

For UFAP Paper No. 07/2020

Ms. Josephine Yang AS(TM)2, DEVB

For UFAP Paper No. 08/2020

Ms. Louisa Ngai AS(GL)1, DEVB

Mr. Ringo Lee Director, Earthasia Ltd.

Prof. Chu Lee-man Adjunct Associate Professor, CUHK

Action

1. The Chairperson welcomed Members to the third meeting of the Urban Forestry Advisory Panel (“UFAP”), in particular two overseas Members who attended the meeting via video conferencing. He advised that this was the last UFAP meeting of the term 2019-2020.

Item 1 : Confirmation of the minutes of the last meeting

2. The minutes of the last meeting were confirmed without amendment.

Item 2: Genetic Diversity and Population Structure of the Causal Agent of Brown Root Rot Disease, *Phellinus noxius*, in Hong Kong (UFAP Paper No. 05/2020)

3. The Chairperson briefed that the Brown Root Rot Disease (“BRRD”) Study (“Study”) commenced on 16 November 2017 with the objectives to determine the genetic diversity of BRRD, its relationship with different tree species and different geographic areas in Hong Kong and in the region, and evaluate the potential sources and its spread mechanisms in Hong Kong. The Study was completed in March 2020 and a webinar for discussion on its findings was held on 19 October 2020 among government departments. He invited Prof. Kwan Hoi-shan, Emeritus Professor, School of Life Sciences, The Chinese University of Hong Kong, who had supervised the Study, to present the key findings of the Study, including the high genetic diversity of the disease scattered in different parts of Hong Kong and in a wide variety of tree species, and its high correlation with the strains in Macao than other places in the region.

4. A Member enquired if micro-environmental factors, such as wind speed, soil conditions, etc., and BRRD situations in the region, such as Guangdong, had been taken into consideration in the Study.
5. A Member would like to clarify whether BRRD was a soil-borne disease and whether its infection was related to tree age.
6. A Member supported the undertaking of the Study and suggested using good genetic markers from the whole genome sequence to develop a test kit for quick testing of BRRD.
7. Another Member queried about the types of human activities involved and speculated that the process of transplanting might be a cause for the spread of the disease.
8. Prof. Kwan responded that given the scope of the Study, Members' suggestions had not been considered. Nevertheless, there were other studies showing that there was no particular correlation between micro-environmental factors and disease infection in street trees. He further noted that BRRD could be soil-borne or air-borne via the sexual spores produced from the fungal fruiting bodies on tree trunks and could be spread by any human activities interfering with the diseased parts or materials, and life cycle of trees and their health were key factors affecting their risk of infection, instead of tree age. In addition, he remarked that genetic markers currently available were very specific and easy to use for rapid detection of the disease through polymerase chain reaction-based detection methods. For example, in the Study, only a single nucleotide polymorphism marker was used to distinguish the local infected trees from trees in the region. The high diversity of BRRD in Hong Kong indicated that the disease had existed in Hong Kong for a long period of time and for effective disease control and prevention, more resistant and robust tree species and measures to prevent further spreading of the disease should be considered.
9. The Chairperson thanked Prof. Kwan for his detailed presentation, responses to the Members' enquiries, and recommendations.

Item 3: Update of Urban Forestry Support Fund (UFAP Paper No. 06/2020)

10. AS(TM)2, SGE(SD) and AS(GL)2 introduced the Paper with the aid of PowerPoint, highlighting the latest development of the initiatives implemented under the Urban Forestry Support Fund (“Fund”). As at the end of October 2020, 142 applications for study sponsorship and three applications for scholarship were received under the Study Sponsorship Scheme. For the Trainee Programme, the administrator, viz. the Construction Industry Council, received seven applications involving 18 arborist trainees and one tree climber trainee, of which two applications involving three arborist trainees and one tree climber trainee were approved. With regard to public education, pamphlets were being prepared to promote better understanding on the concept of ‘urban forestry’ by the public.
11. The Chairperson supplemented that the initiatives under the Fund had aimed to encourage youngsters to join the arboriculture and horticulture industry and to nurture them to become qualified arborists and tree climbers, and to raise public awareness on urban forestry through a series of public education and promotion activities.
12. A Member opined that most tree management personnel were taken as general workers in the construction-related industry. He enquired if the Government would introduce a registration system for tree management personnel so as to uplift the quality of their skillsets. In addition, he noted that the Study Sponsorship Scheme and Trainee Programme had aimed to encourage youngsters to join the arboriculture and horticulture industry and asked if there would be any training for other more senior personnel who had been working in the industry.
13. A Member opined that a number of trainees had been hired and trained in the arboriculture industry for a couple of years, but their career paths were not clear. As a result, it was difficult to retain these experienced young people in the industry. He also expressed that it was necessary for experienced arborists with skills in tree inspection and risk assessment to take up the role of training tutors in the industry, which would in turn provide them with an alternative career path.

