

**Confirmed Minutes of the 90<sup>th</sup> Meeting of the  
Environmental Impact Assessment Subcommittee of  
the Advisory Council on the Environment  
held on 22 November 2004 at 4:00pm**

**Present:**

Mr. Otto POON, BBS (Chairman)  
Mr. Peter Y C LEE  
Dr. NG Cho-nam, BBS  
Mrs. Mei NG, BBS  
Prof. POON Chi-sun  
Miss Petula POON (Secretary)

**Absent with Apology:**

Prof. HO Kin-chung, BBS (Deputy Chairman)  
Prof. WONG Tze-wai

**In Attendance:**

Mr. Elvis AU	Assistant Director (Environmental Assessment & Noise), Environmental Protection Department (EPD)
Miss Sarah NG	Executive Officer (E), Environment, Transport and Works Bureau

**In Attendance for Agenda Item 3:**

Mr. LAM Poon-wah	Chief Building Service Engineer/Energy Efficiency Division B, Electrical and Mechanical Services Department (EMSD)
Mr. SHEK Lap-chi	Engineer/Energy Efficiency Division B, EMSD
Mr. Vincent TSE	Project Director, Managing Director of Parson Brinckerhoff (Asia) Ltd.
Mr. Daniel HO	Project Manager, Assistant Vice President of Parson Brinckerhoff (Asia) Ltd.
Mr. Alan MAN	Environmental Consultant, Director of Binnie & Veatch Hong Kong Ltd.

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Action

**Agenda Item 1: Confirmation of Minutes of the 89<sup>th</sup> Meeting held on 18 October 2004**

The draft minutes were confirmed without amendment.

**Agenda Item 2: Matters Arising**

2. The Chairman reported that there was no matter arising from the minutes of the last meeting.

**Agenda Item 3: Environmental Impact Assessment (EIA) Report on Siu Ho Wan Water Treatment Works Extension**  
*(ACE-EIA Paper 10/2004)*

3. The EIA report on Siu Ho Wan Water Treatment Works Extension was circulated to Members before the meeting. The Chairman declared interest as his company was a water treatment contractor. In addition, five Members agreed by circulation that the EIA report could be endorsed without condition and that a presentation by the project proponent was not necessary.

4. Having regard to the findings and the recommendations of the EIA report and the views of majority Members, the meeting agreed to recommend the EIA report to the Council for endorsement without condition.

**Agenda Item 4: Strategic Environmental Assessment for Territory-wide Implementation Study for Water-cooled Air Conditioning Systems in Hong Kong**  
*(ACE-EIA Paper 11/2004)*

*Internal discussion*

5. Upon a Member's enquiry, Mr. Elvis Au confirmed that the Study was not a designated project under the EIA Ordinance. As regards whether EIA study would be conducted for individual project arising from the implementation of WACS, Mr. Au said that it would depend on whether the works involved were defined as designated project under the EIA Ordinance.

*Presentation*

6. The Chairman welcomed the presentation team to the meeting. Mr. Lam Poon-wah introduced the project and Mr. Daniel Ho presented the findings of the Study to Members.

*Benefits of WACS*

7. In response to the Chairman's enquiry on the benefits of WACS, Mr. Daniel Ho explained that the wider adoption of Cooling Tower Scheme and District Cooling Scheme in the territory would reduce electricity consumption by air-conditioning systems by 1,360 millions kWh per year which was equivalent to savings of about \$1.2 billion. Moreover, the energy conserved could also be translated into reduction in greenhouse gas emission by the volume of 950,000 tonnes per annum.

*Boundary of the potential zones identified for WACS*

8. In response to a Member's question, Mr. Daniel Ho said that the information on districts that were identified to be zonings for Cooling Tower Scheme together with evaluation on the adequacy of fresh water supply, and the detailed boundaries of the 15 potential zones for District Cooling Scheme were set out respectively in Appendix 10.3 and 10.4 of the executive summary of the EIA report. Sensitive marine areas like Tolo Harbour and Deep Bay had been excluded.

