

Urban Forestry Advisory Panel

Minutes of Meeting held on 15 January 2020

Date : 15 January 2020 (Wednesday)

Time : 2:30 p.m.

Venue : Conference Room 1729, 17/F, West Wing, Central Government Offices,
Tamar

ATTENDANCE

Chairperson

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| Ms. Florence KO | Head of Tree Management Office (H/TMO) | Development Bureau (DEVB) (Works) |
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Members

Dr. Paul BARBER

Ir. CHAN Yun-cheung

Prof. CHAU Kwai-cheong, JP

Prof. Leslie CHEN Hung-chi, JP

Mr. Kingsley CHOI Lim-cho

Mr. Kevin ECKERT

Dr. Billy HAU Chi-hang

Dr. David LAU Tai-wai

Mr. Evans IU Po-lung

Mr. Ian SHEARS

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| Mr. David CHAIONG | Chief Leisure Manager (Passive Amenities) | Leisure and Cultural Services Department |
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| Mr. Eric LIU | Senior Conservation Officer (Technical Services) (Atg.) | Agriculture, Fisheries and Conservation Department (AFCD) |
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| Miss. Tracy LAM | Senior Landscape Architect/Tree Management Development & Construction | Housing Department |
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| Mr. Ryan LIN | Senior Landscape Architect/Vegetation Maintenance (Special) | Highways Department (HyD) |
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Secretary

Ms. Olivia CHEUNG Assistant Secretary (Tree Management)3 DEVB (Works)

IN ATTENDANCE

Mr. Edmond LAM Assistant Secretary (Tree Management)1 (AS(TM)1) DEVB (Works)

Ms. Josephine YANG Assistant Secretary (Tree Management)2 (AS(TM)2) DEVB (Works)

Mr. TSANG Kwok-on Tree Management Officer 4 (TMO4) DEVB (Works)

Mr. HSU Ka-man Tree Management Officer 5 DEVB (Works)

Mr. Ernest LEE Senior Manager Qualifications Framework Secretariat (QFS) QFS

Mr. Raymond WONG Assistant Manager The Hong Kong Polytechnic University (PolyU)

Dr. Charles WONG Associate Professor The Hong Kong Polytechnic University (PolyU)

ABSENT WITH APOLOGIES

Dr. Janet WONG Head of Greening, Landscape and Tree Management Section (Atg.) DEVB (Works)

Ms. Cecilia CHEUNG So-mui

Mr. Mark DUNTEMANN

Mr. Patrick LAU Hing-tat, JP

Dr. WONG Fook-yee

Mr. Frank RINN

Dr. WANG Xiao-ming

1. Opening Remarks

- 1.1 The Chairperson informed that H/GLTMS (Atg.) had an ad-hoc office commitment, and therefore, she would chair the meeting on behalf of H/GLTMS (Atg.).
- 1.2 The Chairperson thanked all Members, especially those who had travelled from overseas, for attending the meeting. She also welcomed two new official Members to the meeting, namely Mr. Eric LIU of AFCD and Mr. Ryan LIN of HyD.

2. Confirmation of the Minutes of the Last Meeting Held on 11 April 2019

- 2.1 The minutes of the last meeting were confirmed without amendment.

3. Specification of Competency Standards for the Arboriculture and Horticulture Industry (UFAP Paper No. 01/2020)

- 3.1 The Chairperson welcomed Mr. Ernest LEE and Mr. Raymond WONG of the Qualifications Framework Secretariat (QFS) and invited them to present on the topic, “Implementation of Qualifications Framework (QF) in Arboriculture and Horticulture (A&H) Industry”.
- 3.2 Mr. Ernest LEE briefed Members on the background of setting up the Hong Kong QF, the meaning and objectives of Specification of Competency Standards (SCS), the roadmap of QF and the scope of SCS in the A&H industry, its development process and the way forward.
- 3.3 Observing that it might be difficult to find a related job matching the SCS, a Member asked how the Government and the industry would provide jobs or prescribe contract specifications meeting the SCS.
- 3.4 A Member questioned whether other related technical knowledge on drainage, irrigation system, etc. had been included in the SCS. He added that A&H professionals involved in private projects would provide inputs in the planning and design stages of the projects. These professionals should possess professional knowledge on drainage design, soil management, etc. in order to devise proper planting requirements. He also suggested the Government to take the lead to apply the SCS in various policy initiatives.

