Confirmed Minutes of the 156th Meeting of the Advisory Council on the Environment held on 10 November 2008 at 2:30 pm

Present:

Prof WONG Yuk-shan, BBS, JP (Acting Chairman)
Ms Betty HO
Prof Paul LAM, JP
Mr Edwin LAU
Dr MAN Chi-sum, JP
Mr Markus SHAW
Dr NG Cho-nam, BBS
Prof POON Chi-sun
Mr Eddie WONG
Mr Simon WONG, JP
Dr YAU Wing-kwong
Mr Carlson K S CHAN (Secretary)

Absent with Apologies:

Prof LAM Kin-che, SBS, JP (Chairman)
Dr Dorothy CHAN, BBS
Mr James GRAHAM
Prof Howard HUANG
Ms Goretti LAU
Mr TSANG Kam-lam
Prof WONG Tze-wai

In Attendance:

Ms Anissa WONG, JP	Permanent Secretary for the Environment
Mr P Y TAM	Assistant Director/Technical Services, Planning Department
Mr Joseph SHAM	Assistant Director (Country and Marine Parks), Agriculture, Fisheries and Conservation Department (AFCD)
Dr Tina MOK	Principal Medical and Health Officer, Department of Heath
Ms Monica KO	Principal Information Officer, Environmental Protection Department (EPD)
Ms Josephine CHEUNG	Chief Executive Officer (CBD), EPD
Mr KWAN Chung-kit	Office Manager (CBD), EPD

In Attendance for Agenda Item 3

Mr C W TSE, JP	Assistant Director (Environmental Assessment), EPD
Mr Maurice YEUNG	Principal Environmental Protection Officer (Assessment and Noise), EPD
Mr K H TO	Senior Environmental Protection Officer (Assessment and Noise)5, EPD
Mr Alan CHAN	Senior Marine Conservation Officer (East), AFCD
Mr Dick CHOI	Senior Marine Conservation Officer (West), AFCD
Mr C P LAM	Marine Conservation Officer (W)1, AFCD
Mr S C YIP, JP	Head, Civil Engineering Office, Civil Engineering and Development Department (CEDD)
Mr Ricky WONG	Senior Engineer/Projects 1, CEDD
Mr Peter KAN	Chief Executive Officer (Planning)2, Leisure and Cultural Services Department (LCSD)
Mr Alfred CHOW	Chief Leisure Manager (New Territories East), LCSD
Mr Daniel CHOW	Senior Architect/5, Architectural Services Department (ArchSD)
Mrs Alice CHING	Project Manager 348, ArchSD
Dr Robin KENNISH	Director, Environmental Resources Management – Hong Kong Ltd. (ERM)
Mr Terence FONG	Principal Consultant, ERM
Dr Jasmine NG	Consultant, ERM
Mr Peter SHEK	Project Manager, Halcrow China Ltd.
Dr Paul SHIN	Associate Professor, Department of Biology and Chemistry, City University of Hong Kong

****

Action

The Deputy Chairman informed Members that the Chairman, was out of town and he would chair the meeting as the Acting Chairman.

Agenda Item 1 : Confirmation of the draft minutes of the 155th meeting held on 8 October 2008

2. The draft minutes were confirmed without amendment.

Agenda Item 2 : Matters arising from the minutes of the 155th meeting held on 8 October 2008

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

meeting.

Agenda Item 3 : EIA report on "Development of a bathing beach at Lung Mei, Tai Po" – Additional information on ecological surveys
(ACE Paper 27/2008)

Internal Discussion Session

4. The Acting Chairman informed Members that agenda item 3 would be divided into the following four sessions –

(a) Internal Discussion Session
(b) Presentation Session
(c) Question-and-Answer Session
(d) Internal Discussion Session

The Presentation Session and Question-and-Answer Session would be opened to the public. Internal Discussion Sessions of agenda item 3 and all other sessions of the meeting would remain closed.

5. The Acting Chairman said that the Council endorsed the Environmental Impact Assessment (EIA) report on "Development of a bathing beach at Lung Mei, Tai Po" with some conditions at the meeting on 14 January 2008, while having reservation on the sufficiency of the ecological information. The views and recommendations of the Council were set out in Annex A of the paper. One of the conditions was that the project proponent was required to furnish additional information to confirm the ecological status of the habitat of Lung Mei Beach (Lung Mei). The Council recommended that the Director of Environmental Protection (DEP) to endorse the EIA report only if the additional information provided by the project proponent did not contradict the conclusion made in the EIA report that the ecological value of the beach was indeed a low one. The project proponent, Civil Engineering and Development Department (CEDD), provided the findings of the additional ecological surveys (additional information) and sought Members' views.

6. A Member declared interest for he was a member of the Tai Po District Council. A Member declared interest as the Conservancy Association, of which she was the Chairman, raised an objection against the project.

A Member declared interest for he was one of the Directors of the Conservancy Association. The Acting Chairman and a Member declared that they were residents of Tai Po. A Member declared that he had some investments in the Tai Po district. The meeting agreed that the Acting Chairman and all Members concerned could stay and continue to take part in the discussion as they had neither personal nor direct interest in the project under consideration.

