Confirmed Minutes of the 99th Meeting of the Environmental Impact Assessment Subcommittee held on 19 November 2007 at 2:30 pm

Present:

Dr NG Cho-nam, BBS (Chairman)
Mr TSANG Kam-lam (Deputy Chairman)
Ms Betty HO
Prof Paul LAM
Prof POON Chi-sun
Mr Edwin LAU
Dr MAN Chi-sum, JP
Dr YAU Wing-kwong
Prof LAM Kin-che, SBS, JP (ACE Chairman and non-EIASC Member)
Ms Josephine CHEUNG (Secretary)

Absent with Apologies:

Dr Dorothy CHAN, BBS
Mr Simon WONG

In Attendance:

Mr Elvis AU	Assistant Director (Environmental Assessment), Environmental Protection Department (EPD)
Mr C C LAY	Assistant Director (Conservation), Agriculture, Fisheries and Conservation Department (AFCD)
Mr Alan CHAN	Senior Marine Conservation Officer, AFCD
Mr KWAN Chung-kit	Office Manager (CBD), EPD
Miss Sarah NG	Executive Officer (CBD), EPD

In Attendance for Items 3:

Miss Patricia SO	Assistant Commissioner for Tourism (4), Commerce and Economic Development Bureau

In Attendance for Items 3 and 4:

Mrs Shirley LEE	Principal Environmental Protection Officer (Metro Assessment), EPD
Mr David COX	Senior Environmental Protection Officer (Metro Assessment), EPD

Mr KWAN Pak-lam	Project Manager (Kowloon), Civil Engineering and Development Department (CEDD)
Mr MAK Chi-biu	Chief Engineer/Kowloon, CEDD
Mr Walter LEUNG	Engineer 7/Kowloon, CEDD
Mr Eric MA	Managing Director, Maunsell Consultants Asia Ltd.
Mr Freeman CHEUNG	Executive Director, ENSR Asia (HK) Ltd.
Mr Matthew KO	Executive Director, ENSR Asia (HK) Ltd.
Mr Peter LEE	Associate Director, ENSR Asia (HK) Ltd.

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Action

Agenda Item 1: Confirmation of the Draft Minutes of the 98th Meeting held on 17 September 2007

The draft minutes were confirmed without amendments.

Agenda Item 2: Matters Arising from the Minutes of the 98th Meeting held on 17 September 2007

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

Agenda Item 3: Dredging Works for Proposed Cruise Terminal at Kai Tak
(ACE-EIA Paper 8/2007)

Internal Discussion Session

3. The Chairman informed Members that the following two EIA reports would be discussed at the meeting –

(a) Dredging works for proposed cruise terminal at Kai Tak
(b) Decommissioning of the former Kai Tak Airport other than the north apron

The Chairman suggested and Members agreed that as the core members of the project proponent teams for the two projects was the same, an internal discussion would be held for both projects before inviting the project proponent team to the meeting. The project proponent team could then make presentations and response to questions for the two projects one by one. The Subcommittee would

hold internal discussion on the two projects after the project proponent team left the meeting.

4. The Chairman informed Members that one set of public comments had been received by the Environmental Protection Department (EPD) for each project during the public inspection period from 18 October to 16 November 2007. Separately, a Member had raised some questions on the two projects to the project proponent, the Civil Engineering and Development Department (CEDD). The two sets of public comments referred from EPD and the response of the project proponent to the Member's questions had been circulated to Members for reference before the meeting.

5. The meeting agreed that the discussion on the EIA report on "Dredging works for proposed cruise terminal at Kai Tak" should focus on the justifications for the dredging works, impacts of the dredging works on water quality and marine ecology, cumulative impacts of the project with concurrent works, waste management and impacts of the project on the habitats of waterbirds. The discussion on the EIA report on "Decommissioning of the former Kai Tak Airport other than the north apron" should focus on ecological risk assessment, remediation methods, waste management and impacts of the project on coral colonies.

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

Presentation Session

6. Mr Kwan Pak-lam briefed Members on the background, purpose and scope of the project. Mr Eric Ma briefed Members on the findings of the EIA study.

Question-and-Answer Session

Justifications for the dredging works

7. A Member enquired about the possibility of reducing the depth of dredging in view of the large amount of dredged sediment generated. Mr Eric Ma explained that the recommended depth of dredging at 12 m below Chart

Datum had taken into account the worldwide trend of building larger cruises. A water depth of exceeding 10 m was required for modern cruises (Post-Panamax and Super Post-Panamax types) with capacities of over 5,000 passengers. The relevant government departments, including the Marine Department, had also agreed to the requirements taking into account the need to accommodate the cruises and the need for future maintenance.

