

16.5 Sewerage and Sewage Treatment Implications

16.5.1.1 The philosophy of conventional "shallow" gravity sewers coupled with sewage lift stations is proposed to be provided for the sewerage of SEKD. This approach provides conventional gravity sewers to cater for the developments within each subcatchment area, and subsequently drains the sewage to a local lift station which would be situated adjacent to a major stormwater drainage culvert. At the lift station, the collected flows would be pumped over the drainage culverts into the next subcatchment, to discharge into a manhole where the sewage would flow by gravity into the next lift station. Ultimately, the collected sewage would be directed collectively to either the To Kwa Wan PTW or the Kwun Tong PTW.

16.5.2 Based on the population and landuse distribution for the SEKD development, and also on the population projections in the hinterland by the RCEKSMP study, it is shown that there will be no potential capacity constraints at To Kwa Wan PTW. For Kwun Tong PTW, depending on which current PWWF projections are adopted, there may be a potential capacity constraint by year 2016. Provision for expansion areas at both the Kwun Tong and To Kwa Wan PTWs has been allowed for to make allowance for any future upgrading should this be found necessary.

16.6 Waste Management Implications

16.6.1 Wastes generated during the construction stage of the development would generally include construction and demolition (C&D) material, chemical waste, and workforce waste. With the implementation of practicable waste management measures, the associated impacts are not considered to be an insurmountable environmental constraints.

16.6.2 Waste generated during the operational stage is mainly municipal solid waste. 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. Together with the municipal solid waste generated from the existing catchment of KBTS, the capacity of the existing KBTS would be exceeded in year 2006. Based on the future waste arising estimated in this study, a new RTS with capacity in the range of 3000 to 3700 tpd and with marine access is proposed in Area 6C of SEKD to serve the SEKD and the existing catchment of KBTS. The proposed RTS site is located at more than 300m from existing and planned residential uses. With the implementation of practicable mitigation measures adopted in other newly built RTSs in the territory, adverse environmental impact associated with the operation of the proposed RTS is not expected. 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.

16.6.3 There is no major difficulty on technical grounds, as evidenced by the application of the Automated Refuse Collection System to 2 public housing estates in the pilot scheme. The use of ARCS for combined sites will have institutional and financial issues to be resolved, though not insurmountable. South East Kowloon Development, being a newly developed area, will provide better opportunity of applying the ARCS than in other developed and congested areas. As such, an institutional framework should be formulated to target for a wider application. A further study, based on the initial findings of this report, is recommended to allow the implementation to follow.

16.7 Land Contamination Impact

16.7.1 Two relevant recent studies namely SEKDFS EIA and NAKTA Decommissioning EIA have been reviewed to provide the background information for assessment of land contamination impact. The previous studies identified a number of 'hotspots' within the Kai Tak Airport. Remediation works is now carrying out at the identified locations to decontaminate the land up

to the remediation targets. Besides, findings from previous site investigation indicated that the urban area as a whole did not have a major contamination problem but for specific hotspots with localised land contamination.

16.7.2 Decontamination works are now carrying out at the identified remediation areas within NAKTA using Soil Vapour Extraction / Air Sparging system and excavation with biopile treatment in accordance with the NAKTA Decommissioning EIA Report.

16.7.3 Under the conditions of approval of the NAKTA Decommissioning EIA Report, the decontamination works at the NAKTA area should be carried out such that the remediation targets are fully met. Besides, environmental monitoring and audit should be carried out in accordance with the respective Environmental Monitoring and Audit Manual. Provided that the decontamination works could be completed satisfactorily to meet the remediation targets, residual impacts on the remediated site due to land contamination is not expected.

16.7.4 However, there are sites within the Assessment Area which are not included in the NAKTA decommissioning project. Sites of potential land contamination include those chemical storage tanks (mainly fuel storage tanks) located within the disused Kai Tak Airport. It is recommended that when access to these sites is gained in future, land contamination assessment should be conducted taking into account all past and current land uses and site activities prior to the development of the sites.

16.7.5 Additional investigation including review of site history and GFS hangar operation has been undertaken for the GFS Hangar site located at the south apron. There is a potential for the hangar operation to cause underground contamination although the impact is likely to be insignificant because of the short hangar operation period (5 years); non-polluting use (open area and temporary housing site) before the hangar; presence of concrete covering; absence of underground fuel hydrant pipeline; and the handling and disposal of chemical waste was undertaken by a registered chemical waste collector. In order to confirm the nature and extent of land contamination at the GFS hangar, if any, it is recommended that a land contamination assessment of the GFS hangar should be carried out before redevelopment of the area takes place.

16.8 Hazard to Life

16.8.1 Ma Tau Kok Gas Works

16.8.1.1 In order to establish the acceptability of the proposed South East Kowloon Development, a quantified risk assessment of the risk from the Ma Tau Kok Gas Works to the surrounding population has been carried out.

16.8.1.2 The risk assessment has considered two cases, as follows:

- Base Case - current operation of MTK Gas Works with South East Kowloon Development population.
- Mitigated Case - current operation of MTK Gas Works (buried gas outlets) with South East Kowloon Development population.

16.8.1.3 The levels of individual risk for the current and mitigated current cases do not exceed the "Acceptable" limit (10^{-5} per year) of the Hong Kong Risk Guidelines and therefore no parts of the development lie within any unacceptable areas of individual risk.

16.8.1.4 The 10^{-7} and 10^{-8} individual risk contours around the works extend to cover areas including Site 3V and Wyler Garden (both residential). 10^{-8} contour around the pigging station extends to cover areas including the district open space in Site 3Y2 and the community facilities in Site 3N5. Site 3Y3 (school) is on the fringe of the contour and is barely affected. The district open space acts as a buffer zone around the pigging facilities to minimise the risk.