7. The Acting Chairman informed Members that the World Wide Fund for Nature (Hong Kong) and the Conservancy Association had forwarded their comments to the Council. These had been circulated to Members before the meeting for information. The secretariat also tabled three sets of comments from the Tai Po Rural Committee (with signatures), "大埔各界社團支持發展龍尾泳灘" and the HK Wildlife.Net Forum (the Forum) received shortly before the meeting for Members' information.

8. A Member said that he was an advisor of the Tai Po Rural Committee but his stance was neutral in respect of the project. He had encouraged the Committee to invite the Forum which raised objections to the project for exchange of views. Nonetheless, the Forum declined the invitation.

***Presentation Session* (Open Session)**

9. Mr S C Yip apologized for providing the information at Annex F of the paper (supplementary information on additional extensive intertidal surveys) separately after the submission of the paper. He said that after the submission of the paper, it was considered that provision of the technical details of the surveys would enhance transparency and facilitate Members' consideration. He introduced Dr Paul Shin, Associate Professor of Department of Biology and Chemistry in the City University of Hong Kong and Chairman of the Marine Biological Association of Hong Kong. Dr Shin had conducted extensive research on soft shore in Hong Kong. He highlighted that Dr Shin was not a paid member of the consultant team but he served as an independent expert advisor to CEDD.

10. Dr Paul Shin stressed that his views on the issue were made in his personal capacity based on his professional knowledge and experience in the field. He briefed Members on the study he conducted about soft shore habitats on 40 shores in Hong Kong during 2000 to 2005 with funding support from the

Environment and Conservation Fund.

11. Dr Paul Shin informed Members of his observations on the technical details at Annex F of the paper regarding the additional extensive intertidal surveys –

(a) Appendix A (list of species compiled by members of the public) – the information was mainly based on active search. According to a basic marine ecological sampling theory, the more sampling conducted, the more species would be found. Most of the ecological studies would not adopt active search as the primary methodology. The common methodology adopted was quantitative surveys which would enable comparison of data for detailed analysis;

(b) Appendix B (additional active search surveys conducted by the consultant) – more information such as man-hour spent was given in the report. Nonetheless, the data on the number of species found (such as those in Table B5) did not provide much meaningful information for comparison purpose. It would be more useful if information such as percentage of common species at all the sites could be given to assess the structure of the communities; and

(c) Appendix C (additional intertidal quantitative surveys conducted by the consultant) – the quantitative survey was a commonly and universally acceptable methodology to provide information on the composition and structure of the shore. Figures C13 and C14 (nMDS ordination plots of spatial patterns) showed that the community structure of the four sites (Lung Mei, Ting Kok East, Lai Chi Chong and Yung Shue O North) were very similar. The quantitative surveys could provide more meaningful information about the composition/structure of the site than the active search which could only provide the number of species found in the site.

Question-and-Answer Session (Open Session)

12. In response to the Acting Chairman and a Member's enquiries,

Dr Paul Shin confirmed that he had not conducted any ecological survey in Lung Mei. He had visited the site once and his impression was that it was a typical soft shore beach in the Northeast New Territories with backshore vegetation, sand and rubbles. A Member asked why Lung Mei was not chosen for his research project. Dr Paul Shin said that in view of resources constraints, the research sites were selected based on some criteria, such as size, accessibility and scientific significance. Lung Mei was not selected based on the selection criteria.

13. A Member queried that two of the reference sites, i.e. Ting Kok East and Yung Shue O North, were zoned as Scientific Sites of Special Interest (SSSI) which reflected their ecological importance and high biodiversity. Dr Paul Shin explained that the findings revealed that the composition/structure of Lung Mei was similar to the three reference sites. However, composition/structure of a habitat was only one of the many factors for considering the zoning of SSSI.

14. Dr Robin Kennish referred to Annex D of the paper and explained that the assessment of the ecological evaluation of Lung Mei and the reference sites included a number of criteria (naturalness, size, diversity, rarity, re-creativity, fragmentation, ecological linkage, potential value, nursery/breeding ground, age and abundance/richness of wildlife). For example, the assessment related to nursery/breeding ground showed that mangrove habitats were significant in the other three sites but not in Lung Mei.

15. A Member queried the use of the three reference sites for comparison and asked why other sites such as hard shoreline of reclaimed land in Tai Po with low ecological value were not used for comparison purpose. He noted that the Fisheries Associations in the area complained that the natural shoreline in Tolo Harbour had been destroyed by reclamation. While it was claimed that Lung Mei only constituted a small portion of the natural shoreline, the cumulative impacts of additional habitat destruction in the wider context of Tolo Harbour should be seriously considered. The species would have less and less habitats to move around. If an artificial beach were to be built, a hard shoreline instead of a natural shoreline should be used. Dr Robin Kennish said that the project would preserve the original status of the site as much as possible by providing an artificial beach with sandy shore habitat. There would be some re-colonization along the intertidal and subtidal areas. Two groynes

would be constructed as sand retaining structures which would also help provide some ecological habitat for marine organisms.

