

**Confirmed Minutes of the 226th Meeting
of the Advisory Council on the Environment (ACE)
held on 9 October 2017 at 2:30 pm**

Present:

Mr Stanley WONG, SBS, JP (Chairman)
Prof Nora TAM, BBS, JP (Deputy Chairman)
Ir Cary CHAN, JP
Dr Billy HAU
Dr HUNG Wing-tat, MH
Ms Julia LAU
Dr Michael LAU
Mr Andrew LEE
Prof Kenneth LEUNG
Ir Prof Irene LO, JP
Mr Anthony LOCK
Ir MA Lee-tak, SBS
Prof John NG
Ir Michelle TANG
Dr Eric TSANG
Mr Luther WONG, JP
Mr Simon WONG, JP
Prof WONG Sze-chun, BBS, JP
Mrs Alice CHEUNG, JP (Secretary)

Absent with Apologies:

Prof LAU Chi-pang, JP
Prof Albert LEE
Ir Conrad WONG, BBS, JP
Prof Jonathan WONG, MH, JP

In Attendance:

Mr Donald TONG	Permanent Secretary for the Environment/Director of Environmental Protection
Ms Lily YAM	Assistant Director of Planning/Technical Services, Planning Department (PlanD)
Mr Simon CHAN	Assistant Director (Conservation), Agriculture, Fisheries and Conservation Department (AFCD)
Miss Heidi LIU	Principal Information Officer, Environmental Protection Department (EPD)

Ms Becky LAM	Chief Executive Officer (CBD), EPD
Miss Dora CHU	Executive Officer (CBD) 1, EPD
Miss Apple LEUNG	Executive Officer (CBD) 2, EPD

In Attendance for Item 2:

Mr C F WONG	Assistant Director (Environmental Assessment), EPD
Mr Louis CHAN	Principal Environmental Protection Officer (Regional Assessment), EPD
Mr Lawrence NGO	Senior Environmental Protection Officer (Regional Assessment), EPD
Mr Anthony HO	Environmental Protection Officer (Regional Assessment) 12, EPD
Mr C K SOH	Chief Town Planner/Urban Design & Landscape, PlanD

Project Proponent Team

MTR Corporation Limited

Mr James CHOW, Deputy Head of Property Project
Mr Simon CHAN, Chief Project Manager-Property
Mr Dave NG, Acting Chief Town Planning Manager
Mr Stephen CHIK, General Manager- Planning & Civil Engineering
Ms Felice WONG, Environment Manager
Ms Janice LO, Town Planner
Ms Louise LO, Environmental Engineer II

Simon Kwan & Associates Limited

Mr Michael YAM, Director
Mr CHUNG Cheuk Wai, Chief Architect

*Ove Arup & Partners Hong Kong Limited
(Topside EIA Consultant)*

Mr Franki CHIU, Director
Dr Camby SE, Building Physics Consultant
Ms Claudia YU, Designer

*AECOM Asia Co. Limited
(Railway EIA Consultant)*

Mr Jimmy HUI, Technical Director

In Attendance for Item 3:

Mr Dick CHOI Senior Marine Conservation Officer (West), AFCD
Mr T S SO Environmental Protection Officer(Mega Project) 1, EPD

Project Proponent Team

Airport Authority Hong Kong Mr Kevin POOLE, Executive Director, Third Runway
Mr Peter LEE, General Manager, Environment, Third Runway
Mr Martin PUTNAM, Senior Manager, Environment, Third Runway
Ms Mabel QUAN, Manager, Project Liaison

ERM Hong Kong Dr Jasmine NG, Partner
Mr Raymond CHOW, Consultant

Action

The Chairman informed Members that apologies of absence had been received from Prof Lau Chi-pang, Prof Albert Lee, Ir Conrad Wong and Prof Jonathan Wong.

2. The Chairman reported that the draft minutes of the 225th meeting held on 3 July 2017 was confirmed by circulation without proposed amendments.