14. The Chairperson informed that Members would be briefed on the implementation details of the Registration Scheme for Tree Management Personnel (“Scheme”) in the next agenda item, and advised that the DEVB had planned to roll out the Scheme in December 2020. Upon its launch, contractors undertaking government contracts would be required to engage registered tree management personnel under new or renewed contracts in due course. He added that with a view to promoting sustainability of the arboriculture and horticulture industry, attracting and keeping youngsters in the industry had been the focus of the policy initiative. Nevertheless, the Study Sponsorship Scheme also accepted applications from in-service practitioners aged 30 or above. He further supplemented that as the Trainee Programme had just commenced in August 2020 and taking into consideration the latest development of the COVID-19 pandemic, employer companies might not be very eager to engage trainees. It was expected that participation in the Trainee Programme might be improved as more youngsters had completed their studies under the Study Sponsorship Scheme and joined the industry. The Greening, Landscape and Tree Management Section (“GLTMS”) would continue to promote the Trainee Programme to the industry to encourage participation.

Item 4: Proposed Registration Scheme for Tree Management Personnel (UFAP Paper No. 07/2020)

15. The Chairperson informed that views and opinions from the public and the industry on matters related to the long term development of the arboriculture and horticulture industry had been received in the past years and it was noted that there was a strong aspiration of the industry and the public to uplift the standard of the in-service arboriculture practitioners. Hence, the DEVB had planned to roll out the Scheme in December 2020.
16. AS(TM)2 introduced the Paper with the aid of PowerPoint, reporting the consultation work, proposed framework and implementation details of the Scheme. She informed that the GLTMS had established the Arboriculture and Horticulture Industry Development Advisory Committee (“AHIDAC”) in June 2020, submitted an information paper entitled “Progress Report on Proposed Registration Scheme for Tree

Management Personnel” to the Panel on Development of the Legislative Council in July 2020, and consulted the AHIDAC on the proposed framework and implementation details of the Scheme in July and November 2020 respectively. She further briefed Members on the details of the Scheme, including i) application for registration; ii) registration documents; iii) renewal requirements; iv) registration/renewal fee; v) code of conduct and performance monitoring; vi) Disciplinary Panel and Appeal Board; vii) local professional assessments and trade tests and viii) registration roadmap.

17. The Chairperson supplemented that the AHIDAC comprised 12 non-official members from the trade associations, unions, professional groups and higher education and vocational training institutions in the industry. Advice and comments from the AHIDAC on the Scheme had been taken into consideration in formulating the framework and implementation details of the Scheme.
18. A Member queried if the Appeal Board would handle all registration cases.
19. A Member complimented the DEVB for introducing the Scheme, which was considered very comprehensive. He agreed that it was pertinent to set out the renewal requirements, including minimum hours in continuing education in arboriculture (“CEA”), to uplift and maintain practitioners’ professional and work knowledge, and to implement professional assessments for standardising professional standards of arboriculture practitioners. He suggested defining the responsibilities of arborists such that their roles would not overlap with those of other tree management personnel.
20. A Member commented that the term “professional” might give the idea that all registered tree management personnel are professionals, while some types of tree management personnel are largely technical-based.
21. The Chairperson clarified that the Appeal Board would handle appeal cases related to registration and disciplinary decisions only, but not all registration cases. He took the opportunity to invite Members to join the Disciplinary Panel and the Appeal Board. He remarked that the Scheme would provide identity to practitioners and address the concerns of the

industry, including depicting the career path for different types of tree management personnel. The Scheme would be reviewed as and when necessary and the implementation arrangements be adjusted in the best interest of both the industry and the public. He thanked Members for their comments on the Scheme.

