

Legislative Council Panel on Environmental Affairs

**Supplementary Information on
Environmental Infrastructure Projects**

- (i) **5163DR: Northeast New Territories (NENT) landfill extension**
- (ii) **5164DR: Southeast New Territories (SENT) landfill extension**
- (iii) **5165DR: West New Territories (WENT) landfill extension**

At the Environmental Affairs Panel meetings held on 27 May 2013 and 1 June 2013, Members requested the Administration to provide supplementary information on the following issues:

Was there any previous commitment or ‘promise’ from the Government on the closure of the existing SENT Landfill that had misled the public and local community into thinking that the landfill would be closed in 2011/12?

2. Since the inception of the SENT Landfill Extension project in 2004, the Environmental Protection Department (EPD) has adopted a continuous public involvement approach with the statutory bodies, non-statutory organizations and local organisations, including the Sai Kung District Council (SKDC). A summary of the key public consultation/engagement activities was given at Annex C2 of the Environmental Affairs Panel Paper CB(1)1079/12-13(01) presented at the meeting on 27 May 2013. Throughout the consultation process, EPD clearly mentioned the importance and need to extend the SENT Landfill upon its exhaustion. The major consultation papers presented to the SKDC are listed at **Appendix A** for ease of reference. In addition, the Government issued in 2005 the “Policy Framework for the Management of Municipal Solid Waste (2005-2014)” to the community at large which set out a comprehensive waste management strategy based on the three-tiered approaches with *avoidance and minimization* as top priorities, followed by *reuse, recovery and recycling*, with *bulk reduction* at the end of the hierarchy. There were clear targets, measures and implementation timelines and the plan and need to extend the three landfills was also stated clearly in this public policy document.

Some background information on the planning of the residential development at Tseung Kwan O (TKO) Area 86 (site of LOHAS Park)

3. Regarding the planning of the residential development at TKO Area 86 (i.e. the LOHAS Park), there were extensive discussions at the Town Planning Board (TPB) meetings with representations held in November and December 2011. The relevant parts of the minutes were extracted and enclosed in **Appendix B** for reference. In brief, the rezoning of the industrial sites in TKO Area 86 for residential development in 1998 was based on relevant planning and environmental assessments conducted for the area, i.e. TKO Area 86 Planning Study. The study concluded that Area 86, where the LOHAS Park was presently located, was suitable for residential development. Although the study identified that there were a number of constraints in the vicinity of Area 86, including the landfill, they were not considered to be technically insurmountable. To ensure that the proposed residential development in TKO Area 86 would not be subject to undue adverse environmental impacts, it was zoned “Comprehensive Development Area” (“CDA”) on the TKO Outline Zoning Plan, under which zoning planning permission from the TPB would be required for any residential development. The applicant had to submit a Master Layout Plan (MLP) for the proposed development and provide justifications and technical assessments (including environmental aspects) to substantiate the application. In the environmental assessment submitted together with the MLP, the developer had already proposed some environmental mitigation measures such as paving of noise reduction material along the section of Wan Po Road near the LOHAS Park. The requirements on the provision of environmental mitigation measures had been incorporated in the lease conditions of the LOHAS Park development.

4. In July 2010, the Legislative Council Secretariat also prepared a fact sheet [LegCo Secretariat paper no. FS27/09-10] for the Subcommittee on Country Parks (Designation) (Consolidation) (Amendment) Order 2010 with information on whether the presence of the SENT Landfill had been mentioned in the sales brochures of the residential properties (LOHAS Park). It indicated that the presence of SENT Landfill was not mentioned in the sale of The Capitol and Le Prestige in February 2008 and July 2009, respectively. The presence of the SENT Landfill was mentioned in the sale of Le Prime in November 2009 when the revised Guidelines for Sales Descriptions of Uncompleted Residential Properties were issued in October 2009. The fact sheet is attached in **Appendix C** for reference.

Could the Government just extend the NENT Landfill and WENT Landfill as the extension of the SENT Landfill is comparatively small?

5. The three strategic landfills are distributed on a territorial basis having taken into consideration current and future waste generation and source, traffic and strain on the surrounding road network as well as other associated environmental issues. Their locations at the western, north-eastern and south-eastern New Territories, together with a network of refuse transfer stations (RTSs), are well placed to provide a balanced setting to meet the waste disposal demands of the community at both regional and territorial levels. This provides a most efficient community service to the public with minimum environmental impact.

