

立法會
Legislative Council

LC Paper No. CB(1) 826/02-03
(These minutes have been seen
by the Administration)

Ref : CB1/PL/EA/1

Panel on Environmental Affairs

**Minutes of meeting held on
Friday, 20 December 2002, at 8:30 am
in Conference Room A of the Legislative Council Building**

Members present : Hon CHOY So-yuk (Chairman)
Hon Cyd HO Sau-lan (Deputy Chairman)
Ir Dr Hon Raymond HO Chung-tai, JP
Hon SIN Chung-kai
Hon WONG Yung-kan
Hon LAU Kong-wah
Hon Miriam LAU Kin-yee, JP
Dr Hon LAW Chi-kwong, JP
Hon Henry WU King-cheong, BBS, JP
Hon LAU Ping-cheung

Members absent : Dr Hon David CHU Yu-lin, JP
Hon Martin LEE Chu-ming, SC, JP
Hon Emily LAU Wai-hing, JP
Dr Hon LO Wing-lok
Hon Audrey EU Yuet-mee, SC, JP

Attendance by invitation : **For item IV**
Environment, Transport and Works Bureau

Mr Donald TONG
Deputy Secretary (Environment)1

Mr Raistlin LAU
Principal Assistant Secretary (Environment)1

Action

Electrical and Mechanical Services Department

Mr C K LEE
Assistant Director (Energy Efficiency)

Ove Arup and Partners

Mr Davis LEE
Project Manager

Mr Grant ROBERTSON
Implementation Team Leader

Mr Raymond YAU
Institutional Team Leader

Mr Francis CHEUNG
Economic Advisor

Mr Mark BADGER
Legal Advisor

For item V

Environment, Transport and Works Bureau

Mr Donald TONG
Deputy Secretary (Environment)1

Ms Annie CHOI
Principal Assistant Secretary (Environment)2

Civil Engineering Department

Mr Henry CHAN
Chief Engineer

Environmental Protection Department

Mr Lawrence LAU
Principal Environmental Protection Officer

Clerk in attendance : Miss Becky YU
Chief Assistant Secretary (1)1

Action

Staff in attendance : Mrs Mary TANG
Senior Assistant Secretary (1)2

In the absence of a quorum at the start of the meeting, members agreed that the meeting be proceeded as an informal meeting. A quorum was subsequently reached at 8:55 am.

I. Confirmation of minutes

- (LC Paper No. CB(1) 547/02-03 — Minutes of the meeting held on 25 November 2002)
2. The minutes of the meeting held on 25 November 2002 were confirmed.

II. Information paper issued since last meeting

3. Members noted the following information papers which had been issued since last meeting -

LC Paper No. CB(1) 359/02-03 — Waste Reduction Committee newsletter (Issue 7)

LC Paper No. CB(1) 389/02-03 — A petition to the Chief Executive from the Friends of the Earth

LC Paper No. CB(1) 464/02-03 — A letter from Kadoorie Farm and Botanic Garden on the environmental improvement of Shing Mun River

III. Items for discussion at the next meeting

- (LC Paper No. CB(1) 548/02-03(01) — List of follow-up actions
LC Paper No. CB(1) 548/02-03(02) — List of outstanding items for discussion)
4. The Chairman drew members' attention to the changes in the proposed timing for discussion of some of the items set out in LC Paper No. CB(1) 548/02-03(02).
5. Members agreed to discuss the following items at the next meeting scheduled for Monday, 27 January 2003 -

Action

- (a) Briefing by the Secretary for the Environment, Transport and Works on the Chief Executive's Policy Address 2003; and
- (b) Renewable energy.

(Post meeting note: The meeting on 27 January 2003 was subsequently re-scheduled for 6 February 2003 at the request of the Administration. As the briefing by the Secretary for the Environment Transport and Works on the Chief Executive's Policy Address 2003 had been advanced to 14 January 2003 pursuant to the decision of the House Committee on 10 January 2003, members agreed to hold a joint meeting with the Panel on Transport on Thursday, 6 February 2003, at 2:30 pm to discuss the feasibility study of introducing liquefied petroleum gas vans and light goods vehicles, immediately followed by the regular meeting at 3:30 pm.)

