Confirmed Minutes of the 126th Meeting of the Advisory Council on the Environment held on 13 June 2005 at 2:30 pm

Present:

Prof LAM Kin-che, J.P. (Chairman)
Dr NG Cho-nam, B.B.S. (Acting Chairman for Agenda Item 3)
Mr James GRAHAM
Prof HO Kin-chung, B.B.S.
Prof Howard HUANG
Ms Goretti LAU
Mr Peter Y C LEE
Mrs Mei NG, B.B.S.
Ms Iris TAM, J.P.
Mr TSANG Kam-lam
Prof WONG Tze-wai
Prof WONG Yuk-shan, B.B.S., J.P.
Mr Esmond LEE (Secretary)

Absent with Apologies:

Prof Paul LAM
Prof POON Chi-sun
Mr Markus SHAW

In Attendance:

Mr K K KWOK, J.P.	Permanent Secretary for the Environment, Transport and Works (Environment)
Mr Raymond FAN	Deputy Director of Environmental Protection (2), Environmental Protection Department (EPD)
Mr C C LAY	Assistant Director (Conservation) Agriculture, Fisheries and Conservation Department
Mr Jimmy LEUNG	Assistant Director/Technical Services Planning Department
Ms Monica KO	Principal Information Officer, EPD
Ms Josephine CHEUNG	Chief Executive Officer (CBD), EPD
Miss Sarah NG	Executive Officer (CBD), EPD

In Attendance for Agenda Item 3 :

Ms S C LAU	Chief Town Planner, Urban Design and Landscape Section, Planning Department
Prof Edward NG	Project Leader of Consultant Team, Department of Architecture, Chinese University of Hong Kong
Mr K S WONG	Project Co-ordinator of Consultant Team, Department of Architecture, Chinese University of Hong Kong

In Attendance for Agenda Item 4 :

Mrs Teresa WONG	Assistant Director (Waste Management Policy), EPD
Mr K F TANG	Principal Environmental Protection Officer (EcoPark), EPD

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Action

Agenda Item 1 : Confirmation of the draft minutes of the 125th meeting held on 9 May 2005

The draft minutes were confirmed without amendment.

Agenda Item 2 : Matters arising from the minutes of the 125th meeting held on 9 May 2005

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

Agenda Item 3 : Feasibility Study for Establishment of Air Ventilation Assessment System
(ACE Paper 10/2005)

3. The Chairman and a Member declared their interest as honorary advisors to the Feasibility Study for Establishment of Air Ventilation Assessment System (the Study). Another Member also declared her interest as her company was a sub-consultant to the Study. After discussion, Members agreed that the Chairman of the Environmental Impact Assessment Subcommittee would chair the meeting for the agenda item and that the Chairman and the two Members could stay at the meeting without taking part in the discussion. Nevertheless, the Chairman and the first Member could give advice as necessary to facilitate Members' understanding of the Study while the second Member could give advice from the perspective of town planning if asked.

4. Ms S C Lau briefed Members on the background and objectives

of the Study. Prof Edward Ng presented the major findings and recommendations of the Study. He highlighted that further studies and urban climatic mapping were essential for a better understanding of local wind performance and developing the Air Ventilation Assessment (AVA) system. Ms Lau informed Members that the Committee on Planning and Land Development (CPLD) endorsed the recommendations of the Study on 7 June 2005, in particular the need for further studies owing to the lack of scientific data at this stage. CPLD supported the immediate establishment of an advisory framework and methodology for AVA in Stage A by issuing government technical circulars and revisions to the Hong Kong Planning Standards and Guidelines (HKPSG) to incorporate qualitative design guidelines for better air ventilation. It also agreed to accord priority to carrying out further studies in Stages B and C, i.e. establishment of an urban climatic map for Hong Kong and benchmarking standards respectively for AVA, subject to availability of funds.

5. A Member considered it easier to incorporate the proposed design guidelines for new development projects. However, he was more concerned about the problem of poor air ventilation in old urban areas like Tsim Sha Tsui and Mong Kok. Ms S C Lau admitted that there were practical difficulties in solving the existing problems in old urban districts except by means of urban renewal in the long run. Nevertheless, she assured Members that the Government was taking positive actions to take the lead in applying AVA to large-scale government projects and new developments like the Kai Tak and waterfront development projects. Prof Edward Ng added that the proposed urban climatic map for Hong Kong could help identify problematic or sensitive wind condition areas particularly in old urban districts. This would enable the Government to address the problem areas in a more focused and cost-effective manner.

