chemical waste, and workforce waste. Quantity, quality, and timing of the generation of different categories of waste are identified as far as possible.

Operational Stage

7.3.2.2 The quantity, quality, and timing of waste generation during the operational stage are estimated from the population, land uses, and the program of the proposed development. Municipal solid waste would be of most concern during the operational stage. According to *Monitoring of Solid Waste in Hong Kong 1999* prepared by EPD, the forecast of domestic waste is related primarily to the growth of population in Hong Kong. A linear regression model of historical waste quantities against historical population has been developed. Population forecast provided by the Planned Department has been applied to the domestic waste projection using the regression relationship between population and waste quantity in the model

7.3.2.3 Similar linear regression models have been developed for commercial and industrial (C&I) waste through the following:

- Commercial waste generation is considered against GDP contribution of the commercial sector; and
- Industrial waste generation is considered against the Index of Industrial Production. The forecast of this index is derived from the projection of population and GDP growth provided by the Planning Department and the Financial Services Bureau respectively.

7.3.2.4 Based on the above linear regression model, the projected generation rates of domestic rate and C&I waste are obtained and presented in **Table 7.1** below.

Table 7.1 Projection of per capita Generation Rates and Quantities of Municipal Solid Waste Disposed of at Waste Facilities 2006 – 2016

Year	Domestic Waste		C&I Waste		Municipal Solid Waste
	Quantity (tpd)	Per capita generation rate (kg/person/day)	Quantity (tpd)	Per capita generation rate (kg/employee/day)	Quantity (tpd)
2006	10,090	1.30	2,140	0.55	12,230
2011	11,650	1.40	2,310	0.55	13,960
2016	13,190	1.48	2,540	0.58	15,730

Note: 1. Figures on waste quantities are rounded off to the nearest 10tpd and may not add up to total due to rounding-off.
2. Figures are estimated by linear projection model.
3. Figures are project based on the assumption of no additional waste reduction measures.

7.3.2.5 The forecast quantity of domestic waste or C&I waste during operational phase of SEKD was worked out by multiplying the projected generation rate by the predicted population or employment size respectively. For years between 2006, 2011 and 2016, the per capita generation rates were determined by interpolation.

7.4 Identification, Prediction and Evaluation of Potential Impacts

7.4.1 *Construction Phase Impact Assessment*

Waste Arising

(i) Construction Waste – Demolition Materials

7.4.1.1 During development of the site, the existing Carpark and Terminal Buildings in the NAKTA area will be demolished to maximize the development potential. Under the current implementation program, the Carpark Building and the Terminal Building is scheduled to be

demolished in 2002/2003 and 2005/2006 respectively. This means that substantial building waste would be generated during these periods.

7.4.1.2 The existing buildings to be demolished are predominately of two types: inert and non-inert waste. Inert waste is the reinforced concrete construction. Whereas non-inert waste is the C&D waste, including wood/timber, bamboo, glass, and plastics, steel, non-ferrous metal and ferrous metal from electronic equipment, plumbing fittings, ventilation equipment, lighting, framework and pipes.

7.4.1.3 Based on the current estimate, a total of 203,000m^3 demolition material would be generated from the NAKTA area during year 2003 to 2006. For the Hoi Sham area, a total of 128,000 m^3 demolition material would be generated during year 2005 to 2015. For the Runway area, a total of 114,000m^3 demolition material would be generated during year 2005 to 2011. Among the demolition material are the public fill and C&D waste. The C&D waste would consist of insulation material and wood pieces, etc. The former would be processed and re-used on-site while the latter which is not suitable for suitable reclamation would have to be disposed at a landfill. It is estimated that about 20% of the demolition material will require disposal at landfills and the remaining can be reused as public fills within the project or to public filling areas. **Table 7.2** below tabulated the estimated quantity of general fill requirement during the construction of SEKD. The public fill will be used for surcharging purpose as much as possible.

Table 7.2 Estimated General Fill Requirement for Construction of SEKD

Year	Marine Sand (million cubic metre)	Public Fill (million cubic metre)
2002	0.08	0.46
2003	0.44	1.90
2004	0.70	1.1.2
2005	0.27	0.35
2006	-	1.94
2007	0.89	3.26
2008	-	1.64
2009	-	4.16
2010	0.20	1.95
2011	-	0.23
2012	-	-
2013	-	0.01
Total	2.58	17.02

7.4.1.4 Besides the demolished materials from the existing buildings, there are hangers and workshops which are constructed with structural steelwork with masonry walls and are clad in various materials.

(ii) Construction Waste – Pavement Removal / Land Formation and Preparation

7.4.1.5 Construction of roads and facilities would require the excavation of pavements, stormwater drains, sewers, water mains other utilities and other ducting and services. Based on the current estimates, the total volume of excavated material for the construction of culverts, tunnels, foundation, etc in the NAKTA area is approximately 540,000m^3. For the Hoi Sham and Runway area, the total volume of excavated material is estimated to be about 510,000m^3 and 928,000m^3 respectively. The excavated materials would be used on-site for reclamation and other purposes where applicable.

(iii) Chemical Waste

7.4.1.6 The fuel pipes and oil storage plant of the disused airport would be removed before the commencement of the NAKTA development. They would be emptied by pumping followed by a washing process to ensure that the residual fuel inside the pipes is kept to a minimum.

7.4.1.7 The excavation, land reclamation and construction of new developments in SEKD will need the use of numerous and various earth moving equipment. These construction plant and equipment will require regular maintenance and servicing which will use and generate chemical waste. Substances generated are likely to include oil, lubricants, cleaning fluid, solvents and rags.

7.4.1.8 Asbestos has often been used in buildings for various purposes, including fire protection and heat, sound and electrical insulation. Thus it is likely that there will be asbestos containing material (ACM) in buildings scheduled for demolition, particularly in the existing old building residential blocks. Therefore site investigation and surveys should be carried out prior to demolition to confirm the presence of ACM, so as to determine appropriate removal and handling procedures.

(iv) Workforce Waste

7.4.1.9 Throughout the construction, the workforce on site will generate general refuse, comprising food scraps, paper and empty containers, etc. In addition to the refuse, human waste will require suitable disposal.

Disposal Alternative/Mitigation Measures

7.4.1.10 Different types of wastes should be segregated, stored, transported and disposed of separately in accordance with EPD's required procedures.

(i) Construction and Demolition Material

7.4.1.11 A large quantity of C&D material would be generated resulting from demolition of buildings, removal of pavements and utility services. Under the WDO, C&D waste which is the non-inert portion of the mixed C&D material, can be classified as a trade waste. The waste producers are responsible for its disposal. Its handling should comply with the guidelines and legislation discussed in Section 7.1 above.

7.4.1.12 Whereby wastes should be separated into C&D waste and public fill. Components of C&D waste e.g. steel and other metals should be segregated and recycled as far as possible before disposal to landfill. The latter, such as concrete and rubble, should only be disposed of at a public filling area. It is noted that CED will carry out a study on "Assessment of the Engineering and Economic Viability and Associated Impacts for the Pilot Construction and Demolition Materials Recycling Facility at Kai Tak". Three potential sites are being considered at the current stage with one in the NAKTA area, one in the south apron area, and one in the southern part of the runway. The site selection will be subject to the findings of the study.

