

**Confirmed Minutes of the 131st Meeting of
the Environmental Impact Assessment Subcommittee
held on 18 January 2016 at 2:00 pm**

Present:

Prof Nora TAM, BBS, JP (Chairperson)
Dr HUNG Wing-tat, MH (Deputy Chairman)
Ir Cary CHAN
Prof CHAU Kwai-cheong, BBS, JP
Dr Billy HAU
Dr Michael LAU
Prof Albert LEE
Ir MA Lee-tak, SBS
Prof John NG
Miss Yolanda NG, MH
Dr Eric TSANG
Mr Luther WONG
Ms Becky LAM (Secretary)

Absent with Apologies:

Nil

In Attendance:

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|------------------------|---|
| Prof Paul LAM, SBS, JP | Chairman, Advisory Council on the Environment (ACE) |
| Ir Prof Irene LO | Member, ACE |
| Mr Andrew LAI | Deputy Director of Environmental Protection (3), Environmental Protection Department (EPD) |
| Mr K F TANG | Assistant Director (Environmental Assessment), EPD |
| Mr Louis CHAN | Principal Environmental Protection Officer (Regional Assessment), EPD |
| Mr Lawrence NGO | Senior Environmental Protection Officer (Regional Assessment)1, EPD |
| Mr Simon CHAN | Assistant Director (Conservation) (Acting), Agriculture, Fisheries and Conservation Department (AFCD) |
| Mr CHEUNG Ka-shing | Senior Nature Conservation Officer (South) (Acting), AFCD |
| Mr Dick CHOI | Senior Marine Conservation Officer (West), AFCD |
| Miss Dora CHU | Executive Officer (CBD), EPD |

Project Proponent Team
*Civil Engineering and
Development Department*

Mr Bosco CHAN, Deputy Project Manager
(Hong Kong Island & Islands)

Mr David LO, Chief Engineer/Islands

Mr Kenneth WONG, Senior Engineer 9
(Islands Division)

Planning Department

Ms Donna Tam, District Planning Officer/Sai Kung &
Islands

*Ove Arup & Partners Hong
Kong Ltd. (ARUP)*

Mr Franki CHIU, Director

Mr Henry SHIU, Associate Director

Dr Kin LO, Associate Director

Ms Amanda MO, Associate Director

Mr Jeffrey LO, Associate

Ecosystems Ltd.

Mr Vincent LAI, Managing Director

Action

Item 1 : Matters arising from the minutes of the 130th meeting

The Chairperson informed Members that the EIA Subcommittee (EIASC) last met in September 2015 to discuss the EIA report on “Desalination Plant at Tseung Kwan O”. The minutes of the meeting were confirmed via circulation on 6 November 2015 and had been uploaded onto the website of the Advisory Council on the Environment (ACE) for public information. The Chairperson informed Members that the project Environment Permit was issued on 19 October 2015 and was circulated to all ACE Members for reference.

2. There was no other matter arising from the minutes of the last meeting.

Item 2 : EIA Report on “Tung Chung New Town Extension”
(ACE-EIA Paper 1/2016)

Internal Discussion Session

3. The Chairperson advised that the meeting would discuss the EIA report on “Tung Chung New Town Extension”. Written response from the project proponent (i.e. the Civil Engineering and Development Department (CEDD)) to questions raised by Members had also been circulated for Members’ information before the meeting.

4. The Chairperson informed Members that the discussion would be divided into the Presentation and Question-and-Answer Session which would be opened to the public. The Internal Discussion Session would remain closed.

5. The Chairperson invited any declaration of interest from Members. A Member declared that he was involved in the project when serving as the Deputy Project Manager / Project Manager (Hong Kong Island and Islands) in the Territory Development Department / Civil Engineering and Development Department from 2002 to 2008. Another Member declared that he was the Vice President of the Conservancy Association which had submitted comments to EPD on the EIA report. A Member declared that he was the Chairman of Green Power Hong Kong which had submitted a joint statement by 13 green groups as initiated by the World Wide Fund (WWF) on the project. Another Member, being a member of WWF, advised that WWF also submitted comments to EPD on the EIA report. A Member declared that she was a specialist on waste infrastructure of the Ove Arup & Partners Hong Kong Ltd (ARUP), which was the consultant of the project proponent. The meeting agreed that these Members could stay on and continue participating in the discussion.

6. The Chairperson informed that during the public inspection period of the EIA report from 4 December 2015 to 2 January 2016, a total of 2,306 public comments had been received by EPD. As an administrative arrangement, the public comments and the gist of major issues/concerns received by EPD had been circulated to Members for reference before the meeting. The main concerns raised by the public were on ecology, water, air, noise and cultural heritage. Among the public comments received, less than 1% expressed support and about 15% expressed objection to the project. The majority objections were on the ground of marine ecology, in particular the concern on the Chinese White Dolphins (CWDs). About 90% of the public comments urged the ACE for endorsement of the EIA report with 2 conditions to protect the CWDs: (i) designate waters off Tai O (West Lantau) as a marine park to compensate for the reclamation-induced habitat loss; and (ii) prohibit construction barges from entering The Brothers Marine Park.

7. The Chairperson reminded Members to keep confidentiality of the discussion on the EIA report. Members should refer any enquiries to the Secretariat in case they were approached on the discussion and/or decision of EIASC.