22. AS(TM)2 supplemented that a professional assessment would comprise written examination and interview and would be applicable to arborists, tree risk assessors and tree work supervisors who would have to apply their knowledge and experience to make professional judgement and provide professional advice in the course of their work. As the work of tree climbers and chainsaw operators were operational in nature, trade tests would be developed to assess the competence of their skillsets.
23. A Member asked how the Specification of Competency Standards (“SCS”) was defined and if there would be any mechanism to modify and update the SCS.
24. AS(TM)2 informed that the SCS had been formulated together with the industry in support of the Qualifications Framework. The SCS consisted of more than 130 units of competency on the skill and knowledge necessary for performing essential tasks up to acceptable standards in the arboriculture and horticulture industry. Based on the SCS, the requirements of CEA were developed. She further supplemented that the Qualifications Framework would review and update the SCS as and when necessary.
25. The Chairperson supplemented that the Scheme had just been launched. The first stage was to recognise and register the qualified in-service practitioners. Educational institutions would then be liaised to develop suitable CEA courses. Practitioners would need to enhance their professional skills and knowledge for renewal of their registrations. In future, the CEA requirements would be reviewed and adjusted to meet the latest development of the industry.

Item 5 : Update of Street Ecology Study Stage II (UFAP Paper No. 07/2020)

26. The Chairperson introduced that Members had been briefed on the scope of the Street Ecology Study Stage II consultancy study at the first meeting of this term of the UFAP on 11 April 2019. Members might recall that upon completion of the Street Ecology Study Stage I in end 2018, the “Street Tree Selection Guide” was released, introducing 80 less commonly used tree species to promote species diversity. The Stage I Study concentrated on the selection of the right tree at the right place in the street environment. The focus of the Stage II Study was on the underground growing environment of urban trees. Another objective was to review the commercial availability of the 80 less commonly used species introduced in the Street Tree Selection Guide, to identify shortfalls and to propose measures to enhance the procurement and long term supply. He invited Mr. Ringo Lee of Earthasia Ltd. to present the Paper.
27. A Member declared that he was involved in the Stage II Study.
28. Mr. Ringo Lee briefed Members on the latest development of the Study, including the commercial availability of the 80 tree species in the Street Tree Selection Guide, and the preliminary findings on the research on soil volume, innovative measures to increase soil volume, local application of innovation measures, measures to improve existing soil conditions and guidelines on soil improvement.
29. A Member appreciated the GLTMS in initiating the Study. Regarding the commercial availability of tree species, he shared his experience in the Chicago area, in which a consortium was formed comprising four to five wholesale nurseries to project and grow the required types and number of species to meet the demands of about 30 to 40 suburbs for the next five years. As an example, a high quality species, Swamp Oak (*Quercus bicolor*), was not available at nurseries 20 years ago. Through the consortium, Swamp Oak had become a very popular tree now with constant supply. He suggested informing nurseries the potential of some high quality species for Hong Kong, that in turn, might trigger the supply of these species in the near future.

30. The Chairperson thanked for the experience sharing and suggestion. He added that the GLTMS would continue to liaise with the local authority and departments on the tree species required so as to meet the shortfall.
31. Another Member commented that making reference to recent research and taking into consideration global warming and extreme weather conditions, he did not recommend planting large trees, and suggested reviewing the 80 tree species listed in the Street Tree Selection Guide to avoid large or tall trees, in particular, trees selected should be drought tolerant and be able to cope with the extreme weather conditions, especially during typhoons. In addition, he recommended (a) aligning government departments' soil specifications; (b) providing more lateral space, apart from depth, for proper root growth; (c) analysing soil texture to develop an appropriate planting programme and soil amendment schedule at the early stage of planting; (d) maintaining effectiveness of organic amendment materials in urban soils; and (e) using field assessments to define the water-holding capacity of soil in urban planting, instead of using a single, simple term of "moisture content". He further suggested that mulching on soil surface after tree planting should be practised.
32. Mr. Ringo Lee explained that the term "moisture content" referred to the general content of water in the soil. Prof. CHU Lee-man supplemented that it represented the visual assessment on water logging and soil drainage, and would consider to change the term to 'water content'. Prof. Chu further explained that soil quality might not be easily understood by practitioners. As the guidelines would be prepared for frontline staff, a simple term reflecting visual assessment had therefore been used in the Study. If situations permit, going deeper on the soil conditions and soil constraints could be included to enhance understanding.
33. A Member noted that the literature review on soil volume in the presentation had made reference to research work from the 1970s to 1990s. As the climate and species selection had been very different in the past 20 to 30 years, he suggested including more up-to-date research work in the past ten years in the Stage II Study.