16. A Member asked whether rare species, particularly rare fish species, would be missed out from the quantitative surveys in view of the limited efforts. Dr Paul Shin said that there was not yet consensus on how to define rare species. Some referred to rare occurrence of some species but this did not mean that they were rare species that should be protected. Some referred to rare species which had important function to the community. Both active search and quantitative survey were based on random approach. Whether rare species could be identified would depend on the level of efforts devoted on the sampling size.

17. Dr Robin Kennish said that the quantitative survey was a widely adopted ecological survey methodology for comparison purpose. With sufficient efforts, rare species should be able to be accounted for in the quantitative surveys. Nonetheless, they had also conducted additional active search to provide supplementary information to help capture particularly rare species.

18. In reply to a Member's enquiry about the methodology adopted in the multivariate plots in Figures C13 and C14 of the paper, Dr Jasmine Ng confirmed that all species data, including rare species, were included for compilation. Dr Paul Shin considered that it was also important to reduce the influence caused by the abundant species as compared with the rare species by assigning weightings. A Member considered that it was important that all the species data were included in the analysis and the weightings might also help the analysis.

19. A Member queried that even if rare species found might not be functionally linked in the community, it did not mean that these species should not be protected as nature conservation included the preservation of biodiversity. Dr Paul Shin said that there were different schools of thoughts on rare species and respective protection measures. He considered that the function of species should be considered in a holistic manner before justifications for preservation could be established. For example, one individual amphioxus was found in the core samples of Lung Mei. Having regard to the ecological linkage of amphioxus and other related factors, it was concluded that Lung Mei was not an

important habitat of amphioxus as significant population of the species could not be found and the record of the individual was considered a chance occurrence.

20. A Member enquired about the yardsticks in assessing the scarcity of species and objective means to assess the ecological value of a rare species. Dr Paul Shin considered that these were more academic questions with no conclusive or agreed benchmarks up to this stage. Dr Robin Kennish said that the use of the word "rare" species might be confusing in the current context. While the three recorded fish species (Two-spot Goby, Tropical Sand Goby and Grass Puffer) found in Lung Mei were listed under the IUCN (International Union for Conservation of Nature) Red List, they were commonly found throughout Tolo Harbour and Channel area, and other areas in Hong Kong. Most of the species found by the Forum were also commonly found in Hong Kong.

21. A Member considered that it was not valid to say that the higher number of species found by the Forum could not prove that Lung Mei was a site of high biodiversity simply because the group put more survey efforts. Dr Paul Shin said that his intention was to point out the drawbacks of active search as compared with the widely adopted quantitative survey methodology. Dr Robin Kennish said that if the result of the active search were to be compared with other three reference sites, it was necessary to have standardized approach for comparison purpose. It was impossible to determine the ecological value of a site based on active search in isolation.

22. A Member considered the conclusion that the habitat of Lung Mei was typical did not mean that its ecological value was low as the focus was not to determine its uniqueness but its ecological value. Dr Robin Kennish clarified that the survey findings showed that the community structure, not the ecological value, of Lung Mei was similar to the reference sites. The number of species was only one of the many factors for assessing the ecological value of a site. The survey findings concluded that the ecological value of Lung Mei was "low" while the other three sites were "moderate" or "moderate to high".

23. Two Members enquired about the impacts of developing an artificial beach on the three recorded fish species. Dr Robin Kennish explained that the three species were reported to be found elsewhere in Hong Kong waters other than Lung Mei. They should not be under threat of extinction with the

development of the proposed artificial beach.

24. A Member asked Dr Paul Shin whether the over 100 species found in Lung Mei would be affected by the development of the artificial beach. Dr Paul Shin said that it would depend on the mobility of marine organisms. For highly mobile species such as fish, active creatures and crabs, they would certainly move away from the site of development. For those creatures imbedded in sand, they might be affected by the development.

25. A Member expressed strong reservation about the logic of developing the site in view of the mobility of the species. Following this logic, Mai Po which was currently the habitat of migrating birds could be open for development because all visiting birds were mobile. The same argument could also be applied to habitats of dolphins in Hong Kong waters. Dr Paul Shin clarified that his explanation was to address the question raised by a Member and should not be quoted outside the context. He personally supported the preservation of Mai Po which was an important breeding ground for migrating birds. He reiterated that his comments made were based on his knowledge on and experience in scientific data and research of the subject.

(Dr Paul Shin left the meeting for other commitments at this juncture.)

26. A Member considered that the ecological value of a site should not be judged based on whether the site was the last habitat for species of extinction. For Lung Mei, whether the site should be protected was a matter of judgement on the importance of nature conservation or development. Mr S C Yip said that Lung Mei was not an established habitat for endangered species as shown in the result of the quantitative surveys while Mai Po was an established habitat for migrating birds. Dr Robin Kennish explained that the acceptability of the ecological impacts was not based on whether the site would cause extinction but a number of factors based on the Technical Memorandum on EIA Process (TM), such as the ecological value, footprint and magnitude of the construction works. The current project would involve only about 200 m of shoreline against the 9 km of shoreline with similar habitat in the Plover Cove, small-scale reclamation of 1.02 ha and dredging works to remove potential hazard elements for swimmers. Moreover, the methodology of the in-filling of sand would be a slow process and most of the sand would be loaded above the high water mark and gradually re-profiled seawards by wave actions. There would not be

physical profiling works beneath the sea level. The environmental impact was considered acceptable under the EIA Ordinance.