Impacts of the dredging works on water quality and marine ecology

8. A Member enquired about the impacts of the dredging works on the water quality of Victoria Harbour. Mr Peter Lee explained that an elutriate test was conducted by mixing sediment samples from the seabed with water to assess the likelihood of releasing contaminants from sediment to the water during dredging. The UK Water Quality Standards for Coastal Surface Water were taken as the assessment criteria for individual heavy metal contents. Water quality modelling was conducted on the identified contaminants and it was found that only one contaminant (i.e. copper) had some exceedance outside the dredging spot with a mixing zone of about 200 m. The result of modelling represented only the predicted maximum concentration but not the actual maximum plume size, which should be much smaller, thus the water quality impact was acceptable. Moreover, mitigation measures, including close grab dredgers and/or silt curtains, would be used which would further minimize the dispersion of sediment.

9. The Chairman asked about whether the busy navigation channel in the harbour would be a constraint to the laying of the silt curtains. Mr Peter Lee explained that silt curtains would be erected near the seawalls along the runway area, which was relatively more contaminated than the southern zone near the navigation channel. For the southern zone near the navigation channel with high current and marine traffic, close grab dredgers would be used and the dredging works would be closely monitored by water quality monitoring.

10. A Member expressed concern about the impacts of the dredging works on the marine ecology, such as marine organisms and fisheries in the vicinity of the dredging spot. Mr Freeman Cheung explained that the result of water quality modelling showed that the impact of dispersion of contaminants on marine organisms and fisheries was insignificant. The modelling was based on a very conservative assumption of 100% release of the contaminant contents.

Even under this conservative scenario, the dispersion was only limited to 200 m from the dredging spot. Mr Peter Lee added that the project site was not an active fishing zone. The nearest fishery sensitive area was the fish culture zone which was about 8 km from the project site. Water quality monitoring under the environmental monitoring and audit programme would be conducted during the dredging operation to closely monitor the impacts.

11. Two Members enquired about the methodology of conducting the elutriate tests and water quality modelling. Mr Peter Lee explained that it was assumed that the total contaminant contents attached to the sediment were released into the water and then dispersed in the form of a sediment plume in water quality model. The concentration levels of contaminants in the sediment around the dredging spot were measured and the concentrations of contaminants, assuming complete release, were compared with the relevant water quality standards to determine the extent of the mixing zone. The highest contaminant levels measured in the sediment samples presented in Tables 6.4 and 6.5 of Volume 1 of the EIA report were adopted as the contaminant concentrations in the water quality model.

12. A Member asked whether maintenance dredging would be required. Mr Peter Lee said that they estimated that maintenance dredging would be needed at an interval of about five to ten years depending on future deposition rate of sediment. The estimated dredging volume required was approximately 350,000 m^3. The EIA report had included water quality assessment for maintenance dredging. It was recommended that maintenance dredging should be conducted during the dry seasons to minimize the impacts. While the timing of maintenance dredging for Phase 1 and dredging works for Phase 2 might overlap, the operators would have to plan and schedule the dredging works and comply with the technical requirements to avoid concurrent dredging activities.

Cumulative impacts of the project with concurrent works

13. The Chairman noted that the Hong Kong and China Gas Company Ltd. (HKCG) had proposed a project for relocation of the submarine gas main and there would be some overlapping of the two project sites. On the cumulative impacts of the cruise terminal dredging works with HKCG's marine works, Mr Peter Lee said that during the course of the EIA study, HKCG had been requested

to provide the latest information regarding the proposed relocation of the submarine gas main. In March 2007, they were informed by HKCG about the possible alignments from Ma Tau Kok to North Point (west option) and from the tip of the existing runway (east option). Considering that a larger amount of sediment dredging would be resulted from the west option, the west option was taken as the worst-case assumption for the gas main relocation works in the sediment plume modelling for the current EIA project. HKCG subsequently submitted a project profile indicating an alignment envelope of about 500 m wide across the Victoria Harbour and the exact alignment had to be determined after a feasibility study and an EIA study.

