



LEGCO PANEL ON ENVIRONMENTAL AFFAIRS – 26 March 2012

“Reduce, Recycle and Proper Waste management”: Progress of the Key Initiatives under the Waste Management Strategy

Submission from Living Islands Movement (Session 1, 10.45 am – 11.45 am)

We urge the Honourable Members to ask EPD the following questions with reference to the IWMF Phase 1 project (5177DR):

1. We challenge EPD’s claim that it is recovering 52% of Hong Kong’s MSW. According to Government figures, 18,000 tonnes of MSW is produced in Hong Kong every day. We believe this includes material exported by the private sector in the normal course of business that is not processed by government facilities. In fact, we believe that government actually collects about 9,000 tonnes MSW per day, and that only a small percentage of this is recovered. So we ask: Precisely how much MSW collected from domestic and commercial premises was recovered by Government in 2011?
2. In a letter to Living Islands Movement of 31 October 2011 (attached), EPD stated that cost estimates were in preparation for both Shek Kwu Chau (SKC) and TTAL proposed sites. Why are they not included in today’s proposal (5177DR) presented to the Panel for Environmental Affairs? What are the comparative costs of the two locations?

3. LIM estimates that the cost of an incinerator at TTAL would be HK\$3-5 billion and would be commissioned two years earlier than one at SKC, saving HK\$20 billion tax payers' money. Why has TTAL therefore not been chosen for the first incinerator? Further, can EPD confirm that TTAL is to be the site of a second incinerator as indicated in the map in Annex E1 of today's paper?
4. EPD claims that transport distance for MSW to SKC is one fourth less than TTAL. But, why is EPD concealing the additional sea transport required to take the toxic residue from the SKC location (over 900 tons per day) to TTAL?
5. We do not understand the claim that a "balanced spatial distribution" is achieved by siting an incinerator at SKC. What is the justification for this when it goes against the normal planning practice of siting industrial facilities away from areas zoned for conservation and recreation?

Louise Preston
Chairman
Living Islands Movement

23 March 2012

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31 October 2011

Ms Louise Preston
Chairman
Living Islands Movement
GPO Box 1218
Hong Kong

Dear Ms Preston,

Integrated Waste Management Facilities Phase 1 (IWMF)

Thank you for your letter of 3 October 2011 in response to our previous reply letter of 7 September 2011. We would like to provide the further information as follows.

Berthing facility at Tsang Tsui

The existing seawall at the Tsang Tsui Ash Lagoons (TTAL) site is a sloping seawall not suitable for berthing of marine vessels. Hence, for both of the potential sites of IWMF Phase 1 (i.e. Tsang Tsui Ash Lagoon (TTAL) and the artificial island nead Shek Kwu Chau (SKC)), the existing berths and marine reception areas at the West New Territories (WENT) Landfill will be used to receive containerized waste from all the refuse transfer stations that employ marine vessels. Moreover, the use of the existing berths and marine reception areas will also enhance the overall operation of waste transportation and delivery to become more efficient through maximizing and sharing the existing logistic resources.



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Capacity

The current proposed artificial island site near Shek Kwu Chau will only have a treatment capacity of 3000 tonnes per day. As mentioned in our pervious reply letter of 7 September, even with our target recovery rate of 55% to be achieved by 2015, the huge amount of Municipal Solid Waste (MSW) that cannot be recovered or recycled in Hong Kong will still stand at more than 8,000 tonnes per day. It has to be treated effectively and properly with modern waste treatment facilities to bring about a substantial reduction in the amount of waste to be disposed of at landfill. Since the capacity of the IWMF Phase 1 at the artificial island near SKC can only handle 3,000 tonnes of MSW per day, it is essential for us to keep in view the need for further IWMF and food waste treatment facilities, taking into account the progress and effectiveness of various waste reduction and recycling initiatives that are being pursued. If there is a need for developing the IWMF Phase 2, TTAL will be one of the potential suitable sites to be considered.

Potential glare and visual impact

The IWMF is proposed to be developed at an artificial island near Shek Kwu Chau which is about 3.5 - 5.5 kilometer and 6.5 kilometer away from Cheung Chau and Cheung Sha respectively as shown in the figure below.



