

Urban Forestry Advisory Panel (2021-2022)
(Notes of the 3rd Meeting)

Date and Time : 17 June 2022 (Friday) at 2:30 pm

Venue : Conference Room 4, G/F, Central Government Offices, Tamar

Present

Mr. Ryan Lin	Chairperson (H/GLTMS(atg.)/H/TMO, DEVB)
Ir. Chan Yun-cheung	Member
Mr. Kingsley Choi	Member
Prof. Chu Lee-man	Member
Mr. Evans Iu	Member
Mr. Patrick Lau, JP	Member
Prof. Anthony Leung	Member
Mr. Chiky Wong	Member
Dr. Wong Fook-yee	Member
Prof. Charles Wong	Member
Prof. Leslie Chen, JP	Member (via video conferencing)
Mr. Mark Duntemann	Member (via video conferencing)
Dr. David Lau	Member (via video conferencing)
Mr. Yiu Vor	Member (via video conferencing)
Mr. Eric Liu	Member (SConO(TS), AFCD)
Ms. Eva Lee	Member (SLA/VM(S), HyD)
Mr. Sunny Lo	Member (SLA/TD&C, HD)
Ms. Annie Fung	Member (CLM(PA), LCSD)
Mr. Hsu Ka-man	Secretary (AS(TM)3, DEVB)
Ms. Luna Fong	Note-taker (TMO6, DEVB)

Absent with Apologies

Dr. Paul Barber
Prof. Chau Kwai-cheong, JP
Mr. Kevin Eckert
Dr. Billy Hau
Mr. John Ho
Mr. Ian Shears

In Attendance

Ms. Vina Wong	H/GLO, DEVB
Mr. Edmond Lam	AS(TM)1, DEVB
Mr. Kun Chung-ming	Designated TMO5, DEVB

UFAP Paper No. 01/2022

Ms. Phoebe Sze

SForO/TF, LandsD

Mr. Edward Yuen
Mr. Jonathan Picker

ForO/TF2, LandsD
Director, Asia Tree Preservation, Ltd.

UFAP Paper No. 02/2022

Mr. Lo Shun-Cheong
Dr. Allen Zhang

SLC, HyD
Principal Investigator, THEi

UFAP Paper No. 03/2022

Mr. Hsu Ka-man

AS(TM)3, DEVB

Action

1. The Chairperson welcomed Members to the 3rd Urban Forestry Advisory Panel (UFAP) meeting of the 2021-2022 term, including two new Members, Ms. Eva Lee (the representative of HyD) and Ms. Annie Fung (the representative of LCSD), and those who attended the meeting via video conferencing.

(Remark: Two Members who did not attend the meeting today had offered their comments (Annex I) which were distributed at the meeting for Members' reference.)

Item 1 : Confirmation of the minutes of the last meeting

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

Item 2: Preservation of Old and Valuable Tree No. LANDSD N/3 (UFAP Paper No. 01/2022)

3. The Chairperson introduced the Old and Valuable Tree (OVT) No. LANDSD N/3 in which continuous defoliation was observed. The OVT was a *Cinnamomum camphora* (樟), situated at Wo Keng Shan Tsuen in North District. GLTMS organised a visit to the OVT in early June in which Prof Chau and Prof Chu joined and provided valuable advice. Responsible for the maintenance of the OVT, LandsD had been carrying out a series of remedial measures to tackle the health problem. He invited SForO/TF of LandsD and the consultant, Mr. Jonathan Picker, Director of

Asia Tree Preservation, Ltd., to present their findings and follow up works for preserving the OVT.

4. SForO/TF, LandsD informed Members of the background, the health issue and the maintenance works about the OVT No. LANDSD N/3. Mr. Jonathan Picker then briefed Members on the detailed maintenance works since 2013, damage caused by typhoon Higos in 2020, and subsequent mitigation measures, significant defoliation observed since late 2021, the follow up actions taken in connection with the defoliation, and the way forward.
5. The Chairperson supplemented that the villagers of Wo Keng Shan Tsuen had strong tie to the OVT and wished to be informed on actions taken to save the OVT and participated in preserving the OVT. Moreover, the health condition of the OVT also attracted media reports and the attention of a Legislative Councillor. As the prime objective was to preserve the OVT, he wished to seek Members' advices in this aspect.
6. A Member agreed to the follow up works without further comment.
7. A Member speculated that the rapid decline of the OVT should be related to the damage of vascular bundles near the big wound caused by typhoon. The 30% of crown loss made the OVT exposed suddenly to direct sunlight that unavoidably led to the decline of the OVT. He appreciated LandsD's efforts, but was not optimistic about preserving the OVT.
8. A Member asked about the age of the OVT in order to check whether the OVT reached the end of the normal lifespan of this tree species.
9. Mr. Jonathan Picker estimated that the OVT might be over one hundred years' old and might be approximately 20% to 30% of the lifespan of this tree species.
10. SForO/TF, LandsD stated that according to the information prepared for nomination of the tree as OVT in 2013, the tree was said to be over one hundred years old.