27. A Member considered that a major point in doubt was that only about 29 species were found by the project proponent when submitting the EIA report. With the diligence of the Forum, it was found that about 106 to 168 marine species were found, giving a very different picture on the biodiversity of the site. Dr Robin Kennish said that the number of species found did not determine the ecological value of a site. The quantitative surveys they conducted provided information for comparison purpose which showed that there were consistently lower number and abundance of species in Lung Mei. No matter whether the methodology was based on the TM as reported in the EIA report or on quantitative surveys for additional extensive surveys, the conclusion was the same.

28. A Member considered that the basis of comparison between Lung Mei and the three reference sites with at least "moderate" ecological value was not fair. From the Google Earth satellite photo of Inner Tolo Harbour, there was a long stretch of artificial coastline. It was not sensible to create an artificial beach along one of the few remaining stretches of natural coastline in Inner Tolo Harbour. He urged the project proponent to create the beach in a site of artificial coastline.

29. A Member referred to Annex D of the paper and queried the classification of the overall ecological value of Lung Mei as "low". By comparing Lung Mei with the three sites of ecological importance, it would be inevitable that the ecological value of Lung Mei was relatively lower. However, if other sites with lower ecological importance were used for comparison, the ecological value of Lung Mei would then be relatively higher.

30. Dr Robin Kennish referred to Annex B of the paper and explained that the ecological surveys conducted for the EIA report adopted similar methodologies as those for other sandy shores in previous approved EIA reports. The ecological composition of the area (such as the abundance of mangrove and seagrass bed) was an important consideration in assessing the ecological value.

31. A Member queried that the last sentence in paragraph 14 of the paper seemed to contradict the information in Figures C9 to C12 of Appendix C

of Annex F of the paper. Dr Jasmine Ng clarified that the last sentence of paragraph 14 referred to the low "diversity of species" among the four sites whereas Figures C9 to C12 referred to "abundance of species". Consideration had been given to the abundance of species and it was stated in the second last row of the table in Annex C that the overall abundance and richness of marine fauna in Lung Mei was comparatively "low to moderate".

32. The Member further queried the last chart of Figure C11 which showed that the "Shannon-Weiner Diversity Index" of Lung Mei was similar to that of Ting Kok East. Dr Jasmine Ng clarified that different meanings of "diversity" were used in different contexts. The low "diversity" in paragraph 14 referred to the number of species, as illustrated in Table C14 of Appendix C of Annex A. The "Shannon-Weiner Diversity Index" in Figure C11 included abundance of species. Another Member queried the different yardsticks for interpreting "diversity". Dr Robin Kennish explained that "diversity" in EIA studies usually referred to a matrix of factors. However, "diversity" in paragraph 14 referred to the number of species in order to facilitate straight comparison with the number of species found by the Forum.

33. A Member considered that it was a fallacy to say that the development would not affect the three recorded fish species simply because they were mobile and could be found in other sites. If the species were too rare to be seen, they should be rare enough to be important. The controversial debate on "rarity" reflected the complexity of the issue. Thus, a precautionary approach should be adopted. The diversity and abundance of species in Lung Mei were not as high as other sites in relative terms might be because the site was relatively smaller. The conclusion on the low ecological value was rather subjective. Although it was claimed that the reclamation involved 1.02 ha, the sand filling would unavoidably affect the marine fauna in the tidal and intertidal areas. Mr Terence Fong pointed out that the EIA report also reported some Common Rat Snakes, a species of conservation interest, within the village/modified areas. Nonetheless, the presence of this species did not affect the assessment of the ecological value of the site.

34. A Member expressed concern that the loss of the natural habitat was a net loss without compensation. Dr Robin Kennish explained that Lung Mei was mainly a sandy shore with rubbles, backshore vegetation and small-scale mangrove seedlings. It was not comparable to other sites having

extensive scale of mangroves. Mr Terence Fong added that as explained in the EIA report, the mitigation measures were based on the principles of avoidance, minimization and compensation. A detailed feasibility study had been conducted, including site selection to avoid sensitive areas and minimization of reclamation.

35. A Member queried the cost-effectiveness of developing the beach. He considered that it would not worth the public money to develop a beach which would be closed for about 14% of the time during the bathing season due to poor water quality. Mr S C Yip explained that the 14% downtime of the beach was based on the assumption of 60% sewerage connection rate to the new public sewerage system upon completion. Nonetheless, he had discussed with members of the Tai Po District Council and they agreed to launch a campaign to achieve a higher connection rate.

36. A Member said that the development of the beach might attract more new developments, such as temporary barbecue sites and car parks on the agricultural land, and some of which might be outside the scope of the sewerage service area. Mr S C Yip said that it was a mandatory requirement that new developments had to be connected to public sewerage systems.