The high hills at SKC would be served as a natural visual barrier to views from the east and north. Given that the coast line of South Lantau such

as Pui O Beach and Cheung Sha Beach are some distance (about 5 to 6 km) away from SKC, the view from South Lantau towards SKC should not be unacceptably affected by the IWMF at the artificial island and any (see example of photomontage in Figure A and Figure B below extracted from the EIA report). The mitigation measures mentioned in our previous reply can meet the safety requirements at night. The residual glare escaping from the artificial island and reaching South Lantau will be minimal.

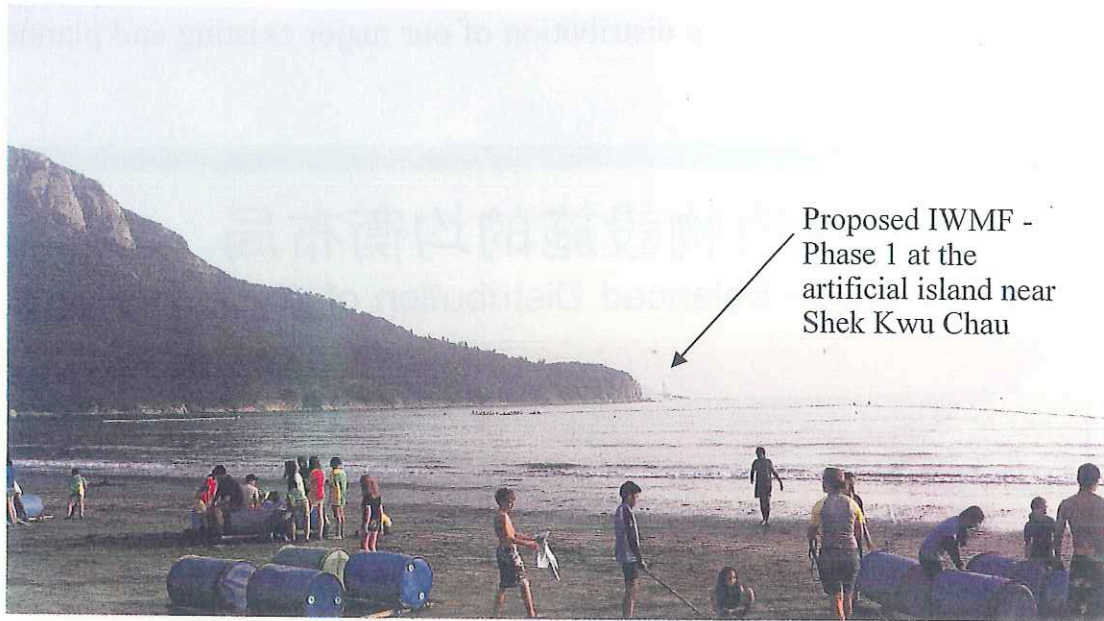


Figure A: View from Pui O Beach to SKC when IWMF - Phase 1 is in operation and most of the IWMF - Phase 1 will be blocked by SKC.