8. In view of the wide scope of the environmental aspects covered in the EIA report, the Chairperson suggested and Members agreed that for a more structured and focused discussion at today's meeting, questions should be raised on the key subject areas in the order of –

- (a) ecology;
- (b) fisheries; and
- (c) water quality.

[The project proponent team joined the meeting at this juncture.]

Presentation Session (Open Session)

9. Mr Bosco Chan gave an overview of the background and need for the project. Mr Franki Chiu briefed Members on the ecology, fisheries and water quality aspects of the Tung Chung New Town Extension project, gist of the key comments received during the public inspection period and response to these comments.

Question-and-Answer Session (Open Session)

Impacts on Chinese White Dolphins (CWDs)

10. In response to a Member's question on whether the reclamation of 120 ha of land in Tung Chung East proposed development area (TCE PDA) would cause any impacts on CWDs, Mr Vincent Lai explained that an ecological baseline was established based on the AFCD's long-term marine mammal monitoring programme as well as the Cumulative EIA for the Three Potential Nearshore Reclamation Sites (CEIA). Based on literature review, it was concluded that waters near Tung Chung were of very low use by CWDs, and hence the reclamation should be of low impact to CWDs. He added that an eco-shoreline design would be adopted along the future artificial seawall to address the loss of general marine habitat.

11. In response to the Member's further enquiry on the availability of historical data on CWDs before 2006, Mr Vincent Lai said that AFCD's long-term marine mammal monitoring programme was commenced in the 1990s and the results indicated that the area from the east of the Hong Kong International Airport (HKIA) to the Mass Transit Railway (MTR) depot at Siu Ho Wan was of low CWD use. The Member commented that according to the data provided by some green groups, the project area was of high CWD activity before the construction of the HKIA. He was of the view that the project proponent should provide justifications for establishing the baseline review based on the data obtained after HKIA construction, and whether mitigation measures should be proposed based on the level of impact on CWDs. Another Member echoed the views of the Member and pointed out that there were no data on CWDs in Lantau North before the opening of the HKIA. Considering that CWDs might have left the area due to the various construction works in the surrounding area, mitigation measures should be introduced based on the precautionary principle, to compensate for the impact on CWDs from the reclamation work.

12. Mr Bosco Chan mentioned that since the opening of HKIA in 1998, records showed that the nearby waters were of low use by CWDs. The low CWD usage in the project area was confirmed by AFCD's long-term monitoring data since 2006. He added that the reclamation sites were of a water depth of 2 to 3 m, and as shown in the CWD data at Sunny Bay and Siu Ho Wan, CWDs rarely travel to shallow waters with water depth below 4 m. A Member pointed out that according to the sighting records of WWF in the 1990s, CWDs were found even in the shallow waters of the Butterfly Beach. He stated the possibility of the developments and disturbances rather than the shallow waters that deterred CWDs from travelling to that area, and argued that conducting literature review alone in the absence of field survey was inadequate to

support the conclusions made in the EIA report.

13. Mr Vincent Lai said that with reference to the passive acoustic monitoring (PAM) survey conducted under CEIA, areas with considerable CWD day time usage, i.e. Siu Ho Wan, showed a higher night time use; while areas with very low day time usage, i.e. Sunny Bay, showed only low and probably occasional CWD use even during night time. He considered that Tung Chung area with a very low usage by CWDs during day time was reasonably expected to have low usage during night time. In response to the query of a Member on the representativeness of the data, Mr Lai said that a general conclusion was based on the overall consideration of the AFCD's long-term marine mammal monitoring programme as well as results of land-based surveys and acoustic monitoring presented in CEIA. Replying to the Member's further question on the specialists responsible for conducting CWD impact assessment, Mr Vincent Lai informed that the assessment was conducted by the Ecosystems Ltd under the Land Supply Study and reviewed by AFCD. Mr Henry Shiu confirmed that there was CWD expert in the consultant team.

14. In reply to a Member's enquiry on the relevance of the proposed eco-shoreline to CWDs, Mr Vincent Lai clarified that the main objective of the eco-shoreline was to enhance the habitat for other marine life forms.

15. While the reclamation site was not an important habitat for CWDs, a Member commented that this did not imply no impact on the CWDs. He pointed out that AFCD's Monitoring of Marine Mammals in Hong Kong Waters only covered data collected during the day time, and echoed another Member's earlier comment that CWDs were generally more active during night time. Based on the PAM survey conducted only at the three potential reclamation sites, he considered that it was unscientific to conclude that the Tung Chung area was of low usage by CWDs during night time. He considered that the reclamation of 120.5 ha of land could possibly reduce the carrying capacity, food sources of CWDs as well as potential nursery and breeding grounds near the shoreline; such possible impacts were not covered in details in the EIA report. The Member also commented that the designation of the Brothers Marine Park (BMP) was a mitigation measure aiming to provide a desirable habitat for CWDs returning to the Hong Kong waters after the construction of the Hong Kong - Zhuhai - Macao Bridge (HZMB) Hong Kong Boundary Crossing Facilities. He was concerned that the numerous works vessels navigating near to or even into BMP would further deter CWDs from returning to the Hong Kong waters. The Member found it unacceptable that there was no mitigation measure proposed in the EIA report to address the impacts on CWDs.