7.4.1.13 Besides, with reference to the *Works Bureau Technical Circular No. 5/98 – On Site Sorting of Construction Waste on Demolition Sites*, there is a mandatory requirement of demolitions works for on-site sorting of all C&D material prior to disposal. In view of the large scale of the proposed developments, there would be a need to set up an on-site construction and demolition waste handling facilities including temporary barging point and areas for sorting and stockpiling to handle the large quantities of C&D material generated.

7.4.1.14 The largest quantities of C&D material generated which require stockpiling will be during the building demolition. In SEKD, it will be generated during the demolition of the multi-storey carpark and the Terminal Building. The quantity is about 100,000 m^3 and a 150m by 150m area will be required assuming a height of 5m stockpiling. The existing site currently occupied by TDD on the southern end of the runway could be used for stockpiling and sorting up to 2010. By that time, most of the works in SEKD will be completed except for the remaining part of Hoi Sum Phase II reclamation and waste generation will not be substantial.

7.4.1.15 If there is surplus waste required to be disposed of at public filling area, it should be noted that the public filling materials should only consist of earth, building debris and broken rock and concrete. They shall be free from marine mud, household refuse, plastic, metals, industrial and chemical waste, animal and vegetable matter, and other material considered unsuitable by the public filling supervisor. Small quantity of timber mixed with otherwise suitable material will be permitted. The waste can be transported off-site by barges using the two adjacent temporary barging points proposed by CED for the Choi Wan and Anderson Road Projects. However, this would be subjected to the agreement of CED.

(ii) Chemical Waste

7.4.1.16 Chemical waste (e.g. oily sludge, halogenated solvent) produced from decommissioning of underground pipes and tanks and other activity should be handled according to the *Code of Practice on the Packaging, Labeling and Storage of Chemical Waste* and disposed of by a licensed contractor at Tsing Yi Chemical Waste Treatment Facility. In addition, mitigation measures must be adopted to prevent the uncontrolled disposal of chemical and hazardous waste into the air, soil and waters.

7.4.1.17 Where tanks or pipes are to be emptied or removed, precautionary measures should be taken to avoid the spillage of any petroleum products which may cause contamination to the ground. Any contaminated material such as absorbent or cleaning stuffs should be properly disposed of.

7.4.1.18 If temporary on-site storage of ACM is required, the storage facilities should be designed in accordance with the *Code of Practice on the Packaging, Labeling and Storage of Chemical Waste* issued by EPD. ACM must be removed by registered contractors and disposed of at landfill. The handling procedures must comply with the requirements specified in the EPD's *Code of Practice on the Handling, Transportation and Disposal of Asbestos Waste*.

7.4.1.19 A sewerage system or septic tanks must be provided to collect human waste. Sludge should be removed regularly by a hygiene service company to a suitable landfill site, subject to the sludge generated meeting the acceptance criteria (e.g. dry solid content) for the landfill.

7.4.1.20 On-site refuse collection point must be provided. This waste would normally be collected by private waste collectors, then transferred to a transfer station for compaction and containerization, and finally disposed of at a landfill.

7.4.1.21 **Table 7.3** provides a summary of waste handling method for different type of waste.

Table 7.3 Summary of Waste Handling Procedures during Construction Phase

Waste Type	Mitigation Measures	
	Handling	Disposal
Construction and Demolition Material	Where possible should be re-used on-site	On-site for reclamation and road base
	If off-site disposal required, separate into: • C&D waste	Landfill
	• Public fill: concrete and rubble	Public filling area or reclamation
Chemical Wastes	Recycle on-site or by licensed companies Stored on-site or by licensed companies	Chemical waste treatment facility

Waste Type	Mitigation Measures	
	Handling	Disposal
Chemical Wastes	Asbestos Provision of appropriate on-site temporary storage facility To be removed off-site by registered contractors	Landfill
Workforce Waste	Provide on-site refuse collection facilities Main sewerage or septic tank	Refuse Station for compaction and containerization and then to Landfill Private hygiene company

7.4.2 *Operational Phase Impact Assessment*

Forecast of Waste Generation

7.4.2.1 With reference to the current planning data for the entire SEKD and some of the adjacent development areas, the residential and employment population has been estimated to be about 263,000 and 76,000 respectively in year 2018 with full occupation of the entire SEKD. Based on the equation for per capita waste generation rates in *Monitoring of Solid Waste in Hong Kong 1999* prepared by EPD, the forecasted quantities of domestic waste and C&I waste are presented in **Table 7.4** below. Taking into account the estimated occupation year for different development areas within SEKD from year 2005 to 2018, **Tables 7.4a – 7.4l** show the projected domestic and C&I waste generation from different development areas in SEKD.

Table 7.4 Forecasted Per Capita Domestic Waste and C&I Waste Generation Rates from 2005 to 2018

Year	Per Capita Generation Rate of Domestic Waste (kg/person/day)	Per Capita Generation Rate of C&I Waste (kg/employee/day)
2005	1.300	0.550
2006	1.300	0.550
2007	1.320	0.550
2008	1.340	0.550
2011	1.400	0.550
2012	1.416	0.556
2013	1.432	0.562
2014	1.448	0.568
2015	1.464	0.574
2016	1.480	0.580
2017	1.480	0.580
2018	1.480	0.580

Table 7.4a Projected Waste Generation from Various Development Areas in SEK D - Year 2005

Year	Development Area	Residential Population	Employment Population	Domestic Waste (tpd)	C&I Waste (tpd)	Total Waste (tpd)
2005	1A	12810	1172	16.7	0.6	17.3
	1B	23804	1751	30.9	1.0	31.9
	1C	16442	1367	21.4	0.8	22.1
	1D	14899	2549	19.4	1.4	20.8
	1E	-	-	-	-	-
	1G	-	850	-	0.5	0.5
	1K	-	-	-	-	-
	1L	-	-	-	-	-
	1P	-	-	-	-	-
	1Q	-	-	-	-	-
	1R	-	4500	-	2.5	2.5
	2A	-	-	-	-	-
	2B	-	-	-	-	-
	2C	-	-	-	-	-
	2D	-	-	-	-	-
	2E	-	-	-	-	-
	2F	-	-	-	-	-
	3A	-	-	-	-	-
	3B	-	-	-	-	-
	3C	-	-	-	-	-
	3D	-	-	-	-	-
	3E	-	-	-	-	-
	3F	-	-	-	-	-
	3G	-	-	-	-	-
	3H	-	-	-	-	-
	3J	-	-	-	-	-
	3K	-	-	-	-	-
	3M	-	-	-	-	-
	3N	-	-	-	-	-
	3P	-	-	-	-	-
	3Q	-	-	-	-	-
	3R	-	-	-	-	-
	3S	-	-	-	-	-
	3T	-	-	-	-	-
	3V	-	-	-	-	-
	3X	-	-	-	-	-
	3Z	-	-	-	-	-
	4A	-	-	-	-	-
	4B	-	-	-	-	-
	4C	-	-	-	-	-
	4D	-	-	-	-	-
	4E	-	-	-	-	-
	4F	-	-	-	-	-
	4G	-	-	-	-	-
	4H	-	-	-	-	-
	4J	-	-	-	-	-
	4K	-	-	-	-	-
	4L	-	-	-	-	-
	4M	-	-	-	-	-
	4N	-	-	-	-	-
	4R	-	-	-	-	-
	4S	-	-	-	-	-
	5A	-	-	-	-	-
	5C	-	-	-	-	-
	5E	-	-	-	-	-
	5G	-	-	-	-	-
	5H	-	-	-	-	-
	5J	-	-	-	-	-
	5K	-	-	-	-	-
	5L	-	-	-	-	-
	6A	-	-	-	-	-
	Total	**67955**	**12189**	**88**	**7**	**95**