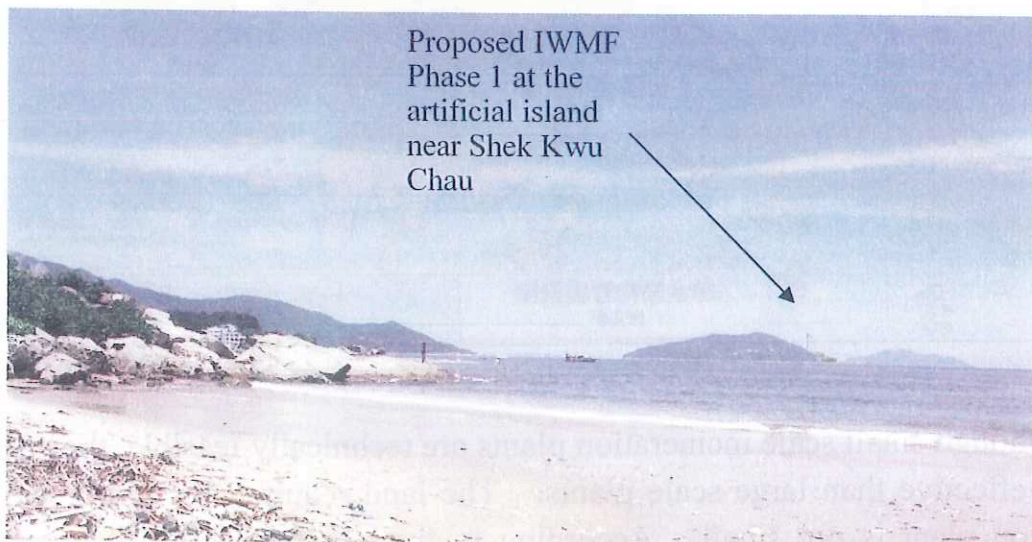


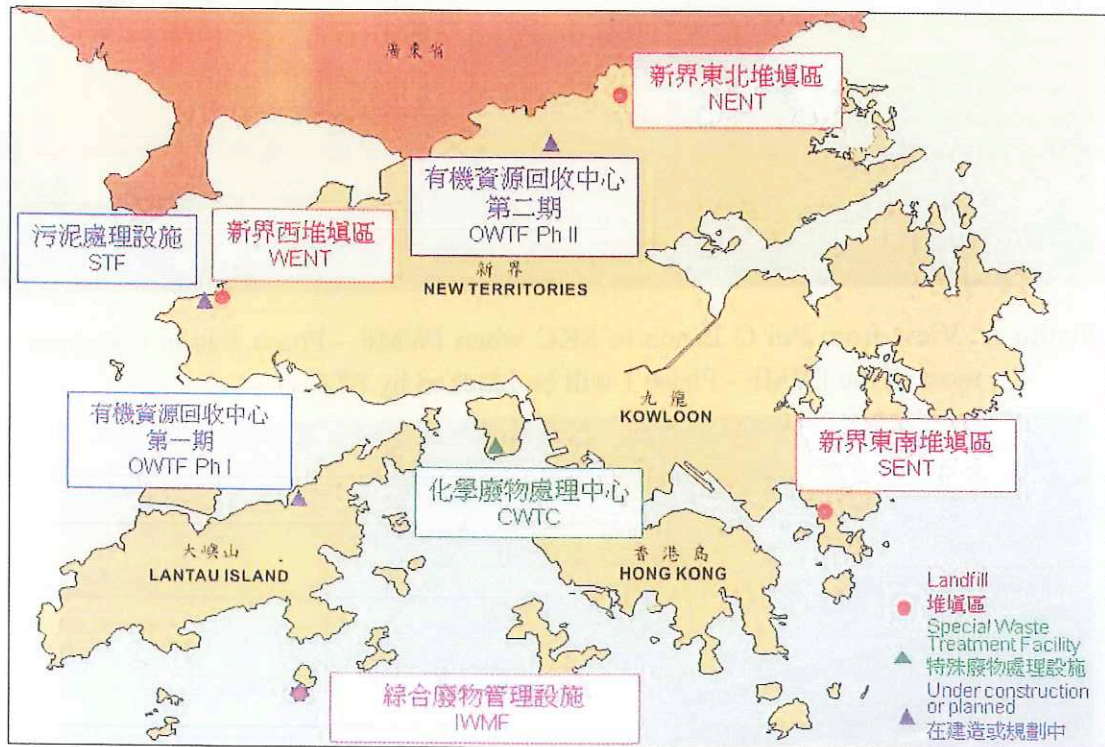
Figure B: View from Cheung Sha Beach to SKC when IWMF Phase 1 is in operation and most of the IWMF will be blocked by SKC.

Site Selection Considerations

Taking into account the EIA results and Hong Kong's overall waste management strategy, the Government has identified the artificial island near SKC as the preferred site for developing the first modern IWMF in Hong Kong. This can well match with our existing marine transportation network of MSW with similar resources for implementation and also achieve a more even distribution of our major waste treatment facilities in the territory. The diagram below shows a balance distribution of our major existing and planned waste facilities.