16. Mr Bosco Chan reiterated that the results of the PAM survey and pointed out that the pattern of CWDs were comparable during the day time and night time. He explained that the adoption of eco-shoreline might in turn enhance the food source for CWDs. Concerning the routing of the works vessels, Mr Franki Chiu said that the works vessels would travel at the edges of the southern and western waters of the BMP as far as possible. The contractor would be required to submit a proposal on reducing marine traffic, such as capping the daily works vessel movements and

reusing excavation materials in situ.

17. The Member pointed out that the CWD population in Hong Kong had been decreasing significantly, and it should not be regarded as only a small percentage of the total population at the Pearl River Estuary (PRE) as mentioned in the EIA report. While it was claimed in the EIA report that there were approximately 2,500 CWDs in PRE, the Member commented that this figure was not up-to-date. He informed that according to a study undertaken by the University of Hong Kong in 2012, it was found that the population of CWDs in PRE was under constant decline by 2.5% annually, amounting to 70% decline in three generations. As there were other on-going projects in PRE, the entire CWD population in PRE was under threat. He reiterated the importance to introduce mitigation measures to ensure suitable habitats for CWDs being available during the reclamation and other construction works. Mr Bosco Chan was of the view that focus should be on the project area, i.e. TCE PDA, rather than the entire PRE, and explained that this project would have a low impact on CWDs and therefore they did not introduce any mitigation measures for CWDs in the EIA report. He considered that the adoption of eco-shoreline was a mitigation measure to address the loss of marine habitat in general.

18. The Chairperson sought clarification from AFCD on the CWD data from the 1990s, and asked the presentation team to state clearly the impacts on CWDs by the reclamation works. She commented that the eco-shoreline would not be able to perform its function immediately and its effectiveness could not be known at this stage. Mr Dick Choi replied that AFCD did not have any data on CWDs before mid 1995, hence the CWD numbers before the construction of HKIA was not available. Mr Vincent Lai said that the fisheries production in the reclamation site was low based upon the fisheries baseline survey for the EIA study, and thus not likely to significantly contribute to the food sources of the CWD population. He explained that the eco-shoreline should be able to enhance the fisheries resources in the area, and this would be subject to regular monitoring under the Environmental Monitoring and Audit (EM&A) programme.

19. A Member reiterated that the deduction of low CWD usage of the reclamation site during night time from the PAM result obtained from two locations was weak. He mentioned that he made adverse comments on the CEIA before in the ACE meeting in March 2015, and commented that it would not be convincing to use the data from CEIA without conducting any further field surveys. Based on the precautionary principle, mitigation measures for CWDs should be adopted.

Impact of works vessels on the Brothers Marine Park (BMP)

20. A Member asked the presentation team to provide an estimate on the works vessels movements and to consider whether it was feasible to impose a daily cap and reusing excavation materials in situ. Mr Jeffrey Lo said that on estimate there would be 56 daily works vessels round trip movements at the maximum to transport fill materials during the peak construction stage, with approximately half of the movements to the east to Tseung Kwan O Area 137, and the remaining travelling to

the north to the Mainland and Tuen Mun Area 38. Such level of movement would last for about 1.5 years, and vessel movements would decrease to approximately 30 daily afterwards. He mentioned that the timing for excavation works for the construction of service reservoirs would tally with that of the reclamation works which would last for about 5 to 6 years, and the contractor would be required to transport the excavation materials to TCE PDA for reuse as far as possible. Mr Bosco Chan agreed to include the maximum daily cap and reusing of excavation materials in situ as one of the conditions in the reclamation works contract, and the contractors would be required to submit a proposal on reducing marine traffic. It would also be one of the conditions to avoid contractors' works vessels entering the BMP as far as possible. The Member further opined that some measures should be in place to prohibit contractors from frequently entering the BMP solely for convenience. Considering that there would be enforcement difficulties for AFCD, he suggested the project proponent to set up a monitoring mechanism and requirements in this aspect. Mr Chan agreed and mentioned that requirements would be drawn up during the detailed design stage and would be included in the contract. He added that there would be CEDD site supervisory staff stationing at the construction site to monitor the contractors, as well as an environmental team to be set up to audit and follow up on suspected non-compliance actions of the contractors.

21. A Member commented that while works vessels were prohibited from entering the core area inside the BMP, the restricted area should be expanded and two routes, one to the East and the other to the North, should be designated to restrict the travelling of the works vessels. He suggested the adoption of an hourly cap, and asked the project proponent whether the works vessels would be prohibited from using the two anchorage areas inside the BMP. Mr Bosco Chan replied that the construction barges would take time to load and unload the fill material at fill bank therefore it would be unlikely a number of construction barges arriving the reclamation site at the same time. The detailed arrangements, including the feasibility of setting an hourly cap, would be considered during the detailed design stage with the objective of minimizing disturbances to the BMP. He confirmed that works vessels would be prohibited from stopping over or anchoring at the anchoring areas, and consideration would be given to include this term as a contract condition. Mr Jeffrey Lo clarified that works vessels would be prohibited from stopping over or anchoring within the entire BMP as recommended in the EIA report.

22. A Member enquired whether barges of a larger size to be deployed during the construction stage would generate greater noise impacts. He also expressed concern that the 10% of fill materials to be carried by land transportation would increase the burden of the Tsing Ma Bridge and the North Lantau Highway, especially with the development plan of Lantau Island under study, the vehicle flow in that area was anticipated to increase dramatically. The Member further asked about the routing of works vessels heading west, and whether it would pass through the high density CWD habitat to the north of Sha Chau and Lung Kwu Chau Marine Park (SCLKCMP).