Table 7.4b Projected Waste Generation from Various Development Areas in SEKD - Year 2006

Year	Development Area	Residential Population	Employment Population	Domestic Waste (tpd)	C&I Waste (tpd)	Total Waste (tpd)
2006	1A	12810	1172	16.7	0.6	17.3
	1B	23804	1751	30.9	1.0	31.9
	1C	16442	1367	21.4	0.8	22.1
	1D	14899	2549	19.4	1.4	20.8
	1E	-	-	-	-	-
	1G	-	850	-	0.5	0.5
	1K	-	-	-	-	-
	1L	-	-	-	-	-
	1P	-	-	-	-	-
	1Q	-	2500	-	1	1
	1R	-	4500	-	2.5	2.5
	2A	-	-	-	-	-
	2B	3470	1267	5	1	5
	2C	-	-	-	-	-
	2D	-	-	-	-	-
	2E	3135	1039	4	1	5
	2F	3734	1200	5	1	6
	3A	-	-	-	-	-
	3B	-	-	-	-	-
	3C	-	-	-	-	-
	3D	-	-	-	-	-
	3E	-	-	-	-	-
	3F	-	-	-	-	-
	3G	-	-	-	-	-
	3H	-	-	-	-	-
	3J	-	-	-	-	-
	3K	-	-	-	-	-
	3M	-	-	-	-	-
	3N	-	-	-	-	-
	3P	-	-	-	-	-
	3Q	-	-	-	-	-
	3R	-	-	-	-	-
	3S	-	-	-	-	-
	3T	-	-	-	-	-
	3V	-	-	-	-	-
	3X	-	-	-	-	-
	3Z	-	-	-	-	-
	4A	-	-	-	-	-
	4B	-	-	-	-	-
	4C	-	-	-	-	-
	4D	-	-	-	-	-
	4E	-	-	-	-	-
	4F	-	-	-	-	-
	4G	-	-	-	-	-
	4H	-	-	-	-	-
	4J	-	-	-	-	-
	4K	-	-	-	-	-
	4L	-	-	-	-	-
	4M	-	-	-	-	-
	4N	-	-	-	-	-
	4R	-	-	-	-	-
	4S	-	-	-	-	-
	5A	-	-	-	-	-
	5C	-	-	-	-	-
	5E	-	-	-	-	-
	5G	-	-	-	-	-
	5H	-	-	-	-	-
	5J	-	-	-	-	-
	5K	-	-	-	-	-
	5L	-	-	-	-	-
	6A	-	-	-	-	-
	Total	**78294**	**18196**	**102**	**10**	**112**

Table 7.4c Projected Waste Generation from Various Development Areas in SEK D - Year 2007

Year	Development Area	Residential Population	Employment Population	Domestic Waste (tpd)	C&I Waste (tpd)	Total Waste (tpd)
2007	1A	12810	1172	16.9	0.6	17.6
	1B	23804	1751	31.4	1.0	32.4
	1C	16442	1367	21.7	0.8	22.5
	1D	14899	2549	19.7	1.4	21.1
	1E	-	-	-	-	-
	1G	-	850	-	0.5	0.5
	1K	-	-	-	-	-
	1L	-	-	-	-	-
	1P	-	-	-	-	-
	1Q	-	2500	-	1	1
	1R	-	4500	-	2.5	2.5
	2A	-	-	-	-	-
	2B	3470	1267	5	1	5
	2C	-	-	-	-	-
	2D	6226	2064	8	1	9
	2E	3135	1039	4	1	5
	2F	3734	1200	5	1	6
	3A	-	-	-	-	-
	3B	-	-	-	-	-
	3C	-	-	-	-	-
	3D	-	-	-	-	-
	3E	-	-	-	-	-
	3F	-	-	-	-	-
	3G	-	-	-	-	-
	3H	-	-	-	-	-
	3J	-	-	-	-	-
	3K	-	-	-	-	-
	3M	-	-	-	-	-
	3N	-	-	-	-	-
	3P	-	-	-	-	-
	3Q	-	-	-	-	-
	3R	-	-	-	-	-
	3S	-	-	-	-	-
	3T	-	-	-	-	-
	3V	-	-	-	-	-
	3X	-	-	-	-	-
	3Z	-	-	-	-	-
	4A	-	-	-	-	-
	4B	-	-	-	-	-
	4C	-	-	-	-	-
	4D	-	-	-	-	-
	4E	-	-	-	-	-
	4F	-	-	-	-	-
	4G	-	-	-	-	-
	4H	-	-	-	-	-
	4J	-	-	-	-	-
	4K	-	-	-	-	-
	4L	-	-	-	-	-
	4M	-	-	-	-	-
	4N	-	-	-	-	-
	4R	-	-	-	-	-
	4S	-	-	-	-	-
	5A	-	-	-	-	-
	5C	-	-	-	-	-
	5E	-	-	-	-	-
	5G	-	-	-	-	-
	5H	-	-	-	-	-
	5J	-	-	-	-	-
	5K	-	-	-	-	-
	5L	-	-	-	-	-
	6A	-	-	-	-	-
	Total	**84521**	**20260**	**112**	**11**	**123**

Table 7.4d Projected Waste Generation from Various Development Areas in SEKD - Year 2008

Year	Development Area	Residential Population	Employment Population	Domestic Waste (tpd)	C&I Waste (tpd)	Total Waste (tpd)
2008	1A	12810	1172	17.2	0.6	17.8
	1B	23804	1751	31.9	1.0	32.9
	1C	16442	1367	22.0	0.8	22.8
	1D	14899	2549	20.0	1.4	21.4
	1E	-	-	-	-	-
	1G	-	850	-	0.5	0.5
	1K	-	-	-	-	-
	1L	-	-	-	-	-
	1P	-	-	-	-	-
	1Q	-	2500	-	1	1
	1R	-	4500	-	2.5	2.5
	2A	-	-	-	-	-
	2B	3470	1267	5	1	5
	2C	5316	1731	7	1	8
	2D	6226	2064	8	1	9
	2E	3135	1039	4	1	5
	2F	3734	1200	5	1	6
	3A	-	-	-	-	-
	3B	-	-	-	-	-
	3C	-	-	-	-	-
	3D	-	-	-	-	-
	3E	-	-	-	-	-
	3F	-	-	-	-	-
	3G	-	-	-	-	-
	3H	-	-	-	-	-
	3J	-	-	-	-	-
	3K	-	-	-	-	-
	3M	-	-	-	-	-
	3N	-	-	-	-	-
	3P	-	-	-	-	-
	3Q	-	-	-	-	-
	3R	-	-	-	-	-
	3S	-	-	-	-	-
	3T	-	-	-	-	-
	3V	-	-	-	-	-
	3X	-	-	-	-	-
	3Z	-	-	-	-	-
	4A	-	-	-	-	-
	4B	-	-	-	-	-
	4C	-	-	-	-	-
	4D	-	-	-	-	-
	4E	-	-	-	-	-
	4F	-	-	-	-	-
	4G	-	-	-	-	-
	4H	-	-	-	-	-
	4J	-	-	-	-	-
	4K	-	-	-	-	-
	4L	-	-	-	-	-
	4M	-	-	-	-	-
	4N	-	-	-	-	-
	4R	-	-	-	-	-
	4S	-	-	-	-	-
	5A	-	-	-	-	-
	5C	-	-	-	-	-
	5E	-	-	-	-	-
	5G	-	-	-	-	-
	5H	-	-	-	-	-
	5J	-	-	-	-	-
	5K	-	-	-	-	-
	5L	-	-	-	-	-
	6A	-	-	-	-	-
	Total	**89837**	**21991**	**120**	**12**	**132**