6. The Chairman reminded members that a joint meeting with the Panel on Transport would be held on Thursday, 23 January 2003, at 4:30 pm to discuss measures to abate traffic noise. Another joint meeting would also be scheduled to discuss the feasibility study on introducing Liquefied Petroleum Gas vans and light goods vehicles.

IV. District cooling system in South East Kowloon Development

(LC Paper No. CB(1) 548/02-03(03) — Paper provided by the Administration)

7. The Deputy Secretary for the Environment, Transport and Works (DSETW) said that consequent upon an earlier study which had concluded that a district cooling system (DCS) was more economically and environmentally attractive than the conventional air-cooled air conditioning system, the Electrical and Mechanical Services Department (EMSD) had commissioned the Ove Arup and Partners (OAP) to conduct a consultancy study on the implementation of DCS at South East Kowloon Development (SEKD). The consultancy study had just been completed. The ensuing presentation only reflected the findings and recommendations of the consultants and the Government had yet to examine them and take a position. Mr Grant ROBERTSON/OAP then gave a power-point presentation on the findings of the study.

(Post-meeting note: The presentation materials tabled at the meeting were circulated to members under LC Paper No. CB(1) 565/02-03.)

Environmental impact

8. While supportive of the use of a more energy efficient DCS, Mr Henry WU was concerned about the impact on marine environment as a result of changes in temperature of the receiving waters associated with the operation of DCS, which was

Action

expected to implement on a large scale. An in-depth study on the environmental impact of the system was therefore necessary. Mr Davis LEE/OAP confirmed that an initial assessment had been made on the impact of changes in water temperature on the marine environment. The findings indicated that the temperature difference between the inlet and the outlet points would not be more than one degree Celsius (°C). These findings had been endorsed by the Environmental Protection Department on the understanding that a more in-depth environmental impact assessment would be made by the consortiums undertaking DCS.

Technical considerations

9. Noting that DCS in SEKD would involve the distribution of chilled water through an extended close loop network of underground pipes for air conditioning purposes, Mr Henry WU enquired about the measures to prevent heat loss during operation of the system. Mr Raymond YAU/OAP explained that insulation would be provided for the underground pipes to prevent heat loss in the distribution of chilled water. He pointed out that a similar DCS system of insulated underground pipes had been applied in Chicago. The system was performing satisfactorily and the temperature difference was only about 0.5°C despite the extensive network. Mr Davis LEE/OAP added that the viability of DCS was assessed and confirmed by way of energy and cost models. The outcome of the modelling studies indicated that DCS was more energy efficient than air-cooled air conditioning systems and cooling tower systems by 35 % and 19 % respectively. At members' request, Mr YAU agreed to provide the findings of the modelling studies with regard to changes in water temperature of the receiving waters; heat loss during distribution of chilled water; and overseas experience on DCS with a similar scale of service area as that to be served by the proposed DCS, and difference in temperature of the receiving waters for the four seasons to enable a more exact comparison.

Consultant

10. Ms Cyd HO enquired if the Administration had taken into consideration the possibility that DCS might become obsolete as a result of advancement in air-conditioning technology in the years ahead. In this connection, the Consultant was requested to provide information on the adaptability of DCS to new technologies. Sharing similar concern, Dr LAW Chi-kwong expressed reservations at the technical viability and energy efficiency of DCS, particularly when the technological risks had not been fully explained. He considered it necessary for the Administration to provide overseas experience on energy savings as a result of implementing DCS.

Consultant

Admin

11. Mr Francis CHEUNG/OAP advised that both the technological and financial risks in implementing DCS would be borne by investors and not consumers. In fact, there were investors who had indicated interest in the DCS project in SEKD. The Assistant Director (Energy Efficiency) added that DCS had been implemented in Japan as early as 1970 and the number of DCS had since grown from two to about 150. EMSD staff had visited Japan and found that DCS was highly successful and well received. While it was worthwhile to explore the viability of DCS in Hong Kong, the Government was still open-minded about its implementation. The Chairman

Action

questioned the need for the consultancy study given that the Administration already had in hand so much knowledge about DCS.

