Annex B

EIA report on "Tung Chung New Town Extension"
Summary of issues discussed by the Environmental Impact Assessment Subcommittee at the meetings on 18 and 22 January 2016

The Environmental Impact Assessment Subcommittee (EIASC) discussed the EIA report on "Tung Chung New Town Extension" at the meetings on 18 and 22 January 2016. The issues discussed were summarized below.

Impacts on Chinese White Dolphins (CWDs)

2. Members enquired on whether the reclamation of 120 ha of land in Tung Chung East proposed development area (PDA) would cause any negative impacts on CWDs. Members worried that the land reclamation could possibly reduce the carrying capacity, food sources of CWDs as well as nursery and breeding grounds near the shoreline. However, Members did not aware of such details in the present EIA report.

3. Members showed their concern about the numerous works vessels navigating near to or even into the Brother Marine Park (BMP) that would further deter CWDs from returning to the Hong Kong waters. Members considered the absent of mitigation measure in the EIA report to address the impacts on CWDs unacceptable.

4. The Project Proponent 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). The low dolphin usage in the project area was confirmed by AFCD's annual monitoring data since 2006. He advised that an eco-shoreline design would be adopted to mitigate the loss of marine habitat in general.

5. Considering that AFCD's Monitoring of Marine Mammals in Hong Kong Waters only covered data collected during the day time but dolphins were generally more active during night time, Members further questioned the relevance of the proposed eco-shoreline to CWDs.

6. The Project Proponent explained that the adoption of eco-shoreline compensated for marine ecology which they considered would in turn enhance the food source for CWDs. The Project Proponent was asked to provide details on the enhancement/mitigation measures, including off-site measures, to compensate for the impact on CWDs caused by the reclamation in Tung Chung East, as well as the routings of works vessel traffic within the Brothers Marine Park during the construction phase. *(Supplementary information at Appendix I)*

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

7. In reply to Members' query on the feasibility of imposing a daily cap and reusing excavation materials in situ, the Project Proponent estimated that there would be 56 daily works vessel movements at the maximum to transport fill materials during the construction stage. The contractor would be required to submit a proposal to reducing marine traffic, such as capping the daily works vessel movements and reusing excavation materials in situ. The Project Proponent also agreed to include the maximum daily cap and reusing of excavation materials in situ as one of the contract conditions when engaging contractor.

8. The Project Proponent agreed to consider Members' views of setting an hourly cap of works vessel movements during the detailed study with the objective of minimizing disturbances to BMP. And confirmed that works vessels would be prohibited from stopping over or anchoring at the anchoring areas. The meeting requested the Project Proponent to advise on the feasibility of imposing daily and hourly caps on works vessel movements through the Brothers Marine Park during the construction phase. *(Supplementary information at Appendix I)*

9. Some Members opined that measures should be in place to prohibit contractors from frequently entering BMP solely for convenience. And suggested the Project Proponent to set up a monitoring mechanism and regulations in this aspect. The Project Proponent advised that there would be CEDD officers stationed at the construction site to monitor the contractors, as well as an environmental team to audit and follow up on non-compliance actions of the contractors.

10. Members 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; they anticipated that vehicle flow in that area would increase dramatically. The meeting requested the Project Proponent to provide an estimation of fill materials (in tonnes) to be sourced from outside Hong Kong and the number of works vessel movements on Urmston Road required for transportation of the fill materials for the project site. *(Supplementary information at Appendix I)*

11. The Project Proponent explained that the excavation materials to be generated from the construction of the service reservoirs would be transported to the reclamation site for reuse via land transportation. This accounted for 10% of the total fill materials required for the project site. He added that land formation works at Tung Chung West would also generate excavation materials for use at the reclamation site.