11. Two Members asked any checking about water table or water source in which its change or blockage might cause defoliation of the OVT.
12. SForO/TF, LandsD explained that, according to the soil test conducted, sufficient moisture levels for plant growth were recorded at locations surrounding and underneath the OVT. Furthermore, the presence of healthy vegetation and other Camphor trees around the OVT also indicated that the soil moisture was sufficient.
13. A Member commented that it was necessary to manage the expectation of the villagers. The Government should keep them posted of the information about the efforts on saving the trees and plan ahead of any succession plan or an event to commemorate the OVT.
14. The Chairperson informed that, at the last visit with the Legislative Councillor and villagers, GLTMS had briefed them on the current condition of the OVT and Government's efforts attempting to restore its health condition as far as practical.
15. SForO/TF, LandsD supplemented that LandsD kept close liaison with the villagers who had all along been informed on maintenance works conducted.
16. The Chairperson highlighted the comments provided by two Members (Annex I) who could not attend the meeting. One of them considered that the Cobra system was ineffective in the application. Both Members viewed that they were not optimistic about restoring its health condition.
17. Mr. Jonathan Picker agreed that it was not an ideal angle for installation of the Cobra cable but this was limited by unavailability of suitable sized branches above the installation point. In this case, the Cobra cable was installed to divert the branch away from the village road in case the branch failed.
18. Observing the latest update of the OVT in the OVT Register (Register) in April 2021, a Member stressed that timely updating the OVT condition in the Register could let public know Government's efforts on preserving the OVT. Moreover, he enquired if cation exchange capacity had been

included in the soil test conducted. He expressed that the parameter of the soil analysis should be expanded to include cation exchange capacity, content of organic matters, salinity and bulk density. They were important soil properties that would affect the nutrient availability and tree growth.

19. As the maintenance of the Register system was being implemented, SForO/TF, LandsD would update the information in due course.
20. Mr. Jonathan Picker replied that the soil test carried out was targeted to find out nutrient deficiency. He agreed that in general, cation exchange capacity could be useful in soil tests, however, not critical in this case.
21. A Member appreciated the efforts in preserving the OVT and suggested providing measurement for its leaning angle.
22. SForO/TF, LandsD responded that leaning was not observed in this OVT.
23. A Member suggested that, the Government should consider the various scenarios and appropriate follow up actions in case the OVT was finally felled due to poor health.
24. The Chairperson thanked Members' comments and suggested including time-line in way forward. The OVT would be closely monitored and its condition would be reviewed after a few months.

Item 3: Medium and Long Term Management of *Eucalyptus* (桉樹) along San Tin Highway (UFAP Paper No. 02/2022)

25. The Chairperson introduced that HyD commissioned a study on management strategy for the *Eucalyptus* growing along the San Tin Highway. The study carried out between 2019 and 2021 had been completed. He invited SLC of HyD and the consultant, Dr. Allen Zhang of THEi, to share their study as well as brief Members on their management strategy on managing the *Eucalpytus*.

26. A Member declared the interest that the consultant, Dr. Allen Zhang, was his colleague. The Chairperson clarified that he could offer comments in this agenda item.
27. SLC, HyD informed Members of the background and problems encountered in managing *Eucalyptus* in recent years. Dr. Allen Zhang then briefed Members on the objectives, methodology, results, recommendations, and conclusion of the study.
28. A Member asked about the details of tree failure in the past, risk evaluation carried out, public's acceptance level of the risk, and negative feedback received after publicizing the study in the social media. Moreover, he suggested that the public should be kept informed, and public engagement and support would be important during implementation.
29. SLC, HyD responded that San Tin Highway was a high speed road and any tree failure could cause serious damage to road users. About 90 cases of tree defects and failure were analysed in the study leading to the establishment of several failure mode of the *Eucalyptus*. Though most of the tree failure cases happened during typhoons when there was only limited usage on the road, HyD recognized the need to commission a study for formulating a strategy for risk abatement as well as increasing biodiversity. It was agreed that engaging the public and promoting public awareness of sustainable vegetation management was recommendable.
30. A Member queried why root development was not assessed in the study. He also commented that the increase of tree height and crown spread would induce additional wind load, and therefore, should not be regarded as the indicator of successful anchorage. Good root development which provided better anchorage should be considered.
31. Dr. Allen Zhang responded that a higher percentage of thinning was favourable to root development was supported by research from a number of countries including the Mainland. As the assessment was made only 24 months after selective thinning, it would be more effective to assess the performance of trees height and crown spread. The study adopted 30% and 60% thinning and the result revealed that the application of 60% thinning promoted better tree

