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CB(1) 1636/03-04(10)

(ACE Paper 8/2002)
For discussion

Inviting Expressions of Interest in Providing Integrated Waste Treatment Facility(ies)

Purpose

This paper sets out Government's plan to invite expressions of interest from the local and international waste management industry in providing integrated waste treatment facility(ies) in Hong Kong.

Background

2. At present, over 6 million tonnes of wastes are disposed of in our three landfills each year. About 52% of them are municipal solid waste, 41% construction and demolition (C&D) waste, and 7% other wastes such as sludge and animal carcass. In 2000, Hong Kong people produced about 5.2 million tonnes of municipal solid waste of which about 1.8 million tonnes (34%) were recovered.

3. The three landfills at Tseung Kwan O, Nim Wan and Ta Kwu Ling occupy 270 hectares of land. When planned in the 1980s, they were expected to serve our need for waste disposal till 2020. However, as the amount of waste requiring disposal has been increasing (the average growth rate for municipal solid waste is 3.5% each year in the past five years), the landfills have been filling up much faster than planned. By the end of 2001, we only had a remaining landfill capacity of around 114 million tonnes. We project that the existing landfills would only last 10 to 15 years if waste continues to grow at the current trend. The landfills may be saturated even earlier if we fail to prevent C & D materials from being dumped there or if we fail to achieve the recycling target of 40% for municipal solid waste by 2007.

4. Like other economies, our waste management strategy comprises three key elements, namely waste avoidance and reduction in the first place;

followed by reuse and recycling; and finally treatment and disposal of unrecyclable waste. On waste prevention and recycling which has been our main focus in tackling the waste problem, we informed Members through Paper 36/2001 in September 2001 of our new initiatives and our target of raising the overall recovery rate of municipal solid waste from 34% in 2000 to 40% in 2007. We have been making progress in the past few months. A brief progress report on the actions that we have taken to reduce and recycle waste is at **Annex**. These actions have contributed to the increasing level of public participation in waste prevention and recovery. We will continue our work in this area, particularly in involving the community and the business sector in this pursuit.

5. However, we cannot count on waste reduction and recycling alone in dealing with this problem since clearly not all wastes are recyclable. Our estimate is that even if we are able to reduce waste as much as possible, and meet our target recycling rate of 40% by 2007, there will still be about 4 million tonnes of unrecyclable wastes that need to be handled. Integrated waste treatment facility(ies) would be needed to reduce the volume of unrecyclable waste that requires disposal while the existing landfills would have to be extended or new ones developed to serve as final repositories for residual waste emerging from integrated waste treatment facility(ies) and waste that cannot be treated.

6. Given Hong Kong's land constraints, it is extremely difficult to find suitable sites for new landfills. We are studying the possible extension of existing landfills and development of new landfills and plan to present findings to the Advisory Council on the Environment (ACE) early next year.

Invitation for Expressions of Interest on Integrated Waste Treatment Facility(ies)

7. Integrated waste treatment facility(ies) focuses primarily on waste treatment but also embodies waste recovery and recycling at the same location so that municipal solid waste could be managed more efficiently and in a sustainable manner. These facilities are commonly used in other economies to reduce the volumes of wastes before their final disposal in landfills since this would help prolong the life of landfills and reduce the demand for resources in provisioning of landfills. However, it should be noted that integrated waste treatment facility(ies), even combined with our waste reduction efforts, would not have any significant impact in conserving the life

of the three existing landfills. This is because commissioning of such facilities would require a relatively long lead-time of around 10 years but the existing landfills are expected to be filled up in around 10 – 15 years. Having said that, such integrated waste treatment facility(ies), coupled with persistent recycling programmes, would help slow down the rate in filling up the extended or new landfills. As mentioned in paragraph 4 above, our priority last year was to step up our waste reduction and recycling programmes. Now that the various programmes have been put in place for vigorous implementation, our next focus would be to plan for the establishment of integrated waste treatment facility(ies) in Hong Kong.

8. There are various technologies in waste treatment, including some new and innovative ones that have emerged lately. To make sure that we would not miss out any potential conventional and innovative waste treatment technologies, we will kick off a search in April 2002 by inviting technology suppliers and facilities operators from Hong Kong and other places to express interest in developing modern integrated waste treatment facility(ies) in Hong Kong. Under this expressions of interest (EoI) exercise, proponents would be invited to provide us with technical, financial, operational, and other relevant information on their waste treatment technologies/facilities. A detailed assessment of the EoI submissions and public consultation would be carried out before a decision is made on the technology(ies) to be adopted in Hong Kong. We maintain an open mind on the technology(ies) but would ensure that they would meet the highest international environmental standards and be cost-effective.

9. The call for EoI will be widely publicized through the Government gazette, internet, technical journals, local and overseas newspapers, and consulate generals/trade commissions in Hong Kong. The EoI exercise is not and does not form part of any procurement or tender pre-qualification exercise. Those taking part in this EoI exercise will not be given any advantage or preferential treatment in any subsequent procurement or tender exercise.

10. Interested parties will be asked to submit detailed information in the following areas together with figures, statistics, graphics, technical drawings and photos etc. where appropriate in their proposals :

(a) Technology Information – including details of the treatment and recovery technology and the process involved, the waste types/composition and throughput that it can handle, the pollution

control technologies, output and residual products and their marketability, flexibility for expansion or reduction in capacity, land and infrastructural requirements, compatibility with our existing waste management system, reliability and total lead-time.