選址傾向 - 廢物設施的均衡布局

Site Preference - Balanced Distribution of Waste Facilities



Although small scale incineration plants are technically feasible, they are less cost-effective than large scale plants. The land required for small scale incineration plant is not small. According to the experience in Tokyo, the smallest incineration plant that treats 200 tonnes of waste requires about 1 ha. of land. For larger plants with capacities from 300 to 600 tonnes per day, about 3 to 5 ha will be required. Given the already highly congested, high

density urban area with high rise buildings and the huge shortage of land for housing development, it will be very difficult to identify a suitable site for accommodating small incineration facilities in urban area.

Furthermore, on the recommendation of the Advisory Council on the Environment (ACE), the integrated waste management facilities (IWWMF) will be developed in phases. With reference to the capacity of similar IWWMF in other densely populated cities (e.g. Singapore where the demographic and geographical characteristics are similar to Hong Kong) and for better cost-effectiveness, the Government has decided that the IWWMF Phase 1 will have a treatment capacity of 3,000 tonnes each day, having taken into account the effect of plans and programmes on waste reduction and recycling, the proven reliability of an incineration plant on the proposed scale, and the site selection and environmental constraints. The scale of a number of incineration plants overseas is similar to that of the proposed IWWMF with a treatment capacity of 3,000 tonnes each day. Examples are the Tuas South and Senoko incineration plants in Singapore, the Amsterdam incineration plant in the Netherlands and the Lorton incineration plant in Virginia, USA.

Air quality impact

The IWWMF EIA Study has used scientific mathematical models to assess in detail the air quality impact of the IWWMF's emissions throughout the year, including the impact on neighbouring places, such as Cheung Chau and South Lantau. Given that the IWWMF is several kilometers away, the emissions from the IWWMF will be greatly diluted when they reach South Lantau. Findings of the EIA Study show that emissions from the IWWMF will only have a negligible impact on the neighbouring places and the predicted air quality will fully meet the short-term (i.e. hourly) and the long-term (i.e. annual) air quality standards. For example, taking into account all the sources of emission in Hong Kong, the annual average cumulative concentrations of nitrogen dioxide in Cheung Chau and Cheung Sha at South Lantau are projected to be 26 $\mu\text{g}/\text{m}^3$ and 17 $\mu\text{g}/\text{m}^3$ respectively, far below the air quality objective of 80 $\mu\text{g}/\text{m}^3$. Emissions from the IWWMF account for less than 0.08 $\mu\text{g}/\text{m}^3$ and 0.12 $\mu\text{g}/\text{m}^3$ of such concentrations respectively. Given that the IWWMF would be developed to high environmental standards in compliance with stringent emission standards as explained in the preceding paragraphs, it would not impact Cheung Chau and Lantau adversely.

Education and community facilities

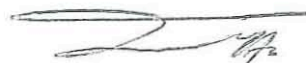
The IWMF will have a high quality architectural and landscaping design so as to blend the facilities into the surrounding green environment. For example, boulders with the similar textures of the existing rocky shores would be employed for the construction of breakwater and the shoreline of the reclamation area to echo the existing natural shoreline of Shek Kwu Chau; rooftop and vertical greening along with the periphery of each building would be implemented to increase the green environment effect and landscape would also be introduced at the stack to further enhance the overall natural and green concept. With reference to the current community facilities developed in our current Sludge Incineration Facilities, the IWMF will include an education centre and related visitor facilities provisions that are conducive to tourism development. The education centre and visitor facilities would provide demonstration of advanced waste management technologies and information on the ecology of the areas around SKC. We anticipate that the IWMF – Phase 1 could attract several hundred visitors a day, helping to boost tourism in the area.

Cost estimates

As mentioned in my previous letter, we are now preparing and finalizing the cost estimates for developing the IWMF, taking account of the on-going consultation with the local community on the community facilities to be included in the IWMF project. The study will cover both the SKC and TTAL sites.

I would like to thank members of the Living Islands Movement again for giving us the opportunity to present and discuss the proposed IWMF development and for their interest in environmental matters. We look forward to the collaboration and further liaison with your members

Yours sincerely,



(Elvis W K Au)

for Director of Environmental Protection

LIM POSITION ON WASTE INCINERATION IN HONG KONG

STOP PRESS – SEE LATEST DEVELOPMENTS IN NEW YORK BELOW

We oppose absolutely the Government's plan to build a Supersize Incinerator on land to be reclaimed next to the picturesque island of Shek Kwu Chau, near Cheung Chau and South Lantau.