6. Upon a Member's enquiry about the compromise between better air ventilation and maximizing development potential, Prof Edward Ng pointed out that according to the results of some experiments, there was no direct correlation between the density/height of buildings and wind performance in the area. Wind performance would depend very much on building disposition and layout. Thus, the number of buildings or flats might not necessarily be affected if developers took into account AVA. Ms S C Lau explained that the need to balance the interests of various sectors of the community and different objectives, including social, environmental and economic concerns, had always been acknowledged in the town planning process.

7. In response to a Member's enquiry on whether air ventilation at the ground level would be affected by raised pedestrian walkways, Prof

Edward Ng said that individual pedestrian walkways would not have a significant impact on air ventilation in general. However, the effect of a cluster of pedestrian walkways within confined road space would be rather significant in densely developed areas like Mong Kok. As such, AVAs were essential for massive elevated design structures and infrastructures.

8. A Member asked whether the Study had included the relationship between noise barriers, podia and air ventilation at the ground level. The Acting Chairman was concerned whether the Study recommendations had taken into account other factors such as air quality and noise impact. Otherwise, the proposal might solve the air ventilation problem but create or aggravate other environmental problems. Ms S C Lau pointed out that the prime objective of the Study was to improve air ventilation in the macro wind environment of Hong Kong instead of air quality, although a better wind environment would help avoid air stagnation and might contribute to the improvement of air quality. She also stressed that air ventilation should not be treated as the prevailing factor and developers had to balance air ventilation with other considerations.

9. A Member said that he understood the uniqueness of the Study and agreed it was necessary. However, he considered that air ventilation could not be assessed without reference to air quality. Ms S C Lau pointed out that the air quality problem should best be tackled at the pollution source. The improvement in air ventilation was far more indirect in solving the air quality problem. Prof Edward Ng highlighted that the prime goal of the Study was to identify objective assessment criteria using wind velocity ratio. Such indicator would provide a basis to compare different options. He emphasized that the Study was unprecedented and was in its very preliminary stage. Given more time and further studies, he believed that the AVA system could be further developed to become more robust. The Member said that there should be prudent interpretation of data, in particular the basic assumption that the higher wind speed the better, which might not necessarily be the case, especially for highly polluted areas or when there was an outbreak of a contagious disease. When incorporating the recommendations in technical circulars and HKPSG, the Administration should be very careful. All relevant information should be put together to provide a comprehensive understanding. Another Member agreed that care should be taken in the implementation to avoid intensifying the air pollution problem.

10. A Member shared the view that the ultimate goal of better air ventilation should be to improve air quality and the living environment of Hong Kong. The effectiveness of the AVA system would be affected by the fact that individual decision makers could decide on the weighting of air ventilation in their overall planning considerations. Given the small size of

Hong Kong, it would be undesirable that AVA was given much weight in some areas and not taken seriously elsewhere. Ms S C Lau stressed that the Study aimed to focus on the external macro wind environment and avoid duplicating efforts in air pollution control, air quality standards and monitoring under the purview of EPD. ETWB and EPD had been consulted and agreed with the scope of the Study prior to its commencement. She considered that wind environment was more related to psychological factors such as the level of comfort. In the absence of more scientific backing and benchmark standards, which might only be gathered and established after further studies in Stages B and C, the AVA system would not be suitably applied through statutory means such as the Environmental Impact Assessment Ordinance.

11. A Member agreed that emphasis should be put on health impact assessment in the Study and hoped that more health input data and information on the monitoring of residents' health would be made available to the public. She also enquired whether there would be qualitative benchmarks or indicators for the design of individual buildings as well as the interactive impacts among individual buildings and air ventilation in the housing lot. Prof Edward Ng said that according to his experience in a previous study on lighting and air ventilation conducted for the Buildings Department, air ventilation of individual buildings could be addressed more effectively through Building (Planning) Regulations. The current Study focused on a more macro perspective.

12. A Member pointed out that he had tried to adopt a health-based approach in the study of AVA. From the perspective of air quality, it was difficult to specify a set of quantitative criteria for the purpose of AVA as it was necessary to stop the source of pollution once the level of air quality started to deteriorate beyond an acceptable level. Moreover, there were very limited quantitative data on airborne contagious diseases. The only available information was data gathered on the outbreak of the Severe Acute Respiratory Syndrome (SARS). He found it not feasible to adopt a health-based approach in specifying planning or building standards in the context of AVA.

13. A Member anticipated problems in the actual implementation of the system and disagreements between developers and the Government. He pointed out that wind was very dynamic and the assessment would be affected by various factors like changing physical environment of the city and changing wind directions at different times. To stipulate AVA as one of the considerations for development projects would increase the cost and lengthen the time of development. From a civil engineering point of view, he suggested the use of mechanical methods to improve air ventilation, such as by installing a huge ventilation fan at the rooftop of a building to create the uplift of wind from different directions.