23. In response to the Member's questions about the size and usage of the works

area at TCE PDA, Mr Jeffrey Lo explained that the excavation materials to be generated from the construction of service reservoirs next to an existing one would be transported to the reclamation site for reuse via land transportation. This accounted for approximately 10% of the total fill materials required for the project site. He added that site formation works at Tung Chung West would also generate excavation materials for use at the reclamation site. As for the noise level, Mr Franki Chiu explained that the noise level of the propellers of the works vessels would be highly dependent on the speed rather than the size of the vessels. Mr Vincent Lai supplemented that the deployment of larger barges would effectively reduce the marine traffic volume. In reply to a Member's question, Mr Lai referred members to Section 9.7.2.22 of the EIA report on the impact of underwater noise. Mr Lo informed that the reclamation works area would be an extension of 100 to 150 m in all directions from the reclamation site, and the entire area would be to the west of the Tuen Mun Chek Lap Kok Link. As the depth of the waters in the area only ranged from 2 to 3 m, the fill material required would be much less than the reclamation works of the HZMB project and therefore the number of trips required for works vessels to travel to the site would be relatively smaller.

24. In reply to a Member's earlier question on the routing of works vessels heading to the West, Mr Henry Shiu said that the work vessels would navigate along the Urmston Road. The Member enquired further whether the works vessels could navigate along the middle of Urmston Road to avoid CWD hotspots. Mr Bosco Chan replied that the marine traffic on Urmston Road was subject to the regulations of the Marine Department and agreed to provide supplementary information on the routing of works vessels after the meeting.

CEDD

25. Reply to a Member's question concerning the impact of the project on CWDs and corresponding contingency measures, Mr Vincent Lai considered that the works area was of some distance from the BMP, and efforts would be made to avoid encroachment of the BMP by works vessels. Mr Bosco Chan followed that the BMP was designed to be an attractive habitat for CWDs and should be able to serve its purpose when disturbances to the BMP would be controlled to a minimum.

26. In reply to a Member's question concerning the effect of noise generated by works vessels on dolphins, Mr Franki Chiu said that as mentioned in the EIA report, there were studies indicating that large vessel traffic generally produces low frequency sounds which would not overlap with the sound frequency used by dolphins. The Member was concerned that the low frequency generated by movements of large barges would undermine CWDs' ability to avoid the possible collision risk, and asked the presentation team to provide supplementary information concerning this aspect. As regards to the Member's question concerning the duration of the project, Mr Bosco Chan said that the whole project would be phased in four stages and the first population intake was targeted in 2023. The schedule had taken into consideration the balance between the urgent need for public housing and the impacts on the environment, especially those caused by the increase in marine traffic. He mentioned that works vessels heading west to the Mainland sourced construction materials that were not available locally. Mr Henry Shiu supplemented that these

CEDD

materials mainly include sandfill for the drainage layer as well as rockfill and armour rock for the seawall.

27. A Member suggested and Mr Henry Shiu agreed to review the information on the research conducted by dolphin experts from Zhuhai on the impact of underwater noise generated by works vessels on CWDs. CEDD

Construction of a marina

28. Considering that the proposed marina might create negative impacts on the environment, a Member enquired whether there was a genuine need for a marina in Tung Chung East. He pointed out that the area assigned for the marina was close to the three runway system and therefore would be subject to a high noise level, and questioned the suitability for a marina at that location. Ms Donna Tam explained that the main objective of the project was to provide land for housing developments, with employment opportunities, community and recreational facilities serving locals and visitors. She said that the provision of a marina could meet the increasing demand for berths and at the same time enhance the vibrancy of the area, and it was considered a compatible use within the Tung Chung East development. In order to minimize negative impacts on the environment, only 95 berths would be provided at the marina with a view to reducing the volume of vessel movements in that area. Mr Bosco Chan added that the marina was targeted for leisure vessels which usually have a low traffic frequency, thus the magnitude of the potential marine traffic impact on the BMP should be on the low side.

29. A Member enquired if there were other suggestions, apart from a marina, to make use of the waterfront promenade to enhance the vibrancy of the area and promote a water-friendly culture. He suggested introducing blue infrastructures to facilitate direct contact with the waters. Mr Bosco Chan said that a water-friendly culture would be promoted via the adoption of the proposed eco-shoreline at the coastline of Road P1 (Tung Chung - Tai Ho Section) as well as the eastern coastline of TCE PDA, while the western artificial seawall of TCE PDA was close to the marine navigation channel which would constrain the implementation of eco-shoreline. He added that the waterfront promenade with a general width of 20 m would be widened to provide space for certain facilities and activities, and he welcomed the introduction of blue infrastructure, for which the concept had specifically been adopted in TCW PDA for revitalisation of the channelized section of Tung Chung Stream. The specific design would be formulated in the detailed design stage. Another Member opined that a holistic approach should be adopted for the construction of a marina by weighing between the pros and cons.

30. A Member informed that according to some studies conducted on Hong Kong marina, it was found that there were ecological impacts created by the anti-fouling paint of marine vessels within the marina on the ecosystem of the surrounding environment. He asked the project proponent to provide supplementary information on possible impacts of anti-fouling paint on CWDs, other marine organisms and the surrounding environment, including the eco-shoreline, Tai Ho CEDD

Bay, etc. Another Member further asked the project proponent to provide justification on the need for a marina and to provide information on the spatial distribution of marinas in Hong Kong. Two Members both questioned the necessity of a marina that was neither tourist attraction nor scenic view nearby the area. The Chairperson reminded Members that the focus of discussion should be placed on possible environmental impacts generate by the marina rather than the appropriateness of land use. As the marina would create certain impacts on the surrounding environment, the project proponent was strongly recommended to reconsider the proposal.

