

**WEEE Recycling Centre funded by
the Environment and Conservation Fund:
Way Forward**

Purpose

1. The funding support for the WEEE Recycling Centre (“WRC”) now operated by St James Settlement (“SJS”) at the EcoPark would expire in October 2013. This note proposes continued funding support from the Environment and Conservation Fund (“ECF”) with appropriate adjustments to the project objectives and performance targets.

The Recommendations

2. In view of the success in the first phase (to be elaborated in paragraphs 3 to 6), we *recommend* that –
 - (a) by way of open tender we select a competent NGO operator to proceed with a second phase (subject to a \$10-million project budget ceiling) for a 36-month period until October 2016 as the mandatory producer responsibility scheme (“PRS”) is being developed; and
 - (b) we suitably adjust the project objectives under the second phase by requiring the WRC project to more proactively promote the recycling of WEEE items and place more emphasis on refurbishment for reuse, either through donation to the needy or sales as second-hand goods.

Justifications

Present Position

3. The WRC project, initiated in May 2009, was intended to replace the former facility at Kowloon Bay which could not be further expanded to cater for increasing demand. The operator (i.e. SJS) was selected through open tender and funding support was approved for a three-year term subject to a \$10-million ceiling and other regular terms and conditions under the ECF. The project accepts all types of WEEE but is intended to recover more “common” WEEE items including (i) the four types of appliances to be covered under the mandatory PRS (collectively referred to as “bulky WEEE”) i.e. television sets, refrigerators, washing machines and air conditioners as well as (ii) smaller-sized household appliances, i.e. microwave ovens, AV equipment, fans, rice cookers, etc. mainly for proper treatment with some small proportion for refurbishment and ultimately donation or resale. The WRC project is funded on a reimbursement basis; SJS would be paid the operating expenses upon completion of WEEE processing at incremental quantity as set out in the contractual payment schedule.

4. As at end March 2012, the WRC project has been operative for 18 months and has received \$4.0 million (i.e. 40% of the ceiling) and processed 385 tonnes of WEEE (i.e. 57% of the total processing target). Performance of the operator and effectiveness of the project are considered as satisfactory. In particular, SJS managed to accomplish their WEEE processing targets and controlled their operating expenses well within the approved budget. Apart from building an extensive collection network at the community level, SJS also secured contributions and support from renowned businesses, notably CLP which sponsored the setting up of an education centre and Siemens which offered voluntary technical transfer on refurbishment techniques. The operational experience from the WRC project has also provided valuable inputs to the planning of the mandatory PRS which would include the development of a local WEEE treatment plant.

Justifications for a Second Phase

5. At present, some 70,000 tonnes of WEEE is generated annually

in Hong Kong, 85% of which belongs to bulky household appliances as well as computer products that would be covered under the future PRS. The remaining 15% is mainly medium-sized equipment such as microwave ovens and other smaller items such as AV equipment, fans, heaters, rice cookers, etc (collectively referred to as “non-bulky WEEE”). In the first 18 months of operation, the WRC project has collected/processed 385 tonnes of WEEE, including –

	Refurbished		Dismantled
	Donated	Sold	
Bulky WEEE	21	4	153
Non- Bulky WEEE	13	7	187
Total	34	11	340

6. By now, the successful operation of the WRC project has created a constant demand from the community for an environmentally sound recycling outlet through which WEEE could be refurbished for donations or if not feasible properly detoxified and dismantled. Looking ahead, taking into account (amongst other things) the experience gained from the WRC project, we are actively pursuing the development of a WEEE treatment plant at the EcoPark through Design-Build-Operate (“DBO”) with a capacity of 30,000 tonnes annually. Since the new facility would not be commissioned until 2015/16, there is a strong case to retain the project as a stop-gap measure pending the commissioning of the permanent facility so as to maintain a proper recycling outlet in Hong Kong. We therefore propose that we go for a second phase of a 36-month period until October 2016.