14. Mr K K Kwok said that from an environmental point of view, improved air circulation normally would help disperse concentration of pollutants, particularly at the street level, which would improve the local environmental condition. From this point of view, the proposal of AVA would be worth supporting. He noted that one of the recommendations of the Study was a four-stage approach for implementation. He considered the availability of wind data absolutely vital for any quantitative assessment for further implementation of the system. He enquired whether steps were being taken to proceed with the urban climatic mapping proposed in Stage B.

15. Ms S C Lau said that stakeholders being consulted had expressed strong support for conducting the urban climatic mapping and CPLD had endorsed that further studies in Stages B and C be given priority to proceed. Moreover, the Hong Kong Observatory had agreed to provide technical support for the mapping. However, financial resources had yet to be secured and negotiations for joint collaboration with the Hong Kong Observatory and EPD had yet to be started for the new studies.

16. A Member agreed to the importance of urban climatic mapping which would affect not only city design but also transport planning. Moreover, the mapping would be a very useful reference for local residents who had health problems in considering their housing locations. Developers should also make reference to the mapping information in shouldering their social responsibilities for improving air ventilation in the community. She considered that relevant bureaux and departments working on the greening policy should also join hands with the Planning Department in the AVA initiative with a view to improving the living environment as a whole.

17. A Member agreed that it would be important to develop some tools, like the urban climatic mapping, as a way to predict which would be crucial for future planning and decision making processes for Hong Kong. Thus, the proposal should be taken forward as early as possible. Moreover, there should also be a policy for public engagement when qualitative or quantitative design guidelines were developed as they would affect different sectors of the community.

18. A Member considered the project a meaningful one. On data collection, he pointed out the difficulty he had experienced in conducting air quality assessment due to the lack of localized data in urban area. The best available information could only be obtained from monitoring stations of the Hong Kong Observatory which were sometimes remote. Thus, he considered that a comprehensive network should be developed for data collection in order to obtain more realistic data for the mapping and thus implementation of the AVA system.

19. The Acting Chairman supported the Member's suggestion and

enquired about the degree of resolution and level of height for data collection. The Chairman agreed with the Member on the lack of urban climatic data especially on the wind environment in Hong Kong and enquired whether the mapping would be conducted by means of measurement or by modeling. Prof Edward Ng explained that overseas experience of mapping was to bring down meteorological data collected by computer modeling to a resolution as low as 10 m by 10 m. However, he considered that resolution of about 50 m by 50 m would be sufficient for the case of Hong Kong and data collected for the urban climatic map would be converted to function planning map. The information required would essentially include wind data distribution which could be conducted by wind tunnel modeling as well as land use data and building heights which would be available from the Hong Kong Observatory and Planning Department respectively. Data collected would be inputted for simulation modeling and cross calibration would be conducted at 2 m above ground levels. He highlighted that climatic mapping for Hong Kong, given its complex urban geometry, would be much more complicated when compared with other cities and a longer time would be required.

20. The Acting Chairman pointed out that the validation process would be very important for simulation modeling and thus actual data from the local stations would be very important so as to reduce the magnitude of error. As the modeling would mainly be based on mechanical wind, the effect of thermal wind under a low wind condition should also be taken into account.

21. The Acting Chairman concluded that the Council supported the recommendations of the Study. He summarized Members' comments as follows -

(a) to conduct the urban climatic mapping in Stage B and benchmarking study in Stage C as early as possible;

(b) to plan ahead related policy issues and development of guidelines for taking forward the AVA system as early as possible which would be vital for planning purposes;

(c) to develop a comprehensive network for data collection and make available a comprehensive database for reference and validation purposes; and

(d) to take into account and balance other environmental considerations which would interface with the air ventilation issues for the overall objective of better health and living environment.

Agenda Item 4 : Development of EcoPark
(ACE Paper 11/2005)

22. Mr K F Tang briefed Members on the background and progress of the development of EcoPark. Mrs Teresa Wong highlighted that the EcoPark project was an integral part of the waste management strategy. It was important to promote the local environmental and recycling industry so that there would be outlets for waste recovered and collected in the chain of the total waste management system.