Item 1 : Matters arising (Closed-door session)

3. There were no matters arising from the minutes of the last meeting.

Item 2 : Report of the 140th Environmental Impact Assessment Subcommittee Meeting

(ACE Paper 18/2017)

Internal Discussion Session (Closed-door session)

4. The Chairman informed that the following Environmental Impact Assessment (EIA) reports had been discussed at the Environmental Impact Assessment Subcommittee (EIASC) meeting on 11 September 2017:-

- (i) Siu Ho Wan Station and Siu Ho Wan Depot Replanning Works (Railway EIA); and

- (ii) Proposed Comprehensive Residential and Commercial Development atop Siu Ho Wan Depot (Topside EIA).

The discussion and recommendations of the EIASC on the two EIA reports had been summarized in ACE Paper 18/2017.

5. The Chairman invited declarations of interests from Members. For Railway EIA, three Members declared that they hold shares of MTR Corporation Limited (MTRC). A Member declared that she was an employee of the AECOM Asia Co. Limited which was a consultant of the Railway EIA, but she was not involved in the project to be discussed. Another Member declared that he was engaged in a consultancy project with AECOM which had no relevancy with the EIA reports to be discussed. A Member, being a member of World Wide Fund, advised that the renewal programme of its facilities at Mai Po had engaged various consultants including AECOM Asia Company Ltd. The meeting agreed that all Members concerned could stay on and continue participating in the discussion.

6. The meeting agreed that the discussion would first discuss the Railway EIA, followed by the Topside EIA.

Railway EIA

7. On the invitation of the Chairman, the EIASC Chairperson reported that the Railway EIA report was submitted by the MTRC and was made available for public inspection from 14 July to 12 August 2017. A total of eight public comments had been received by EPD during the public inspection period. Having regard to the findings of the Railway EIA report and the supplementary information provided by the project proponent at the EIASC meeting, the Subcommittee recommended the full Council endorse the Railway EIA report with two conditions and two recommendations as set out in paragraph 14 of ACE Paper 18/2017.

8. A Member drew Members' attention to the fact that the Railway EIA was a Schedule 2 project, whereby an Environmental Permit (EP) was required for its construction and operation; and the Topside EIA was a Schedule 3 project, for which an EP was not required under the EIA Ordinance (EIAO). He considered that it was undesirable for the project proponent to undertake separate EIA studies for the two projects as they were highly interrelated.

9. Mr C F Wong clarified that, while he noted the potential benefits of having

one single EIA for the two projects, it was permissible under the EIAO for the project proponent to undertake two separate EIA studies. Prior approval from the authority was not required. He noted that the project proponent had explained in the EIA reports that the arrangement of undertaking separate EIAs was to streamline the project implementation and provide ease of reference for the public. Having said that, he stressed that mitigation measures, in particular for noise impacts, should be provided at source as far as practicable under the EIA mechanism.

10. A Member opined and the Chairman agreed that the meeting should come up with independent recommendations for the two projects with regard to the scope and roles of the project proponent for each project.

Connectivity and walkability within the project site

11. A Member suggested that recommendation (d) i.e. “to provide facilities including pedestrian walkway, linkage, public spaces and cycle tracks to enhance connectivity and walkability within the project site and also to the adjacent waterfront and nearby Tung Chung New Town Extension” should be upgraded as a condition. He considered that it was important to enhance internal connection in terms of walkability and cycling with a view to reducing the need for transportation within the Railway project site, thereby minimizing noise impacts and emissions.

12. As the project proponent agreed to provide all-weather pedestrian links and cycle track networks, a Member suggested and another Member agreed to allow greater flexibility for the project proponent to consider providing alternative facilities, such as travellators. A Member proposed and the meeting agreed that instead of making recommendation (d) a condition, the project proponent should be “strongly recommended” to provide facilities to enhance connectivity and walkability within the project site.