12. Referring to paragraph 8(a) of the Administration's paper, Mr Henry WU asked if it would be more cost effective and secure to have separate pump houses instead of one centralized pump house to serve the two chilling plants, which were scheduled to commence operation at different stages. He also enquired about the down time and failure rate of the system as well as the contingency arrangements in case of system failure. The Principal Assistant Secretary for the Environment, Transport and Works (Environment)1 (PAS/ETW(E)1) explained that there would not be much difference to have one centralized or two separately located pump houses as they merely served to pump water to the system. The more important question was whether there were sufficient number of pump sets to cater for contingency purpose. In fact, several pump sets would be installed in the proposed pump house and a total breakdown of the system was unlikely due to the presence of back-up pumping facilities. At members' request, the Administration undertook to provide input from the Consultant on the cost difference between building one centralized pump house and two separately located ones.

Admin

Financial viability

13. Ms Cyd HO enquired about the rationale for introducing the "build-operate-transfer" (BOT) contract which allowed private sector operation of DCS for 30 years before transferring the ownership of the whole system to the Government. She pointed out that BOT was at variance with the usual arrangement whereby a new facility would be operated by the Government at first and transferred to private operators at a later stage. She also opined that the Administration had to be careful in drawing up the terms for the BOT contract, particularly those governing the transfer of ownership to the Government, to avoid manipulation by the DCS operator. DSETW clarified that the Administration had not taken a decision on the BOT approach as proposed by the consultants. Notwithstanding that, the BOT arrangement was not new and had been adopted in other facilities such as the Western Cross Harbour Tunnel. He added that the consultant's recommendation to involve the private sector in taking forward the DCS project was in line with the prevailing Government policy to foster public-private partnerships. The provision of incentives to encourage private sector participation would help put in place new infrastructure projects with smaller Government investment, particularly in times of financial deficits.

14. As regards the basis upon which the contract period of 30 years was arrived at, Mr Raymond YAU/OAP explained that in view of the intensive capital outlay of the DCS project amounting to an estimated total of \$655 million at 2001 price level, a long payback period of 25 years was expected. Given that financial viability was sensitive to the overall service subscription rate, pace of development of SEKD and land costs for the system, there was a need to provide for an extended contract period of 30 years. Mr Davis LEE/OAP added that the contract period of 30 years had similarly been applied in other BOT contracts and had taken into account the risks and

Action

uncertainties of the DCS project.

15. Ms Cyd HO was concerned about the limited bargaining power of DCS users in terms of fees and quality control once they subscribed the DCS service. Sharing similar view, Mr WONG Yung-kan enquired about the mechanism on fee control for DCS given its long payback period. DSETW explained that the use of DCS in SEKD was not mandatory and consumers were free to use other air-conditioning systems taking into account the respective charges. The implementation of DCS merely provided an additional option for consumers. As the subscription rate for DCS was governed by market forces, there was no cause for concern over the monopolization of air-conditioning systems by the DCS operator. PAS/ETW(E)1 added that the DCS charges would be subject to the terms of contract agreed by both the consumers and the DCS operator to their best interest.

16. In response to Mr WONG Yung-kan's enquiry on the cost effectiveness of the DCS project given the heavy Government subsidies on land cost, DSETW explained that the recommendation of waiving the land costs for DCS facilities and for laying distribution of pipes on Government land by the consultants was meant to ensure that the DCS project would be reasonably attractive to the private sector. He assured members that the consortiums undertaking the DCS project could not use the land for purposes other than DCS as ownership of the land would remain at all times with the Government given that the land was only intended to be licensed to the consortiums.

17. Given the long pay back period, high technological risks involved and huge financial outlay for the DCS project, Dr LAW Chi-kwong considered it necessary for the Administration to provide a more detailed breakdown on the opportunity cost incurred by the Government if it was to waive the land cost for DCS facilities and for laying distribution of pipes on Government land. Mr Francis CHEUNG/OAP advised that as SEKD was a new development area, the opportunity cost for waiving the land cost for DCS facilities was comparatively low. Besides, the DCS facilities did not require a huge land commitment.

Admin

V. Construction and demolition materials

- (LC Paper No. CB(1) 1414/00-01(03) — Paper provided by the Administration
- LC Paper No. CB(1) 1869/00-01 — Extracts from the minutes of the meeting of the Panel on Environmental Affairs held on 5 June 2001
- LC Paper No. CB(1) 548/02-03(04) — Paper provided by the Administration)

18. DSETW informed members on the progress in implementing the measures to tackle the problem of construction and demolition (C&D) materials by highlighting the salient points in the information paper (LC Paper No. CB(1) 548/02-03(04)).