12. The Project Proponent added that the deployment of larger barges, with a capacity equivalent to 10 to 20 times normal sized barges, would effectively reduce the marine traffic. The Project Proponent was asked to give details on the routings of works vessels along the Urmston Road which will source construction materials from outside Hong Kong. *(Supplementary information at Appendix I)*

13. Concerning the effect of noise generated by works vessels on dolphins, the Project Proponent explained that there were studies demonstrating that large vessel traffic generally produces low frequency sounds which would not overlap with the sound frequency used by dolphins. However, Members showed concern about the low frequency generated by movements of large barges would undermine CWDs' ability to avoid the possible collision risk, and requested the Project Proponent to provide supplementary information to clarify whether the low frequency generated by movements of large works vessels would undermine CWDs' ability to avoid the possible collision risk. *(Supplementary information at Appendix I)*

Construction of a marina

14. Considering that the proposed marina might create negative impacts

on the environment, Members doubted the genuine need for a marina in Tung Chung East. Members 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. The Project Proponent explained that one of the objectives of the project was to provide the new population with employment opportunities, community and recreational facilities. They advised that the construction of a marina could meet the increasing demand for berths and at the same time enhance the vibrancy of the area.

15. Members pointed out that there were possible ecological impacts created by the anti-fouling paint of marinas on the ecosystem of the surrounding environment. They asked the Project Proponent to provide supplementary information on possible impacts of anti-fouling paint of the marina on CWD, other marine organisms and the surrounding environment, including the eco-shoreline, Tai Ho Bay, etc. As the marina would create certain negative impacts on the surrounding environment, the Project Proponent was strongly recommended to reconsider the proposal of a marina at the proposed location. *(Supplementary information at Appendix I)*

Implementation of eco-shoreline

16. In response to Member's enquiry on the effectiveness of the eco-shoreline in protecting marine biodiversity, the Project Proponent informed that the idea of introducing an eco-shoreline was originated from a land supply study. They considered that eco-shoreline would provide suitable habitats for colonization of marine organisms and thereby effectively enhance the ecological function of the new seawalls.

17. Members pointed out 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. They considered this an enhancement measure rather than a mitigation 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. *(Supplementary information at Appendix I)*

Conservation of the Tung Chung Stream

18. Members appreciated the project proponent's plan to conserve the Tung Chung Stream but showed concern about the width of the conservation areas. The Project Proponent explained that the general width of the conservation areas would be between 20 to 30 metres, some parts of the area would be narrower due to existing developments. They further advised that the width of the conservation areas had made reference to that of the buffer areas of other rivers in Hong Kong with ecological significance, such as the Sha Lo Tung streams.

19. In addressing Members' concern that some parts of the buffer areas might have to be wider than 30 metres to protect important species or wetland of conservation value in the vicinity. The Project Proponent considered 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 with a width greater than 30 metres but still promised to further review in the EIA report.

20. Some Members questioned the rationale for designating only one section but not the entire Tung Chung Stream as the River Park. The Project Proponent advised 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 of Tung Chung Stream immediate upstream up to Shek Mun Kap.

21. Some Members pointed out that illegal dumping was very common in the New Territories. They considered it 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.

22. In view of the high conservation value of the Tung Chung Stream, some Members considered that the entire Tung Chung Stream should be covered in the River Park. They enquired the possibility of designating the River Park and construct polders for protection of the Tung Chung Stream before the commencement of construction works in the surrounding area. The Project Proponent agreed that the construction of the River Park would be

prioritized as far as possible in the detailed study.

Conservation of woodland habitats

23. In reply to Member's question on whether there would be any loss of Fung Shui Woods, the Project Proponent replied that while 4.6 ha of Fung Shui Woods would be covered by the conservation areas, 0.16 ha of Fung Shui Woods will be lost due to the construction of polders. He added that another 0.04 ha of Fung Shui Woods would also be lost to the widening of the Shek Mun Kap Road to accommodate the future traffic.

24. Members opined that with possible illegal dumping, tree felling and construction of small houses, Fung Shui Woods in the V-zones could be damaged by the indigenous inhabitants in nearby villages. They strongly considered that the Fung Shui Woods in the V-zones should be included as a loss to be compensated in the EIA study. Members requested the Project Proponent to assess the feasibility of avoiding the encroachment into the existing Fung Shui Woods when widening Shek Mun Kap Road. *(Supplementary information at Appendix II)*

25. In reply to Members' question concerning the fire-prone locations of compensation areas, the Project Proponent said that fire resistant species would be planted in the periphery of the compensation woodland areas. Buffer zones would also be assigned to space the compensation areas adjacent to graves and burial grounds.