Table 7.4e Projected Waste Generation from Various Development Areas in SEKD - Year 2011

Year	Development Area	Residential Population	Employment Population	Domestic Waste (tpd)	C&I Waste (tpd)	Total Waste (tpd)
2011	1A	12810	1172	17.9	0.6	18.6
	1B	23804	1751	33.3	1.0	34.3
	1C	16442	1367	23.0	0.8	23.8
	1D	14899	2549	20.9	1.4	22.3
	1E	-	-	-	-	-
	1G	-	850	-	0.5	0.5
	1K	-	-	-	-	-
	1L	-	-	-	-	-
	1P	-	234	-	0.1	0.1
	1Q	-	2500	-	1	1
	1R	-	4500	-	2.5	2.5
	2A	-	-	-	-	-
	2B	3470	1267	5	1	6
	2C	5316	1731	7	1	8
	2D	6226	2064	9	1	10
	2E	3135	1039	4	1	5
	2F	3734	1200	5	1	6
	3A	-	-	-	-	-
	3B	-	-	-	-	-
	3C	-	-	-	-	-
	3D	-	-	-	-	-
	3E	-	-	-	-	-
	3F	-	-	-	-	-
	3G	-	-	-	-	-
	3H	-	-	-	-	-
	3J	-	-	-	-	-
	3K	-	-	-	-	-
	3M	-	-	-	-	-
	3N	-	-	-	-	-
	3P	-	-	-	-	-
	3Q	-	-	-	-	-
	3R	-	-	-	-	-
	3S	-	-	-	-	-
	3T	-	-	-	-	-
	3V	-	-	-	-	-
	3X	-	-	-	-	-
	3Z	-	-	-	-	-
	4A	-	-	-	-	-
	4B	-	-	-	-	-
	4C	-	-	-	-	-
	4D	-	-	-	-	-
	4E	-	-	-	-	-
	4F	-	-	-	-	-
	4G	-	-	-	-	-
	4H	-	-	-	-	-
	4J	-	-	-	-	-
	4K	-	-	-	-	-
	4L	-	-	-	-	-
	4M	-	-	-	-	-
	4N	-	-	-	-	-
	4R	-	-	-	-	-
	4S	-	-	-	-	-
	5A	-	-	-	-	-
	5C	-	-	-	-	-
	5E	-	-	-	-	-
	5G	-	-	-	-	-
	5H	-	-	-	-	-
	5J	-	-	-	-	-
	5K	-	-	-	-	-
	5L	-	-	-	-	-
	6A	-	-	-	-	-
	Total	**89837**	**22225**	**126**	**12**	**138**

Table 7.4f Projected Waste Generation from Various Development Areas in SEKD - Year 2012

Year	Development Area	Residential Population	Employment Population	Domestic Waste (tpd)	C&I Waste (tpd)	Total Waste (tpd)
2012	1A	12810	1172	18.1	0.7	18.8
	1B	23804	1751	33.7	1.0	34.7
	1C	16442	1367	23.3	0.8	24.0
	1D	14899	2549	21.1	1.4	22.5
	1E	-	-	-	-	-
	1G	-	850	-	0.5	0.5
	1K	-	-	-	-	-
	1L	-	346	-	0.2	0.2
	1P	-	234	-	0.1	0.1
	1Q	-	2500	-	1	1
	1R	-	4500	-	2.5	2.5
	2A	-	-	-	-	-
	2B	3470	1267	5	1	6
	2C	5316	1731	8	1	8
	2D	6226	2064	9	1	10
	2E	3135	1039	4	1	5
	2F	3734	1200	5	1	6
	3A	-	-	-	-	-
	3B	-	-	-	-	-
	3C	-	-	-	-	-
	3D	-	-	-	-	-
	3E	-	-	-	-	-
	3F	-	-	-	-	-
	3G	-	-	-	-	-
	3H	-	-	-	-	-
	3J	-	-	-	-	-
	3K	-	-	-	-	-
	3M	-	-	-	-	-
	3N	-	-	-	-	-
	3P	-	-	-	-	-
	3Q	-	-	-	-	-
	3R	-	-	-	-	-
	3S	-	-	-	-	-
	3T	-	-	-	-	-
	3V	-	-	-	-	-
	3X	-	-	-	-	-
	3Z	-	-	-	-	-
	4A	2921	842	4	0.5	5
	4B	6580	495	9	0.3	10
	4C	5992	1007	8	1	9
	4D	1786	515	3	0.3	3
	4E	9351	812	13	0.5	14
	4F	3709	590	5	0.3	6
	4G	-	-	-	-	-
	4H	-	-	-	-	-
	4J	-	-	-	-	-
	4K	3980	669	6	0.4	6
	4L	5969	547	8	0.3	9
	4M	7006	504	10	0.3	10
	4N	-	117	-	0.1	0.1
	4R	4102	295	6	0.2	6
	4S	2917	933	4	1	5
	5A	-	-	-	-	-
	5C	-	-	-	-	-
	5E	-	-	-	-	-
	5G	-	-	-	-	-
	5H	-	-	-	-	-
	5J	-	-	-	-	-
	5K	-	-	-	-	-
	5L	-	-	-	-	-
	6A	-	-	-	-	-
	Total	**144148**	**29899**	**204**	**17**	**221**

Table 7.4g Projected Waste Generation from Various Development Areas in SEK D - Year 2013