*Use of seawater for Cooling Tower Scheme and District Cooling Scheme*

9. A Member asked whether seawater could be used for Cooling Tower Scheme given the general shortage of fresh water supply in the Pearl River Delta and the need to conserve water resource in Hong Kong. In response, Mr. Vincent Tse pointed out that the constraint of the city main seawater supply in meeting the water demand of cooling towers was the major consideration for using fresh water instead of seawater. The installation of seawater pipeline network down to domestic level would be very costly and there would be additional load to the sewerage system. Mr. Daniel Ho added that seawater cooling towers would release highly corrosive moist air which would cause damage to structures and buildings nearby, in particular metal fixtures such as lamp-posts, windows and doors. The proposal to use fresh water for the Cooling Tower Scheme was made after detailed evaluation on the adequacy of fresh water supply of 46 cooling tower district zones.

10. In response to a Member's question on why seawater could be adopted for District Cooling Scheme and whether such scheme could be put into wider use, Mr. Daniel Ho explained that no moist air would be released from such system as it operated within piping network in the form of a closed circuit. Mr. Vincent Tse advised that the implementation of District Cooling Scheme would involve much higher infrastructure requirements as well as capital investment. It was recommended for 15 potential zones on grounds of financial viability.

11. In response to a Member's question, Mr. Lam Poon-wah explained that District Cooling Scheme was commonly adopted in many overseas countries in view its energy and environmental benefits. Most of the District Cooling Systems used fresh water. In Hong Kong, seawater would be used for District Cooling Systems as far as possible but for area which were far away from the sea, fresh water would have to be used. In the case of Cooling Tower Scheme, the loss rate of fresh water would be minimal, i.e. about 1% or in the order of 1 m<sup>3</sup> of water for 1 m<sup>2</sup> of area per year.

*The impact on seawater temperature*

12. In response to a Member's query on the environmental impact of seawater discharge from District Cooling Scheme, Mr. Alan Man explained that the major impact on the receiving water included temperature rise and increase in residual chemicals content. Based on the hydrodynamic model set up to assess the impact of WACS, the seawater discharge from all the 15 potential zones under the District Cooling Scheme would be able to comply with the water quality standards if suitable mitigation measures as detailed in the Study were put in place. Mr. Lam Poon-wah advised that the discharge of seawater into the sea would require a Discharge Licence from the Director of Environmental Protection and hence would be subject to the control imposed by the Director.

13. Two Members expressed concern about the impact of WACS on seawater temperature. In response, Mr. Alan Man explained that in area like Kowloon Bay where the seawater was relatively stagnant, about 1 km<sup>2</sup> water surface area would encounter temperature increase by 1°C. In sensitive marine areas like Tolo Harbour, about 4-5 km<sup>2</sup> water surface area would encounter temperature increase over 1°C and thus the use of seawater in those areas would be avoided. In response to Mr. Peter Lee's question, Mr. Alan Man said that the maximum increase in seawater temperature at the mouth of the outfall would be 5°C to 6°C in summer. Mr. Daniel Ho emphasized that water quality modeling had been conducted and according to the findings, there would be no problem in complying with the water quality objectives in the territorial water. Mr. Lam Poon-wah pointed out that the existing power generation process also resulted in an increase in seawater temperature. In other words, the conventional air-conditioning systems would also affect the seawater temperature indirectly.

*The feasibility of recovering and using the heat produced by WACS*

14. In response to a Member's suggestion to use the heat generated from power plants, Mr. Lam Poon-wah said that the proposal was not viable in Hong Kong from the financial and environmental points of view as long pipelines had to be built to collect and transmit the heat from power plants to commercial or residential areas. As regards the use of heat generated by the District Cooling Scheme, Mr. Lam said that the study on the implementation of a pilot District Cooling Scheme in Wan Chai Waterfront would not rule out the feasibility of recovering the heat for other use.