Implementation of eco-shoreline

31. In response to a Member's enquiry on the effectiveness of the eco-shoreline in enhancing marine biodiversity, Mr Vincent Lai informed that the idea of introducing an eco-shoreline was originated from the Enhancing Land Supply Study. The eco-shoreline would provide suitable habitats for colonization of marine organisms and thereby effectively enhance the ecological function of the new seawalls. While some overseas examples were quoted in the EIA report, Mr Lai said that a similar design had been adopted locally at Shan Pui River, where mangroves were planted alongside the extended embankment of the artificial river channel composing of soft mud. It was observed that there was colonization of benthic organisms at the mangroves. While the design of the seawall would have to tie in with the objectives of the project and would be formulated in the detailed design stage, he said that the anticipated benefits could be obtained with the adoption of a good design. The Member asked and the presentation team agreed to consider reporting the results of the detailed study to Members in due course.

32. A Member opined that the geographical conditions at the waterfront of TCE PDA differed substantially from Shan Pui river. In view that the waterfront of TCE PDA faced north or northeast and would be subject to strong winds, he questioned the suitability of an eco-shoreline at that location.

33. The Chairperson opined that the adoption of an eco-shoreline was to enhance the aesthetic value of the area as well as to generate ecological benefits in the long run. She expressed reservation on the effectiveness of this measure and asked the project proponent to provide supplementary information on the anticipated enhancement function of the proposed eco-shoreline on the future reclamation seawalls for addressing the loss of general marine water habitat.

CEDD

Conservation of the Tung Chung Stream

34. A Member expressed his appreciation to the project proponent for conserving the Tung Chung Stream. In reply to the Member's question concerning the width of the buffer zones, Mr Bosco Chan explained that while the general width of the buffer zones would be between 20 to 30 m, some parts of the area would be narrower due to the constraints posed by existing developments. Mr Vincent Lai supplemented that the width of the buffer zones had made reference to that of the

buffer areas of other rivers in Hong Kong with ecological significance, such as the Sha Lo Tung Stream. The widths of buffer zones were in general 30 m for all natural sections of the Tung Chung Stream, i.e. the two main branches and the joined outlet section, and in general 20 m for the major tributary at Ngau Au. He stressed that the widths of the buffer zones would not be less than the recommendation except at areas with constraints such as insufficient space or proximity to existing developed areas, for instance the Mok Ka Village. A Member was concerned that there could be further developments along the Tung Chung Stream before the commencement of the project which would further constrain the setting up of the buffer zones. He asked the project proponent to commit to designating buffer zones of a general width of 30 m except at areas constrained by existing developments.

35. A Member was of the view that the width of the buffer zones should be based on the actual needs on each of the locations. While a compromise had to be made at areas with existing developments, the Member opined that some parts of the buffer zones might have to be wider than 30 m to protect important species or wetland of conservation value in the vicinity. Mr Bosco Chan agreed to clarify the wordings used in the EIA report to avoid misunderstandings. Mr Vincent Lai mentioned that wetlands of ecological significance had already been taken into consideration in the design of the buffer zones, resulting in some parts of the buffer zones wider than 30 m. He added the wet abandoned agricultural land in the middle and southern sections of Fong Yuen had been designated as a green belt for better conservation.

CEDD

36. A Member sought clarification on the rationale for designating only one section but not the entire Tung Chung Stream as the River Park. Mr Vincent Lai replied that to restore the ecological connection between the upstream and downstream of Tung Chung Stream, it was proposed to revitalise the existing channelized section, which would be designated as the River Park together with the natural section immediately upstream to Shek Mun Kap. As for the western branch of the Tung Chung Stream, he mentioned that the designation of conservation areas alongside the stream should be sufficient for the protection. While the River Park would be under the management and maintenance by relevant Government departments, the Member was concerned about the possible illegal dumping, tree felling and construction of small houses at the sections of the Tung Chung Stream outside the River Park, especially with the area surrounded by village-type development zones (V-zones). He suggested the project proponent to reconsider including the western branch of the Tung Chung Stream in the River Park without having to propose additional facilities in that area.

37. In response to the Member's follow-up question on the management of the conservation areas, Mr David Lo said that while the conservation areas were private properties, they were of a designated land use. The Member pointed out that illegal dumping was very common in the New Territories which had even occurred at Ramsar sites. He and another Member opined that it was ineffective to restrain illegal dumping solely by land use control without management, especially when the area became more well-connected with the development of a transportation system. Mr Lo said that polders to be managed by the Drainage Services Department (DSD)

would be installed at the outside boundary of the conservation areas along the western branch of the Tung Chung Stream. Mr Bosco Chan said that polders to be constructed at a higher elevation to the stream and the conservation areas made the western branch of the Tung Chung Stream unsuitable to be included into the River Park. He said that relevant Government departments would take enforcement actions within the conservation areas for any illegal dumping. The Chairperson said that the designation of the River Park should be based on the suitability and potential environmental benefits of the concerned area, while the management and enforcement against illegal actions would be a separate matter.