(b) Environmental Information – including emissions to air and water, residual solid waste, greenhouse gas, energy consumption, odour, noise, visual impact, and risks of accidents.

(c) Social Information – including likely community perception, constraints to adjacent development, and employment opportunities.

(d) Economic Information – including likely capital and operating costs (with reference to similar facilities elsewhere), and possible sources of revenue.

11. As any new integrated waste treatment facility(ies) would incur huge capital investment, we will need to make sure that all the proposed technologies/facilities are reliable in treating large quantities of waste and would be able to meet our long-term waste management needs. Hence, we plan to consider only proven technologies/facilities that are able to treat at least 500 tonnes of municipal solid waste per day per site (i.e. over 150,000 tonnes a year). Mere conceptual proposals or laboratory scale technologies would not be considered.

Advisory Group

12. To increase transparency and to assist the Government in considering the EoI submissions, an Advisory Group (AG) would be set up. This Group, to be chaired by the Secretary for the Environment and Food, would comprise representatives of the ACE and the Waste Reduction Committee, members of professional institutions and academia, and community organizations. The Director of Environmental Protection will also be a member. The Group will be responsible for refining the proposed assessment criteria (para. 13 below), evaluating the EoI submissions, and making recommendations to the Government on viable technology(ies) based on the EoI submissions for public consultation purposes.

Proposed Assessment Criteria

13. The Government would first screen out those proposals that do not meet the minimum handling volume of 500 tonnes per day per site. Qualified proposals would be evaluated in accordance with the following key assessment criteria, subject to any modifications advised by the AG:

(a) Waste Minimization/Resource Recovery - This will focus mainly on the technology's ability to deliver a sustainable, cost-effective waste processing and disposal method to divert solid waste from landfills. In addition, its ability to facilitate waste avoidance/recycling and beneficial re-use of resources will be assessed.

(b) Environmental Concerns - The technology must be ecologically sustainable. We will assess the impact of the proposed technology/facility(ies) on the environment in terms of local (odour, noise, etc.), regional (air emission, residual waste disposal, wastewater disposal, etc.) and global (such as greenhouse gas) impacts.

(c) Social Impacts - The technology must provide a solution that satisfies the community's needs and expectations for proper waste management, and will not bring about unnecessary constraints to developments in the neighbourhood of the facility(ies).

(d) Economic Viability - The technology must provide a cost-effective and efficient waste management system for a small place with a huge population.

(e) Compatibility - As an integral part of HK's long term waste management strategy, the proposed technology must be compatible in strategic planning and operational needs (scale, required footprint, etc.) with the existing waste management system in respect of waste collection, transportation, storage, treatment and disposal.

(f) Performance and Operational Reliability - The assessment will cover the reliability of the technology and experience/track

record of the supplier/operator in treating solid waste. It will also cover the technology's ability to treat waste input which may vary in composition and quantity over time.

Location(s) of Integrated Waste Treatment Facilities

14. On the basis of the evaluation by and recommendations of the AG, the Government would consult the public on the technology(ies)/facility(ies) to be adopted in Hong Kong. The choice of technology(ies) would be a key factor in determining the number and the size of sites required for establishing the integrated waste treatment facility(ies). Once we have decided on the technology(ies) to be adopted, we will then consider the possible location(s) to site the facility(ies), assess the engineering, environmental and economic viability of the site(s) concerned, and carry out public consultation on the proposed location(s).

15. Members may be aware that in the Waste Reduction Framework Plan issued in 1998, waste-to-energy recovery was recommended as one of the integrated waste treatment technologies to be adopted in Hong Kong. Following this recommendation, the Environmental Protection Department initiated in 1999 an environmental impact assessment and feasibility study for waste-to-energy facilities. That study will continue in parallel, but without prejudice to the forthcoming EoI exercise. The findings of that study will be taken into account when we consider the site location(s) after a decision on the waste treatment technology(ies) has been made.

Timetable

16. We plan to invite EoI in developing integrated waste treatement facility(ies) in Hong Kong in April 2002. We will allow three months for interested parties to formulate and submit their proposals. The assessment process will start in July and is expected to last about three to six months (i.e. between October and December 2002), depending on the number and complexity of the proposals received. We plan to consult LegCo, ACE, and the public towards the end of this year on the recommended technology(ies)/facility(ies).

17. Assuming a decision could be reached on the choice of technology(ies), we may kick off in 2003 the EIA study(ies) for the integrated waste treatment facility(ies). We will consult the public around late 2004 upon completion of the EIA for the proposed facility(ies). If everything proceeds according to schedule, construction of the facility(ies) might commence in 2008, with a view to being commissioned by 2012 at the earliest.

18. We will make reports to the ACE as we reach each critical milestones e.g. the outcome of the EoI exercise and the outcome of the technical assessment.

Landfill Charging

19. Landfill charging is an essential component of our waste management strategy as it provides an economic incentive for waste producers to reduce waste and/or to carry out sorting to facilitate reuse/recycling. It would also ensure that costly landfills are not used for dumping construction and demolition (C&D) materials which should be directed to public filling areas for reclamation purpose. Experience in many places like Shenzhen, Shanghai, Taipei, USA, Canada, most European countries, Japan and Singapore has shown that landfill charging is one of the most common and effective measures to reduce waste.

20. There is a need to focus first on C&D waste as Hong Kong currently generates around 14 million tonnes of C&D materials each year. About 11 million tonnes (80%) are reused in reclamation works or recycled but the remaining 20%, most of which are C&D waste, are dumped in our landfills, and they account for about 40% of the waste disposed of at landfills each year.