6. Timely extension of all three landfills is very crucial as reaffirmed in the “Hong Kong Blueprint for Sustainable Use of Resources 2013-2022” (the Blueprint) released on 20 May 2013. We simply do not have adequate landfill space to meet Hong Kong’s demands and we need to obtain as much capacity as we can by extending all three landfills. It is essential to extend the SENT Landfill because it is an integral disposal outlet for construction waste due to the synergy created by the proximity of the SENT Landfill, the construction waste sorting facility (to sort out inert fill materials for later beneficial reuse) and the public fill bank (to stockpile inert fill materials) in the TKO Area 137. Some 2,320 tonnes of construction waste are being disposed of at the SENT Landfill each day, which account for about 67% of the overall construction waste disposed of daily at the three landfills. Although the SENT Landfill Extension project could only provide an additional landfill capacity of some 6.5 million cubic metres, this landfill capacity can maintain a continuous service of about 6 years for disposal of construction waste in the urban and south-eastern part of the territory. We need this time to plan for permanent succession construction waste handling facilities in the south-east territory region for sorting and bulk transfer to the other landfills in future. If we cannot extend the SENT Landfill, the diverted vehicles will impose strain on the surrounding road network to the other two more remote landfills. The extra travel distance of some 1,000 vehicle loads of waste is over 60,000 vehicle-km/day together with 117 tonnes of carbon monoxide and 76 tonnes of nitrogen oxides vehicle emissions per year, not to mention the potential traffic congestion and noise impact.

Public Concerns on the potential health impact caused by SENT Landfill and its extension

7. There are comprehensive environmental monitoring systems for leachate, landfill gas, groundwater, surface water, marine water and sediments, noise, dust, organic emissions and odour at all three landfills. At the SENT Landfill, regular monitoring of 39 volatile organic compounds (VOCs)¹ has been carried out since its operation in 1994. There are 4 VOC monitoring points located at the 4 corners near the boundary of the SENT Landfill and samples are collected quarterly to monitor the VOC concentrations. Since the operation of the SENT Landfill, the results are in full compliance with the contract requirements with the trigger levels set at 1 per cent of the Occupational Exposure Limits of the United Kingdom Health and Safety Executive standard.

8. Assessments on cancer health risk and non-cancer health risk (both acute and chronic health effect) have also been carried out in the Environmental Impact Assessment (EIA) for the SENT Landfill Extension project. According to the assessment results, based on established local and international standards², the acute and chronic health effect of benzene and vinyl chloride is considered to be insignificant. Also, the calculated total cancer health risk levels are lower than the international standards at different elevations of all identified air sensitive receivers including the LOHAS Park, and hence the total health risks are considered to be insignificant.

¹ The 39 VOCs include dichlorodifluoromethane, vinyl chloride, methanol, ethanol, dimethyl sulphide, carbon disulphide, methylene chloride, chloroform, methyl propionate, butan-2-ol, 1,1,1-trichloroethane, 1,2-dichloroethane, benzene, carbon tetrachloride, di-n-propyl ethene, heptane, trichloroethylene, ethyl propionate, methyl butyrate, methanethiol, toluene, ethyl butyrate, octane, propyl propionate, 1,2-dibromoethane, n-butyl acetate, tetrachloroethylene, ethylbenzene, xylene, nonane, ethanethiol, terpenes, propyl benzene, decane, dichlorobenzene, limonene, butyl benzene, undecane and butanethiol.

² The criteria/guideline were selected in the following order of preference:

- ◆ Hong Kong Air Quality Objectives
- ◆ World Health Organisation
- ◆ United States Environmental Protection Agency
- ◆ California Air Resources Board

The action plan of the waste management strategy is incomplete as the Government has only emphasized on the need for infrastructures (hardware) and not on waste reduction and recycling targets (software)

9. The Blueprint, which was mentioned in Section 2 of the Environmental Affairs Panel Paper CB(1)1079/12-13(01), states clearly the challenges and opportunities of waste management in Hong Kong, and maps out a comprehensive strategy with targets, policies and action plans for the coming 10 years with a view to tackling the waste crisis in Hong Kong. On waste reduction, our target is to reduce the per capita disposal rate of municipal solid waste by 40 per cent by 2022. To achieve this goal, the Blueprint proposes policies and actions in three main areas. Firstly, the Government will undertake multiple and concurrent actions to drive behavioural change to reduce waste at source through policies and legislation, including municipal solid waste charging and producer responsibility schemes. Secondly, the Government will roll out targeted territory-wide waste reduction campaigns, such as those on food waste reduction and glass beverage bottle recycling. Thirdly, the Government will allocate resources to enhance waste-related infrastructure, including organic waste treatment facilities, waste-to-energy integrated waste management facilities as well as landfill extensions.