37. A Member considered that the issue at stake involved two key aspects. The first aspect involved personal and value judgement on whether the site should be protected or developed. The second aspect involved the assessment of scientific data and information provided to the Council. The Council agreed at the meeting in January to endorse the EIA report with some conditions and one of the conditions was to request the project proponent to furnish additional information to confirm the ecological status of the habitat of Lung Mei. From the discussion so far, there seemed to be no disagreement on the survey methodology adopted and the data provided. The data showed that Lung Mei was a typical soft shore with similar habitat characteristics as those in the vicinity. In case the site was to be developed, it would not cause a loss of habitat which was unique to Hong Kong.

38. A Member pointed out that the Council observed at the meeting in January that the EIA report could only meet the minimum requirement of sampling methodology under the TM. The survey for wet season (July to October) was conducted on a day in late October. Moreover, the information

of the additional active search was not available at that time.

(The project proponent team left the meeting at this juncture.)

Internal Discussion Session

39. The Acting Chairman highlighted that the agenda item was a continuation of the discussion of the EIA report in January. The focus would be to give comments on whether the additional information provided by the project proponent contradicted the conclusion made in the EIA report that the overall ecological value of the site was a low one.

40. A Member considered that the endorsement given at the meeting in January was based on the EIA report submitted which reported that about 29 species of marine organisms were found. However, members of the Forum who were amateur in the field of ecological surveys found 106 species. Thus, the condition for requiring additional ecological surveys was laid down in order to clarify this outstanding concern. However, the additional information provided by the project proponent confirmed the findings of the Forum about the large number of species. Based on the additional information, he considered that the ecological value of Lung Mei should be at least "low to moderate".

41. A Member enquired about the assessment of the Agriculture, Fisheries and Conservation Department (AFCD) on the additional information and the difference in number of species found in the two rounds of ecological studies by the project proponent. Mr Joseph Sham said that in conducting ecological samplings, the number of species being identified would depend very much on survey efforts. Related publications by Professor B S Morton (formerly of the University of Hong Kong) indicated that a full species count of Hong Kong's sandy beaches would probably run into many hundreds if sufficient efforts were spent on the sampling. This explained the higher number of species identified by the project proponent in the additional surveys than that in the EIA study. There was no contradiction in the findings of the two rounds of ecological studies.

42. The Acting Chairman asked why three sites which were of higher ecological value were used as reference for comparing with Lung Mei. Mr Alan Chan said that according to Annex B of the report, the selection of

reference sites targeted at sites of similar habitats as Lung Mei. Twelve sites were selected at the initial stage and site visits were conducted to ascertain similar ecological characteristics with Lung Mei. Five reference sites were selected for the active search and three reference sites were selected for the quantitative surveys. These selected sites had similar ecological characteristics, nature of substratum and fauna composition as Lung Mei. Mr Dick Choi highlighted that the surveys conducted by the project proponent were not conducted in the core mangrove habitats but in the peripheral sites with similar habitats as Lung Mei.

43. A Member reiterated that by comparing Lung Mei with three sites of relatively higher ecological value, it was inevitable that the ecological value of Lung Mei was comparatively low. Another Member agreed that the ecological value of Lung Mei was comparatively lower than the other three reference sites but was not convinced that the ecological value of Lung Mei was low.

(A Member left the meeting for his personal commitments at this juncture.)

44. Mr Joseph Sham said that there was a general impression that the species listed in the IUCN Red List must be rare or endangered species which should be protected. He referred to Annex E of the paper on the "nine categories in the IUCN Red List" and explained that not every species listed in the Red List meant they were rare or endangered species. Among the three recorded fish species in Lung Mei, Two-spot Goby and Tropical Sand Goby belonged to the category "Lower risk near threatened" which meant that they were of lower risk but did not satisfy the criteria for critically endangered, endangered or vulnerable. The Grass Puffer belonged to the category "data deficient" which meant that information data was insufficient to assess risk of extinction. According to Annex B of the report, these species had wide distribution worldwide and were commonly found in Tolo Harbour and other areas of Hong Kong. For example, the Two-spot Goby was widely distributed in Indo-Pacific, Western Central Pacific and Africa. In Hong Kong, they were commonly found in Sai Kung, Lantau, North New Territories and Tolo Harbour.

45. A Member was concerned that attaching little importance to species in the Red List might have implications on future consideration of reports under the EIA process. Mr C W Tse advised that for a project which

might affect species listed in the Red Data Books or lists of international conventions for conservation of wildlife, the TM requirement under Annex 16 was an ecological assessment instead of disapproval of the proposed project.

46. The Member was concerned about the practice for handling the additional information. He asked whether the information formed part of the EIA report and constituted a major change of the EIA report. As the supplementary information was passed to the Council, the public might have the impression that the information was for the public to comment. Mr C W Tse explained that under the EIA Ordinance, the public and the Council could give comments on the EIA report during the public inspection period. The DEP might, within 14 days of receiving the comments from the Council, request the project proponent to provide supplementary information. The DEP shall, within 30 days of the receipt of the supplementary information, decide on whether to approve the report. For the current EIA report, the additional information provided by the project proponent did not form part of the EIA report. The EIA Ordinance did not require exhibiting the supplementary information for public inspection and comments. It had been a practice that the supplementary information submitted by the project proponent would be uploaded onto the web after a decision on the report was made. As the Council expressed concern about the ecological status of the site and requested for additional information, it was considered appropriate that the information be submitted to the Council for consideration. Under section 4.5.2 of the TM, in case the EIA report required certain amendments, if such amendments would not affect the validity of the assessment and the overall results and conclusions of the report, the DEP might approve the report with conditions.