38. In view of the high conservation value of the Tung Chung Stream with ecological connection between the Sunset Peak, Lantau Peak and the Tung Chung Bay, a Member agreed with another Member that the entire Tung Chung Stream should be covered in the River Park. Apart from conservation, the Member mentioned that the River Park was also of recreational value to the population at Tung Chung West (TCW). He asked whether there were any measures to protect the western branch of the Tung Chung Stream against illegal dumping if it could not be included in the River Park. Ms Donna Tam said that TCW had been covered by the Development Permission Area (DPA) Plan since August 2015, which had been subsequently replaced by the Tung Chung Valley Outline Zoning Plan (OZP) gazetted in January 2016. Under the provision of the OZP, enforcement against unauthorized land filling would be undertaken by the Planning Authority. Regarding the development of small houses, there was no provision for planning applications for development of new small houses within conservation areas on the OZP, while redevelopment of existing houses might be permitted subject to planning permission by the Board. In this connection, the area covered by existing houses at Mok Ka had been excluded from being zoned as the conservation area. With understanding that dumping activities were illegal under the Town Planning Ordinance, the Member sought for information on the enforcement measures, and enquired whether it was possible to first designate the River Park and construct polders for protection of the Tung Chung Stream before the commencement of construction works in the surrounding area. While the River Park area involved land resumption which would take considerable time, Mr David Lo replied that the construction of the River Park would be prioritized as far as possible in the detailed design stage. Mr Bosco Chan supplemented that while the development of TCW would commence in 2020, proposed advance works including the revitalization of the channelized section of the Tung Chung Stream and compensation of woodland could be undertaken as early as 2017.

39. A Member enquired the reason for changing the zoning of the TCV-8 area, i.e. to the north of Ngau Au and to the west of the outlet of Tung Chung Stream, from green belt as shown on the Recommended Outline Development Plan (RODP) in the Stage Three Public Engagement Digest to residential area. Ms Donna Tam explained that in response to public comments received during the public engagement of the Tung Chung Study, the area around Ngau Au had been reviewed. As the area was largely covered by abandoned farmlands or unmanaged orchards which were of relatively low ecological value, the area was proposed for low-rise low-density

residential use. The surrounding area which was of high ecological value was retained as “Green Belt”. Mr Vincent Lai supplemented that the area concerned mainly consisted of orchards, abandoned agricultural land and active farmlands without special conservation value.

Conservation of woodland habitats

40. In reply to a Member's question on the loss of Fung Shui Wood, Mr Vincent Lai said that while around 3.6 ha of Fung Shui Wood would be covered by the Conservation Area and Green Belt, 0.16 ha of Fung Shui Wood would be lost due to the construction of polders to the east of Shek Mun Kap Village and to the east of Mok Ka Village. He explained that as Mok Ka Village was adjacent to the western branch of Tung Chung Stream, the loss of Fung Shui Wood in between was inevitable for construction of the polders. As for Shek Mun Kap Village, the polder was sited closer to the village in order to minimize its height and development footprint and would unavoidably encroach on a small area of Fung Shui Wood. Mr Lai added that another 0.04 ha of Fung Shui Wood would also be lost to the widening of the Shek Mun Kap Road for traffic.

41. A Member suggested including assessment on the loss of Fung Shui Wood and secondary woodlands due to small house development in the V-zones in the EIA study, or alternatively, excluding woodlands with high ecological value from the V-zones. He anticipated that with the development of the Tung Chung area, there would be a large number of applications for small houses within the V-zone. Mr Vincent Lai said that within the 14 ha of area being designated as the V-zones in the RODP, there were about 2 ha of Fung Shui Wood and secondary woodlands in the V-zones, of which only 0.38 ha was Fung Shui Wood. As there were no proposed developments under this project in the V-zone, the potential loss of Fung Shui Wood within the V-zones had not been included as loss in the EIA study. The Member remarked that Fung Shui Wood was an important habitat in Hong Kong and suggested that these areas should be excluded from the V-zones, or alternatively, no land use planning should be designated for the proposed V-zones at this stage.

[Ir Cary Chan and Prof John Ng left the meeting at this juncture.]

42. Ms Donna Tam replied that land would be reserved for the development of small houses in accordance with the Small House Policy. In designating the “V” zone, relevant considerations including the ‘village environs’, the local topography, the existing settlement pattern, site characteristics, and the forecasted demand for small houses would be taken into account. She explained that the development of small houses was based on a well-established mechanism, where building licenses must be obtained under the Small Houses Policy. Relevant Government departments, including the Planning Department (PlanD) and the Agriculture, Fisheries and Conservation Department (AFCD), would be consulted and if the site for the proposed Small House was found to contain habitats or woodland of ecological importance, the departments concerned might raise objection to the proposal. Within the broad-zoning under the statutory OZP, Ms Tam said that detailed layout plans

would be prepared to guide future development. Mr Vincent Lai supplemented that the proposed compensation woodland of 11 ha was far greater than 6 ha of woodland loss under the project. Mr Bosco Chan stressed that applications for construction of small houses would not be approved in areas in the V-zones with ecological significance. A Member opined that it was not uncommon for trees in the V-zones to be damaged to give way to small house development in the New Territories. He agreed with another Member that the potential loss of Fung Shui Wood in the V-zones should be compensated in the EIA study.

[A Member left the meeting at this juncture.]