14. Mr Peter Lee said that the current EIA study had assessed the worst-case cumulative impacts of the project as well as other possible concurrent marine works in the area. The result of the water quality modelling indicated that the contribution of the cruise terminal dredging works on suspended solids (SS) elevations would be much higher at the Tai Wan flushing water intake (50.9% for mean SS elevation and 96.9% for maximum SS elevation) as compared with the Quarry Bay intake (19.1% for mean SS elevation and 19.3% for maximum SS elevation). This indicated that the Tai Wan intake was most susceptible to impacts arising from the cruise terminal dredging works, whereas the water quality impacts at Quarry Bay intake would be largely associated with other concurrent projects.

15. Mr Peter Lee further explained that an additional sensitivity test was conducted under the current EIA using a higher dredging rate of 5,000 m3 per day to cater for the possible change of dredging rate of the gas main relocation works. The result of the sensitivity tests indicated that there would be no unacceptable cumulative water quality impact at the water sensitive receivers with the implementation of proposed mitigation measures. As the exact alignment and construction method of the new gas main were currently under study by HKCG, concerns on the cumulative water quality impacts at the Quarry Bay intake should be addressed in that project EIA.

16. Mrs Shirley Lee said that the proposed gas main relocation works had been identified as a designated project under the EIA Ordinance. In the relevant study brief issued to HKCG as the project proponent, HKCG was requested to consider other feasible alternatives/options for the pipeline alignment

for the project. Alternative locations/design of the two gas stations on both sides of the harbour should also be investigated. HKCG should compare the environmental impacts as well as the environmental benefits and dis-benefits of each of the options of pipeline alignment and locations of gas stations, and provide reasons for selecting the final preferred option including the environmental factors played in the selection. In other words, HKCG had to assess and recommend in its own EIA study the future alignment option by taking into account cumulative impacts of all known concurrent projects on both sides of the Victoria Harbour.

17. Mr David Cox said that in the context of the Kai Tak Development EIA required under Schedule 3 of the EIA Ordinance (Schedule 3 EIA), the cumulative impacts of various individual projects would be taken into account. There were checks and balance to ensure that possible cumulative impacts from all known concurrent projects would be addressed.

18. A Member enquired about the interrelationship between the cruise terminal dredging works and proposed dredging works at the Kai Tak Approach Channel (KTAC). Mr Kwan Pak-lam explained that based on the latest study findings, extensive dredging works for KTAC would be unlikely in view of the large amount of sediment (about 1 million m^3) involved. To tackle the problems at source, the possible measures would include the control of expedient connections to drainage systems within its catchment area, in-situ treatment of sediment and an opening on the runway to improve water circulation. The cruise terminal dredging works should not affect the works for KTAC or vice versa.

19. A Member expressed concern about the overall cumulative impacts and environmental acceptability of various designated projects to be undertaken under the Kai Tak Development. Mr Kwan Pak-lam explained that the impacts of the cruise terminal dredging works at the far end of the runway would have minimal impacts on other planned projects such as the multi-purpose stadium complex, major road works, sewerage and drainage systems. Assessment had been made on whether the cruise terminal dredging works would impose constraints on other future development. The plan was that some of the designated projects under the Kai Tak Development would be submitted as a package together with the Schedule 3 EIA. Members considered that it was important to assess the cumulative impacts of the projects no matter the projects

were submitted individually or as a package under the Schedule 3 EIA.

Waste management

20. A Member enquired about the disposal of dredged marine sediment. Mr Kwan Pak-lam confirmed that the Marine Fill Committee had agreed to reserve sufficient disposal area at the East Sha Chau Contaminated Mud Pits for the disposal of contaminated sediment as well as open sea disposal sites, such as that near south of Cheung Chau, for the disposal of uncontaminated sediment. Mr Peter Lee added that the EIA estimated that about 430,000 m^3 of dredged marine sediment would be contaminated (Category M sediment and Category H sediment) and would need to be disposed of by either open sea disposal at dedicated sites (Type 1 disposal) or confined marine disposal (Type 2 disposal); and about 950,000 m^3 of dredged marine sediment would be uncontaminated (Category L sediment) and could be disposed of at open sea disposal sites (Type 1 disposal).

21. A Member enquired about the time limit of the disposal sites in view of the limited capacity of available sites and long time frame of Stage 2 of the project. Mr Kwan Pak-lam said that the capacity of the disposal site should be sufficient enough to cope with the disposal requirements of the Stages 1 and 2 as the estimated amount of dredged sediment requiring disposal was comparatively small. Mr Mak Chi-biu added that in planning a dredging project, the schedule of dredging and disposal programme of dredged materials had to be considered in one package.