26. Members 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 Woods. They considered that the re-creation of Fung Shui Woods would require a very careful design as well as a considerable long period of time, and there were rarely successful cases in Hong Kong and therefore requested the Project Proponent to provide a woodland planting list and more detailed explanation on how to ensure the success of woodland planting, especially Fung Shui wood, such as (i) fire control; (ii) handling the possible objections from local villagers; and (iii) illegal dumping. *(Supplementary information at Appendix I)*

Protection of Romer's Tree Frogs

27. Members raised that a small population of Romer's Tree Frogs were found distributed sparsely at the Wong Nai Uk Area in 2012. They commented that locations without the existence of this species signified that the location might not be a desirable habitat and therefore suggested that a detailed habitat enhancement plan should be drawn up to serve as a guide for future project proponents.

28. The Project Proponent agreed to discuss the 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

29. Members asked whether measure in place 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. The Project Proponent advised 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 accident releases. He further assured that a number of water quality monitoring stations would be installed at the upstream and downstream of the contaminated mud pits to ensure that there were no exceeding suspended solids.

30. In response to Members' enquiry on the effectiveness of deploying silt curtain in shallow waters, the Project Proponent explained that different methods to install the silt curtain with a view to minimize the release of suspended solids, such as by using floating silt curtains, or to install supports in the soil layer. Furthermore, workers stationed at the works site would conduct regular patrol and monitoring to ensure timely repair and maintenance of the silt curtain.

Air quality

31. In response to Members' enquiry on the model assumptions for air quality impact assessment, the Project Proponent explained that an estimated site traffic generation of 300,000 m^2 gross floor area (GFA) from the mainly retail and commercial land use inside the Topside Development at Hong Kong Boundary Crossing Facilities was included in the model.

32. The Project Proponent further explained that Transport Department would relax the traffic restrictions in phases for tourist coaches and private cars to enter the closed roads in South Lantau during weekdays. He considered that it would be relatively easier for electric vehicles to obtain closed road permits for access to southern Lantau to show the effort to promote environmental protection.

33. Some members questioned the rationale for setting year 2023 as the assessment year when the Road P1 and district distributor in TCE would not be commissioned until 2024 and 2029 respectively. The Project Proponent explained that although the Road P1 and district distributor would not be physically present in 2023, vehicular emission from the entire proposed road network within the PDA as well as road networks within 500 metres of the assessment area had already been accounted for in the assessment model in order to determine the highest emission scenario and the worst assessment year.

34. Members requested the Project Proponent to assess and present the peak hour traffic flow with regard to North Lantau Highway, Tuen Mun Chek Lap Kok Link and internal roads beyond year 2023 with a view to presenting the "worst case scenarios" for the air quality in the new town extension to the fully developed situation. (*Supplementary information is at Appendix II*)

35. Members further asked whether there were any blockages on the air corridor, the Project Proponent replied that the heights of developments in TCW was low, and there were planned open spaces in TCE which would link with that in the existing developed areas to provide good air ventilation. He added that an air ventilation assessment (AVA) was conducted in accordance with the Town Planning Ordinance. The Project Proponent agreed to supplement the AVA report as well as simulations on the disperse of air

pollutants along the air corridor under current and projected future air quality conditions to Members for information after the meeting. (*Supplementary information is at Appendix II*)

Noise Impact

36. Some members showed concern about the noise impacts generated at the joints of bridge decks, the Project Proponent explained that there would be a few bridges spanning over the Tung Chung Stream in TCW for access to existing villages and areas in the PDA with low plot ratios. As the traffic flow was expected to be low, and there would only be a small number of joints given the short length of the bridges, the noise generated by vehicles travelling across the joints was expected to be insignificant.

37. The Project Proponent informed the meeting that the Transport Department was currently conducting a study on low noise road surfacing materials of greater durability at road intersections, which would reduce the need for using noise barriers. He agreed to assess the feasibility of using new and proven technology to reduce air pollution during the detailed study.