43. In reply to a Member's question concerning the fire risks of compensation planting areas, Mr Vincent Lai said that fire resistant species, such as *Schima superba*, would be planted in the periphery of the compensation woodland areas. Buffer areas would also be assigned to separate the compensation areas from the adjacent graves and burial grounds. Mr Lai added that the compensation woodland would be monitored for 3 years and maintained for 10 years by the project proponent. In addition to the number of trees to be planted, the Member opined that the duration of maintenance period should be adequate to ensure the compensation woodland reaching maturity. He shared that during the site visit to Tung Chung on 6 January 2016, Members witnessed that the proposed compensation area had just experienced a recent fire. He asked the project proponent to provide more details on the preventive measures against fires in the compensation woodland. Mr Bosco Chan said that in case of hill fire, the damaged parts would be further compensated based on the available resources. He added that the prevention of hill fire would also be enhanced via promotion and public education.

44. A Member considered that the variety of trees on the list of plant species recommended for compensatory woodland planting was limited, with only one to two species of trees common in Fung Shui Wood. The Member shared that the recreation of Fung Shui Wood would require a very careful design as well as a considerable long period of time, and he shared that he had not seen any successful cases in Hong Kong. Mr Vincent Lai explained that the recommended planting list included both species recorded in the Fung Shui Wood and woodlands to be lost. He added that the compensation areas would form an ecological linkage to the nearby woodlands and Sheung Ling Pei Fung Shui Wood. The Member further commented that the plant species of Fung Shui Wood should be clearly differentiated from those of secondary woodlands, and these should be planted at different locations with careful planning. He suggested that the fostering of Fung Shui Wood must be conducted in phases, with species that could be more easily cultivated to be planted in the early phase, followed by common Fung Shui Wood species.

45. A Member agreed that it was very difficult to recreate Fung Shui Wood, and that the compensation of Fung Shui Wood and secondary woodlands should be addressed separately. He further pointed out that there might be a need to obtain consent from the villagers to plant trees near to the graves as they might regard this as having impact on their "Fung Shui". In response to the Member's enquiry on whether

the area of the V-zones were based on the OZP of PlanD and hence the land use of such areas was outside the control of the project proponent, Ms Donna Tam clarified that the “V” zones on the OZP was drawn up to reflect the existing village settlements and their expansion areas. The Chairperson said that a plan on the compensation of woodlands with details on the site selection and list of species should be submitted to ACE for further consideration.

Protection of Romer’s Tree Frogs

46. A Member said that a small population of Romer’s Tree Frogs was found distributed sparsely at the Wong Nai Uk Area in 2012. He commented that the absence of the target species in some locations might suggest that these locations were not desirable for receiving the frogs to be translocated. As for locations with the existence of the target species, they might already have reached the maximum carrying capacity and any further release of Romer’s Tree Frogs at these locations might upset the existing ecological balance. He suggested that the project proponent should consider carrying out habitat enhancement to increase the carrying capacity of the area before the release of Romer’s Tree Frogs. In view that the habitats of the Romer’s Tree Frogs fell into both public land and private properties, the Member opined that an integrated and detailed release and habitat enhancement plan would be required for effective protection of the frogs.

[A Member left the meeting at this juncture.]

47. Mr Vincent Lai replied that while the Government would be responsible for the capture and translocation of the Romer’s Tree Frogs within the public works area, the timing of the developments of the private lots was not known at this stage, which would affect the effectiveness of the capture and translocation of the frogs if carried out together with that for public works. He said that it would be more effective for the private developers to conduct their own exercise. In reply to a Member’s follow-up question, Mr Lai said that the future project proponents of the private lots would be required to conduct capture-and-translocation exercise prior to site formation and such requirement would be stipulated on the land transaction application. Understanding that the Government could not conduct capture-and-translocation exercise on the private lots, another Member suggested that a detailed capture-and-translocation plan should be drawn up to serve as a guide for the private developers. Mr Bosco Chan agreed to discuss this issue further with relevant government departments and to review the feasibility of enhancing the habitats of Romer’s Tree Frogs within the public works area so that the translocation could be conducted effectively when the private lots were developed.

Water quality

48. On behalf of a Member who had left the meeting early due to other commitments, the Chairperson asked whether there were any measure to prevent or mitigate the accidental release of large amounts of suspended solids with the adoption of the non-dredged method for constructing the seawall. She further enquired on behalf of the Member on the proposed mechanism to prevent the cumulative exceedance of water quality objectives caused by the concurrent projects. Mr Franki Chiu said that a silt curtain would be deployed around the entire marine works area, and continuous monitoring would be implemented during the dredging works to ensure effective containment of any accidental releases. As for the possible cumulative exceedance of water quality objectives, he explained that the forecast at the contaminated mud pits at East Sha Chau was based upon a maximum allowable rate of dredging and disposal, i.e. 600 tonnes per day. He pointed out that such modelled worst case cumulative impact was very unlikely to be representative when the average daily disposal rate was only about 158 tonnes per day as advised by the mud pit operator. The contribution due to the proposed reclamation works would be insignificant. Mr Chiu added that there was a number of water quality monitoring stations installed at the upstream and downstream of the contaminated mud pits to ensure there would be no exceedance of the suspended solid criteria.