13. A Member opined that there was respective work to be conducted under each project for the waterfront to be fully utilized. With reference to the supplementary information submitted by the project proponent after the EIASC meeting, the use of the waterfront would be maximized by incorporating various design elements and facilities in the proposed development. In order to enhance connectivity to and allow more space for the waterfront, the Member pointed out that fundamental changes should be made under the Railway EIA, such as setting back the depot edge. Notwithstanding the agreement in para. 12, he proposed

with the support of two other Members to consider upgrading recommendation (d) as a condition or including a new condition to mandate the setback of the depot edge and provision of more public space.

14. A Member opined that the purpose of EIA was to assess whether a project would have negative impacts on the baseline conditions and to propose mitigation measures as necessary. She considered that it might not be justified to impose EP conditions that would require the project proponent to make enhancements or introduce work that would result in positive environmental impacts.

15. A Member said that recommendation (d) was concerned with walkability and connectivity within the project site; and if it was considered that the design and use of the waterfront should also be addressed, it would be more appropriate to include a separate condition or recommendation.

16. Mr C F Wong said that any proposed conditions should be relevant to the EIAO and the Technical Memorandum (TM). As the TM had not specified any requirements on walkability and connectivity, it might not be appropriate to upgrade recommendation (d) into a condition. He added that, in any case, the project proponent had agreed to provide a minimum of two metres setback for the majority of the depot edge along the waterfront as stated in its supplementary information.

17. Ms Lily Yam supplemented that there was no Outline Zoning Plan (OZP) covering the project site at this stage. In drawing up the draft OZP which was currently in progress, comments from relevant bureaux/departments (B/Ds), including EPD, would be solicited on the proposed land use zoning and development parameters, etc. of the concerned site. She assured Members that their comments and suggestions would be reflected to PlanD via EPD. The Town Planning Board (TPB), when considering the draft OZP, would take into account comments received from concerned B/Ds/parties, amongst other relevant factors. The Chairman echoed that the TPB attached great importance to land uses relating to the waterfront and would take into account the views of advisory bodies including ACE.

18. A Member wondered whether developing the waterfront might have significant impact on the Railway project. Another Member was of the view that the spatial requirement for the waterfront was insignificant to the Railway project development. Furthermore, as the construction of the Railway project would be

carried out in phases without disruption to the normal operation to the depot and railway services, the proposed condition if made was unlikely to cause a delay in the Railway project development. A Member added that the project proponent had agreed to set back the depot edge to provide more open space for the use of the waterfront.

Landscape and visual impacts

19. A Member asked about the relevance of potential landscape and visual impacts. Mr C K Soh pointed out that the existing waterfront was a man-made feature on reclaimed land that was likely to be of a low usage, hence no negative impact from the Railway project was anticipated. However, he agreed that the value of the waterfront could be significantly enhanced subsequent to the change of land use, and the proposed Topside development would be a good opportunity to improve the landscape and visual quality of the waterfront area.

20. Mr Donald Tong said that proposed conditions should have sufficient legal basis under the EIAO and the TM for the purpose of good governance, and to afford the Government good public defense against legal challenges, if any. He advised that even no EP was required for the construction and operation of Schedule 3 designated projects, the project proponents could be required to undertake relevant measures through mechanisms like the town planning or the land lease. Mr C F Wong cited the Pak Shek Kok Development, which was a Schedule 3 designated project, as an example and said that the requirement for carrying out noise mitigation measures was imposed on the land lease for meeting the TM requirements.

21. With reference to Section 8.1 in Annex 18 of the TM, Mr C K Soh agreed with two Members that mitigation should not only be concerned with damage reduction but also potential landscape visual enhancement. Nevertheless, the TM had not stipulated clearly the standards or benchmarks for such enhancement. PlanD considered that the project had met the TM requirements in consideration that there was no significant landscape and visual impact anticipated; and the project proponent had demonstrated its commitment to mitigating possible impact and enhancing the landscape and visual quality of the site. He opined that there was always room to improve; and a condition requiring the project proponent to enhance the landscape and visual quality should be in compliance with Annex 18 of the TM.