38. Members sought confirmation from the Project Proponent on whether the three runway system (3RS) of HKIA would be fully commissioned in 2023 so that the Noise Exposure Forecast (NEF) 25 contours of the 3RS would be shifted away as predicted from the boundary of TCE by that time. The Project Proponent explained that the NEF 25 contours would be outside the Tung Chung New Town Extension area as stated in the 3RS EIA report, and this was a commitment made by the project proponent of 3RS in the Environmental Monitoring and Audit (EM&A) Manual hence would fall under the jurisdiction of the Environmental Impact Assessment Ordinance (EIAO).

39. Some members raised that the concept of low carbon should be strengthened via the land use planning and transportation system design of the PDA. The Project Proponent replied that in addition to the proposed railway stations at TCE and TCW, the PDA would be covered by comprehensive cycling tracks and pedestrian walkways. In order to enhance the greenery and sustainability of the New Town, there were proposals for cycling tracks to run adjacent to all roads, linear parks and green belts, and the use of electric buses would be promoted within the PDA.

Sewerage and sewage treatment implications

40. To mitigate the risks of breakdowns, the Project Proponent explained that 100% standby pumping capacity within each SPS, with spare pump up to 50% pumping capacity would be stockpiled in each sewage pumping stations (SPSs) for any emergency use. There would also be emergency storage facilities with up to 6-hours average dry weather flow (ADWF) capacity to provide a wider timeframe for the urgent repair in case of any breakdown of pumping facilities.

41. In reply to Members' question on whether grey water could be recycled, the Project Proponent replied that there was no independent sewage treatment works within the PDA, grey water within the New Town would be discharged to Siu Ho Wan Sewage Treatment Works. He said that stormwater collected would be reused for irrigation and street cleansing.

Waste management

42. Members enquired the need for sourcing construction and demolition (C&D) materials such as boulders from the Mainland. The Project Proponent replied that the Fill Management Division of CEDD had already maximized the project's use of locally available C&D materials from fill banks and concurrent projects. Only construction materials that were not available in Hong Kong, such as sandfill for the drainage layer and rockfill for the seawall, would be sourced from the Mainland. The Project Proponent agreed to state in the contract that materials should be sourced from concurrent projects. Members also suggested the use of waste glass containers for reclamation.

Landscape and visual

43. In view of the high ecological value of the Tung Chung Stream, Members opined that the use of artificial elements such as fencing and grasscrete should be avoided so as to preserve the natural character and ecological connection throughout the stream as far as possible. For the conservation area adjacent to the polders, they considered that there should be guiding principle for the planting of vegetation which would take into the account the height, colours, seasonality and shapes of difference plant species

so as to enhance the aesthetics as far as possible. The Project Proponent assured that the natural characteristics of the stream would be preserved as far as possible, and the engineered section of the Tung Chung Stream would be revitalized.

44. Members also suggested engaging stream ecologists during the detailed study to advise on the appropriate vegetation to be planted on the riparian zones that would best help conserve the ecology of the stream as well as wetlands in the area. The Project Proponent reassured the meeting that priority would be given to conservation over compensation of habitats.

45. With the proposed marina in TCE, members considered that more blue infrastructures such as canals and lagoons should be introduced in the design of the waterfront to promote a water-friendly culture and activities. They considered the introduction of blue infrastructures should be considered during the planning stage to ascertain that there would be sufficient space reserved for their construction. The Project Proponent said that the introduction of blue infrastructures to the waterfront would be further assessed in the detailed study. Members further requested the project proponent to provide photomontage views of the Tung Chung New Town Extension from nearby developments.(*Supplementary information at Appendix II*)

Cultural heritage

46. Members suggested that apart from preservation, more resources should be deployed to attract visitors by promoting the historical values of relics such as the Tung Chung Fort. The Project Proponent also confirmed that seven potentially registrable old and valuable trees (OVTs) at Tung Chung Valley would be preserved and due effort would be made to protect these OVTs from the negative impact general by the construction works.

47. The EIASC deliberated the EIA report on "Tung Chung New Town Extension" and recommended the full Council to endorse the EIA report with 5 conditions and 14 recommendations.

EIA Subcommittee Secretariat
February 2016