Year	Development Area	Residential Population	Employment Population	Domestic Waste (tpd)	C&I Waste (tpd)	Total Waste (tpd)
2013	1A	12810	1172	18.3	0.7	19.0
	1B	23804	1751	34.1	1.0	35.1
	1C	16442	1367	23.5	0.8	24.3
	1D	14899	2549	21.3	1.4	22.8
	1E	-	190	-	0.1	0.1
	1G	-	850	-	0.5	0.5
	1K	-	-	-	-	-
	1L	-	581	-	0.3	0.3
	1P	-	234	-	0.1	0.1
	1Q	-	2500	-	1	1
	1R	-	4500	-	2.5	2.5
	2A	-	-	-	-	-
	2B	3470	1267	5	1	6
	2C	5316	1731	8	1	9
	2D	6226	2064	9	1	10
	2E	3135	1039	4	1	5
	2F	3734	1200	5	1	6
	3A	-	-	-	-	-
	3B	-	-	-	-	-
	3C	-	-	-	-	-
	3D	-	-	-	-	-
	3E	-	-	-	-	-
	3F	-	-	-	-	-
	3G	-	-	-	-	-
	3H	-	-	-	-	-
	3J	-	-	-	-	-
	3K	-	-	-	-	-
	3M	-	-	-	-	-
	3N	-	-	-	-	-
	3P	-	-	-	-	-
	3Q	-	-	-	-	-
	3R	-	-	-	-	-
	3S	-	-	-	-	-
	3T	-	-	-	-	-
	3V	-	-	-	-	-
	3X	-	-	-	-	-
	3Z	-	-	-	-	-
	4A	2921	842	4	0.5	5
	4B	6580	495	9	0.3	10
	4C	5992	1007	9	1	9
	4D	1786	515	3	0.3	3
	4E	9351	812	13	0.5	14
	4F	3709	590	5	0.3	6
	4G	-	-	-	-	-
	4H	-	-	-	-	-
	4J	-	-	-	-	-
	4K	3980	669	6	0.4	6
	4L	5969	547	9	0.3	9
	4M	7006	504	10	0.3	10
	4N	-	117	-	0.1	0.1
	4R	4102	295	6	0.2	6
	4S	2917	933	4	1	5
	5A	-	-	-	-	-
	5C	-	-	-	-	-
	5E	-	-	-	-	-
	5G	-	-	-	-	-
	5H	-	-	-	-	-
	5J	-	-	-	-	-
	5K	-	-	-	-	-
	5L	-	-	-	-	-
	6A	-	80	-	0.04	0.04
	Total	**144148**	**30403**	**206**	**17**	**224**

Table 7.4h Projected Waste Generation from Various Development Areas in SEKD - Year 2014

Year	Development Area	Residential Population	Employment Population	Domestic Waste (tpd)	C&I Waste (tpd)	Total Waste (tpd)
2014	1A	12810	1172	18.5	0.7	19.2
	1B	23804	1751	34.5	1.0	35.5
	1C	16442	1367	23.8	0.8	24.6
	1D	14899	2549	21.6	1.4	23.0
	1E	-	190	-	0.1	0.1
	1G	-	850	-	0.5	0.5
	1K	4659	1544	7	1	8
	1L	-	581	-	0.3	0.3
	1P	-	234	-	0.1	0.1
	1Q	-	2500	-	1	1
	1R	-	4500	-	2.6	2.6
	2A	-	161	-	0.1	0.1
	2B	3470	1267	5	1	6
	2C	5316	1731	8	1	9
	2D	6226	2064	9	1	10
	2E	3135	1039	5	1	5
	2F	3734	1200	5	1	6
	3A	-	-	-	-	-
	3B	-	-	-	-	-
	3C	-	-	-	-	-
	3D	-	-	-	-	-
	3E	-	-	-	-	-
	3F	-	-	-	-	-
	3G	-	-	-	-	-
	3H	-	-	-	-	-
	3J	-	-	-	-	-
	3K	-	-	-	-	-
	3M	-	-	-	-	-
	3N	-	-	-	-	-
	3P	-	-	-	-	-
	3Q	-	-	-	-	-
	3R	-	-	-	-	-
	3S	-	-	-	-	-
	3T	-	-	-	-	-
	3V	-	-	-	-	-
	3X	-	-	-	-	-
	3Z	-	-	-	-	-
	4A	2921	842	4	0.5	5
	4B	6580	495	10	0.3	10
	4C	5992	1007	9	1	9
	4D	1786	515	3	0.3	3
	4E	9351	812	14	0.5	14
	4F	3709	590	5	0.3	6
	4G	2168	625	3	0.4	3
	4H	1825	526	3	0.3	3
	4J	-	-	-	-	-
	4K	3980	669	6	0.4	6
	4L	5969	547	9	0.3	9
	4M	7006	504	10	0.3	10
	4N	-	117	-	0.1	0.1
	4R	4102	295	6	0.2	6
	4S	2917	933	4	1	5
	5A	2671	770	4	0.4	4
	5C	-	-	-	-	-
	5E	2954	979	4	1	5
	5G	-	-	-	-	-
	5H	3249	967	5	1	5
	5J	9582	999	14	1	14
	5K	-	-	-	-	-
	5L	-	3544	-	2	2
	6A	-	80	-	0.05	0.05
	Total	**171257**	**40518**	**248**	**23**	**271**

Table 7.4i Projected Waste Generation from Various Development Areas in SEKD - Year 2015

Year	Development Area	Residential Population	Employment Population	Domestic Waste (tpd)	C&I Waste (tpd)	Total Waste (tpd)
2015	1A	12810	1172	18.8	0.7	19.4
	1B	23804	1751	34.8	1.0	35.9
	1C	16442	1367	24.1	0.8	24.9
	1D	14899	2549	21.8	1.5	23.3
	1E	9596	2507	14	1.4	15.5
	1G	-	850	-	0.5	0.5
	1K	4659	1544	7	1	8
	1L	-	581	-	0.3	0.3
	1P	-	234	-	0.1	0.1
	1Q	-	2500	-	1	1
	1R	-	4500	-	2.6	2.6
	2A	18667	3896	27	2	30
	2B	3470	1267	5	1	6
	2C	5316	1731	8	1	9
	2D	6226	2064	9	1	10
	2E	3135	1039	5	1	5
	2F	3734	1200	5	1	6
	3A	-	-	-	-	-
	3B	-	-	-	-	-
	3C	-	-	-	-	-
	3D	-	-	-	-	-
	3E	-	-	-	-	-
	3F	-	-	-	-	-
	3G	-	-	-	-	-
	3H	-	-	-	-	-
	3J	-	-	-	-	-
	3K	-	-	-	-	-
	3M	-	-	-	-	-
	3N	-	-	-	-	-
	3P	-	-	-	-	-
	3Q	-	-	-	-	-
	3R	-	-	-	-	-
	3S	-	-	-	-	-
	3T	-	-	-	-	-
	3V	-	-	-	-	-
	3X	-	-	-	-	-
	3Z	-	-	-	-	-
	4A	2921	842	4	0.5	5
	4B	6580	495	10	0.3	10
	4C	5992	1007	9	1	9
	4D	1786	515	3	0.3	3
	4E	9351	812	14	0.5	14
	4F	3709	590	5	0.3	6
	4G	2168	625	3	0.4	4
	4H	1825	526	3	0.3	3
	4J	-	-	-	-	-
	4K	3980	669	6	0.4	6
	4L	5969	547	9	0.3	9
	4M	7006	504	10	0.3	11
	4N	-	117	-	0.1	0.1
	4R	4102	295	6	0.2	6
	4S	2917	933	4	1	5
	5A	2671	770	4	0.4	4
	5C	-	-	-	-	-
	5E	2954	979	4	1	5
	5G	7588	2409	11	1	12
	5H	3249	967	5	1	5
	5J	9582	999	14	1	15
	5K	6967	2145	10	1	11
	5L	-	3544	-	2	2
	6A	-	4655	-	3	3
	Total	**214074**	**55699**	**313**	**32**	**345**

Table 7.4j *Projected Waste Generation from Various Development Areas in SEKD - Year 2016*