21. C&D waste is mainly generated from construction sites (about 70-80%) and renovation of domestic/commercial premises (about 20-30%). The key sectors affected by a landfill charging scheme would be developers and contractors who are waste producers, and waste haulers who transport C&D waste to landfills. The scheme would also impact on general members of the public as and when they undertake renovation. However, they are unlikely to be affected by the scheme on a regular basis like developers, contractors, and waste haulers.

22. We have been discussing the details of a landfill charging scheme with the relevant trades. Through our discussions, we are aware that they have two major concerns. Contractors are concerned about the impact of the charging scheme on running contracts. As such contracts are signed before the implementation of the scheme, they would have difficulty in recovering the charge from developers. Waste haulers are concerned about the need to pay the charge at the landfill gate, which means that they would have to collect or recover the charge from the waste producers. They believe this would lead to bad debts and cash flow problems. They suggest the Government should establish a direct settlement system to charge all C&D waste producers direct.

23. Taking into account the concerns of the construction industry and waste haulers, we carried out further consultation on a scheme including the following features :

a) in accordance with the polluters-pay principle, our intention is to charge all C&D waste at around $125 per tonne so as to recover fully the capital ($56) and recurrent costs ($69) of the three existing landfills in 2001;

b) exempt all construction contracts that have already commenced and/or that are signed before the implementation of the scheme;

c) establish a direct settlement system so that major C&D waste producers (i.e. contractors) would pay the landfill charge direct to the Government, thereby obviating the need for waste haulers working for them to collect/handle such charge; and

d) charge waste haulers the remaining 20 – 30% C & D waste arising mostly from ad hoc renovation works as there are no effective means to extend the direct settlement system to small C&D waste producers. (Please see paragraph 25 below.) However, to allay waste haulers' concern on cash flow problems, they would be billed on a monthly basis and given a credit period. Furthermore, a security deposit will not be required.

24. Waste producers and waste haulers consider that the proposed charging rate is too high and should be lowered. In addition, notwithstanding the introduction of a direct settlement system for construction sites that covers about 70-80% of C&D waste, waste haulers still reject the proposal on the

ground that they would have to pay/handle the charge on behalf of small C&D waste producers.

25. A direct settlement system for major C&D waste producers is feasible since all construction sites are highly visible and works therein could only commence after the contractors concerned have obtained the relevant permits/approvals from the Government. On the other hand, there is currently no requirement for home/office renovation projects to be registered or approved. It is therefore not possible to track down small C&D waste producers. We do not favour any scheme that does not cover renovation waste producers, because it is extremely difficult to differentiate C&D waste coming from construction and renovation sites. Any such exemption is likely to create immense opportunities for abuse. We therefore consider that any charging scheme should apply to all C&D waste producers.

Conclusion

26. Members are invited to comment on the proposed EoI exercise and offer their views on the proposed landfill charging scheme.

Environment and Food Bureau
Environmental Protection Department
February 2002

Annex

Progress on Waste Recycling Initiatives

Long-term and Short-term Land for Recycling Industry

- A four-month preliminary study on the development and arrangement of the Recovery Park commenced in late November 2001.

- Two more sites in Tai Po would also be made available for waste recycling operations under short-term tenancies in the first half of 2002. Will continue to identify new sites for use by recycling operations.

Enhancing Public Education and Community Involvement

- Preparation is in hand to submit an application for seeking approval of the Finance Committee for injecting $100 million into the Environment and Conservation Fund, primarily for use by district organizations and green groups to organize community-based recycling projects with sustainable impact.

- Participating schools in recycling programme has increased from around 400 from last academic year to 800 plus so far. Housing Department started a trial to place waste separation bins on each floor in two public housing estates in November 2001.

- We have launched a large scale publicity campaign, including two Announcements of Public Interests, visits by theme van on waste problems to shopping centers and schools, special campaigns/exhibitions, etc.

- We are providing training for 5,000 voluntary Environmental Protection Ambassadors.

- Together with green groups and Education Department, we are developing education materials on waste recycling/separation for use by teachers in schools.

Recycling Bins and Collection Service for Recyclables

- The number of recycling bins in public places and schools has increased from around 8,000 to 13,000 by the end of 2001. Together with another 6,600 recycling bins in private housing estates, we have now around 19,500 all over the territory.

- Collection of recyclables from public places, leisure facilities, Government buildings, and country parks have also been contracted out since mid-December 2001 so as to ensure that they would be picked up properly and delivered to recyclers for recycling purposes.

- Environmental Protection Department has also launched a pilot collection scheme for plastic bottles in 250 public/private housing estates.

- Number of enquiries on EPD's hotline has increased on average from 10 before September to around 100 each day.

Government Leadership

- Government is developing a procurement guideline for departments to use green products (e.g. recycled papers, printer cartridge), extending the pilot scheme for using retreaded tyres in its heavy vehicle fleet and using more compost made from organic waste in greening.

Producer Responsibility Schemes

- We are discussing with various industries the feasibility of developing voluntary producer responsibility schemes. As a start, we are joining hands with mobile phone manufacturers/service providers on a mobile phone battery recycling programme.

Other New Initiatives

- We issued in end November 2001 invitations for expressions of interest on recycling of glass bottles and waste tyres so that the private sector could offer us good suggestions for handling such wastes.

- We plan to establish a pilot plant to recycle electrical and electronic goods at one of our refuse transfer stations.