47. Ms Anissa Wong said that under the EIA process, the EIA report had been submitted to the Council for advice and exhibited for public inspection. In light of the comments of the Council and members of the public, the project proponent was required to furnish further information to ascertain the ecological status of the site. It was noted that the Council had also made comments on the merit and cost-effectiveness of the project outside the EIA framework as elaborated in Annex A of the paper which was open to the public at the Council's website. The project proponent would be requested to convey these comments to relevant parties when the project went through the town planning process and seeking of funding approval process.

48. A Member registered his strong objection that the project proponent provided the detailed additional information at Annex F at a late stage rendering little time for Members and the public to study and respond. He considered that the additional information contradicted the conclusion made in the EIA report but reinforced the findings of the Forum that it was a site of high biodiversity. The public would find it difficult to understand any conclusion other than that the additional information contradicted the conclusion of the EIA report.

49. A Member said that the additional information gave him a very different view of the site which confirmed its rich biodiversity. From the nature conservation point of view, efforts should be made to protect the species rather than driving them away to other sites.

50. A Member considered that the quality of the research conducted by the project proponent was in question. The findings of the additional surveys confirmed that the ecological study conducted for the EIA report was of lower quality than those conducted by the amateurs. The conclusion that the ecological value of the site was low was questionable. Moreover, the water quality of the beach was a concern. About 38% of the time during the bathing season, the water quality would be graded poor or very poor. He urged the Council to re-consider whether the development of the beach should go ahead.

51. Mr Joseph Sham explained that AFCD considered the methodologies and findings of the two rounds of ecological studies conducted by the project proponent acceptable. The additional surveys were conducted by qualified specialists and the findings and assessments supported by an independent checker. In the additional surveys, more species were found because more time and efforts were spent. Nonetheless, these were not the standard requirements for conducting EIA studies. There were existing Guidance Notes providing the principles in conducting an ecological survey. It was stated in the guidelines that the surveys were not aimed at identifying an exhaustive list of species but for revealing the general ecological profile of the site. According to the survey findings provided in Annexes B and C of the report, the number of species in Lung Mei was the lowest compared with the three reference sites studied using the same survey methodology and sampling effort. The marine fauna recorded there were mostly typical and common species. Out of the 139 species of marine fauna found in the active search,

about half of them were marine subtidal species such as fish, shrimps and swimming crabs with relatively higher mobility and wider habitat range. The surveys indicated that Lung Mei did not support very high species diversity as compared with other similar soft shore habitats within Plover Cove and Tolo Harbour and Channel area or serve as a critical habitat of any species of conservation importance. It was also noted that the project proponent had adopted two approaches in examining the ecological status of the project site. Both approaches arrived at the same conclusion. Based on the information provided by the project proponent, AFCD agreed with the assessment that the overall ecological value of the site was low and the conclusion of the EIA report remained valid. It should be noted that in assessing the ecological value of a site, the presence of established mangrove, seagrass bed and horseshoe crab would be some of the important indicators to show that the site was of a higher ecological value.

52. The Acting Chairman concurred with the observations that the number of species in Lung Mei was the lowest when compared with the three reference sites and the site was not a critical habitat with mangrove and seagrass bed. He also agreed with the other two Members that natural habitats should be protected. It was a difficult task to strike a balance between conservation and development.

53. A Member said that having regard to all the information and views, he was of the view that Lung Mei was not a site of high ecological value. He had been to the site and passed through the site often, he noticed that the site was a relatively deserted area. It was not until the submission of the development project that the voice from the environmentalists was heard for protecting the area. If the site were worth for conservation, the voice for protection should have been raised earlier.

54. A Member said that he had no special view on whether to develop the beach. He learnt from the local Tai Po residents that they had an expectation for restoring the beach some 12 years ago. According to some aged villagers, the site was used to be a sandy beach and the sand was removed for development of the Plover Cove dam. Some of them could even recall the name of the construction company which removed the sand. On whether the site was of low ecological value, he would count on the expert advice. On the comments submitted by the Forum which was tabled, he supported their

suggestion of adding adequate educational elements about coastal education on the beach to provide nature education to the public.

55. A Member said that the major difficulty for the Council to consider the case was that the Council received different information, from the project proponent and the public, at different times. He noted the professional advice that having over 100 species of marine fauna was common for a soft shore beach like Lung Mei. The more efforts put to the survey, the higher the number of species found. The fact that the more number of species found did not necessarily mean that the site was particularly important. He would be more concerned in case there were other factors, such as the presence of ecological barrier, which would affect the mobility of the marine fauna. Having taken into account all the information available, he considered that Lung Mei was a typical soft shore in Hong Kong and beaches with similar characteristics were common in Hong Kong. There was no scientific data to suggest that there was uniqueness in the site that differed from similar beaches in Hong Kong. It was difficult to judge whether the ecological value was low, moderate or high as it was a matter of relativity.