22. Mr C F Wong explained that in general, unless there was evidence that the project might not be able to meet the TM requirements, it would not be desirable to ask the project proponents to accept a condition purely to enhance environmental performance, as this might be subject to challenges and would have undesirable read-across implications. He further advised that, for the project in question, if there was no evidence showing that negative landscape impacts would arise from the project itself, it would be difficult to justify the imposition of the condition requiring the project proponent to submit a landscape plan to enhance the landscape and visual quality of the site.

23. Following on this, two Members considered that the construction of the extensive wall of 1.6 kilometres along the site boundary which was near to the waterfront would inevitably lead to negative visual impacts. On the premises that the project would have negative landscape impacts, a Member considered that requiring the project proponent to submit a Landscape and Visual Plan could be justified.

24. In summarizing the discussions, the Chairman suggested for Members' consideration an additional condition requiring the project proponent to submit a detailed Landscape and Visual Plan of the project especially showing the landscape and visual features along the waterfront with a view to minimizing the overall landscape and visual impact of the project. Members agreed.

25. Mr Donald Tong added that EPD would follow up with relevant authorities including Department of Justice as necessary to ensure that the proposed additional condition as suggested by the ACE to be imposed on the EP would be legally justified under the EIAO and TM; and enforceable. EPD

Topside EIA

26. A Member reported that the Topside EIA report was made available for public inspection from 14 July to 12 August 2017, during which a total of six public comments had been received by the EPD. Having regard to the findings of the EIA report and the information provided by the project proponent at the EIASC meeting on 11 September 2017, Members considered it necessary for the project proponent to provide supplementary information. As it was not feasible to arrange another EIASC meeting before the full Council meeting today, Members agreed to invite the project proponent to attend the full Council meeting to address the outstanding issues.

[The presentation team joined the meeting at this juncture.]

Presentation cum Question-and-Answer Session (Open session)

27. Mr James Chow gave opening remarks. With the aid of a powerpoint presentation, Mr Michael Yam and Mr Franki Chiu briefed Members on the background, design concept and considerations as well as environmental outcomes and benefits of the Topside project.

Landscape and visual impacts

28. Two Members expressed their appreciation towards the project proponent for its efforts in providing additional information to explain the design concepts and considerations of the proposed plan, and addressing Members' concerns raised at the last EIASC meeting. With a view to building a liveable and sustainable community, a Member suggested considerations be given to connecting the proposed breezeways with facilities of greater human activities such as schools. With a view to realizing the elaborate plans and designs, Ms Lau reminded the project proponent to take extra care when setting the contractual terms and tendering requirements.

Noise impacts

29. In order to minimize the proposed extent of fixed windows for two-third along the southern façade in the proposed development scheme, two Members suggested mitigating the noise impacts at source and deploying alternative noise mitigation measures such as installing ventilators and acoustic balconies. As the project site was located in a geographically advantageous area surrounded by the natural environment, a Member opined that the project proponent should fully capitalize on such advantage in the planning and design of the development.

30. Mr Franki Chiu explained that the southern facades of residential towers along the southern boundary were exposed to noise sources including the road traffic noise from North Lantau Highway (NLH), and railway noise from Tung Chung Line (TCL) and Airport Express Line (AEL). The predicted noise levels exceeded relevant noise criteria by a large extent and could not be fully addressed by deploying mitigation measures at source. Self-protecting building design was

therefore proposed with the use of fixed windows at the habitable rooms along the southern facades, coupled with the provision of noise canopy along the southern podium and acoustic windows to achieve full compliance of relevant noise criteria. Nevertheless, he said that the project proponent would keep in view of the latest technology to explore opportunities to optimize the noise mitigation arrangements during the detailed design stage.

31. A Member expressed his disappointment that the railway noise could not be mitigated entirely at source. Mr Simon Chan of MTRC explained that the extent of the noise canopy had already been maximized given the spatial constraints after the construction of Tuen Mun-Chek Lap Kok Link. Mr Stephen Chik supplemented that the design of the track form had already been optimized in order to minimize the noise impacts.