- Tenders will be invited in the next few months for the establishment of a composting plant at Ngau Tam Mei to recycle organic waste.

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(ACE Paper 14/2003)
For discussion

Proposed Landfill Charging Scheme – Associated Arrangements

Purpose

This paper sets out the detailed arrangements and associated charges relating to the proposed landfill charging scheme.

Background

2. In March 2002, we informed Members, through ACE Paper No 8/2002, of the framework of the proposed landfill charging scheme. To recap, the scheme comprises the following key features :

(a) to charge construction waste disposed of at landfills in the first phase. It is necessary to focus on construction waste first as it is voluminous[1] and poses the greatest threat to the lifespan of landfills;

(b) to set the landfill charge for the disposal of construction waste at $125 per tonne. This represents full recovery of the capital ($56 per tonne) and recurrent ($69 per tonne) costs of the three existing landfills;

(c) to establish a direct settlement system and require major waste producers, mainly construction contractors (which generate about 70 - 80% of construction waste), to open accounts and pay landfill

[1] In 2002, construction works generate over 16 million tonnes of construction waste. We reused/recycled some 80% of these waste, but the remaining 4 million tonnes had to be disposed of at landfills, and they accounted for 48% of the waste disposed of at landfills.

charges direct to the Government;

(d) to charge waste haulers who deliver construction waste arising from renovation works, which constitute the remaining 20-30% of construction waste. As there are about 300,000 small ad-hoc renovation works each year, it would be extremely difficult and costly to locate the waste producers and extend the direct settlement system to them. Hence, we have no alternative but to charge waste haulers when they deliver construction waste to landfills – a practice that is adopted in most economies with such charging scheme. To allay waste haulers' concern about cashflow problems, they would be billed on a monthly basis and given a credit period of 30 days. The demand for payment will be suspended if waste haulers have concrete evidence showing that they fail to collect the charges from the waste producers; and

(e) to exempt all construction contracts that are awarded before the commencement of the landfill charging scheme. This is to address the construction industry's concern about running contracts awarded before the implementation of the scheme as there are no provisions in the contracts to enable them to recover landfill charges from their clients.

Proposed Supporting Measures

3. We propose the following measures in support of the landfill charging scheme.

4. Construction waste is a mixture of inert public fill and non-inert waste, and a large proportion of the inert public fill can be reused/recycled. Hence, an important means to reduce disposal of waste at landfills is to separate the inert portion from the non-inert portion, such that the inert public fill could be reused/recycled and only the non-inert waste would be disposed of at landfills.

5. Sorting of waste at source is not widely practised in Hong Kong because most construction/renovation sites have space constraints. Also, there is no economic incentive for construction firms to carry out sorting. With the implementation of landfill charging, there would be a need for sorting facilities

which could assist the construction industry to sort mixed waste, particularly from small construction sites, so as to reduce the landfill charge payable. We plan to make available two *sorting facilities* - one in Tuen Mun in close proximity to the West New Territories Landfill, and another in Tseung Kwan O near the Southeast New Territories Landfill. The two facilities could together handle about 2,500 tonnes of mixed construction waste each day.

6. To divert inert public fill away from landfills, and to provide outlets for inert public fill arising from sorting facilities, there will be a number of *public fill reception facilities*. They include reclamation projects[2] and the temporary fill banks[3].

7. In summary, there will be three types of disposal facilities for construction waste i.e. landfills, sorting facilities and public fill reception facilities. Taking into account their capacity and costs, we intend to adopt the following waste acceptance criteria –

(a) Landfills – to receive mixed construction waste with not more than 50% inert content;

(b) Sorting Facilities – to receive mixed construction waste with more than 50% inert content; and

(c) Public fill reception facilities – to accept pure inert public fill.

Sorting and Public Fill Charges

8. In line with the User Pays Principle, we intend to charge the disposal of construction waste at sorting facilities and public fill reception facilities. The charges are tentatively set at $100[4] per tonne for sorting

[2] Except special projects with time or other constraints, all reclamation projects are using as much public fill as possible to meet their fill requirements.

[3] Because of the decreasing number and scale of reclamation projects, we have set up a temporary fill bank at Tseung Kwan O to stockpile inert public fill for future use when new reclamation projects are available. Another temporary fill bank will be set up at Tuen Mun.

[4] There are currently no sorting facilities. The actual cost of the facilities will not be known until such facilities have been set up.

facilities and $27[5] per tonne for public fill reception facilities.

9. To be effective, we consider that the proposed sorting charge needs to be set and maintained at a good relativity to the landfill charge of $125 per tonne. On the one hand, it has to be lower than the landfill charge thereby providing a financial incentive for waste producers/haulers to go for sorting. On the other hand, the charge cannot be so low as to invite abuse by users. The sorting facilities would provide waste producers, particularly small construction sites with physical constraints and cannot carry out on-site sorting, a "cheaper alternative" to landfills. We do not agree with the idea of providing the sorting facilities free of charge as this goes against the User Pays Principle and would amount to subsidizing the waste producers with taxpayers' money. In addition, this is most likely to invite abuse by users who will be tempted to take mixed with waste with high non-inert content to the sorting facilities instead of landfills.

10. As for the proposed public fill charge, it must be noted that with the decreasing number of reclamation projects in Hong Kong, the huge amount of inert public fill generated from construction works has become a substantial liability for which expensive disposal outlets have to be made available. Hence, it is necessary and reasonable to impose a public fill charge to encourage the industry to adopt construction methods that would reduce the generation of inert public fill.