growth than that of 30% thinning in terms of height and spread.

32. SLC, HyD supplemented that they assessed tree growth of individual trees based on their height and crown spread because excavation of/around planted trees for root assessment along high speed roads was impractical.
33. The Member further commented that, rather than founded on a scientific ground, it was only an assumption to connect root development with the increase in height and crown spread of the trees. As the presentation was not comprehensive, he requested for more information that supported the study approach.
34. The Chairperson opined that the study report should contain a lot of relevant information. Since there was only limited time allowed for the presentation, the presenter could only provide summary information. More detailed information could be provided to Members. The study in fact had recommended several prioritized management tasks that would assist HyD in managing *Eucalyptus* along highway.
35. A Member offered the following comments –
 - (i) As trees in group supported each other, it would be necessary to consider whether removal of some trees in the thinning exercise would generate risk for the remaining trees.
 - (ii) Through native species would be adopted for replanting, the removal of a large number of tree was still debatable.
 - (iii) As the majority of tree failure incidents were caused by typhoons, he had reservation on adopting tree removal as a major tool to reduce the risk.
 - (iv) The assessment of 34 cases related to overgrowth of branch or crown was considered a subjective judgment of the assessor or arborist.
 - (v) As shown in the chart of probability of tree hazard, some tree height and spread ratios seemed unreasonable.
 - (vi) As the scoring system had a significant impact on the prioritization management system, he wished to know more details about the method and parameters in determining the scores.

36. A Member commented that topping a tree to a certain height was applied in the Mainland as an alternative to thinning. The tree after topping would regenerate and grow.
37. Dr. Allen Zhang responded that the scoring system was available in the report of their study.
38. SLC, HyD supplemented that overgrowth / protruding branches posed immediate hazards. As such, this defect should be included in the study. Topping was not considered in the study and might not be suitable for *Eucalyptus* or accepted by the public. HyD accorded high priority to avoid accident caused by tree failure along high speed roads. HyD would strike a balance between tree removal by thinning and public safety in deriving the long-term solution.
39. A Member appreciated the study and commented that such arrangement to tackle the problem was long overdue. As a pioneer species, *Eucalyptus* seedling were planted many years ago, but they had not been well taken care of after planting, including necessary thinning. He suggested the study should be widely circulated as reference in new development areas.
40. SLC, HyD responded that one of the objectives of the study was to work out a methodology in selecting tree species to be replaced, their quantity and the appropriate replacement species. Hopefully, a model would be built up and applied to other expressways built some time ago.
41. A Member commented that *Eucalyptus* was a fast growing species adopted for quick vegetation establishment along new roads at that time. The trees grew older and the current problems, which were not anticipated in the past, emerged. The study aimed at improving risk management, enhancing vegetation diversity and scenery of the highways, and could set a precedent for developing future highways. As such, the study was highly recommended.
42. A Member asked about the rationale for not recommending *Polyspora axillaris* for replanting which was a species growing successfully in country parks, and the elaboration on the connectivity of natural habitat close to the highway.

43. Dr. Allen Zhang explained that the recommended species were derived from the data collected in 24 months. The data included the survival rate, the height and the crown spread of the trial species. He suspected that the poor performance of *Polyspora axillaris* recorded in the study might be due to the difference in soil properties between the highway slopes and country parks.
44. The Chairperson thanked Members' comments, and the study team's response to Members' questions. He noticed members would like to know more about the study as the meeting could only offered limited time for the presentation, he suggested HyD sharing the study finding with members if appropriate.