10. The Blueprint has given due focus on our core problems and outlined a comprehensive waste management strategy covering mid to long-term goals with concrete actions and a timetable, so as to demonstrate the Government's determination in tackling our waste management problem. We expect that by 2022, waste recycling, modern incineration and landfill disposal in Hong Kong will account for 55 per cent, 23 per cent and 22 per cent respectively. This allocation would be closer to the widely adopted waste management structure in the advanced economies.

**Environment Bureau/Environmental Protection Department
June 2013**

Appendix A

Summary of Consultation Papers submitted to Sai Kung District Council since 2004

Date	Ref.	Event
6 Apr 2004	SKDC(M) 18/04-05 (Chinese only)	Attended SKDC Meeting to brief members on the planned commissioning of the Feasibility Study and Environmental Impact Assessment (EIA) for the proposed SENT Landfill Extension
4 Mar 2008	SKDC(M) 4/08 (Chinese only)	Consulted SKDC on the findings of the Feasibility Study and EIA of the extension project
18 Nov 2008	SKDC(M) 110/08	Attended SKDC Meeting to report the progress of the extension project
4 May 2010	SKDC(M) 68/10 (Chinese only)	Attended SKDC Meeting on amendments to the Outline Zoning Plan (OZP) for the extension project
3 May 2011	SKDC(M) 72/11 (Chinese only)	Attended SKDC Meeting to introduce the revised scheme of the extension project

Note: The consultation papers can be obtained from the website of the Sai Kung District Council, i.e. <http://www.districtcouncils.gov.hk/sk/tc/welcome.html>.

Extract of Minutes of Town Planning Board Meeting on 9 December 2011 about the Planning History of Residential Development at TKO Area 86

8. In response to a Member's question on the planning of LOHAS Park, Mr. Ivan M.K. Chung, DPO/SKIs, made the following main points:

- (a) the rezoning of the industrial sites in TKO Area 86 to the north of the SENTLF and the proposed SENTLFX for residential development in 1998 was based on relevant planning and environmental assessments conducted for the area. The "TKO Area 86 Planning Study" on the future land uses and development parameters for Area 86 was completed in end 1997 and was agreed by the Government. The study concluded that Area 86, where LOHAS Park was presently located, was suitable for residential development. Although the study identified that there were a number of constraints in the vicinity of Area 86, including the landfill, they were not considered to be technically insurmountable. The study noted that the landfill had been designed and engineered to avoid any adverse impact on the general public. The study and its proposal for residential development in TKO Area 86 were considered acceptable by the relevant departments;
- (b) to ensure that the proposed residential development in TKO Area 86 would not be subject to undue adverse environmental impacts, it was zoned "Comprehensive Development Area" ("CDA") on the TKO OZP, under which zoning planning permission from the Board would be required for any residential development. Applicant had to submit a Master Layout Plan (MLP) for the proposed development and provide justifications and technical assessments (including environmental aspects) to substantiate the application. A planning brief had also been prepared to guide development in respect of the development parameters, and provision of community facilities and environmental mitigation measures; and
- (c) the first MLP (Application No. A/TKO/22) for the LOHAS Park

development was approved by the Board on 16.4.1999. An Environmental Assessment (EA) was submitted together with the MLP. In approving the first MLP, the Board had imposed 26 approval conditions requiring, inter alia, the provision of mitigation measures against environmental impacts. The developer had submitted relevant technical assessments for fulfilling the approval conditions, which included assessments and proposals to mitigate impacts from the landfill. The technical assessments were accepted by relevant departments.

