WSD conducted roving exhibitions "Water Conservation – Past • Present • Future" at all 18 districts between August 2017 and June 2018, with around 27,000 visitors in total.
- WSD was producing 3 videos on water saving tips at home (with foreign domestic helpers as the target audience). The voice overs included five languages (Chinese, English, Thai, Indonesian Bahasa, Tagalog). The videos were targeted for launching by Q3 of 2018, together with poster and leaflet.

6.9 Mr Edwin LAU invited Mr LAW Tak Chi, George to further brief the Members on the videos and the promotion plan.

#### **Water Efficiency Labelling Scheme (WELS)**

6.10 Mr Edwin LAU reported the following:

- WSD had reported that since 25 May 2018, WELS had been extended to cover water closets, which was the sixth type of water using device under the scheme in addition to showers for bathing (2009), water taps (2010), washing machines (2011), urinal equipment (2012) and flow controllers (2014).
- To promote the use of water efficient products to enhance water conservation, WSD had launched the first stage of mandatory WELS since 1 February 2017 (with a one-year grace period and full implementation commenced on 1 February 2018), in which all plumbing works in domestic kitchens as well as bathrooms and toilets of all premises should use water efficient showers for bathing, water taps and urinal flushing valves of prescribed WELS grades. As a result, there had been increase in applications for registration to WELS.
- WSD was also exploring mandating water efficient labels for designated water using devices on sale in the retail market through legislation to facilitate the purchase of water-efficient products by consumers for water conservation purposes.

## **7. Water Loss Management Strategy of WSD**

- 7.1 Upon invitation of the Chairman, Mr LEE Kwun Chung, Johnson of WSD presented on the water loss management strategy of WSD.
- 7.2 The Chairman appreciated WSD's effort in leakage detection work and suggested WSD to provide training on leakage detection to more WSD in-house staff as the leakage detection experience was valuable to WSD.
- 7.3 Prof CHENG Man Chung, Daniel suggested WSD to organize competitions for leakage detection contractors for awards such as "best leakage detection contractor" and "contractor achieving highest water loss reduction" etc.
- 7.4 Dr WONG Siu Wing, Eric enquired why leakage detection and water main repair works were often carried out at night which might increase the cost. Mr Johnson LEE of WSD replied that leakage detection and water main repair works could be conducted in the daytime as well. However, some leakage detection work such as leak noise correlation would be more effective at night with a lower ambient noise.

## **8. Automatic Meter Reading for Water Supplies in Hong Kong**

- 8.1 Upon invitation of the Chairman, Mr NG Chung On of WSD presented on the automatic meter reading (AMR) for water supplies in Hong Kong.
- 8.2 The Chairman appreciated the move as AMR was a marked improvement to the existing manual meter reading every 4 months. Moreover, leak in private water mains could be easily detected by instantaneous comparison of the reading on the master meter with the sum of readings of the individual automatic meters of all the households. In response to Chairman's enquiry, Mr LEE Tai On of WSD replied that the cost of installing each automatic meter would be about HK\$800 in which about HK\$500 was the cost of the meter.
- 8.3 Prof CHIU Pauline enquired about the maintenance cost and the party responsible for it. Mr LEE Tai On of WSD replied that WSD would be responsible for the maintenance of the automatic meters. The cost of maintaining each meter was estimated to be about HK\$80 including the cost of electricity, server license and maintenance etc. per year. The developer would be responsible for the installation of the outstation, cable ducts and cabling works for AMR.
- 8.4 Prof CHENG Man Chung, Daniel enquired whether wireless data transfer could be adopted for AMR. Mr LEE Tai On of WSD replied that the wireless technology for data transfer for AMR within buildings was still not mature currently but WSD would closely monitor the technology development for adoption in future.
- 8.5 Prof WU Xun considered that the AMR could enable consumers to be more aware of their consumption behaviour for initiating a behaviour change for water conservation. Mr WONG Chung Leung of WSD shared Prof WU's view.
- 8.6 Sr Prof. WONG Bay suggested that AMR data could be captured in the Building Management System (BMS) of future smart buildings. Mr WONG Chung Leung of WSD advised that WSD had been working with ArchSD to identify suitable government buildings for studying the feasibility of implementation of various smart building initiatives including smart water supply initiatives. Mr LEE Tai On of WSD supplemented that due to privacy considerations, consent from all registered customers of the premises / building

would be required if the AMR data was to be provided to the BMS concerned.

- 8.7 Dr Eric WONG concerned about the privacy of the data collection and handling. Mr LEE Tai On of WSD assured that whilst the water consumption data collected would only be mapped to the customer's account in WSD's Customer Care and Billing System (CCBS), the data would be handled with high security during the process of its transfer and storage. The water consumption data would only be provided to the users themselves.

## **9. Promotion of Youth Participation in Water Conservation**

- 9.1 Upon invitation of the Chairman, Mr LAW Tak Chi, George of WSD presented on the promotion of youth participation in water conservation. WSD proposed to launch a "Cherish Water Ambassador" scheme targeting young generation (including secondary and territory students). As a pilot scheme, WSD would launch a small-scale video competition for about 200 ambassadors in early 2019 and hold an award ceremony in around mid-2019. Members supported the scheme.
- 9.2 Mr Edwin LAU suggested that WSD might include elements similar to mentorship programme in the ambassador scheme.
- 9.3 Prof CHAN Yan Keung, Thomas welcomed WSD's suggestion of organizing a small-scale video competition for the ambassadors and suggested organizing other similar events (such as joint school competition) on water related issues such as water resource protection or water conservation on an annual basis. The winners should be presented with a certificate to enhance participation rate. Sr Prof. WONG Bay agreed with the suggestion and shared that the Hong Kong Green Building Council also organized competitions in primary and secondary schools for promotion of sustainable development and green building practices.
- 9.4 The Chairman suggested WSD might consider inviting the ambassadors with outstanding performance to visit the Dongjiang Water Supply System as a token of appreciation of their effort.

## **10. Proposed Visit to Dongjiang Water Supply System**

- 10.1 Upon invitation of the Chairman, Ms LAW Ming Chu, Cecilia of WSD presented on the proposed visit to Dongjiang Water Supply System which would be held from 27 to 29 November 2018.
- 10.2 Ms Cecilia LAW advised that an email inviting Members to the proposed visit to Dongjiang Water Supply System would be sent out after the meeting. The WSD Chairman encouraged Members especially those new Members to join the visit.

## **11. Any Other Business**

- 11.1 There being no further items raised, the Chairman thanked Members for attending the meeting and adjourned the meeting at 4:30 p.m.