22. A Member enquired about the disposal of construction and demolition (C&D) materials of the existing seawall construction. Mr Peter Lee explained that it was not possible at this stage to make any accurate assessment as to which materials might be suitable for reuse until the design of the future seawall was available. Thus, the EIA report recommended that C&D waste generated from the seawall structure should be sorted and reused or recycled as far as practicable. Mr Kwan Pak-lam explained that the recommendation of the EIA report could provide a reference for the successful bidder of the new cruise terminal who would undertake the project. Mr Mak Chi-biu added that the quantities of different types of waste presented in the EIA report represented the worst-case scenario.

23. In response to the Chairman's enquiry, Mr Elvis Au said that the Environmental Permit (EP), which would include the requirement of a waste management plan, would be available on EPD's website. The project proponent would be required to submit a detailed plan on waste reuse, recycling and disposal under the waste management plan. Any substantial change would require an application for variation of EP conditions.

Impacts of the project on the habitats of waterbirds

24. The Chairman expressed concern about the possible loss of feeding grounds for waterbirds such as egrets during the construction phase of the dredging works and operation phase of the cruise terminal. Mr Kwan Pak-lam explained that such impact would be minor as there were nearby suitable areas for waterbirds to forage for food. Miss Patricia So said that the successful bidder of the new cruise terminal would be required to provide a landscaped deck of 220,000 m^2 to be developed in three phases with the first phase to be completed in 2012. Apart from the landscaped deck, the approved outline zoning plan for the Kai Tak development also included abundant green areas, such as the metropolitan park and runway park, which would offer favourable areas for birds.

Agenda Item 4: Decommissioning of the Former Kai Tak Airport other than the North Apron
(ACE-EIA paper 9/2007)

Presentation Session

25. Mr Kwan Pak-lam briefed Members on the background, purpose and scope of the project. Mr Eric Ma briefed Members on the findings of the EIA study.

Question-and-Answer Session

Ecological risk assessment

26. A Member noted that the EIA report adopted the Dutch B standards for contaminated land assessment which had been replaced by the risk-based

remediation goals (RBRGs) in August 2007. Mr Matthew Ko explained that the Dutch B standards were used for the EIA study as the study was embarked in early 2007 and they were required to submit a contamination assessment plan at the start of the study to outline the assessment methods and the choice of parameters before the new RBRGs were introduced. Although the project proponents could opt to adopt the Dutch B standards or the new RBRGs during the transitional period, they decided to follow the Dutch B standards which they considered were more stringent for the project in question.

27. A Member enquired about the ecological risk assessment of possible contaminated runoff. Mr Matthew Ko explained that under the RBRGs, the remediation target would be subject to the planned use of the site. Ecological risk assessment might need to be conducted when ecological impact was an issue of concern. Given the land contamination was mainly land-based and at a distance from the water, there was very little ecological concern. The project proponent team considered that it was not necessary to conduct a separate ecological risk assessment for this case.

Remediation methods

28. A Member said that he noted that all the contaminated soil would be treated and backfilled to the site to minimize off-site disposal. The recommended remediation methods included biopiling to remediate total petroleum hydrocarbon (TPH), volatile organic compounds and semi-volatile organic compounds; cement solidification/stabilization to remediate heavy metals; biopiling followed by cement solidification/stabilization to remediate metals and TPH. In reply to Prof Poon's enquiry about the backfilling of the treated soil, Mr Matthew Ko said that the excavation would go deep to about 6 m beneath ground level. The treated soil, except those cement solidified/stabilized soil to be covered by about 1 m top soil, would be used as general filling materials above or below the ground water level. The Member expressed concern about backfilling the soil which was treated by means of cement solidification/stabilization beneath the underground water level as there would be a risk of long-term potential leaching of heavy metals into the groundwater, even though the treated soil would comply with the requirements of the Toxicity Characteristics Leaching Procedure (TCLP) test, which represented a set of minimal standards.

29. Mr Matthew Ko noted the concern and said that it would be feasible to spread the soil treated by means of cement solidification/stabilization to a level above the groundwater level in view of the relatively small amount of this type of treated soil (about 580 m^3).

Waste management

30. A Member expressed concern about the relatively large amount of C&D waste (about 4,100 m^3) generated by the project and over 90% would be disposed at the landfill. Mr Peter Lee explained that the major portion of the C&D materials were items of the existing buried fuel hydrant system and underground fuel supply system, such as fuel tanks and pipelines, which were rusty metal components with a bulk space inside. Mr Matthew Ko added that as the materials had been in contact with contaminated materials for a very long time, it was necessary to be very careful in recommending reusing and recycling the materials. In the EIA report, it was recommended that the materials would be recycled and reused as far as practicable and disposal at the landfill would only be a last resort. The details would be laid down in the waste management plan.