7. The ECF Secretariat has consulted the Financial Services and the Treasury Bureau regarding the continuous funding support through ECF for the extended operation of the WRC. The Bureau has reiterated the principle of accountability for the use of public fund, in particular in relation to the potential public interest over projects receiving sizable funding support. Having regard to the assessment above, the Secretariat recommends a funding ceiling of \$10 million should continue to be imposed. In addition, the project should be closely monitored to ensure that there is no overlapping of resources and that this project would not become recurrent and standing item under the ECF.

Project Objectives and Performance Targets

8. In order to cater for the anticipated increase in demand for services over time, the new operator should in the second phase more proactively outreach to WEEE sources, with the target of establishing regular collection services for no less than 450 housing estates (cf. 300 under existing services) of which there should be a reasonable mix between private and public housing. In addition, there are a total of 15 collection points operated under the existing WRC project and we would require the new operator to progressively expand the coverage with an ultimate objective to enable a territory-wide provision in ALL the 18 districts.

Non-Bulky WEEE

9. While the second phase might bridge over the gap of service before the full implementation of the PRS, we also cherish an early opportunity to explore an optimal approach in the management of non-bulky WEEE which falls outside the PRS coverage. Experience from the first 18 months of the WRC project is that there might also be a demand for recycling outlets for these items probably because they are less popular in the second-hand market. For individual product types (e.g. mobile phones), there have been feedback suggesting that a not-for-profit recycler with credibility and good reputation could potentially encourage recycling which is not widely practiced due to privacy, data security or other concerns. Our proposal is for the second phase to more proactively promote the recycling of non-bulky WEEE through –
 - (a) arousing the public's awareness to the environmental costs associated with the use of non-bulky electrical and electronic equipment which albeit generally not containing hazardous materials is also made principally of metal and plastics and should be properly recycled rather than dumped as ordinary trash;
 - (b) assuring the community that a proper recycling outlet for non-bulky WEEE (including mobile phones) is also available in Hong Kong despite the fact that the mandatory PRS would as a matter of law apply to television sets, washing machines, refrigerators, air

conditioners and computer products; and

- (c) increasing the amount of non-bulky WEEE collected under the WRC project, enabling the operator to gain more practical experience in the collection, refurbishment and dismantling of such items at a reasonable scale of operation.

10. At present, the WRC project is recovering on average 20 tonnes of WEEE on a monthly basis. In the second phase, we would require a similar amount of WEEE to be recovered. But by composition, we hope that no less than 60% (by weight; cf. ~50% under current services) would be non-bulky WEEE.

Dismantling for Recycling vs Refurbishment for Reuse

11. The capacity of the permanent WEEE treatment plant, at 30,000 tonnes per annum, would be significantly larger than the current operation in the WRC project. This could enable automation by which the treatment processes could be done in a much more cost effective manner than the current manual operations under the WRC project. For more gainful use of public funds under the ECF, we propose that the second phase of the WRC project could place more emphasis on refurbishment which has to rely on manual work (by skilled technicians) even with the PRS and thus suitably scale down manual dismantling operations in the second phase. Accordingly, we would require that the WRC project should continue to carry out dismantling for (i) hazardous items, (ii) maintaining a demonstration production line for education programmes and (iii) sparing stockpiling space as necessary.

12. Shifting the strategic focus of the project to refurbishment is expected to be conducive to sustainable waste management in the following aspects –

- (a) As the most preferred strategy under 3R, “reuse” promotes the avoidance of waste at source and reduces consumption of energy and other natural resources either in the manufacturing of new products or in the recycling process.

- (b) In line with international experience and as a measure to demonstrate corporate social responsibility, the

management contractor for a WEEE treatment plant would normally set aside a small percentage of reusable items for donations. We need more experience on how the necessary refurbishment could be efficiently carried out. As a rough indication, a “1% donation” requirement would generate a demand for refurbishment work at 300 tonnes per year far exceeding the current refurbishment capacity of the first phase.