49. In response to the Chairperson's enquiry on the effectiveness of deploying silt curtain in shallow waters, Mr Jeffrey Lo said that there were different methods to install the silt curtain to minimize the release of suspended solids, such as by using floating silt curtains, or installing supports in the soil layer to erect the silt curtain in the shallow water area. He added that workers on site would conduct regular patrol and monitoring to ensure timely repair and maintenance of the silt curtain. There would also be laying of geotextile and sand blanket over the marine deposit prior to reclamation filling to prevent re-suspension and seabed disturbance. In response to a Member's enquiry on the location of the discharge from the Siu Ho Wan Sewage Treatment Works, Mr Lo said that an existing submarine outfall was located within the North Lantau waters and was several hundred metres from the coastal area.

50. Mr Bosco Chan said that they were committed to minimize the environmental impacts, and would be prepared to provide supplementary information to Members. The Chairperson thanked the project proponent for their presentation.

[The project proponent team left the meeting at this juncture.]

Internal Discussion Session

51. Following up the comments of Members on the lack of dolphin field survey conducted by the project proponent on CWDs, the Chairperson sought AFCD's advice on whether it was necessary to conduct a field survey, and if yes, whether meaningful statistics could be obtained within a short time. Mr Dick Choi mentioned that while AFCD had suggested the consultant of the project proponent to consider conducting acoustic survey under the EIA study, the data so obtained might not be

meaningful even if it had actually been conducted as there were other on-going construction activities at that time. With reference to the acoustic survey conducted under CEIA, Mr Choi advised that the survey would take approximately half a year to complete. He pointed out that according to the acoustic surveys undertaken by the consultants of the HKIA third runway system project and CEIA, as well as AFCD's consultants on CWD monitoring, the findings were consistent where areas of considerable CWD daytime use showed a higher night time use, and areas of very low day time usage showed correspondingly low CWD usage during night time.

52. A Member opined that while conducting field survey at this stage could no longer yield meaningful results with great disturbances from concurrent projects in the area, this did not mean that the project would impose no negative impacts on CWDs. In view that the habitats of CWDs in North Lantau had been under rapid decline, any further reclamation within the CWD habitat should be mitigated under the precautionary principle. For the effective protection of CWDs, the Member further commented that the Government should formulate an overriding policy that require all reclamation works to be mitigated for instance by the establishment or expansion of marine park, rather than to assess the need for mitigation measures on a project by project basis.

53. In response to a Member's query on whether the conducting of CWD surveys was included as a requirement in the study brief, Mr Dick Choi clarified that based on the project profile, public comments and available information on CWDs at the time, AFCD considered that the potential impact of the project on CWDs was of lower magnitude when compared with other major reclamation works such as the HKIA third runway project, hence conducting CWD survey had not been stipulated as a mandatory requirement in the project study brief. In view that no data was available and the data might not be meaningful even if field study was conducted, the Chairperson opined that it was debatable whether mitigation measures should be proposed under the precautionary principle as suggested by a Member. She asked Members to deliberate on the matter and give further views in the upcoming meeting.

[A Member left the meeting at this juncture.]

54. Apart from the reclamation works, a Member reiterated that works vessels navigating near to or into the BMP would cause disturbances to CWDs. As the BMP had not been designated yet and CWDs could not get close to the area due to the ongoing projects, the impact of the works vessels on CWDs could not be assessed even if a field survey was conducted. He echoed another Member's comment that compensatory or contingency measures should be proposed under the precautionary principle. The Chairperson pointed out that there was at present no mitigation measure proposed for CWDs, and while the eco-shoreline was merely put forward to enhance the ecological functions of the future seawalls the project proponent should explain more clearly the effectiveness of the eco-shoreline as a mitigation measure.

[A Member re-joined the meeting at this juncture.]

55. Mr K F Tang opined that the project proponent should give more information on the extent and actual measures taken to avoid works vessels from encroaching into the BMP. The project proponent could consider capping the number of vessels and defining the restricted area within the BMP to further minimize impacts. The Chairperson also referred to earlier comments raised by Members, such as the reuse of excavation materials arising from the project so as to reduce marine traffic. Mr Tang further suggested that all works vessels could be equipped with the global positioning system (GPS) so as to enable real-time monitoring. While these measures would mitigate for the impact caused by the traffic of works vessels, the Chairperson said that project proponent should reconsider proposing further enhancement measures for the loss of marine habitat due to reclamation. A Member suggested including this into the list of information to be further supplemented by the project proponent.

56. Rather than the size of the works area, a Member opined that more focus should be placed on the volume of marine traffic within this area. Another Member was of the view that the reclamation works could be stretched over a longer period of time so that fill materials could be sourced from concurrent projects rather than from outside Hong Kong. He suggested and the Chairperson agreed to ask the project proponent to provide an estimation of fill materials to be sourced from outside Hong Kong, as well as the number of works vessel movements on Urmston Road required for transportation of fill materials to the project site.

CEDD

57. The Chairperson asked Members to send any further comments to the Secretariat for forwarding to the project proponent for their advanced preparation of a response at the meeting on 22 January 2016. Members were also requested to send to the Secretariat any conditions or recommendations they wish to impose on the project so as to facilitate the discussion on 22 January 2016.

Secretariat

[Post meeting notes: A list of required supplementary information was sent to the project proponent on 20 January 2016. The project proponent had provided the supplementary information as well as a written reply to a Member's submission which was circulated to Members on 22 January 2016.]

Item 3 : Date of next meeting

58. The Chairperson reminded Members that the next discussion session would be held on 22 January 2016 at 2 pm.

**EIA Subcommittee Secretariat
January 2016**