There are many reasons for our objection. These include: A politically-motivated site selection decision based on a weak Environmental Impact Assessment (EIA) study, failure of due process, inadequate consultation and engagement with the people most affected by the project, failure to implement the government's previous waste management strategy (of 2005), failure to educate the public and facilitate up-to-date waste reduction, recycling and reuse practices ("3Rs") in Hong Kong and failure to investigate alternative technologies and approaches.

Specifically regarding the Shek Kwu Chau site:

1. It is the most expensive and inconvenient location
2. The time-line involved will not meet EPD's own supposed deadline
3. It is the most environmentally sensitive of the short-listed sites
4. The impact on the quality of life and tourist business in the surrounding area, including Cheung Chau and South Lantau, has not been taken into account
5. In planning terms, the location is totally inappropriate. The area is reserved for conservation and recreation. It forms a much needed "green lung" for the Western side of Hong Kong that will be seriously compromised by this scheme.

The location decision was not based on objective criteria. If a large incinerator is not acceptable in an appropriate area (i.e. an industrial zone), then it is not acceptable at all.

Specifically regarding incineration:

1. EPD have not addressed widespread concerns about dioxin and small particle (P1.0-2.5 μ) pollution of air, water and land generated by incineration.
2. LIM believes that the potential for 3Rs is much greater than government portrays and that incineration of unsegregated waste in particular should be strongly discouraged.

3. LIM and others are not satisfied that all the alternative methods of dealing with HK's waste problem have been fully investigated, including the possibility of greater cooperation in the Pearl River Delta area.

LIM and others believe that each of the 18 districts of Hong Kong should be involved in, and at least partly responsible for, its own waste management. Setting up a single giant incinerator in a supposedly remote but scenic location is bad policy in every way.

The goal of our anti-incinerator campaign

Our main objective is have the incinerator project shelved pending a complete rethink of waste management strategy throughout the territory. Instead of a single giant incinerator, we want to see urgent and vigorous implementation of:

1. Comprehensive waste segregation starting in every household and every office and every shop. Collection and delivery systems for the separate categories of waste to be set up
2. Establishing a network of recycling and reuse exchange centres across the territory
3. Promoting to development of recycling businesses based on wood, glass, metal, plastics and other collected materials, including offering financial support to private sector SME initiatives, where needed to "seed" businesses
4. Financial measures (i.e. a waste charging regime) should also include incentives to reduce, recycle and reuse
5. Strong producer responsibility schemes and reduced packaging measures must be introduced in parallel to 3Rs at the user end.

The target should be to recycle or process almost all organic waste, paper, wood, plastics, glass, and metals.

Only then should the need to incinerate an irreducible minimum of waste be addressed.

If incineration is to be contemplated at all we want to see all the new technologies that are being talked of investigated properly.

Finally, we want to see government (and not just EPD) engage the public in a territory wide consultation on how to deal with Hong Kong's waste problem. That should involve listening to new ideas instead of just "selling" this expensive incineration scheme.

FRESH APPROACH TO WASTE MANAGEMENT IN NEW YORK CITY

Here are some key passages from an article in Waste Management World (www.waste-management-world.com) kindly provided by James Middleton of Clear the Air:

New York City mayor, Michael Bloomberg has launched a Request for Proposals to build a waste to energy facility.

Private sector firms have been asked to submit plans for a pilot facility using reliable, cost-effective, sustainable and environmentally sound waste to energy technology, which will help the City meet its goal of doubling the amount of waste diverted from landfills, as Bloomberg committed to doing in his State of the City speech.

The City will not provide any capital funding for the proposed facility and will pay a per tonne fee to the operator of the facility.

Furthermore, the proposal is seeking the cleanest and most modern waste to energy technologies, and specifically excludes conventional incineration or "mass burn" proposals.

Companies wishing to submit a proposal will be required to provide detailed environmental data, including extensive emissions performance data and greenhouse gas reduction data. The Department of Health and Mental Hygiene will evaluate all emissions data.