23. The Chairman noted that EcoPark would be operated and managed on commercial principles while it was also the Government's intention to facilitate recycling of recovered materials which was otherwise not financially viable. He enquired how the balance could be achieved. A Member also enquired about the relationship between the Government and the future Management Contractor (the Operator) in managing EcoPark. Mr K F Tang explained that one of the major obstacles facing the recycling industry was the availability of secure land for investment. The provision of long-term sites with basic infrastructure at reasonable rates would facilitate the development of the recycling industry. Mrs Teresa Wong said that while EcoPark would be managed by the Operator according to prudent commercial principles to make the best use of market forces, the Government would exercise adequate control and safeguards in ensuring that EcoPark would be used and managed for its intended purpose. A detailed management framework would be included in the management contract, including the need to give priority to the environmental and recycling sectors that helped contribute to the Government's waste management targets and to facilitate recycling of recovered materials which was otherwise not financially viable. Mr Tang added that the zoning provision would help ensure the Operator to take on tenants based on Government's requirement.

24. A Member pointed out that the relationship between the Government and the Operator should be clear in the economic planning of EcoPark. An example of economic planning would be to encourage the complementary effect of different recycling processes in EcoPark in such a way that wastes or by-products generated by some processes would become raw materials for others to achieve the objective of cleaner production. Mr Raymond Fan said that the Government intended to achieve a close loop production for waste or by-product exchange within EcoPark with a view to achieving synergy and generating a circular economy.

25. A Member expressed concern about the sustainability of EcoPark, having regard to the experience of the industrial estates. He considered that the economic value of the local recycling business had yet to be proven which would depend very much on the collection of a sufficient volume of recyclable waste and the existence of markets for recycled products. The Government had to be open-minded in providing a certain level of subsidy as it would be difficult for EcoPark to operate on a self-financing basis. Another Member shared his concerns. She also enquired whether the industrial estates in Yuen Long and Tseung Kwan O could be retrofitted for recycling industries. Mrs

Teresa Wong explained that the Administration was well aware that the economic viability of the recycling business had yet to be proven. In terms of subsidies for the project, the Government would bear the capital cost and would bring in a commercial operator as the management agent to offer assistance and support to the tenants. The Government would also help kick-start the operations but the operators had to achieve sustainability of their business so as to stand on their own in the long run. Under the overall waste management strategy, there were and would be other initiatives, such as the source separation scheme, municipal solid waste (MSW) charging scheme and product responsibility scheme (PRS) to facilitate the development of the recycling industry and bring environmental cost into the equation. Mr Raymond Fan highlighted that EcoPark was different from the industrial estates in that the choice of the site with a sea frontage at Tuen Mun Area 38 had taken into account the recyclers' views, such as the need for berthing facilities, to suit their requirements.

26. A Member considered that long-term strategic business plans, such as joint ventures, had to be formulated to secure sources of funding for the sustainability of the recycling industry.

27. A Member considered that the development of the local recycling industry would be directly linked to the implementation of the MSW charging scheme. He learnt from some investors in large recycling business that they perceived business opportunities in the recycling business after the introduction of the MSW charging scheme as they could offer a relatively cheaper alternative for waste disposal compared with the cost of landfill dumping.

28. A Member enquired what measures had been taken to help some recycling workshops in the New Territories which might have potential for further development. Mr K F Tang explained that the Government as well as trade associations had maintained an active dialogue with different types of local recyclers to see what assistance could be offered.

29. A Member considered that emphasis should be put on public education to increase awareness of local waste recycling and efforts should be made in green procurement to widen the scope of markets for recycled products. She suggested that funding collected from the MSW charging scheme and PRS could be used to set up a designated fund to support the promotion of waste management. Moreover, some new macro scale projects like the Kai Tak development project could be used as a demonstration case for extensive use of recycled products. Another Member suggested that the Government should encourage green procurement within Government departments which could help spin off the recycling industry. Mr K F Tang explained that the intention was for EcoPark to demonstrate the link between waste recovery and product procurement. For example, a section of road in

EcoPark would be set aside for the use of locally developed recycled construction materials to prove their viability in public works projects. As far as procurement within the Government was concerned, there was currently a green procurement policy to encourage the use of recycled products.

30. A Member enquired for a clearer objective of EcoPark and also the long-term strategy for developing the recycling business such as establishing collaboration with the Pearl River Delta. Mr K F Tang explained that the major objective of EcoPark was not to relocate scattered operators or coordinate waste collection but to encourage re-processing of recyclable waste and make it a showcase for developing the local environmental and recycling industry with a view to promoting waste reduction and recovery. In fact, upon full operation of EcoPark, the anticipated amount of recyclable waste exported overseas could not be substantially reduced due to the limited size of the EcoPark. Another Member suggested that the EcoPark should focus more on its objectives rather than trying to achieve too many goals at one time. Mr Raymond Fan agreed that there would be a need to prioritize the objectives. EcoPark was key to kick-starting the local recycling business and the direction of the long-term strategy would depend very much on the viability of the project.