Year	Development Area	Residential Population	Employment Population	Domestic Waste (tpd)	C&I Waste (tpd)	Total Waste (tpd)
2016	1A	12810	1172	19.0	0.7	19.6
	1B	23804	1751	35.2	1.0	36.2
	1C	16442	1367	24.3	0.8	25.1
	1D	14899	2549	22.1	1.5	23.5
	1E	9596	2507	14	1.5	15.7
	1G	-	850	-	0.5	0.5
	1K	4659	1544	7	1	8
	1L	-	581	-	0.3	0.3
	1P	-	234	-	0.1	0.1
	1Q	-	2500	-	1	1
	1R	-	4500	-	2.6	2.6
	2A	18667	3896	28	2	30
	2B	3470	1267	5	1	6
	2C	5316	1731	8	1	9
	2D	6226	2064	9	1	10
	2E	3135	1039	5	1	5
	2F	3734	1200	6	1	6
	3A	1659	389	2	0.2	3
	3B	3386	793	5	0.5	5
	3C	1335	385	2	0.2	2
	3D	1559	449	2	0.3	3
	3E	1291	372	2	0.2	2
	3F	1455	419	2	0.2	2
	3G	-	-	-	-	-
	3H	-	-	-	-	-
	3J	-	-	-	-	-
	3K	-	-	-	-	-
	3M	-	-	-	-	-
	3N	3264	1044	5	1	5
	3P	2067	685	3	0.4	3
	3Q	3542	1258	5	1	6
	3R	3523	829	5	0.5	6
	3S	2317	568	3	0.3	4
	3T	3663	7318	5	4	10
	3V	4935	1209	7	1	8
	3X	-	117	-	0.1	0.1
	3Z	-	-	-	-	-
	4A	2921	842	4	0.5	5
	4B	6580	495	10	0.3	10
	4C	5992	1007	9	1	9
	4D	1786	515	3	0.3	3
	4E	9351	812	14	0.5	14
	4F	3709	590	5	0.3	6
	4G	2168	625	3	0.4	4
	4H	1825	526	3	0.3	3
	4J	1853	534	3	0.3	3
	4K	3980	669	6	0.4	6
	4L	5969	547	9	0.3	9
	4M	7006	504	10	0.3	11
	4N	-	117	-	0.1	0
	4R	4102	295	6	0.2	6
	4S	2917	933	4	1	5
	5A	2671	770	4	0.4	4
	5C	-	-	-	-	-
	5E	2954	979	4	1	5
	5G	7588	2409	11	1	13
	5H	3249	967	5	1	5
	5J	9582	999	14	1	15
	5K	6967	2145	10	1	12
	5L	-	3544	-	2	2
	6A	-	4655	-	3	3
	Total	**249923**	**72069**	**370**	**42**	**412**

Table 7.4k Projected Waste Generation from Various Development Areas in SEKD - Year 2017

Year	Development Area	Residential Population	Employment Population	Domestic Waste (tpd)	C&I Waste (tpd)	Total Waste (tpd)
2017	1A	12810	1172	19.0	0.7	19.6
	1B	23804	1751	35.2	1.0	36.2
	1C	16442	1367	24.3	0.8	25.1
	1D	14899	2549	22.1	1.5	23.5
	1E	9596	2507	14	1.5	15.7
	1G	-	850	-	0.5	0.5
	1K	4659	1544	7	1	8
	1L	-	581	-	0.3	0.3
	1P	-	234	-	0.1	0.1
	1Q	-	2500	-	1	1
	1R	-	4500	-	2.6	2.6
	2A	18667	3896	28	2	30
	2B	3470	1267	5	1	6
	2C	5316	1731	8	1	9
	2D	6226	2064	9	1	10
	2E	3135	1039	5	1	5
	2F	3734	1200	6	1	6
	3A	1659	389	2	0.2	3
	3B	3386	793	5	0.5	5
	3C	1335	385	2	0.2	2
	3D	1559	449	2	0.3	3
	3E	1291	372	2	0.2	2
	3F	1455	419	2	0.2	2
	3G	-	-	-	-	-
	3H	-	-	-	-	-
	3J	-	-	-	-	-
	3K	-	-	-	-	-
	3M	-	-	-	-	-
	3N	3264	1044	5	1	5
	3P	2067	685	3	0.4	3
	3Q	3542	1258	5	1	6
	3R	3523	829	5	0.5	6
	3S	2317	568	3	0.3	4
	3T	3663	7318	5	4	10
	3V	4935	1209	7	1	8
	3X	-	117	-	0.1	0.1
	3Z	-	100	-	0.1	0.1
	4A	2921	842	4	0.5	5
	4B	6580	495	10	0.3	10
	4C	5992	1007	9	1	9
	4D	1786	515	3	0.3	3
	4E	9351	812	14	0.5	14
	4F	3709	590	5	0.3	6
	4G	2168	625	3	0.4	4
	4H	1825	526	3	0.3	3
	4J	1853	534	3	0.3	3
	4K	3980	669	6	0.4	6
	4L	5969	547	9	0.3	9
	4M	7006	504	10	0.3	11
	4N	-	117	-	0.1	0.1
	4R	4102	295	6	0.2	6
	4S	2917	933	4	1	5
	5A	2671	770	4	0.4	4
	5C	4057	1169	6	1	7
	5E	2954	979	4	1	5
	5G	7588	2409	11	1	13
	5H	3249	967	5	1	5
	5J	9582	999	14	1	15
	5K	6967	2145	10	1	12
	5L	-	3544	-	2	2
	6A	-	4655	-	3	3
	Total	**253980**	**73338**	**376**	**43**	**418**

Table 7.4 Projected Waste Generation from Various Development Areas in SEKD - Year 2018

Year	Development Area	Residential Population	Employment Population	Domestic Waste (tpd)	C&I Waste (tpd)	Total Waste (tpd)
2018	1A	12810	1172	19.0	0.7	19.6
	1B	23804	1751	35.2	1.0	36.2
	1C	16442	1367	24.3	0.8	25.1
	1D	14899	2549	22.1	1.5	23.5
	1E	9596	2507	14	1.5	15.7
	1G	-	850	-	0.5	0.5
	1K	4659	1544	7	1	8
	1L	-	581	-	0.3	0.3
	1P	-	234	-	0.1	0.1
	1Q	-	2500	-	1	1
	1R	-	4500	-	2.6	2.6
	2A	18667	3896	28	2	30
	2B	3470	1267	5	1	6
	2C	5316	1731	8	1	9
	2D	6226	2064	9	1	10
	2E	3135	1039	5	1	5
	2F	3734	1200	6	1	6
	3A	1659	389	2	0.2	3
	3B	3386	793	5	0.5	5
	3C	1335	385	2	0.2	2
	3D	1559	449	2	0.3	3
	3E	1291	372	2	0.2	2
	3F	1455	419	2	0.2	2
	3G	1093	315	2	0.2	2
	3H	1143	329	2	0.2	2
	3J	1488	429	2	0.2	2
	3K	3362	1114	5	1	6
	3M	2128	716	3	0.4	4
	3N	3264	1044	5	1	5
	3P	2067	685	3	0.4	3
	3Q	3542	1258	5	1	6
	3R	3523	829	5	0.5	6
	3S	2317	568	3	0.3	4
	3T	3663	7318	5	4	10
	3V	4935	1209	7	1	8
	3X	-	117	-	0.1	0.1
	3Z	-	100	-	0.1	0.1
	4A	2921	842	4	0.5	5
	4B	6580	495	10	0.3	10
	4C	5992	1007	9	1	9
	4D	1786	515	3	0.3	3
	4E	9351	812	14	0.5	14
	4F	3709	590	5	0.3	6
	4G	2168	625	3	0.4	4
	4H	1825	526	3	0.3	3
	4J	1853	534	3	0.3	3
	4K	3980	669	6	0.4	6
	4L	5969	547	9	0.3	9
	4M	7006	504	10	0.3	11
	4N	-	117	-	0.1	0.1
	4R	4102	295	6	0.2	6
	4S	2917	933	4	1	5
	5A	2671	770	4	0.4	4
	5C	4057	1169	6	1	7
	5E	2954	979	4	1	5
	5G	7588	2409	11	1	13
	5H	3249	967	5	1	5
	5J	9582	999	14	1	15
	5K	6967	2145	10	1	12
	5L	-	3544	-	2	2
	6A	-	4655	-	3	3
	Total	**263194**	**76242**	**390**	**44**	**434**