Action

- 3.5 Units of competency at Level 6 were shown in the presentation. A Member asked how the units of competency at Level 6 would be taught, since the highest QF level of arboriculture and related courses offered in Hong Kong was Level 5.
- 3.6 A Member asked whether the SCS had made reference to the available international standards and existing good practices in Hong Kong and overseas. He also asked if units of competency on plant establishment, pruning and tree protection had been included.
- 3.7 Mr. Raymond WONG responded as follows –
- (a) Stakeholders' were involved and their agreements were sought in finalising the SCS. It was a good foundation to raise the professional standard of the A&H industry. QFS would work with A&H Industry Training Advisory Committee to encourage application of SCS by the stakeholders in the industry.
 - (b) SCS in the A&H industry focused on the core arboricultural and horticultural knowledge and skills. Other related technical knowledge on, such as drainage system, roof system, should be included in other disciplines of training, such as Architecture, Landscape Architecture, Civil Engineering, etc.
 - (c) When preparing the SCS, apart from making reference to the existing courses, the professional writer engaged by QFS had also examined the competency of the existing A&H practitioners. Level 5 competency linked to the ability of decision making, whereas Level 6 competency should comprise the skills on problem solving and the target candidates were project managers, consultants and business operators. In this connection, units of competency at Level 6 could be used for designing professional qualifications. Member's views on including the professional knowledge would be considered.
 - (d) As mentioned in the presentation, international and local standards had been studied as part of the developmental process of SCS.
- 3.8 The Chairperson added that the Government would consider making reference to the SCS when developing the framework for the proposed registration scheme for tree management personnel and when drafting qualifications requirements for tree management personnel in contract provisions.

Action

- 3.9 Mr. Raymond WONG presented an example of a unit of competency in the SCS. He introduced the unit of competency for “diagnose abiotic disorders of plants”. While the Chinese version of 1st edition of SCS was made available to public in December 2019, the translation to English version was in progress and targeted to be completed in Q1 to Q2, 2020.
- 3.10 In response to a Member’s query about the absence of the units of competency on plant establishment (e.g. maintenance pruning, structural pruning for young trees, etc.) and tree protection during construction, Mr. Raymond WONG informed that these items had been included under “Planting, Caring and Management of Plants” functional area.
- 3.11 A Member commented that “planting” of a tree should refer to the planting process in the nursery as well, but it appeared that in the SCS, “planting” of a tree only referred to the planting process after a tree was planted on site. He opined that the usage of “planting” in the SCS was conceptually not correct and therefore, some essential units of competency on planting in nurseries might have been omitted.
- 3.12 Mr. Raymond WONG explained that the units of competency on planting in nurseries were included under “Plant Selection, Cultivation and Propagation” functional area.
- 3.13 The Member further commented that a logical sequence of the core competency areas, namely nursery production, planting, transplanting, tree management and then removal, should be adopted. Mr. Raymond WONG informed that SCS grouped the units of competency by functional areas. When using the units of competency to develop courses, course providers would arrange the relevant units of competency in the said logical sequence in their courses.
- 3.14 A Member asked how knowledge, skills and supplies of competent personnel could be integrated. Mr Raymond WONG responded that the SCS would be used as a reference for course providers to develop QF-recognised SCS-based courses. Different from other non-SCS-based courses, SCS-based courses placed emphasis on learning outcomes and typically practical sessions and assessments were in place to make sure learners could attain the learning outcomes upon successful completion of these courses.

Action

- 3.15 A Member wished to know the compatibility of QF to overseas academic qualifications, the effectiveness of the proposed registration scheme without a legal framework on upholding work quality, and the registration criteria.
- 3.16 The Chairperson informed that the registration scheme, to be rolled out in late 2020, would be operated on a voluntary basis while the Government would take the lead to incorporate the registration requirements in government contracts. As the framework and implementation details of the proposed registration scheme was still being developed, the registration criteria had not been confirmed yet. In principle, all existing in-service practitioners who are qualified would be recognised.
- 3.17 The Chairperson supplemented that, since the promulgation of SCS on 9 December 2019, QFS was promoting SCS to the Government, the employers in the private sector and the local academic institutes and training providers to encourage more practicable and innovative application. Comments from these stakeholders about competency requirements, performance standards and development of SCS-based courses would be sought. In July last year, the Government communicated with the industry in QFS's industry forum on SCS that the Government might make reference to SCS when developing the framework of the proposed registration scheme.