31. A Member considered the initiative a wise move for Hong Kong regardless whether it would generate economic gain or not, as it was part of the long-term management strategy for MSW. In respect of the Wastewater Treatment Facility (WTF) in EcoPark, he suggested separating the wastewater collection into four collection pipelines, viz putrescible organic material, heavy metal containing material, toxic persistent organic material and oily wastewater, to achieve a more cost-effective means of wastewater management. Mr K F Tang agreed to take into account the suggestion in the design of WTF. He further explained that the on-site WTF would be a shared facility and was not intended to treat all types of effluent. Where the effluents from a particular process or tenant could not be treated by the WTF, the tenant would be required to install process-specific pre-treatment facilities within his lot.

32. A Member enquired about the nature of major processes and raw materials used in EcoPark which would have a direct impact on the health of workers as well as the environment. Mr K F Tang explained that members of the Environmental Impact Assessment (EIA) Subcommittee had expressed similar concerns. As the future scope of operation and recycling processes could not be determined at this stage, an "Umbrella Approach" had been adopted. The Government would consult relevant departments on issues concerning health and safety of workers in the Process Review mechanism.

33. Upon a Member's enquiry about the planned holiday camp near the EcoPark, Mr K F Tang confirmed that the environmental impact of EcoPark on the camp had been included in the EIA report. There were

recommendations, such as restrictions on the height of chimneys, if any, in EcoPark, to minimize environmental impacts on the camp.

34. The Chairman concluded that the Council fully supported the development of EcoPark which was an important move as an integral part of the waste management strategy. He summarized Members' comments as follows -

(a) the Administration should be clear about the objectives of EcoPark and prioritize them;

(b) the EcoPark would be a showcase to demonstrate the technical feasibility and viability of the environmental and recycling industry in Hong Kong as well as to show the Government's determination to take forward waste management initiatives;

(c) the Government should be alert and aware of various considerations, including the economic viability of the recycling industry, the need for Government subsidies, the need for streaming wastewater influent to the wastewater treatment facility and health implications on workers; and

(d) the Government should try to ensure the long term sustainability of the project and development of the recycling industry through market creation , like green procurement and use of recycling products in large scale works projects, implementation of the MSW charging scheme, long term planning to achieve synergy between processes and synergy with the Mainland.

Agenda Item 5 : Report on the 92nd Environmental Impact Assessment Subcommittee Meeting
(ACE Paper 12/2005)

35. Chairman of the EIA Subcommittee, reported the recommendations of the Subcommittee at its meeting held on 23 May 2005 on the EIA report on Development of EcoPark in Tuen Mun Area 38. The Subcommittee recommended that the report be endorsed without condition. The Subcommittee suggested that the project proponent consider consulting the Labour Department in the Process Review mechanism on relevant provisions with a view to encouraging good management practices and minimizing health hazards to workers in EcoPark. The Subcommittee also requested updates on the project.

36. An EIA Subcommittee Member highlighted Members' concern on the potential land contamination problem at the Subcommittee meeting, in particular residues left by outgoing tenants. A Member suggested requesting the project proponent to provide the surface with berms among individual lots

to confine the seepage problem of contaminated wastewater. Chairman of the EIA Subcommittee explained that the project proponent had agreed to provide impermeable hard surface to all tenants' lots in Phase I which would minimize the impact of land contamination.

37. The Chairman suggested and Members agreed to recommend that the project proponent stipulate in the land grants or tenancies that the grantees or tenants be liable for any contamination residues upon expiry of the land grants or tenancies. The Chairman concluded that the Council endorsed the recommendations and suggestions of the Subcommittee.

Agenda Item 6: Any Other Business

Independent study conducted by the World Bank on EIA systems in Asia

38. The Chairman shared with Members the good news that a recent independent study conducted by the World Bank on EIA systems in Asia had ranked Hong Kong's EIA system as the best in Asia and one of the most transparent and advanced systems in the world. The report highlighted that Hong Kong had set up an institutional framework for both EIA and Strategic Environmental Assessment since the 1980s and these tools had been applied successfully in Hong Kong with proven records.

Retreat for Council Members

39. The Chairman reminded Members that the retreat would be held on 18 June and 11 Members would join.

Tentative items for discussion at the next meeting

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

Agenda Item 7 : Date of Next Meeting

41. The next meeting was scheduled for 11 July 2005.

ACE Secretariat
June 2005