7.4.2.2 **Table 7.5** summarises the predicted waste generated from SEKD from year 2005 to 2018. It is estimated that the total waste (i.e domestic and C&I waste) generated from SEKD would

increase from 95 tpd in year 2005 to 434 tpd in year 2018. The trends of municipal waste arising in SEKD are illustrated in **Figure A**.

Table 7.5 Summary of Projected Waste Generation from SEKD

Year	Domestic Waste (tpd)	C&I Waste (tpd)	Total Waste (tpd)
2005	88	7	95
2006	102	10	112
2007	112	11	123
2008	120	12	132
2011	126	12	138
2012	204	17	221
2013	206	17	224
2014	248	23	271
2015	313	32	345
2016	370	42	412
2017	376	43	418
2018	390	44	434

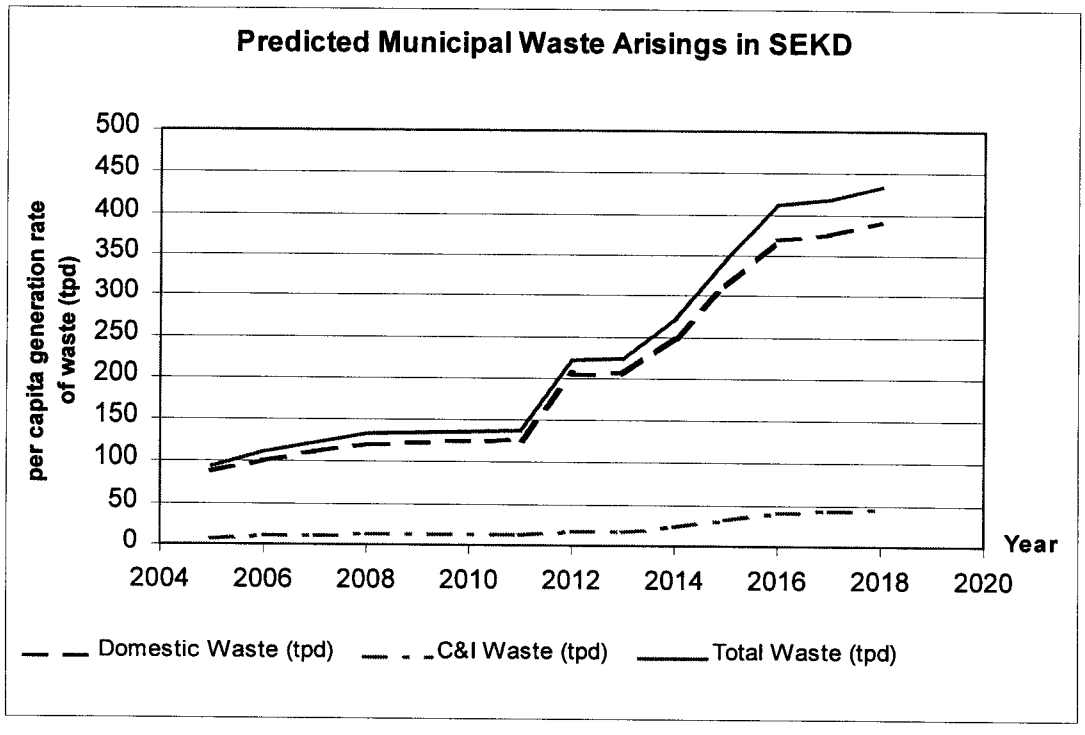

Figure A Predicted Municipal Waste Arising in SEKD

Waste Handling Capability of Existing Kowloon Bay Transfer Station (KBTS)

7.4.2.3 The waste disposal options for SEKD would depend on a number of factors. Factors to be considered include the amount of waste arising from the entire new development area of SEKD, the future waste management strategies, as well as the effectiveness of the Waste Reduction Framework launched by the Government in November 1998. The target level of the Waste Reduction Framework upon completion of the intermediate phase in 2005 is 22% in total waste reduction. The target level by the end of the final phase in 2007 is 40% in total

waste reduction. The corresponding target reduction of waste transferred by Refuse Transfer Stations (RTSs) in 2005 and 2007 would be 16% and 20% respectively.

7.4.2.4 It is noted that SEKD will fall within the current catchment area of the existing Kowloon Bay Transfer Station (KBTS) located to the west of SEKD in Kowloon Bay. The KBTS was commissioned in April 1990 with a daily operational capacity of 1800 tpd. The current catchment of KBTS includes Kowloon City, Wong Tai Sin and Kwun Tong districts. A recent consultancy study of EPD indicated that, the capacity of SENT Landfill might be exhausted by 2009. Upon closure of SENT Landfill, some of the waste currently disposing of at SENT Landfill will need to be disposed of at the KBTS after 2009. The projected waste generation of the future KBTS catchment including Kowloon City, Wong Tai Sin, Kwun Tong, SEKD and Sai Kung (after 2009) without considering waste reduction targets are presented in **Table 7.6**. The projected quantities of municipal solid waste from Kowloon City, Wong Tai Sin, Kwun Tong, and Sai Kung in 2006, 2011 and 2016 are extracted from *Monitoring of Solid Waste in Hong Kong 1999, EPD.*

Table 7.6 Projected Municipal Solid Waste Quantities of KBTS Catchment in tpd Without Considering Waste Reduction Targets

Catchment	District	2006			2011			2016		
		Domestic	C&I	Total	Domestic	C&I	Total	Domestic	C&I	Total
KBTS	Kowloon City	620	60	680	650	60	710	660	60	720
	Wong Tai Sin	500	30	530	520	40	560	550	40	590
	Kwun Tong	700	180	880	770	180	950	980	220	1200
	Sai Kung	---	---	---	560	190	750	610	200	810
	Old SEKD*	-158	-35	-193	-173	-35	-208	-360	-51	-411
	Current SEKD	102	10	112	126	12	138	370	42	412
				2009			**2900**			**3321**
Plus additional waste projection error of	**10%**			**2210**			**3190**			**3653**
Capacity of KBTS				**1800**			**1800**			**1800**
Surplus / deficit				**-410**			**-1390**			**-1853**

Note: * Deduction of the projected municipal solid waste quantities generated from the SEKD population included in EPD's waste forecast undertaken in 1999 for Kowloon City and Kwun Tong districts.

7.4.2.5 Two additional scenarios assuming 50% and 100% achievement of the waste reduction target were considered and the corresponding projected waste generation from the KBTS catchment are presented in **Tables 7.7 and 7.8** respectively.