4. Internet of Things and Remote Sensing Based Tree Monitoring Approach Towards Extensive Urban Tree Management in Smart City (UFAP Paper No. 02/2020)

- 4.1 The Chairperson welcomed Dr. Charles WONG, Associate Professor of the Department of Land Surveying and Geo-Informatics of PolyU, and invited him to present on the topic "Internet of Things and Remote Sensing Based Tree Monitoring Approach Towards Extensive Urban Tree Management in Smart City".
- 4.2 Dr. Charles WONG introduced the smart sensing technology (SST) network developed under the Jockey Club Smart City Tree Management Project for monitoring the stability of 8 000 urban trees in Hong Kong. He shared with Members his preliminary findings regarding the functionality and performance of the SST network based on the data collated during the passage of Typhoon Mangkhut happened in September 2018. He also introduced the use of Computational Fluid Dynamics (CFD) Model in analysing numerically wind speeds at different levels of a landscape over which

Action

strong winds blew past. In addition, he showed Members the prototype of the dashboard to be developed to manage and display tree monitoring data as well as other useful environmental data with a view to providing early alert on potential uprooting failures and to facilitating implementation of timely and effective mitigation measures.

- 4.3 Members asked if data on weather and other environmental conditions, and tree characteristics such as species, tree structure, tree health and tree canopy spreading, were collected. They were highly relevant to causing tree failures. Dr. Charles WONG replied that relevant environmental data such as weather, wind speed, traffic conditions, surrounding building conditions and species characteristics, were collected for a correlation analysis with reported tree failures.
- 4.4 A Member asked whether the tilted trees would bounce back to their original positions or move to new leaning positions, according to the field data collected. Dr. Charles WONG informed that PolyU had commissioned another survey by using more complex sensors to test this phenomenon.
- 4.5 A Member asked if the data could be correlated to the data of past incidents of tree failure so that the result could be used as a prediction of tree failure to a particular region. Dr. Charles WONG replied that it was a separate research which will be completed by PolyU.
- 4.6 The Chairperson informed that GLTMS has consistently collected reports of tree failure from tree management departments. So far, data from about 1,500 tree failure reports had been compiled in the Tree Failure Database since 2015. GLTMS was tidying up the database and conducting a tree failure analysis to examine if there was any correlation between different tree failure modes and tree characteristics, such as tree species, form and size. The database and the findings would be shared with academic institutes for research purposes.
- 4.7 A Member advised that the application of CFD Model through street landscapes was very difficult and asked the way forward of the project. Dr. Charles WONG informed that his research team would include more three-dimensional trees and street-landscaped models in the analysis to enhance accuracy in the calculation.

5. Consultancy Study on Occurrence and Distribution of Pests and Diseases on Urban Trees in Hong Kong (UFAP Paper No. 03/2020)

- 5.1 TMO4 briefed Members on the background, objectives, project schedule, trial field study and surveys, and key deliverables of the study.
- 5.2 A Member enquired about the feasibility of storing the specimens collected under the project in a local institute instead of the institute of the research team in the Mainland.
- 5.3 A Member wished to know the reason for not conducting any survey in the coming Summer and Winter.
- 5.4 A Member asked the following questions –
- (a) Whether there would be any sampling of insects from soil;
 - (b) Whether there are any expected control and preventive measures; and
 - (c) Whether there would be any desktop review on the effect of climate change to pests and diseases phenomenon, especially in tropical and sub-tropical regions.
- 5.5 A Member echoed the significance of temperature change to outbreak of pests and diseases, based on his experience in Australia. He opined that control of causal agents was crucial, but he did not recommend the use of chemicals, which would adversely affect the population of insects. One of the roles of urban forests was to provide a habitat to insects which, in return, supported and created a healthy ecosystem for the urban forests. Therefore, the recommendations from the study should strike a balance between pests and diseases control and maintenance of the ecosystem. He shared with the Members on the different management strategies to control pests and diseases in both Australia and New Zealand. He suggested adopting the method of “quarantine”, which could effectively prevent sources of pests and diseases from reaching urban forests. Finally, he commented that control of pests and diseases might be expensive, but the potential economic loss of agricultural products should be taken into account as well in deciding on an optimal management strategy.