Item 4: Update of Tree Labels with Quick Response Codes (UFAP Paper No. 08/2021)

45. The Chairperson recapped that the project on using quick response (QR) codes in tree labels was first introduced to Members at the meeting held on 8 November 2018 and then, updated for Members' information at another meeting on 16 April 2021. He invited AS(TM)3 to report on the progress of the project.
46. AS(TM)3 briefed Members on the latest development of project, including targeted trees for label display, the progress for installation of tree labels, the available information through scanning of the QR code, the progress for provision of botanical descriptions, and the follow-up works upon the completion of the project.
47. Noting some trees along the central divider in Cheung Sha Wan were installed with tree labels, a Member (Mr. Evans Iu) asked about the criteria for tree selection.
48. AS(TM)3 replied that the tree labels should be installed to those trees accessible by the public for scanning their QR codes. He would follow up with the mentioned trees in Cheung Sha Wan.

49. The Chairperson supplemented that the tree labels not only provide information on the exact location of the tree, but also provided the public with botanical descriptions linked to the GLTMS's website. As the tree labels should be accessible by the public, they were tied to the height to facilitate scanning and installed to the trees near the public access.
50. A Member appreciated the efforts of the Development Bureau. He wished to ask about the durability of the tree labels and their ties, especially after strong wind, heavy rainfall, etc., and the mechanism for checking the label condition.
51. AS(TM)3 responded that the condition of tree labels would be checked, especially after typhoon, this year. In the long run, staff of the tree maintenance departments would check the tree labels during their regular inspections of their trees. GLTMS would be informed once irregularities on the tree labels were spotted.
52. A Member enquired about the way to ensure the accuracy to tie tree labels to the right trees. Moreover, he also offered the following suggestions –
- (i) As tree labels would serve the educational purposes, GLTMS should consider organising a programme, such as a competition, to raise the interest of students in reading the botanical descriptions provided by tree labels.
 - (ii) As most of tree label users could read Chinese, it would be more appropriate to display the webpage in Chinese first upon scanning the QR code.
53. AS(TM)3 responded that the consultant for installation of tree labels had deployed suitable professionals to supervise the installation work. Moreover, the tree maintenance departments would also check the tree labels after installation to ensure accuracy. GLTMS currently introduced the tree labels to students during school talks and Member's suggestion to attract students' interest in reading the botanical descriptions was well-noted for consideration. He further supplemented that the first webpage after scanning the QR code was presented in both Chinese and English. If the public clicked the link within the Chinese descriptions, the next webpage, i.e. botanical descriptions, would be presented in Chinese.

54. Two Members suggested adding audio or video for botanical descriptions as students usually sourced video or audio reports via internet and reading was considered difficult for some students.
55. A Member suggested increasing the font size of the paragraph in the second part of the first webpage so that the public could easily click the link to access the next webpage for botanical descriptions.
56. Noting that not all trees along a heavily patronised access in Ma On Shan Promenade had tree labels, a Member asked about the criteria for tree selection. Moreover, he also wished to know whether the existing tree labels in Kowloon Park would adopt the same design.
57. AS(TM)3 responded that all individual trees accessible by the public in this project should be provided with a tree label. As it was expected some tree labels would be lost after installation, GLTMS prepared to arrange the replacement of the lost and the damaged ones later in the year. As the project included the display of tree labels for parks and gardens, those in Kowloon Park would be also replaced.
58. CLM(PA), LCSD informed that LCSD would need more time to install the tree labels in parks and gardens in view of COVID-19 pandemic. She expected the installation would be completed by August 2022.
59. The Chairperson thanked Members' comments and would consider Members' suggestions.

Item 5 : Any Other Business

60. There being no other business, the meeting was adjourned at 17:00 pm.

3rd UFAP(2021-22) Meeting on 17 June 2022
Comments from Members

Comments received on 15 June 2022 morning

Agenda Item 2: Preservation of Old and Valuable Tree No. LANDSD N/3

- In view of the severe defoliation observed, and the damage / loss of major tree trunk after the typhoon in Aug 2020. I don't think the *Cinnamomum camphora* (OVT LANDSD N/3) can restore its health. It is very sad but I have to say that this OVT may pose potential safety hazards to the public. Fence of the OVT is necessary. And I agree the recommendation mentioned in "Way Forward".