32. Given that the occupants of the concerned flats at the southern facades of residential towers might have different levels of acceptance towards noise impacts, a Member suggested that if legally permissible, the occupants should be given the option to open the windows. He also pointed out the possibility that the noise impacts, such as vehicle engines, might be reduced over time with advancement in technology.

Connectivity and walkability within the project site

33. A Member enquired about the treatment of and connectivity to the waterfront area. Mr Michael Yam advised that subject to further liaison with the relevant B/Ds, landscape paving or greening would be conducted at the service road along the waterfront. Furthermore, to maximize the use of the waterfront, the project proponent had proposed the following provisions subject to detailed design of the depot:-

- (i) a minimum of two metres setback for the majority of the depot edge along the waterfront to provide more space for tree planting, landscaping and provision of various facilities;
- (ii) open staircases at appropriate intervals along the waterfront; and
- (iii) viewing balcony at podium level.

34. In reply to a Member's enquiry on whether further setback of the depot edge was possible for the provision of pocket parks and gardens and other facilities, Mr Michael Yam advised that subject to the depot development, the project

proponent would explore the feasibility of providing further setback at some locations during the detailed design stage.

35. A Member requested the project proponent to supplement drawings of covered walkways and cycling tracks and to consider enhancing the connectivity and walkability between the podium level and the ground level. He further suggested that the project proponent should enhance the environmental design of the passenger waiting areas in the Public Transport Interchange (PTI) and consider the provision of comfortable passenger waiting areas and more environmentally friendly facilities. MTRC

36. Mr Simon Chan of MTRC said that the connectivity and walkability within the project site would be enhanced by the provision of covered walkways, cycling tracks and passageway to connect the shopping mall to the station concourse. E-Shuttle buses were also proposed as a means of low-emission transport option. The optimized designs or arrangements of these provisions would be explored during the detailed design stage.

37. A Member suggested the project proponent consider adopting a bicycle sharing system with a view to minimizing parking spaces and facilitating users' access to cycling facilities.

38. In addition to the provision of internal cycle track network at podium deck level, a Member suggested extending the cycle track to enhance the external connectivity of the project site with the nearby Tung Chung New Town Extension (TCNTE) as well as Sunny Bay along North Lantau Highway.

39. Mr Simon Chan of MTRC assured Members that they were committed to building a green and sustainable city and would try their best to optimize the design of the development during the detailed design stage.

40. A Member invited the project proponent to make regular progress reports to ACE on a voluntary basis to facilitate further review and improvements for the project development.

Conclusion

41. The Chairman thanked the project proponent for the presentation and detailed explanations and asked it to take into consideration Members' comments

and suggestions when optimizing the plans and designs at the detailed design stage.

[The presentation team and Mr C K Soh left the meeting at this juncture.]

Internal Discussion Session (Closed-door session)

42. The Chairperson of EIASC reported that the EIASC had recommended the full Council consider recommendations as set out in paragraph 12 of the ACE paper 18/2017 should it decide to endorse the EIA report.

43. A Member suggested and another Member supported to include additional recommendations concerning the design of the PTI and the interface and connection between the residential area and the waterfront promenade at ground level.

44. A Member reminded other Members that as the waterfront area was unleased Government land outside the project area, the relevant recommendation should focus on the connectivity to the waterfront and the provision of public areas within the project site.

45. Given that the project proponent could fully address the concerns raised by Members at the EIASC meeting held on 11 September 2017, the Chairman suggested and Members agreed to endorse the EIA report and accept all recommendations proposed by the EIASC with two additional recommendations for the Topside EIA:-

- (i) enlarge the public areas on the ground floor of the waterfront promenade by reducing the footprint of the Depot in some areas whenever possible, to create more space for public use and enjoyment along the waterfront; and
- (ii) enhance the environmental design of passenger waiting areas in the PTI and consider the provision of comfortable passenger waiting areas and more environmentally friendly facilities such as share use of bicycles.