*Implementation of the recommendations of the Study*

15. A Member said that he supported WACS in view of the benefits in energy saving and the reduction in power plant emission. In reply to the Member's enquiry on the implementation of the recommendations of the Study, Mr. Lam Poon-wah advised that a consultant was appointed in September 2004 to draw up guidelines and other relevant requirements on the proper use of cooling towers for air-conditioning purpose. At present, there was no plan to introduce statutory requirements for the implementation of WACS.

*Noise and visual impacts of District Cooling Scheme*

16. In response to a Member's concern on the visual impact of the District Cooling Scheme, Mr. Lam Poon-wah explained that since the chiller plants of the Scheme were put underground, there was no visual impact as such. In fact, the replacement of conventional air-conditioning systems by District Cooling Schemes would greatly improve the amenities of buildings in the territory. In addition, as individual buildings under the District Cooling Scheme were not required to install their own chiller plants, noise and water dripping problems usually associated with conventional air-conditioning systems could be avoided. The Member asked whether excessive piping works would be carried out so as to achieve economy of scale for a District Cooling Scheme. Mr. Vincent Tse responded that a District Cooling Scheme of capacity 30,000 to 40,000 RT would generally be sufficient to achieve economy of scale. Such capacity would unlikely lead to excessive pipe works. Mr. Daniel Ho responded that footprint of the plantroom for a District Cooling Scheme would be smaller than the aggregate floor areas taken up by individual buildings' cooling systems.

*Uploading of the SEA report on EMSD and EPD webpages*

17. The Chairman suggested and Mr. Lam Poon-wah agreed to upload the strategic environmental assessment report on EMSD and EPD

EMSD

websites for the information of the public.

*Conclusion*

18. The Chairman thanked the presentation team and concluded that the Subcommittee supported the proposed way forward of the Study. He hoped that the project proponent would consider Members' suggestions.

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

19. Members noted the updates.

20. In response to the Chairman's comments, Mr. Elvis Au said that he would remind officers concerned to update the name of government departments included in the lists.

EPD

**Agenda Item 6: Any Other Business**

Tentative items for discussion at the 91<sup>st</sup> meeting

21. The Chairman informed Members that according to the tentative schedule provided by EPD, there was no EIA report scheduled for the next meeting to be held on 20 December 2004. The Secretariat would liaise with EPD nearer the time and notify Members in due course.

Noise nuisance caused by Ma On Sha Rail Trial Ride

22. A Member expressed concern about the complaints made by Ma On Shan residents against noise nuisance caused by the trial rides of the Ma On Shan Rail. In response, Mr. Elvis Au clarified that measurements of the noise levels of the trial runs had been taken by EPD in a number of occasions. The energy average noise levels were about 52-56 dB (A) and in compliance with the Noise Control Ordinance. The measured instantaneous maximum noise levels were around 70-76 dB(A) and were also within the noise criterion used in the EIA study. He said that as the railway was a new facility in the area and some residents were not used to the railway noise, some residents may still complain notwithstanding the compliance with the Noise Control Ordinance. The Member considered that project proponents of future designated projects should be required to include educational measures in the EIA report so as to enhance the awareness of the noise level that might be generated by the project and hence the acceptability of the project.

Air quality guidelines for public transport interchanges

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23. Upon a Member's request, Mr. Elvis Au undertook to provide a copy of the guidelines on air quality aspects relating to the design of public transport interchanges for Members' information after the meeting.

EPD

(Post-meeting note: The practice note on the control of air pollution in semi-confined public transport interchanges was circulated to Members on 25 November 2004)

**Agenda Item 7: Date of Next Meeting**

24. The next meeting would be held on 20 December 2004.

(Post-meeting note: The meeting was cancelled as no EIA reports were received and there were no urgent items for discussion.)

**EIA Subcommittee Secretariat  
December 2004**