Impacts of the project on coral colonies

31. The Chairman noted that there was concern about the impact of the project on the coral colonies in the area caused by decommissioning of the off-shore disused fuel dolphin structure at the To Kwa Wan Typhoon Shelter area. Mr Peter Lee explained that some isolated colonies of hard coral (Oulastrea crispate) of mostly small size and low ecological value were found near the middle of the southern runway seawall and southern end of the breakwaters. The coral colonies identified were more than 300 m away from the fuel dolphin. The fuel dolphin was supported by 26 numbers of precast concrete piles. It was proposed that the structure would be demolished by cutting off the piles to 1 m below the existing seabed and the estimated time taken for cutting these piles would be 26 working days. The sediment around the piles would be pushed aside to facilitate the pile cutting. No dredging would be required for the demolition works.

32. A Member enquired about the current movement in the work area of the fuel dolphin. Mr Peter Lee said that water current near the disused fuel

dolphin was very slow (less than 0.5 m/second). The estimated volume of sediment that would potentially be disturbed by the pile cutting would be 130 m^3 only. The qualitative evaluation concluded that the settlement of sediment would be very close to the fuel dolphin structure and would be away from the coral colonies located more than 300 m away from the fuel dolphin. Any increase in turbidity from the decommissioning works would be localized and transient.

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

Internal Discussion Session

EIA report on Dredging Works for Proposed Cruise Terminal at Kai Tak

33. A Member reiterated his concern about the impacts of the dredging works on water quality of Victoria Harbour and the disposal of marine sediment. Mr Elvis Au said that in the environmental monitoring and audit programme, the project proponent would be required to carry out monitoring at a frequency of three days per week during the dredging operation. Measures would be stepped up if deviations were detected. Mr David Cox added that CEDD was the government department responsible for managing the disposal of marine sediment, they had a monitoring regime to ensure that the contaminated sediment would be disposed of properly in compliance with the requirements.

34. In respect of a Member's concern about the disposal of C&D materials of the existing seawall construction, Mr David Cox said that CEDD was also the government department responsible for managing the disposal of C&D materials at public filling areas. They would try to minimize the amount of C&D materials to be disposed of at the public filling areas, such as by reusing the materials arising. Given that a major part of the runway structure was likely formerly public dumping materials, the seawall structure had to be examined after demolition before considering reusing and recycling. The waste management plan and related environmental monitoring and audit would be the mechanisms to ensure that construction waste would be properly sorted for reusing and recycling before disposal at public filling areas.

35. A Member enquired about the need of a waste management plan by the private developer who would undertake the project. Mr Elvis Au said that

dredging works in question was a designated project. No matter whether the project proponent was a government department or a private developer, the EP would require the project proponent to submit a waste management plan before the works could start.

36. Having regard to the findings and recommendations of the EIA report and information provided by the project proponent, Members agreed to recommend to the full Council that the EIA report could be endorsed without condition.

EIA report on Decommissioning of the Former Kai Tak Airport other than the North Apron

37. Regarding the concern about the potential leaching of heavy metals in treated soil which would be backfilled to the site, the Chairman suggested and Members agreed that the contaminated soil treated by means of cement solidification/stabilization to be backfilled to the project site should be filled at a minimum of 1 m above groundwater level to minimize the long-term potential impacts of leaching to the underground water.

38. Having regard to the findings and recommendations of the EIA report and information provided by the project proponent, Members agreed to recommend to the full Council that the EIA report could be endorsed with the condition that the contaminated soil treated by means of cement solidification/stabilization to be backfilled to the project site should be filled at a minimum of 1 m above groundwater level to minimize the long-term potential impacts of leaching to the underground water.

39. The meeting also agreed that there was no need to invite the project proponent teams of the two projects to attend the full Council meeting.

Agenda Item 5: Monthly Updates of Applications under the Environmental Impact Assessment Ordinance

40. Members noted the updates.

Action

Agenda Item 6: Any Other Business

Proposed meeting schedule for 2008

41. The proposed meeting schedule of the EIA Subcommittee for 2008, which had been circulated to Members, was endorsed.

Tentative items for discussion at the next meeting

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

Agenda Item 7: Date of Next Meeting

43. The next meeting was scheduled for 17 December 2007.

EIA Subcommittee Secretariat
December 2007