Agenda Item 3: Medium and Long Term Management of Eucalyptus (桉樹) along San Tin Highway

- I support the conclusion proposed by Dr. Allen ZHANG. I have several painful experience due to fallen Eucalyptus at severe typhoon at the said location - San Tin Highway. My job includes attend emergency restoration during typhoon, I remembered that hundred thousands of Eucalyptus collapsed and the whole Highway was blocked. It spent several days for the FSD / HKPF and other Government Department to clear the road in the most severe case.
- I agree with Dr. Allen's proposal:
 - 60% thinning with replanting on slopes promoted the growth rate of trees and shrubs
 - A prioritization management system was applied to give recommendations on slope/verge management

Table 5.1 Summary of the suggesting management stages and replanting works of slopes and verges in different priority levels

Management stage	Slopes			Verges		
	High Priority	Medium Priority	Low Priority	High Priority	Medium Priority	Low Priority
Short-term ¹				✓	✓	
Medium-term ²	✓				✓	✓
Long-term ³		✓	✓			
Replanting works	Replant shrubs and native small trees			Replant shrubs and green fences		

Agenda Item 4: Update of Tree Labels with Quick Response Codes

- Totally agree with this program. I see that many of the trees at the road side have this tree labels. This taskforce is great. Thank you.

Comments received on 17 June 2022

Agenda Item 2: Preservation of Old and Valuable Tree No. LANDSD N/3

- I have found in my many investigations that most of the large Camphor trees possess some level of heart rot. This is not unusual and provided that there is adequate sapwood, risk of failure is not high.
- The failure of the major scaffold branch has exposed pre-existing decay and cavity, which will only increase. Given the age and condition of this tree, wound closure is not expected.
- Mitigation of crown reduction was appropriate. Approximately 20% reduction of ends of branches can reduce load approximately 50%. It will not prevent failure, but should reduce likelihood.
- Cobra system not effective in this application and as installed. Cobra is too light and will not adequately dampen dynamic oscillation of branches or offset load as required. Steel cables or props would be required to provide this level of risk reduction. However, steel cables will modify dynamic oscillation of branches and concentrate load at nodes where decay is present and may increase likelihood of failure. Cabling is not recommended for this tree.
- With no reported tests for soil borne pathogens, Trichoderma should not be injected. Testing for pathogens should be conducted prior to any treatment. This specific treatment shouldn't cause damage, but there is not an adequate foundation for support of this treatment. Symptoms of dieback point to reduced water availability, which could be a number of issues as was listed on slide 29.
- Application and maintenance of wood chip mulch should prove effective for water and soil problems. Mulch is a highly recommended practice for all urban and protected trees in unnatural or difficult environments.
- I agree with the Way forward for this tree. Maintain mulch and monitor regrowth. Fall zone should be restricted to reduce risk of target strike.
- Given the symptoms of decline and condition of this tree, I am not optimistic regarding its future, but its location results in low risk to people and property and retention and monitoring are appropriate for this tree.

Agenda Item 3: Medium and Long Term Management of Eucalyptus (桉樹) along San Tin Highway

- Incorrect selection and installation of *Corymbia citriodora* (formerly *Eucalyptus citriodora*) has been an anticipated challenge for many years that is now being experienced. Dr. ZHANG's investigation illuminates the source and result of these practices.

- Without knowing specifically which trees are recommended for removal, in general, removal and replacement with a diversity of more appropriate species is very desirable as it appears Dr. ZHANG recommends.
- 4.2.2 Stump Removal: An option of stump retention and natural decay should be offered wherever practical. Stumps could be cut as low to the ground as practical and left to decay naturally. In general, unless stumps obstruct replanting or are otherwise substantively obstructive, it is recommended that they remain. Stump removal disrupts the site and increases the risk of erosion and improves the site for invasive species. Of the stump removal alternatives, stump grinding is the least disruptive, but the heavy equipment involved is restricted on difficult terrain.
- 4.2.3 Replanting: The installation of mono-cultures is not recommended and has also created challenges for various Hong Kong landscape plantings beyond *C. citriodora*. Species Richness/Diversity should be an important consideration when selecting trees and plants to restore these sites and in any large planting. Dr. ZHANG appears to have studied this in depth and recommended species that have proven successful on these sites. I am confident that there are other species that would also work on these sites that could expand this pallet of proven plants. The general guide for diversity is no more than 10% of any one species, 20% of any one genus, or 30% of any family.

Agenda Item 4: Update of Tree Labels with Quick Response Codes

- A wonderful recommendation and resource for everyone interested!
- I am sure that my colleagues will offer that the attachments must be such that they will not damage the tree or restrict growth.
- Vandalism of signs of this nature and size are a significant concern. I recommend considering a pilot project in 2 or 3 areas where vandalism would be considered most likely to determine the significance of this exposure?