56. A Member considered that it was necessary to consider whether net loss of the site without compensation would be acceptable. While he agreed that the ecological value of the site was not as high as other reference sites, it would have higher value than many sites along Tolo Harbour. On the existence of a sandy beach years ago, the project proponent had confirmed earlier that there was no sandy beach in Lung Mei even before the construction of the Plover Cove dam. Inspection of aerial pictures of the Plover Cove area taken in 1962 could not reveal any trace of sandy beach along the Lung Mei area.

57. Mr Dick Choi said that the current approach adopted for evaluating the ecological value of a site was to evaluate it in relation to similar habitats in Hong Kong to avoid over-rating or under-rating. There were a number of publications and information on the soft shore habitats in Hong Kong to facilitate such comparison. Some indicators, such as presence of established mangrove, seagrass bed or horseshoe crab, would justify that the site might be of higher ecological value. On the other hand, the number of species found in the soft shore was not necessarily the prime consideration in assessing its ecological value. For example, Sham Wan in South Lamma was designated as a SSSI as

it was a regular nesting ground for green turtle in Hong Kong. Although no dedicated survey had been conducted to determine the actual number of marine fauna species present in the site, the absence of such piece of information would not undermine its high ecological importance as a green turtle nesting ground. As regards methodology, the evaluation of ecological status of Lung Mei adopted a consistent approach as those adopted for the sandy shores in previous approved EIA reports as shown in Annex B of the paper. For a typical sandy shore without the presence of established mangrove, seagrass bed or horseshoe crab, the ecological value was normally rated as "low". If the ecological value of Lung Mei was rated as "moderate" or "high" purely on the ground that over 100 species were found, the approach would not be consistent with those adopted for the approved EIA reports.

58. Mr C W Tse informed Members that there was a list of examples to show important habitat types in the territory in the Note to Annex 8 of the TM. Some examples included mature native woodland large than one hectare, intertidal mudflats larger than one hectare, established mangrove stands of any size, established seagrass bed of any size and undisturbed natural coastal area longer than 500 m in linear measurement.

59. The Acting Chairman pointed out that it was important to note that the number of species should not be the only factor in evaluating the ecological value of a site. A host of factors should be taken into account for the evaluation.

60. A Member asked whether there was any case that rare species was identified but the site was still classified as of low ecological value. Mr Dick Choi explained that it would depend on whether the habitat supported significant population of the rare species. It was not an automatic mechanism that identification of species in the IUCN Red List would render the site a higher ecological value. When a species in the Red List was identified, it was necessary to look further into local literature on the distribution and abundance of the species, having regard to the fact that the IUCN Red List might not contain sufficient references to reflect local situations. For the three recorded fish species in Lung Mei, in-depth study had been conducted and it was revealed that they were common in Hong Kong. He had personally visited the site and could not find any signs of horseshoe crab, seagrass bed or mangrove of significant size.

Action

61. A Member queried the need for the project proponent to conduct the ecological surveys if the basis of evaluation was based on the presence of seagrass bed, mangrove and horseshoe crab which were not difficult to identify. Mr Dick Choi explained that these were only some of the key features to be taken into account in the evaluation. Moreover, juvenile horseshoe crabs were not easy to be spotted and identified, and seagrass beds could change in size very extensively. Quite a lot of the baseline information on these species came from the consultants' work. Thus, it was necessary for the project proponent to conduct ecological surveys to collect information on the existing ecological characteristics of the site and AFCD to critically examine the findings.

62. A Member considered it important not to undermine the importance of habitats currently classified as low ecological value. As illustrated in the example of Borneo, over 90% of the area was covered by virgin rainforest in the 1970s but the highest rate of deforestation occurred after few decades. The cumulative impacts of destruction bit by bit were enormous and irreversible. The rainforest there in the 1970s were also considered typical and not unique. As an advisory body on environmental protection, it was necessary for the Council to perceive the issue from a wider perspective of the natural shoreline in the Inner Tolo Harbour in which large part of it had become artificial. A Member pointed out that while the project would affect only 200 m of the shoreline, the whole habitat of Lung Mei was of a larger scale.

63. A Member suggested rejecting the EIA report and asking the project proponent to refine the proposal such as by reducing the scale of the development without affecting the beach. Another Member reiterated his concern about the large difference in the number of species in the two rounds of ecological studies. The other Member considered that the request for any further study could not help address the concern of all Members.

64. Mr Dick Choi highlighted that the difference in the number of species in the two rounds of studies was mainly due to different methodologies and survey efforts. Surveys conducted for a longer duration, at a higher frequency or with more manpower would generally result in more species being found. There was thus no fundamental contradiction between the two rounds of studies and there was no valid scientific ground based on the findings of the additional surveys to support the change of the overall conclusion of the evaluation.