Related Powers to Implement the Scheme

11. As set out in para 7, the three different types of facilities are meant to receive construction waste with different inert content. To ensure that users would not deliver inappropriate waste to the facilities (e.g. users trying to pay a lower charge by carrying non-inert waste to public fill reception facilities), the site staff would have to inspect the vehicles arriving at these facilities and determine if they are carrying the appropriate waste for the facilities in question. They would also be empowered to turn away vehicles

[5] This represents the cost of existing public fill reception facilities. Due to the lack of local reclamation projects, we are actively exploring the feasibility of reusing inert public fill in reclamation projects outside Hong Kong. If this option is viable, there may be additional costs involved (e.g. for transporting the fill to the reclamation sites) and the charge would have to be increased accordingly.

carrying inappropriate waste. As it is not practicable in terms of time, space, logistical and cost requirements to carry out detailed inspection and weighing of the detailed content of each vehicle at the gate of facilities, site staff would have to make an immediate judgment based on visual inspection.

12. Site staff at landfills would also need to determine, based on visual inspection, whether a waste load is construction waste and thus should be subject to the landfill charge. Such is needed to prevent evasion of the landfill charge by users who may claim that the waste is commercial/industrial waste and is not subject to charging.

13. Users could choose to pay the required charge, or not to use the facility, or reduce the inert/non-inert content to fit the admission criteria of the concerned facility.

Advice Sought

14. Members are invited to comment on the proposals set out in paragraphs 4 to 13 above.

Environment, Transport and Works Bureau
April 2003

Extracts of Minutes of the 105th Meeting of the Advisory Council on the Environment held on 14 April 2003 at 2:30 p.m.

Present:

Prof. LAM Kin-che, JP (Chairman)
Prof. Peter HILLS
Prof. HO Kin-chung
Mr. Peter Y. C. LEE
Mr. LIN Chaan-ming
Dr. NG Cho-nam
Mrs. Mei NG
Mr. Otto L. T. POON
Ms. Iris TAM, JP
Prof. WONG Tze-wai
Prof. WONG Yuk-shan, JP
Ms. Jessie WONG (Secretary)

Absent with Apologies:
Prof. LUNG Ping-yee, David, SBS, JP
Mr. Michael J. D. RUSHWORTH

In Attendance:

Mrs. Rita LAU, JP	Permanent Secretary for the Environment, Transport and Works (Environment and Transport)
Ms. Doris CHEUNG	Deputy Secretary (E)1, Environment, Transport and Works Bureau (ETWB)
Mr. Thomas CHOW	Deputy Secretary (E)2, ETWB
Mr. Rob LAW, JP	Director of Environmental Protection
Mr. C C LAY	Assistant Director (Conservation), Agriculture, Fisheries and Conservation Department
Miss CHU Hing-yin	Acting Assistant Director/Technical Services Planning Department
Mrs. Belinda HUI	Secretariat Press Officer (Environment, Transport and Works), ETWB
Ms. Polly LEUNG	Principal Information Officer, Environmental Protection Department (EPD)
Miss Petula POON	Chief Executive Officer (E), ETWB
Mr. Eddie CHENG	Executive Officer (E), ETWB

In Attendance for Agenda Item 3 :

Mr. Raistlin LAU	Principal Assistant Secretary for the Environment, Transport and Works (Environment & Transport)E1, ETWB

Mr. Gordon LEUNG	Principal Assistant Secretary for Commerce, Industry and Technology (Commerce & Industry)7, Commerce, Industry and Technology Bureau (CITB)
Mr. Francis HO	Assistant Secretary for Commerce, Industry and Technology (Commerce & Industry) 7A, CITB
Mr. S W PANG	Principal Environmental Protection Officer (Air Management), EPD

In Attendance for Agenda Item 5 :

Ms. Annie CHOI	Principal Assistant Secretary for the Environment, Transport and Works (Environment & Transport)E2, ETWB
Mr. T K CHENG	Acting Principal Environmental Protection Officer (Facilities Development), EPD
Mr. T F LEUNG	Senior Engineer/Barging Point Civil Engineering Department

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Agenda Item 5 : Proposed Landfill Charging Scheme – Associated Arrangements
(ACE Paper 14/2003)

15. The Chairman welcomed the presentation team. Ms. Annie Choi briefed Members on the paper.

16. In response to the Chairman's enquiry on the control of flytipping after the implementation of the proposed landfill charging scheme, Ms. Choi said that the Government would strengthen education against flytipping and step up prosecution on flytipping offences. There had also been proposals to strengthen legislation control against flytipping. However, the Department of Justice advised that such were not consistent with the Bill of Rights and did not commensurate with the severity of the offence.

17. A Member considered that the landfills and the sorting facilities might not necessarily be managed by the Government. Stakeholders might be reluctant to accept the fee level of the sorting facilities if the mechanism for setting the level was unclear. Given that the private sector was usually more cost conscious, the proposed sorting facilities could be privatized. Ms. Choi agreed that the sorting facilities could be operated by private companies. In that regard, the Government would invite "expressions of interest" on operating the sorting facilities in due course. As regards the proposed charge of $100 for the sorting facilities, it was only an estimated figure which had taken into the capital as well as the recurrent

costs of the facilities. The key issue was that it should not be higher than the landfill charge so as to provide an incentive for using the sorting facilities.