[Mr C F Wong, Mr Louis Chan, Mr Lawrence Ngo and Mr Anthony Ho left the meeting at this juncture.]

Item 3 : Expansion of Hong Kong International Airport into a Three-Runway System - Update on the Implementation of Marine Ecology and Fisheries Enhancement Measures

(ACE Papers 19/2017 and 20/2017)

46. The Chairman invited Members to declare interest. A Member declared that she was a Member of the Marine Ecology Enhancement Fund Management Committee set up by the Airport Authority Hong Kong (AAHK). Another Member declared that he was a Member of the Steering Committee for the Marine Ecology and Fisheries Enhancement Funds and the Chairman of the Fisheries Enhancement Fund Management Committee. Two Members declared that they were Members of the Aviation Development and Three-runway System Advisory Committee.

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

Presentation cum Question-and-Answer Session (Open session)

47. Mr Kevin Poole introduced Members to the non-EP related measures that AAHK had undertaken in the vicinity of the proposed Three-runway System (3RS) marine park area and/ or near to the 3RS area. With the aid of a powerpoint presentation, Dr Jasmine Ng briefed Members on the framework of the Marine Ecology and Fisheries Enhancement Strategy (MEFES). Under the MEFES, she explained that AAHK had provided funding for several potential marine ecology and fisheries enhancement measures, including eco-enhancement of seawall designs, voluntary surveillance, and other potential measures that might aid or assist in the effective management of the Marine Parks (MPs), artificial reef (AR) deployment and fish restocking / fish fry release.

Fish restocking / Fish fry release

48. The Chairperson enquired whether the practice of releasing fish species with high commercial value would contradict the release of native and locally depleted species. Dr Jasmine Ng explained that there was no contradiction between the two methods as some of the locally depleted species were of high commercial value, e.g. the Hong Kong groupers. She added that having consulted the relevant stakeholders, monitoring would be designed and conducted to assess if some high commercial value species could be suitable candidate species for release, and whether additional measures relating to their release could

be explored for the benefit of the local fishing industry.

49. Noting that it was impracticable to confine the movements of fish species once they were released, rendering post-release monitoring difficult and ineffective, a Member suggested AAHK construct an oyster reef in the subtidal area or using colonized structures which would provide good surface for other marine species to settle on and create micro-habitats for larval fish. He added that this approach not only could benefit the whole marine ecosystem, but also allow effective monitoring be conducted at the oyster reef as compared to the approach proposed by AAHK. He further suggested that the fish fry release should be done at estuaries instead of open waters in light of the more suitable survival conditions provided by the former.

Eco-enhancement of seawall designs

50. A Member commended AAHK's voluntary efforts on the implementation of the various marine ecology and fisheries enhancement measures. Noting that the design of a sloping seawall could attract birds which was undesirable for aircraft operational safety, he questioned if AAHK would conduct trials in order to optimize the design of the seawall and whether reference could be made to successful examples from overseas so as to minimize the attraction of birds.

51. Mr Peter Lee said that AAHK had recognized the issue of bird attraction as one of the key challenges when reviewing potential seawall eco-enhancement designs. He explained that the features in the proposed design adopted for a sloping seawall included rock pools and eco-concrete which were subtidal and hence would not emerge and attract birds during low tide. On the other hand, since vertical seawall had a limited potential for birds to stand and forage, intertidal rock pools were incorporated into its design.

52. Drawing on his experience in conducting a trial on eco-enhancement of seawall design, a Member remarked on the importance of lowering the pH level of the eco-concrete, for example by using carbon fibre as reinforcement instead of iron to facilitate the growth of marine benthos. He suggested that the project proponent could incorporate a facet into the seawall structure to increase its complexity and durability. Since the relevant technology in the field of eco-shoreline engineering had been developing rapidly, he suggested AAHK make reference to overseas experience such as the Seattle Elliott Bay Seawall Project to explore more innovative eco-enhancement designs for the seawall. In response,

Mr Kevin Poole thanked for the suggestion and undertook to assess the practicability of different designs with a view to adopting the best option for eco-enhancement of the seawall.