27. Mr. Ivan M.K. Chung made the following main points in respect of the planning of the LOHAS Park development:

- (a) the rezoning of the LOHAS Park site for residential development was incorporated in the TKO OZP in 1998 and the first MLP for the LOHAS Park development was approved by the Board in 1999;
- (b) according to the first MLP approved in 1999, the planned population of LOHAS Park was 57,000 people to be accommodated in 21,500 flats. The two key development parameters had not been changed in the latest plan of the LOHAS Park development;
- (c) in the EA submitted together with the MLP, the developer had already proposed some environmental mitigation measures which included the paving of noise reduction material along the section of Wan Po Road near LOHAS Park. The requirements on the provision of environmental mitigation measures had been incorporated in the lease conditions of the LOHAS Park development; and
- (d) it was noted that noise barriers would also be installed along the road (Road D9) linking the area to the Cross Bay Link to be constructed by the Civil Engineering and Development Department. Noise barriers to mitigate against noise impact would also be installed to the road to the north of LOHAS Park.

Note: The minutes of the TPB meeting can be found at http://www.info.gov.hk/tpb/en/meetings/TPB/Minutes/m999tpb_e6.pdf.

FACT SHEET

Mention of the presence of the South East New Territories Landfill in the sales brochures of the residential properties built near the facility

1. Introduction

1.1 The purpose of this fact sheet is to provide the Subcommittee on Country Parks (Designation) (Consolidation) (Amendment) Order 2010 with information on whether the presence of the South East New Territories (SENT) Landfill had been mentioned in the sales brochures of the residential properties built near the facility.

2. Development of the South East New Territories Landfill

2.1 The SENT Landfill commenced operation in September 1994. Between December 2005 and May 2007, the Environmental Protection Department consulted the Country and Marine Parks Board (Board) on a proposal for an extension of the SENT Landfill. The proposed extension included an encroachment proposal of about five hectares of land in the Clear Water Bay Country Park. In May 2007, the Board announced that it would not object to the proposed extension of the SENT Landfill. The Board also recommended excising the proposed encroached area from the approved map of the Country Park.

2.2 In the light of the above, a draft replacement map of the Clear Water Bay Country Park was prepared and made available for public inspection for 60 days with effect from 14 November 2008. The Chief Executive-in-Council approved the draft map on 30 June 2009. An Order was made by the Chief Executive under section 14 of the *Country Parks Ordinance (Cap. 208)* after consultation with the Executive Council to amend the *Country Parks (Designation) (Consolidation) Order (Cap. 208 sub. leg. B)* by replacing the original approved map with a new approved map. The Order would come into operation on 1 November 2010.

3. Mention of the presence of the South East New Territories Landfill in the sales brochures of the residential properties built near the facility

3.1 LOHAS Park is the residential development nearest to the SENT Landfill. It is constructed and sold in phases. As at to date, Phase I (The Capitol), Phase II (Le Prestige) and Phase IIB (Le Prime) of the development have been completed and sold. The **Table** below indicates whether the presence of the SENT Landfill had been mentioned in the sales brochures of the above residential properties of LOHAS Park, making reference to the relevant Guidelines for Sales Descriptions of Uncompleted Residential Properties prevailing at that time¹.

¹ The Guidelines for Sales Descriptions of Uncompleted Residential Properties are issued by the Real Estate Developers Association of Hong Kong in response to the community's demand for comprehensive and accurate information relating to flats for sale. Responsibility for the compliance of these Guidelines rests with individual developers.

Table – Mention of the presence of the SENT Landfill in the sales brochures of LOHAS Park

Date	Guidelines for Sales Descriptions of Uncompleted Residential Properties	Sales of LOHAS Park
June 2001	The Guidelines for Sales Descriptions of Uncompleted Residential Properties were issued in June 2001. The Guidelines did not require developers to show the presence of landfill or ex-landfill in the sales brochure (please refer to Appendix I for details).	–
February 2008	–	Sales of The Capitol <ul style="list-style-type: none"> • The presence of the SENT Landfill was not mentioned in the sales brochure of The Capitol.
October 2008	The Guidelines were revised in October 2008. The revised Guidelines did not require developers to show the presence of landfill or ex-landfill in the sales brochure (please refer to Appendix II for details).	–
July 2009	–	Sales of Le Prestige <ul style="list-style-type: none"> • The presence of the SENT Landfill was not mentioned in the sales brochure of Le Prestige.
October 2009	The Guidelines were further revised in October 2009. They required developers to show the presence of landfill or ex-landfill in the sales brochure (please refer to Appendix III for details).	–
November 2009	–	Sales of Le Prime <ul style="list-style-type: none"> • The presence of the SENT Landfill was mentioned in the sales brochure of Le Prime.