18. A Member pointed out that landfills would be used up in the near future and the replacement cost would be very high and indeed even much higher than the cost of the existing facilities. The landfill charge of $125 per tonne which covered only the capital and the recurrent cost of the facilities did not reflect the residual value and replacement cost of the landfills. Ms. Choi said that the proposed landfill charge was originally set at $43 per tonne in 1995 which represented 50% recovery of the capital and recurrent costs at that time, when the scheme was first proposed. The currently suggested level of $125 had been put forward since 1998, and represented roughly full recovery of the recurrent costs. The proposed charge had not taken into account the replacement costs of the landfills which could only be arbitrary figures. In addition, inclusion of the replacement cost would run contrary to the user-pay principle as current users would need to subsidize future users.

19. A Member asked whether the land cost of the landfills had been taken into account in setting the proposed landfill charge which in his view was too low. Ms. Choi replied in the negative as land cost did fluctuate with the property market. She also pointed out that while some supported the inclusion of land cost and replacement cost, others requested that only the recurrent cost should be considered as they considered that landfills should be regarded as infrastructure development and hence, the capital cost should be borne by the Government. The currently suggested charge represented a balance of the various considerations and was in line with the normal costing and accounting principles of the Government.

20. In response to the Chairman's enquiry, Ms. Choi said that the landfill charges of many countries were much higher. For instance, most European countries charged about HK$400 per tonne and USA charged about HK$200 per tonne. For Singapore, the charge was about HK$280 per tonne. However, some European and Asian countries levied a lower landfill charge than Hong Kong. The level of fee depended on the economic conditions of the countries concerned and the way the landfill charging scheme was implemented.

21. In response to a Member's enquiry, Ms. Choi said that it was not a mandatory requirement for the waste producers to use the sorting facilities. They might choose to sort the waste themselves. Since the landfill site staff had the power to turn away trucks with inappropriate waste content, there was a certain degree of control over the type of wastes being transported to those facilities. She also confirmed that the sorting charge would be applied to the waste before sorting.

22. A Member remarked that the proposed 50% benchmark for determining the acceptance of waste transported to landfills and sorting facilities was quite arbitrary and judgment by visual inspection was too subjective. Such arrangements might also increase the possibility of corruption. The rationale for setting the 50% benchmark had to be made transparent if it was to be accepted by the waste haulers. In response, Ms. Choi said that the setting of the benchmark was not easy. The Administration had to strike a balance having regard to the capacity of the sorting facilities and the landfills. Nonetheless, the proposed benchmark was only a starting point and it could be revised if necessary. As regards visual inspection, since thousands of trucks would use the landfill facilities each day, only a very short turnaround time was available for each truck. There was no other practicable method to judge the content of the waste except by visual inspection. The ICAC had been consulted and had agreed to the proposed arrangements. Furthermore, a comprehensive management and monitoring system including staff rotation and installation of close circuit television would be in place to prevent corruption.

23. In response to a Member's enquiry on the sorting procedures and payment arrangements, Ms. Choi explained that the waste after sorting would be divided into inert and non-inert waste and would be transported to the public fill reception facilities and landfills respectively. The operator of the sorting facilities would be required to pay the relevant charges.

24. A Member said that the cost for transporting inert waste to public fill reception facilities was considerable. He considered that instead of charging the construction industry for disposal of inert waste, the Government should compensate them for the transportation expenses because the inert waste would be used for reclamation projects. In response, Ms. Choi explained that imposing a charge on the disposal of construction and demolition waste would encourage the construction industry to adopt methods that would reduce the generation of inert public fill

25. In response to a Member's enquiry, Ms. Choi confirmed that Government projects would also be subject to landfill charge.

26. A Member remarked that the site staff of the sorting facilities might encounter difficulties in turning away waste haulers. He therefore suggested that all incoming waste transported to the sorting facilities should be accepted but they should be charged differently if the inert content fell below a certain level. In response, Ms. Choi explained that because of the large number of trucks using the sorting facilities each day, it would be impossible to wait for the result of the sorting before deciding and collecting the charge. Another Member suggested that the waste haulers could offload

their waste first and a charge for secondary handling could be levied if the waste content was inappropriate. She also suggested setting up an arbitration mechanism to deal with disputes. Ms. Choi explained that due to the space and cost constraints, the suggestion of allowing waste haulers to offload the waste first might not be feasible.

27. A Member also expressed concerns about the potential conflict between waste haulers and site staff of the sorting facilities and asked whether a mechanism could be set up to resolve such conflict, especially if the facilities were to be run by private companies. In response, Ms. Choi said that if the sorting facilities were operated by private operators, they would have the rights to set their own admission criteria. The exact operational plan would depend on the proposals that the private operators would come up with during the "expression of interest exercise".

28. A Member suggested that instead of relying on visual inspection by site staff, waste producers should be asked to make declarations on the content of the waste and a penalty would be imposed if they made false declarations. Ms. Choi pointed out that administrative arrangements involving both the construction sites and the waste haulers would be required. In addition, it would be difficult for the waste haulers who carried waste from ad-hoc renovation works to declare the content of the waste because they usually gathered waste from different sources before going to the landfills. Another Member did not support the above Member's suggestion, as it would affect the operation of the waste haulers and increase their operation cost.

29. In reply to a Member's suggestion of setting up an award system for contractors who had properly handled their waste, Ms. Choi pointed out that there were already awards such as the Considerate Contractors Award and Green Contractors Award for contractors who performed well on environmental management. The Bureau would consider providing other incentives for the contractors.