53. A Member opined that the intertidal and subtidal rock pools for vertical seawall were rather artificial, and concurred with another Member on the need to devise more innovative designs to develop a more natural-looking eco-shoreline.

Chinese White Dolphins monitoring

54. Noting that the focus of AAHK's presentation was mainly on the enhancement measures to support the conservation of fisheries resources for local fishery industry, a Member suggested that measures to conserve Chinese White Dolphins (CWDs), which was one of the major public concerns should also be given due consideration. In response, Mr Peter Lee said that the purpose for implementing the MEFES was to enhance the marine environment for the benefits of marine ecology, which included CWDs. As such, it had taken into account the need to minimize the impact on CWDs when considering the habitats to be introduced in the eco-enhancement of seawall design. He added that monitoring would be conducted to assess the effectiveness of the eco-enhancement designs of the artificial seawall. The need for additional measures on top of existing ones would be subject to the results of the monitoring programme which was yet to be available.

55. A Member further enquired whether sightings of CWDs would be included. Mr Peter Lee clarified that AAHK had maintained comprehensive sighting records of CWDs in accordance with the requirements under the Environmental Monitoring and Audit (EM&A) Programme, and continuously conducted surveys twice per month to monitor CWDs. On top of the existing CWDs monitoring efforts, Mr Lee said that AAHK proposed to record observations of prohibited activities and conduct additional monitoring during night time within the MPs as part of the proposed pilot test for voluntary surveillance.

Artificial Reef (AR) deployment

56. Noting that a pilot test would be conducted on AR deployment to determine the possible deployment locations, a Member was concerned about the parameters to be included in the pilot tests. In addition, he asked AAHK to

consult ACE again on its future plans to identify suitable sites around the airport for AR deployment. Mr Peter Lee emphasized that during the course of devising the enhancement measures including eco-enhancement of seawall design, AR deployment and fish fry release, the local fishery industry had been consulted on the types of fish species to be released and the best locations for this purpose. He added that to better determine the value of AR deployment in the area, a pilot test would be conducted within the existing Hong Kong International Airport Approach Area (HKIAAA) to the west of HKIA's south runway where fishing was prohibited, which was an area suitable for AR deployment trial. The pilot test was arranged to assess the effectiveness of AR deployment and would provide useful information for determining the potential value of ARs if deployed within the proposed 3RS MPs. The detailed implementation arrangements for this measure would be subject to the results of the pilot tests.

57. Dr Jasmine Ng further explained that a Member's earlier suggestion of the use of oyster beds and colonized structures had been taken into consideration. AAHK intended to increase the habitats for oysters and other sessile organisms and would also look into the fish assemblage associated with the created habitats for obtaining useful information for determining the potential value of ARs within the proposed 3RS MPs.

Voluntary surveillance

58. A Member appreciated the additional measures proposed by AAHK to enhancing marine ecology. As regards to the voluntary surveillance that recorded occurrences of illegal activities within the MPs, the Member suggested AAHK share the relevant information with AFCD in real time in case enforcement actions were to be taken, in particular the illegal fishing activities such as trawling.

59. Mr Peter Lee said that the current proposal for voluntary surveillance was to record suspected prohibited activities such as speeding cases within the MPs. While data received at the AAHK operated Marine Traffic Control Centre for automatic identification system (AIS) equipped vessels could provide some information on the identity of the speeding vessels concerned, Mr Lee pointed out that difficulty might arise in identifying whether fishing boats had a valid permit to conduct fishing activities within the MPs during the course of surveillance. As such, the current focus of the pilot test using voluntary surveillance was to get an overview of the present situation of the prohibited activities conducted within the MPs, and details of future reporting / communication protocol would be discussed

with AFCD at a later stage.