Appendix I

Guidelines for Sales Descriptions of Uncompleted Residential Properties issued in June 2001

A.I.1 According to the Guidelines for Sales Descriptions of Uncompleted Residential Properties issued by The Real Estate Developers Association of Hong Kong in June 2001, the location plan should show clearly and identify all free standing and purpose-built facilities within 0.25 km from the boundary of the lot, such as:

- (a) clinics;
- (b) fire stations and ambulance depots;
- (c) funeral parlours and cemeteries;
- (d) judicial facilities;
- (e) refuse collection points;
- (f) hospitals;
- (g) markets;
- (h) police stations;
- (i) public car parks and lorry parks;
- (j) public conveniences;
- (k) public transport terminals and rail stations;
- (l) public utility installations;
- (m) religious institutions;
- (n) schools;
- (o) social welfare facilities; and
- (p) sports facilities and sports grounds.

Appendix II

Guidelines for Sales Descriptions of Uncompleted Residential Properties issued on 10 October 2008

A.II.1 According to the Guidelines for Sales Descriptions of Uncompleted Residential Properties issued by The Real Estate Developers Association of Hong Kong on 10 October 2008, the location plan should show clearly and identify all free standing and purpose-built facilities within 0.25 km from the boundary of the lot, such as:

- (a) clinics;
- (b) fire stations and ambulance depots;
- (c) funeral parlours and cemeteries;
- (d) judicial facilities;
- (e) refuse collection points;
- (f) hospitals;
- (g) markets;
- (h) police stations;
- (i) public car parks and lorry parks;
- (j) public conveniences;
- (k) public transport terminals and rail stations;
- (l) public utility installations;
- (m) religious institutions;
- (n) schools;
- (o) social welfare facilities; and
- (p) sports facilities and sports grounds.

Appendix III**Guidelines for Sales Descriptions of
Uncompleted Residential Properties issued on 7 October 2009**

A.III.1 According to the Guidelines for Sales Descriptions of Uncompleted Residential Properties issued by The Real Estate Developers Association of Hong Kong on 7 October 2009, apart from those communal facilities and features as stipulated in the guidelines of 10 October 2008, the location plan should also show clearly and identify all free standing and purpose-built facilities, including but not limited to:

- (a) crematorium and columbarium;
- (b) mortuaries;
- (c) slaughterhouses;
- (d) bus and railway depots;
- (e) ventilation shafts (MTR);
- (f) libraries and museums;
- (g) barracks;
- (h) cargo working area;
- (i) petrol and LPG filling stations;
- (j) oil depots/aviation and marine fuel depots;
- (k) sewage treatment works and facilities;
- (l) landfill or ex-landfill;**
- (m) landfill gas flaring plants;
- (n) power plants and electricity sub-stations;
- (o) pylons (high voltage power line);

Appendix III (cont'd)

- (p) correctional institutions/prisons;
- (q) addiction treatment centres;
- (r) helicopter landing pad;
- (s) clinics;
- (t) fire stations and ambulance depots;
- (u) funeral parlours and cemeteries;
- (v) judicial facilities (e.g. courts and magistracies);
- (w) refuse collection points;
- (x) hospitals;
- (y) markets (e.g. wet market and wholesale market);
- (z) police stations;
- (aa) public carparks and lorry parks;
- (bb) public conveniences;
- (cc) public transport terminus and rail stations;
- (dd) public utility installations;
- (ee) religious institutions (e.g. church, temple and tsz tong);
- (ff) schools (e.g. kindergartens, primary schools, secondary schools, vocational training schools etc.);
- (gg) social welfare facilities (e.g. elderly centres, homes for mentally disabled); and
- (hh) sports facilities and sports grounds.

References

1. Environmental Protection Department. (2008) *Possible Environmental Impacts associated with the Proposed Extension of South East New Territories Landfill to the Clear Water Bay Country Park*. Paper submitted to the Panel on Environmental Affairs of the Legislative Council for discussion on 27 October 2008. LC Paper No. CB(1)88/08-09(06).
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5. The Real Estate Developers Association of Hong Kong. (2010) *Guidelines issued by the Real Estate Developers Association of Hong Kong*. Available from: <http://www.eaa.org.hk/consumers/reda.htm> [Accessed June 2010].

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