30. Having regard to the level of the proposed charges for the landfills and the sorting facilities, a Member feared that no private operators would be interested in running the sorting facilities. Ms. Choi noted her concerns but pointed out that it was generally felt that private operators would be able to run business at a lower cost than the Government. The Bureau would thus invite "expressions of interest" from the private sector. The Member asked whether the landfill charge and the charge of the sorting facilities would be the same if the latter facilities were eventually run by the Government. In response, Ms. Choi said that the actual fee charged would depend on the cost of the sorting facilities but it should be lower than the landfill charge so as to provide an incentive for waste producers and haulers to use the sorting facilities.

31. In response to a Member's enquiry, Ms. Choi said that a claim lodged to the Small Claims Tribunal by the waste haulers would be accepted as sufficient evidence that the waste producers had failed to pay them.

32. A Member pointed out that waste haulers would usually demand payment from customers, particularly first-time customers, before carrying out the work. Furthermore, failure to obtain payment from customers should be regarded as business risk. In his view, there was not much ground for suspending the demand for payment of the landfill/sorting charges. In response, Ms. Choi said that according to the waste haulers, it was quite common for them to collect payment after transporting the waste. Hence, failure to obtain payment would add to the risk of bad debt. Furthermore, the suspension mechanism was set up at the request of the Legislative Council to protect the waste haulers.

33. In response to a Member's question, Ms. Choi explained that the operator of the sorting facilities would be responsible for transporting the sorted waste to the landfills and public fill reception facilities. The transportation cost would unlikely be substantial since the proposed sorting facilities would be near to landfills and fill banks.

34. In response to a Member's query on the handling of fallen leaves and grass collected in country parks, Mr. C C Lay clarified that in country parks, such type of biodegradable waste would be left on the soil surface and would decay into fertilizer in a natural way.

35. The Chairman thanked the presentation team. He said that the Council fully supported the landfill charging scheme and hoped that the scheme could be in operation as soon as possible. Mrs. Rita Lau expressed gratitude for Members' constructive comments and hoped that the Council would continue to support the Bureau in implementing the scheme.

Extract of Confirmed Minutes of the 94th Meeting of the Advisory Council on the Environment held on 26 March 2002 at 2:30 p.m.

Present:

Mr. Peter H. Y. WONG, GBS, JP (Chairman)
Mr. Daniel M. C. CHENG
Mr. Edward S. T. HO, SBS, JP
Dr. HO Kin-chung
Mr. KWOK Kwok-chuen, BBS
Prof. LAM Kin-che (EIA Subcommittee Chairman)
Mr. Peter Y. C. LEE
Mr. LIN Chaan-ming
Dr. NG Cho-nam
Mrs. Mei NG
Mr. Otto L. T. POON
Ms. Iris TAM
Miss Alex YAU
Ms. Jessie WONG (Secretary)

Absent with Apologies:

Mr. Barrie COOK
Prof. Anthony HEDLEY, BBS, JP
Prof. Peter HILLS
Prof. Dennis S. C. LAM
Dr. LEONG Che-hung, GBS, JP
Mr. PAO Ping-wing, JP
Mr. Brian ROBERTSON
Mr. Michael J. D. RUSHWORTH
Prof. WONG Yuk-shan, JP
Mr. LOH Ah Tuan

In Attendance:

Mrs. Lily YAM, JP	Secretary for the Environment and Food
Mr. Thomas CHOW	Deputy Secretary (C), Environment and Food Bureau (EFB)
Mr. Donald TONG	Deputy Secretary (B), EFB
Mr. C C LAY	Assistant Director (Conservation), Agriculture, Fisheries and Conservation Department (AFCD)
Dr. Constance CHAN	Assistant Director, Department of Health
Mr. P K CHUNG	Acting Assistant Director (Technical Services), Planning Department (Plan D)

Mrs. Pauline LING	Chief Information Officer, EFB
Ms. Polly LEUNG	Principal Information Officer, Environmental Protection Department (EPD)
Miss Petula POON	Chief Executive Officer (C), EFB
Ms. Cora SO	Executive Officer (C), EFB

In Attendance for Agenda Item 5 :

Ms. Annie CHOI	Principal Assistant Secretary (B)2, EFB
Dr. Ellen CHAN	Assistant Director (Waste Facilities), EPD

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Action

Agenda Item 5: Inviting Expressions of Interest in Providing Integrated Waste Treatment Facility(ies)
(ACE Paper 8/2002)

29. The Chairman welcomed Ms. Annie Choi and Dr. Ellen Chan to the meeting. Ms. Choi briefed Members on the paper.

Provision of information

30. A Member said that it was highly unusual for an Expressions of Interest to provide detailed commercial and financial information as it would not be binding as in the formal tender. He queried whether such information could be relied upon in the short listing exercise. The Chairman commented that those who responded to the invitation might be reluctant to disclose detailed commercial and financial information on the proposed technology/facility. In response, Ms. Choi said that the invitation document would set out clearly information that should be provided by interested parties for assessment purpose. Respondents would be asked to state clearly if there was any information in their submissions that should be kept confidential.

Action

31. A Member considered that the Administration might have difficulty in verifying the financial information. Another Member suggested that the parties should be required to provide references of the proposed technologies/facilities so that the Administration could check the proposal against similar technologies/facilities in operation. In response, Ms. Choi explained that though the provision of financial information was not mandatory, such information was essential for assessing the cost-effectiveness of the proposals. The Administration was aware of the difficulties in verifying the financial information provided but would try to do so through contact with other related parties.