Action

19. Ir Dr Raymond HO questioned the insufficient supply of C&D materials for recycling given that there had not been any such shortage in the past. DSETW explained that not all C&D materials were suitable for recycling. In general, about 59% of C&D materials were soft inert materials like earth which could only be used as fill materials in reclamation and earth filling works while 25% of C&D materials were hard inert materials that could either be used for reclamation or recycling as aggregates for concrete production or as granular materials for road sub-base and drainage bedding layers. The remaining were C&D waste which if contaminated could only be disposed of in landfills. A study on the long-term strategy for disposal of C&D materials was expected to complete by 2003. It would identify long-term options for disposing of C&D materials and its recommendations would be submitted to LegCo for consideration.

20. Dr LAW Chi-kwong also enquired about the reduction in supply of suitable hard materials for recycling from the normal trend of 20% to less than 10% in recent months. PAS/ETW(E)2 explained that the supply of suitable hard materials for recycling had been unsteady as it depended on the nature of materials generated by construction activities. In the past few months, the C&D materials generated were mainly soft fill materials not suitable for recycling. The Administration would nevertheless ensure that suitable hard inert materials were reused in a proper manner. DSETW supplemented that the Administration had taken proactive steps of arranging direct delivery of hard materials from major demolition projects, such as the North Point Estate Redevelopment, to the recycling plant for recycling.

21. Noting that the temporary recycling plant at Tuen Mun 38 had not been frequented by contractors and dumpers because of its remote location, Ir Dr Raymond HO asked if recycling facilities for C&D materials in more convenient locations would be set up in the longer term. PAS/ETW(E)2 confirmed that there were plans to set up a second temporary recycling facility at Kai Tak, and also long-term recycling facilities for C&D materials in Tuen Mun and Tseung Kwan O 137. However, because of the limited supply of suitable hard materials for processing, the recycling plant at Tuen Mun 38 was only operating at one-third of its capacity. It was therefore not justified to set up another recycling plant at Kai Tak. However, the situation would be reviewed in the light of the trend in the supply of suitable hard materials. Ir Dr HO was opposed to the setting up of a recycling plant at Kai Tak which was situated within SEKD. He considered it more appropriate for such a plant to be set up at Tseung Kwan O. DSETW said that recycling plants, if allowed to be set up in Kai Tak, would only be on a temporary basis lest SEKD had other long-term development plans. In the long run, recycling plants would likely be set up in Tseung Kwan O and Tuen Mun.

22. The Chairman enquired whether consideration would be given to setting up sorting facilities adjacent to landfills to facilitate separation of inert materials from mixed waste. Ir Dr Raymond HO also opined that the Government should encourage the private sector to actively take part in sorting and separation of C&D materials to

Action

avoid dumping in the landfills. PAS/ETW(E)2 advised that the introduction of landfill charging would provide incentive for sorting and separation of C&D materials at source by the private sector. On-site sorting would not only reduce the amount of waste to landfills but also generate income if these materials could be sold for recycling purposes. On-site sorting was already a mandatory requirement for Government demolition projects. This mandatory requirement would be extended to all Government works projects in 2003. To assist construction sites which had physical constraints in carrying out on-site sorting, consideration was being given to setting up sorting facilities adjacent to landfills. A charging system had also to be worked out for the sorting facilities. A comprehensive package of proposals together with the legislation for landfill charging would be submitted for Members' consideration. Meanwhile, the Buildings Department had issued guidelines to private contractors encouraging them to implement waste management plans for works projects.

23. Noting that the legislation on landfill charging had been postponed from January to April 2003, the Chairman was concerned whether the landfill charging scheme could be implemented within 2003. DSETW said that the delay in legislative timetable was due to the need to amend both the Waste Disposal Ordinance (Cap. 354) and to draft a new Waste Disposal (Charges for Disposal of Waste) Regulation. Efforts would be made to expedite the introduction of the legislation within 2003.

24. As regards the Chairman's enquiry about the possibility of exporting C&D materials in Hong Kong to other places for reclamation and other purposes, DSETW said that the Administration had begun dialogue with authorities outside Hong Kong and information on the types of materials to be exported had been given to these authorities for consideration. Members would be informed of the progress of talks and the action to be taken.

VI. Any other business

25. There being no other business, the meeting ended at 10:25 am.