- 5.6 TMO4 responded as follows –
- (a) In the observation and search method, the research team would examine insects in the soil.
 - (b) The research team had the expertise and rich experience to suggest practical control and preventive measures for pests and diseases specifically spotted in Hong Kong. The measures would not be limited to the use of chemicals. The suggestion from a Member for adopting an integrated pest management approach would also be considered.
 - (c) As there was no baseline information on the situation of pests and diseases in Hong Kong, the research team would also review the situations in other cities in the southern Mainland.
 - (d) Surveys would be conducted in Spring and Autumn of 2020 because of the abundance of common pests and diseases in Hong Kong in these seasons.
- 5.7 AS(TM)2 added that the study was targeted to commence at the beginning of the wet season. Both AFCD and The University of Hong Kong would keep reference collections of insects for the purpose of the study and identification.
- 5.8 A Member added that Tai Lung Farm of AFCD, and The University of Hong Kong were the two key parties in Hong Kong keeping local insect specimens.
- 5.9 A Member commented that the study would have a positive impact on tree health and stability, and therefore, should cover a lot of trees. It was challenging to complete all the tasks as specified in the study within the short timeframe. He echoed that implementing quarantine to isolate potential pathogens should be recommended. Moreover, he also wished to know the definition of “hazard rating” as mentioned in the presentation.
- 5.10 TMO4 replied that “hazard rating” was rating assessed for each identified pest and disease in terms of its severity of damage to urban trees.
- 5.11 A Member opined that quarantine of plants imported from the Mainland might not be practicable.

Action

- 5.12 A Member expressed that the research team from the Mainland was very knowledgeable and experienced on study and control of pests and diseases in the southern region and was confident that the research team would work out practicable recommendations. The Chairperson agreed with Member's comments, which was also the basis for inviting the research team as one of the potential bidders to submit quotation for the project.
- 5.13 A Member asked why trees in the parks were selected for the surveys. He opined that LCSD has taken proper care of the trees in its parks and problems arising from pests and diseases should be negligible. He suggested adding survey sites in natural or stressed environment.
- 5.14 A Member queried whether trees on man-made slopes would be included in the surveys as they were relatively less well-maintained by departments.
- 5.15 AS(TM)2 replied that the study focused on urban trees. Trees inside parks and along major public roads would both be selected for comparison purposes and the selected trees would include those on man-made slopes and those with low maintenance input as well.
- 5.16 The Chairperson added that trees along the public roads selected were under a stressed environment, whereas trees in the parks have been growing in a well-maintained environment. A comparison of the findings arising from the two different environments could be made.
- 5.17 A Member showed his support to the study. He advised that it was difficult to confirm the identity of pests or diseases based on their morphology only. As regards the study, he raised the following questions –
- (a) Whether the research team was allowed to publicise the research findings; and
 - (b) Whether all raw research data would be documented, including specimens photos showing various stages of growth, as the information was useful for future application, such as serving as a reference for training workshops and quarantine guidelines.
- 5.18 The Chairperson informed that the research team, after obtaining approval from the Government, would be allowed to publicise the research findings. Subject to the research findings, GLTMS might commission further studies. She thanked Members' comments, which would be considered in the study or in future studies as appropriate.

6. A.O.B

- 6.1 AS(TM)1 updated Members that the Guidelines for Tree Risk Assessment and Management (TRAM) Arrangement (9th Edition) was promulgated on 1 November 2019. The new edition was uploaded to the Greening Website (<http://www.greening.gov.hk>) (for viewing by the public) and the Cyber Manual for Greening (<http://devb.host.ccgo.hksarg/>) (for reference by government departments). Government departments were required to use the revised Form 1 and Form 2 to undertake tree group inspection and individual tree risk assessment respectively in accordance with their roll-out plans. Departments were also requested to provide monthly progress reports on their TRAM Exercise on every 15th day of each month starting from 15 January 2020 until completion. The Tree Management Office of DEVB would conduct audit of 5% of both the Form 1 and Form 2 reports submitted by departments.
- 6.2 A Member asked if there was a centralised database for TRAM Exercise from which the information was available for public's reference.
- 6.3 AS(TM)1 replied that GLTMS has managed a centralised database for TRAM Exercise, namely the Tree Management Information System (TMIS). TMIS was being revamped to a new system, namely the Tree Management Common Platform (TMCP). The user acceptance test for TMCP would commence on 23 January 2020. It was expected that TMCP would be launched in July 2020. At present, part of the data in TMIS was duplicated in the Tree Register which was published in the public domain for reference by the public. Moreover, the Government would provide additional information to the public upon request.
- 6.4 The Chairperson supplemented that more information could be introduced in the Tree Register for reference by the public as and when necessary.
- 6.5 Finally, the Chairperson reminded that the Government's first-ever International Urban Forestry Conference would be held on 16 January 2020 and 17 January 2020 at Tai Kwun. She also thanked Members for their acceptance of the invitation to the luncheon to be hosted by Permanent Secretary for Development (Works) on 16 January 2020.
- 6.6 There being no other business, the meeting was adjourned at 16:45 pm.

**Greening, Landscape and Tree Management Section
Development Bureau
April 2020**