Effectiveness of the enhancement measures

60. While appreciating AAHK's efforts in conducting a feasibility study for AR deployment and fish restocking, a Member suggested with the concurrence of another Member that AAHK should draw up certain indicators to measure the effectiveness of the measures proposed.

61. A Member remarked on the importance to set the objectives clear in order to determine the scope of monitoring for the eco-enhancement of seawall design. She enquired on what the specific objectives would be, such as ecosystem functioning or services and/or types of habitats created. Rather than monitoring species diversity and the number of individual organisms which might not be directly related to enhancing the ecological value of the seawall, the Member suggested setting objectives for enhancing ecosystem function or services including the monitoring of human activities for this purpose.

62. In relation to the monitoring methods for fish restocking/ fish fry release, Dr Jasmine Ng acknowledged that difficulty might arise in relation to sending divers or Remotely Operated Vehicles (ROVs) for monitoring due to issue of turbid waters. As such, AAHK would consider different methods for monitoring the progress of fish restocking during Phase One, e.g. the use of scuba and/or ecological surveyors conduct surveys, and also technology-based methods such as GoPro cameras for video recording. The final methods and technology to be adopted would be based on the results obtained after Phase One restocking. As regards to the objectives set for Phase One restocking, Dr Ng said that they would look into the site fidelity and movement patterns of the released fish species. With empirical data obtained, useful information on the suitable restocking scale and appropriate monitoring methodology could be devised to optimize the future restocking programme in Phase Two. Dr Ng added that AAHK had and would continue to collaborate with AFCD on exploring advance technologies for monitoring and improving the relevant protocols.

Conclusion

63. The Chairman thanked AAHK for its presentation and explanation and invited AAHK to consider seeking ACE's views in future on the findings and further progress of the proposed marine ecology and fisheries enhancement

measures.

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

Internal Discussion Session (Closed-door session)

64. Noting that AFCD had already conducted AR studies and deployed AR in Hong Kong waters in the past and such information was available, a Member sought clarification on the need for AAHK to conduct the pilot tests. Mr Dick Choi explained that previous AR deployment by AFCD focused on the Eastern waters of Hong Kong, and issues of high turbidity and sedimentation in the Western Hong Kong waters had made it difficult to ascertain the effectiveness of AR surveys in western waters. As such, AAHK's voluntary efforts to conduct the feasibility studies and pilot tests on AR deployment and fish restocking should be supported.

65. A Member suggested AFCD strengthen the exchange of information with AAHK in future, such that the latter could better utilize its resources and funds on conducting surveys in new research areas and obtaining the relevant information on new technologies and designs that could be incorporated into its enhancement measures. Another Member concurred and suggested AAHK conduct studies to obtain useful and updated information at the initial stage which could be important for future implementation of the enhancement measures within the MPs.

Item 4 : Any other business (Closed-door session)

66. To facilitate a smooth flow of discussion and free exchange of views at the meeting, a Member suggested that any verification of the legality and enforceability of conditions proposed by Members at the meeting could be done after the meeting. Mrs Alice Cheung thanked him for the comments and assured Members that the intention of EPD was to facilitate Members' discussion by advising Members of potential legal or enforceability issues.

67. Given that some projects might span over long periods of time and there might be changes to the baseline conditions, a Member enquired whether project proponents were required to conduct a new EIA and consult ACE before the commencement of the construction of the projects.

68. A Member understood that there were provisions under the EIAO for

project proponents to apply for a variation of the conditions of the EP in the event certain EP conditions could not be fully implemented. An approval would be given if there were no material changes to the environmental impact of the project and the project still complied with the requirements as described in the TM.

69. A Member was confident that EPD and the AFCD would be responsible for monitoring the project implementation in accordance with the EM&A manual.

70. There was no other business for discussion at the meeting.

Item 5 : Date of next meeting (Closed-door session)

71. The Chairman advised Members that the next ACE meeting was scheduled on 6 November 2017 (Monday). Members would be advised on the agenda in due course.

**ACE Secretariat
November 2017**