Table 7.7 Projected Municipal Solid Waste Quantities of KBTS Catchment in tpd Assuming 50% Achievement of Waste Reduction Targets

Catchment	District	2006			2011			2016		
		Domestic	C&I	Total	Domestic	C&I	Total	Domestic	C&I	Total
KBTS	Kowloon City	570	55	626	585	54	639	594	54	648
	Wong Tai Sin	460	28	488	468	36	504	495	36	531
	Kwun Tong	644	166	810	693	162	855	882	198	1080
	Sai Kung	---	---	---	504	171	675	549	180	729
	Old SEKD*	-145	-32	-178	-156	-32	-187	-324	-46	-370
	Current SEKD	94	9	103	113	11	124	333	38	371
				1848			**2610**			**2989**
Plus additional waste projection error of	**10%**			**2033**			**2871**			**3288**
Capacity of KBTS				**1800**			**1800**			**1800**
Surplus / deficit				**-233**			**-1071**			**-1488**

Note: * Deduction of the projected municipal solid waste quantities generated from the SEKD population included in EPD's waste forecast undertaken in 1999 for Kowloon City and Kwun Tong districts.

Table 7.8 *Projected Municipal Solid Waste Quantities of* KBTS *Catchment in tpd Assuming* 100% *Achievement of Waste Reduction Targets*

Catchment	District	2006			2011			2016		
		Domestic	C&I	Total	Domestic	C&I	Total	Domestic	C&I	Total
KBTS	Kowloon City	521	50	571	520	48	568	528	48	576
	Wong Tai Sin	420	25	445	416	32	448	440	32	472
	Kwun Tong	588	51	739	616	144	760	784	176	960
	Sai Kung	---	---	---	448	152	600	488	160	648
	Old SEKD*	-133	-29	-162	-138	-28	-166	-288	-41	-329
	Current SEKD	86	8	94	101	10	110	296	34	330
				1688			**2320**			**2657**
Plus additional waste projection error of	**10%**			**1856**			**2552**			**2922**
Capacity of KBTS				**1800**			**1800**			**1800**
Surplus / deficit				**-56**			**-752**			**-1122**

Note: * Deduction of the projected municipal solid waste quantities generated from the SEKD population included in EPD's waste forecast undertaken in 1999 for Kowloon City and Kwun Tong districts.

7.4.2.6 As shown in **Table 7.8** above, even with 100% achievement of the waste reduction targets, the total municipal solid waste generated from the KBTS catchment would exceed the maximum capacity of the existing KBTS from year 2006 onwards. The percentage contribution of SEKD is estimated to increase from about 5.6% in year 2006 to about 12.4% in year 2016.

7.4.2.7 Under the worst-case scenario as shown in **Table 7.6** without considering the waste reduction targets, the deficit in the capacity of the existing KBTS would increase from 410 tpd (or 23% of the existing KBTS capacity) in 2006 to 1853 tpd (or 103% of the existing KBTS capacity) in 2016. With further implementation of the RTS Charging Scheme in the future, the RTSs including KBTS would be required to handle more privately collected municipal solid waste and the deficit in the capacity of the existing KBTS would increase accordingly.

7.4.2.8 It was advised by EPD that the existing contract of KBTS will expire in 2005 and KBTS will reach the end of its serviceable life in 2010. A major refurbishment of the existing KBTS will in any case be necessary if its service is required beyond 2010. Refurbishing the KBTS will also mean diverting part or all of the municipal waste from its catchment to other RTSs during the refurbishment work that would last from two to three years. The ability of the other RTSs to accommodate the diverted waste is questionable.

Proposed RTS in SEKD

7.4.2.9 With reference to the discussion above, a new RTS is proposed in SEKD to handle the municipal solid waste generated from SEKD and the catchment of the existing KBTS as well as the waste arising from Sai Kung district after 2009. According to the estimation presented in **Tables 7.6 to 7.8** above, the required capacity of the new RTS would be in the range of 3000 tpd to 3700 tpd in year 2016 depends on the degree of achievement of the waste reduction targets.

7.4.2.10 The proposed RTS is located in Area 6C outside the existing Kwun Tong Ferry Pier with an area of about 2 hectares. A schematic layout of the proposed RTS is shown in **Drawing No. 22936/MS/205**. The proposed RTS is separated from all existing and planned residential uses by more than 300m.

7.4.2.11 During the construction phase of the RTS, major environmental impacts would be associated with construction noise, construction dust, and construction site runoff. With the implementation of practicable and effective construction noise reduction measures,

construction dust suppression measures, and construction site drainage management, adverse environmental impacts arising from the construction of the RTS are not expected.

7.4.2.12 During operational phase of the RTS, the main activities of the RTS will be operated in an enclosed structure like other newly built RTSs in the territory. With the implementation of effective odour and noise control measures adopted in other RTS, adverse environmental impact is not expected. Besides, the proposed RTS is provided with marine access with a berthing length of about 200m. Comparing the environmental impacts associated with different modes of waste transfer namely conventional collection and disposal practices using small refuse collection vehicles; land transfer by container; and marine transfer by containers, marine transfer would entail the least environmental impacts. Marine transfer would also reduce the transfer of about 150 to 180 loads of 40 foot containerised refuse everyday comparing with an inland RTS site.

7.4.2.13 The proposed RTS is a Designated Project under Schedule 2 Part I:G.2 of the EIAO, a detailed EIA should be carried out by the future project proponent and approved under the EIAO to confirm that there will be no insurmountable environmental impacts associated with the construction and operation of the RTS.

7.4.2.14 Under the proposed implementation program of SEKD, the reclamation works for the RTS site in Area 6C will be completed in 2011. The site will then be handed over to EPD for commissioning of RTS in 2014.

7.5 Proposed RTS in SEKD

7.5.1 Backgrounds

7.5.1.1 Having reviewed the current operation and future needs, a new station shall be constructed at the waterfront to replace the existing refuse transfer station at Kowloon Bay.

7.5.1.2 In accordance with the requirement set out by the operating department, Environmental Protection Department, a new refuse transfer station with a minimum area of 2 ha is required, equipped with a berth to accommodate vessels with length 100m. Such a facility is similar to the refuse transfer station at West Kowloon Reclamation.

7.5.2 Details of New RTS

7.5.2.1 The proposed station will be located near the existing Kwun Tong Ferry Pier and close to the mouth of the Tsui Ping Nullah on a proposed reclamation area. The site will be rectangular in shape with an overall dimension of 200m long x 100m wide. To facilitate berthing for vessels up to 120m LOA, the vertical seawall 200m long with a minimum draft of 5m facing the breakwater of the proposed Kwun Tong Typhoon Shelter will be adopted.

7.5.2.2 The ingress and egress of the site is located at an access road from the Hoi Bun Road Extension. The proposed layout is shown on the **Drawing No. 22936/MS/205**.

7.5.2.3 The Refuse Transfer Station will generally be a covered or enclosed structure to mitigate possible environmental impact. Refuse will be transported into the station and tipped into a hopper, which will collect and compact the refuse before packing into containers for the disposal.

7.5.2.4 An open area will be provided at the seafront for the storage of filled / empty containers. Empty and filled containers will be stacked on the deck, either waiting for refuse packing or loading on to vessels for disposal. Lifting crane will be installed on the deck to stack containers as well as to handle containers between the deck and vessels.