34. The Chairperson noted that climate change had been a hot topic for vegetation maintenance across the world. In accordance with the Street Tree Selection Guide, tree selection was based upon an integral assessment, including planting location and tree species characteristics, such as wind and drought tolerance. Regarding soil specifications, departments would prepare project-specific particular specifications on top of the general specifications to suit the needs of projects of different natures and planting situations. The Stage II Study would include some good practices or recommendations on soil improvement for use in post planting stage.
35. Mr. Ringo Lee supplemented that the Street Tree Selection Guide was meant to be a live document, and thus, it would be reviewed and updated upon collection of users' feedbacks and experience on the performance of the listed tree species. Regarding soil volume, the size of planting soil area was also considered in the Stage II Study to increase the soil volume for root growth.
36. AS(GL)1 thanked Members for their comments and responded that the Consultant would incorporate Members' comments in the Stage II Study as appropriate. Regarding the comment on the two dimensional lateral planting space, she elaborated that the Consultant had been aware of the same and had explained in the Stage II Study the importance of providing sufficient planting area to allow lateral root spread and expansion.
37. A Member opined that landscape work was always implemented last on site in a development project. As planters and pavements had been built, digging down the soil for more than 500mm would be very difficult, and for slope planting, the soil was highly compacted. He suggested improving the appreciation of other professionals, such as architects and engineers, on soil preparation for tree planting.
38. The Chairperson thanked Members' suggestions and remarked that, given the constraints in urban context, the Consultant would consider Members' comments and suggestions as far as practicable within the scope of the Stage II Study, and would finalise it with continual inputs from our works departments.

Item 5 : Any Other Business

39. The Chairperson noted Members' concern on the pest infestation in *Ficus* species in the northern part of Hong Kong recently. He informed that the GLTMS had received reports of pest infestation in *Ficus* species. Foliage of *Ficus* species were seriously chewed by larvae of *Phaуда flammans* (朱紅毛斑蛾). Some newspapers had also reported the pest problem.
40. AS(TM)2 thanked one Member for bringing up the issue and provided photos of the pest problem for discussion in the meeting. She briefed Members that the *Ficus* species being affected in North, Tuen Mun and Yuen Long had included *Ficus microcarpa* (細葉榕) and *Ficus benjamina* (垂葉榕). The tree management departments were also aware of the raised level of pest infestation, especially from July to October this year. They had taken concurrent actions, mainly spraying diluted soap solution, to eliminate the larvae, which was considered effective. Gradual recovery of tree crown was noted. To minimise impact on the ecosystem, the tree management departments would closely monitor the situation and take action only when spotting a high population of larvae. The Consultant of the "Occurrence and Distribution of Pests and Diseases on Urban Trees in Hong Kong" study had been requested to review this pest infestation issue and recommend medium to long term strategies to prevent any large-scale pest outbreak in Hong Kong.
41. A Member shared a similar pest infestation problem to *Ficus* species in Hawaii. The application of insecticide, Imidacloprid, through soil or trunk injection was very effective. He supported the use of soapy water which was effective to treat the pest in Hong Kong.
42. The Chairperson thanked the Member's comment. In addition, as it was the last meeting of the current term of the UFAP, he thanked Members for their contribution to the development of sustainable urban forestry in Hong Kong.
43. There being no other business, the meeting was adjourned at 12:40pm.

**Greening, Landscape and Tree Management Section
Development Bureau
February 2021**