Integrated facilities

32. A Member was concerned that the term "integrated" would mean a combination of technologies/facilities to handle all kinds of wastes and that single treatment technology(ies) would not be welcomed. In response, Ms. Choi said that the Expression of Interest (EoI) exercise aimed to gather information on technologies that could handle large quantities of waste, whether they were single or integrated technologies. At this early stage of technology search, it would be desirable to allow a higher degree of flexibility. Dr. Chan supplemented that there were overseas examples of integrated waste facilities which comprised mechanical sorting of wastes, organic treatment, energy recovery, and recycling of residues. Different combinations of technologies and facilities would be considered.

33. A Member urged the Administration to select different companies that specialized in recycling different materials instead of just one company so as to ensure cost effectiveness. In response, Ms. Choi clarified that the EoI exercise was not limited to recycling facilities. Also, the EoI exercise was not a tender exercise and no companies would be selected for construction and operation of the facilities at the present stage. However, to ensure cost effectiveness, the economic viability of the proposals would be one of the assessment criteria.

34. In response to a Member's enquiry, Ms. Choi said that there were integrated waste treatment facilities in the Unites States, Europe, Australia, Japan and other countries. The invitation would thus be extended to the international waste management industry.

35. The Chairman urged the Administration to keep an open mind in the exercise to avoid ruling out innovative proposals.

Action

36. A Member supported the EoI approach, as it was an effective way to gather information on the latest technologies for handling wastes.

37. A Member also supported the EoI exercise. He suggested that to encourage innovative proposals, the Administration should make it very clear that the exercise was not confined to big integrated waste treatment technologies/facilities but would also welcome non-integrated types of treatment technologies.

38. A Member suggested that the Government should provide a kick-off grant and set up a non-profit-making recycling board to co-ordinate the collection and recycling of different kinds of waste. The board should include representatives from the recycling industries. In response, Mr. Donald Tong said that we could not count on any single measure to deal with the waste problem. The Government recognized that the importance of recycling and had already introduced a series of measures last year to encourage and facilitate recycling. However, we could not count on recycling alone and hence we now invited the waste management industry to offer us proposals to treat the large volume of unrecyclable waste. As regards possible collaboration with the recycling industries, Mr. Tong pointed out that EPD and various working groups under the Waste Reduction Committee were keeping close contact with the industry for exchange of information on the latest development of technology and for identifying areas for cooperation.

Legislative support

39. A Member said that from the Council's study visit to Europe last year, he noted that good technologies could not be implemented without legislative support. He suggested that the interested parties should be encouraged to propose amendments to related legislation if that could facilitate the implementation of their proposals. Echoing that Member's point, the Chairman said that in addition to legislative support, community acceptance was also crucial to the successful implementation of waste treatment proposals.

Action

Timetable

40. Noting that the estimated earliest commencement time for the selected facilities was 2012, a Member expressed concern that they might not help address the landfill problem to a significant extent. In response, Ms. Choi explained that the timetable only served as a rough indication. Upon the completion of the EoI exercise, a number of processes like public consultation, funding application, EIA, tendering, detailed design and construction of the facilities would follow and the Administration would try to shorten the time required for each process.

41. In response to a Member's enquiry, Ms. Choi said that the tendering exercise would take place after the EIA process. That Member commented that it would seem unfair to the tenderers if the selected technology/facility was patented. Dr. Chan responded that a technology/facility was unlikely to be patented though a particular process or material used in a technology might be, but that would not do the tenderers any injustice.

42. Mrs. Lily Yam informed Members that when the Waste Reduction Framework Plan was released in 1998, the recommended approach was to adopt waste-to-energy as the bulk waste reduction method. However, in the light of rapid development of waste treatment technologies and the changing aspirations of the community in environmental protection, the Administration considered it appropriate to search for a suitable technology or combination of technologies that would best suit Hong Kong through the EoI exercise. She agreed that the word "integrated" might cause confusion. As regards the assessment mechanism, an Advisory Group would be set up to evaluate the submissions with assistance provided by EPD. She appreciated Members' concern about the proposed timetable but pointed out that the site selection process might take up a great deal of time given the public sentiment on the location of waste treatment facilities. That said, the timetable required adjustment and the Administration would try to expedite the whole process as far as practicable.

Action

Landfill charging scheme

43. A Member enquired about the implementation date of the proposed landfill charging scheme and expressed concern about the difficulties in charging operators of ad-hoc renovation work. In response, Ms. Choi said that they would submit the proposed landfill charging scheme to the Legislative Council in the coming months. Upon Legislative Council's agreement to the proposal, the scheme could be implemented within 12 to 16 months. Regarding ad hoc renovation work, Ms. Choi pointed out that it was impossible to identify the waste producers due to the ad-hoc and diverse nature of such work. Therefore, a charge could only be levied at the landfill gate.

44. On renovation waste, a Member said that residents/waste producers had to pay for the collection and disposal of the waste even now. Hence, the waste haulers' concern of bad debts was not justified.

45. The Chairman asked whether the landfill charge of $125 per tonne was based on the value of agricultural or residential land. In reply, Ms. Choi said that the figure included only the capital and operating costs of the three landfills and no land cost had been included. The charge would amount to $205 per tonne if the value of agricultural land was included.

46. The Chairman thanked Ms. Choi and Dr. Chan for the briefing and concluded that the Council fully supported the EoI exercise and the landfill charging scheme.

ACE Secretariat
April 2002