Environmental justice

According to a statement from the Mayor's office, the selection of a clean conversion technology facility will follow the environmental justice approach established in the City's Comprehensive Solid Waste Management Plan, by ensuring borough equity in the siting of solid waste infrastructure.

As such, the City said that proposals must include a Participation Plan with "meaningful opportunities" for public involvement throughout the planning, approval, implementation, construction, testing and operation phases of the facility.

The City said that siting, construction and operation of the conversion facility will undergo extensive environmental and community oversight, including a City Environmental Quality Review and State Environmental Quality Review, as well as approvals from the State Department of Environmental Conservation.

LIM URGES HK GOVERNMENT TO ADOPT A SIMILAR MODERN, INCLUSIVE, ECONOMIC AND HEALTH CONSCIOUS APPROACH TO WASTE MANAGEMENT IN THE TERRITORY.

「島嶼活力行動」就香港興建垃圾焚化爐之定位

我們極力反對在南大嶼山及長洲隣近風景如畫的石鼓洲傍以填海方式興建巨型焚化爐。我們的理據如下：

我們持以下反對原因，包括：焚化爐的選址以不夠全面的環境影響評估研究來作為一個政治主導的決定，缺乏恰當的程序，缺乏對最受影響的市民提出諮詢及參與，未能執行政府在 2005 年的廢物管理策略，未能對全港市民教育及促進最新的 3R 原則(減少、回收、重用)和未能尋求有效的替代技術和方法。

針對選址在石鼓洲：

- 1。這是最昂貴和不便的位置。
- 2。所涉及的時間與環保署原意的期限並不符合。
- 3。這是對環保問題最敏感的選址之一。
- 4。尚未考慮影響生活質素量及周邊地區，包括長洲及大嶼山南部的旅遊業。
- 5。該選址在規劃方面是完全不合適的。該地區原意作為保護大自然及悠閒用途。這項計劃將嚴重損害該地區作為香港西面的“綠肺”。

此外，該選址之決定並非基於客觀的標準。如果一個大型的焚化爐是不能在一個適當的地區（如工業區）所接受，那麼它在甚麼興建都根本不能接受。

針對關於垃圾焚化的問題：

- 1。環保署並沒有評論被受廣泛關注在焚燒垃圾時所產生的二噁英和微粒（P1.0-2.5 μ ）對空氣、水和土地的污染。
- 2。「島嶼活力行動」深信 3R 的潛在需要比政府所述的急切得多，對於焚燒不能分類的廢物更應極力阻止。
- 3。「島嶼活力行動」和各界均不滿沒有全面研究其他處理香港廢物問題的方法，包括加強在珠江三角洲地區合作的可能性。

「島嶼活力行動」及各界認為香港 18 區的市民都應該肩負廢物處理的任務。在一個認為偏遠但風景秀麗的一地方上興建一座巨型焚化爐，屬非良策。

我們就反興建焚化爐運動的目標

我們的主要目標是將現時興建焚化爐的項目擱置，直至對全港的廢物處理策略得到全面的考慮。對興建一座巨型焚化爐，我們反而更希望以下迫切的問題得以大力推行：

- 1。向每家每戶、每間辦公室甚至每家商戶進行綜合廢物分類。設立不同類別的廢物收集和運送系統
- 2。建立遍佈全港的回收和重用交流中心網絡
- 3。發展以木材、玻璃、金屬、塑料和其他收集的材料為主的企業，包括提供財政支持私營的“種子”企業及其相關的中小企業
- 4。鼓勵以減少、回收和重用的財政措施，如廢物收費制度
- 5。落實生產商自負計劃，並推行減少包裝措施以配合 3R 原則致各用戶。

最終目標是對幾乎所有有機廢物、紙張、木材、塑料、玻璃及金屬進行回收或處理。

只有這樣才可繼續討論焚燒極少不可分解廢物的需要。

如果焚化廢物的方案仍需考慮，我們希望應先參考所有正在研發中的環保新技術。

最後，我們希望政府（不只是環保署）能向公眾就如何處理香港廢物問題作出廣泛諮詢。這應包括聽取新的民意，而不是只“推銷”這個昂貴的焚化爐計劃。