13. Experience also shows that donation of refurbished products to the needy could considerably enrich our PR message in promoting waste reduction and recovery by making a strong appeal that on top of environmental protection, participation in recycling activities could also tangibly help the less privileged in our community. During the first 18 months of operation, the WRC project has donated 3,862 items of different equipment to the needy, including bulky items like refrigerators, washing machines, TVs and other smaller items like fans, microwave ovens, rice cookers, etc. Those who have benefited include single parent families, the elderly and charitable organizations. In addition, the donation services under the WRC project also played a role in case of community crisis as in the case of the massive fire broke out in Fa Yuen Street, Mongkok in late 2011¹.
14. As far as performance target is concerned, we would require that the number of refurbished items to incrementally increase to reach a quarterly capacity of 220 pieces for bulky WEEE (cf. ~150 under current services) and 2,000 pieces for non-bulky WEEE (cf. ~1,200 under current services) by the fourth quarter of the second phase. As more WEEE items are refurbished, practical experience could be accumulated on how to make good old appliances of different brands and different models efficiently. More donation applications could also be entertained at an earlier opportunity. At the same time, there would be rooms for the operator to explore market feasibility of reselling part of the refurbished appliances thus creating revenue streams to enable the operation to become viable social enterprises in a longer run.

¹ The fire destroyed the homes of over 100 people. The WRC project swiftly supplied refurbished appliances to the unfurnished temporary housing assuring the victims of basic standard of living at a tragic moment.

Community Education and Publicity

15. As we are drawing close to the implementation of the mandatory PRS, we need to deepen our efforts in community education and publicity to prepare Hong Kong people for compliance with the new scheme which would ban improper disposal of WEEE. The second phase of the WRC project should contribute in this aspect. To this end, our proposal in paragraph 7 to raise the outreach target could partly serve this purpose. On top of that, we would require the new operator to develop plans on public education programmes. We would also require the operator to organize large scale publicity events following the successful experience of the “Here WEEE Go” event held in October 2011.
16. To echo with the shifted strategic focus in the second phase, such publicity efforts should place sufficient emphasis on the services for non-bulky WEEE which fall outside the scope of the future PRS. This would complement our own PR work which would inevitably focus on the statutory scheme which covers television sets, washing machines, refrigerators, air conditioners and computer products only.

Other Options

17. It is an option to maintain the current project scope. We however consider this option less desirable because new experience to be gathered from continuing with the current mode of operation might not have significant marginal benefit to our PRS planning as we have attained an implementation stage. Adopting this approach would also imply that the WRC project might have to wind down upon completion of the second phase because its function would largely be undertaken by the future WEEE treatment plant.
18. An even less desirable option is not to proceed with a second phase. This would mean that the WRC project would come to a close by October 2013. There would be a gap of over two years before the commencement of the PRS and the commissioning of the WEEE treatment plant; during this gap period, no Government-supported WEEE recycling services would be available to the public. This option is counter-productive to our public education efforts in respect of proper WEEE management.

Advice Sought and Way Forward

19. With the justifications and other considerations set out from paragraph 3 to 16, Members are invited to advise whether the recommendation in paragraph 2 could be approved.

20. The WRPVSC discussed this paper in the meeting on 18 September 2012 and recommended the ECF Committee to support the proposal in paragraph 2. Subject to this Committee's endorsement, an open tender exercise would be conducted, tentatively between November 2012 and February 2013, to select the new operator. The tender assessment would be submitted to the WRPVSC or the ECF Committee as appropriate for approval in around March/April 2013 with a view to starting the new contract timely to succeed the first phase. Under this timeframe, we could allow ample time for handover preparation between July and September 2013 before the first phase is due to expire in October 2013.

**Waste Management Policy Division
Environmental Protection Department
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