65. A Member considered that the addition of mitigation measures, such as the reduction of scale of the project, would help conserve the area. Another Member considered that unless the ecological value of the site was considered to be "low to moderate" or even "moderate", it would be difficult to justify the requirement for mitigation measures. Mr Dick Choi said that the assessment should be based on scientific data and information and there seemed no basis to justify the change of the ecological value from "low" to "low to moderate". As regards mitigation measures, it was concluded in the EIA report that the impact on the intertidal shore was low and hence mitigation measures would not be necessary under the EIA practice. Nonetheless, it happened in some past EIA studies that while the ecological impact of a project was assessed to be low, the project proponent could still, on his own initiative, undertake additional enhancement or precautionary measures. The Member reiterated that he did not support the endorsement of the EIA report and considered that the ecological value of the site was at least "low to moderate".

66. A Member considered that the sentiment of the Council was different from that of the meeting in January. At the last meeting, Members were concerned about the ecological value of the site and noted the findings of 106 species by the Forum. Members as well as the Government were suspicious about the large number of species found and thus requested that additional surveys be conducted. The result of the additional surveys conducted by the project proponent confirmed the findings of the Forum and revealed that the ecological study conducted for the EIA report was too crude. With the additional information, she did not agree that the Council should draw the same conclusion.

67. Ms Anissa Wong said that she had to maintain impartiality and consistency in considering the assessment of the EIA report and additional information. In exercising the statutory authority, one of the important considerations would be the consistency of approach in assessing the application with reference to precedent cases. To safeguard the integrity of the EIA process, if the Council disagreed with the assessment of the project proponent and AFCD, the disagreement had to be based on objective and scientific grounds.

68. The Acting Chairman remarked that he observed Members' general sentiment for protecting the nature and safeguarding the natural habitat

as far as possible. He highlighted that the recommendation of the Council within the EIA framework had to be based on the conclusion of the Council on the EIA report made in January and founded on scientific and objective justifications.

69. In view that Members' views were clearly divided, the Acting Chairman suggested and Members agreed that voting be conducted by secret ballot. There were 10 Members present and the requirement of having a quorum of one-third of the total number of Members was fulfilled. Given that the considerations had to be based on all the information provided before and during the meeting as well as the comments and responses made at the meeting, and there was a time limit within which the DEP had to make decision on the EIA report upon receipt of the additional information, it was impracticable to give an advance notice for the motion for voting. The Acting Chairman moved the following motion with two options for the voting –

(a) the Council to reject the EIA report;

(b) the Council to confirm the endorsement of the EIA report with the additional condition that the project proponent should take additional precautionary measures to reduce the size of the project, particularly the size of the car park and footprint of the project, to further minimize the potential ecological impacts arising from the project.

70. Members agreed to put above motion to vote. After the voting by secret ballot, the Acting Chairman invited a Member to co-examine the ballots. The result of the voting was five in favour of option (a) and five in favour of option (b) under the motion. Mr Carlson K S Chan informed Members that in accordance with the "Rules for Voting" of the Council, in case of an equality of votes, whether on a show of hands or on a ballot, the Chairman shall have a second or casting vote.

71. The Acting Chairman pointed out that Members' views on the issue were clearly divided. Members were of the view that a formal stance of the Council was required, rather than leaving the issue unresolved, thus agreeing the Acting Chairman to exercise the casting vote in accordance with the "Rules for Voting" of the Council. The Acting Chairman stressed that the current

deliberation was a continuation of the discussion on the EIA report in January in which the Council concluded that the EIA report could be endorsed with some conditions. The additional information submitted by the project proponent showed that there was a difference in the number of species in the two rounds of ecological studies. The crux of the consideration was whether this difference in number of species would have the effect of changing the ecological value of the site. Based on the scientific data and information as well as professional advice, there was no justifiable ground to confirm that the difference in the number of species would render a change in the site's ecological status. The "number of species" was only one of the many criteria in evaluating the ecological value of a site. Under the EIA process, it was important that a consistent approach should be adopted for assessing the ecological value of Lung Mei as well as for previous approved EIA reports. On this basis, he exercised his casting vote and supported option (b) under the motion. He stressed that his casting vote was exercised within the EIA framework, based on all information provided from various parties to the Council as well as comments and views put forth by Members.

72. The Acting Chairman concluded that the Council confirmed the endorsement of the EIA report with the additional condition that the project proponent should take additional precautionary measures to reduce the size of the project, particularly the size of the car park and footprint of the project, to further minimize the potential ecological impacts arising from the project.

Agenda Item 4 : Enhancing the control of ozone depleting substances
(ACE Paper 28/2008)

Agenda Item 5 : A proposal to control the contents of volatile organic compounds in vehicle refinishing paints, marine vessels paints, pleasure craft paints, adhesives and sealants
(ACE Paper 29/2008)

73. In view of the insufficient time to continue the discussion of agenda items 4 and 5, the Acting Chairman suggested and Members agreed that the two papers would be considered by circulation and Members could provide their views and comments in writing.

(Post-meeting note: The proposals under agenda items 4 and 5 were supported

Action

by circulation.)

Agenda Item 6 : Any other business

Tentative items for discussion at the next meeting

74. The agenda was being compiled. Members would be informed in due course.

Agenda Item 7 : Date of next meeting

75. The next meeting was scheduled for 15 December 2008.

ACE Secretariat
November 2008