

Case 27/2016

Issue: Rational Foundation Design of Spread Footings Bearing on Landfill (waste)

- Recommendation:
- (1) To accept the geotechnical parameters adopted in the determination of bearing capacity of the landfill (waste) and assessment of settlements with reference to:
 - (i) Stage I Geotechnical Parameter Design Submission of the TKO Landfill Restoration Contract 1998 of EPD;
 - (ii) Stage 1 Formation Design Submission of the TKO Landfill Restoration Contract 1998 of EPD; and
 - (iii) Geotechnical Assessment Report for Tseung Kwan O (Stage 1) Landfill of the TKO-I Landfill and Jordan Valley Landfill Feasibility Study Contract February 2003 of EPD.
 - (2) To accept the proposed rational design approach for the footings bearing on landfill (waste) subject to the following conditions:
 - (i) The allowable bearing capacity of the landfill waste is determined in accordance with Appendix A of Geoguide 1, 2nd Edition with Factor of Safety (FOS) greater than 4.
 - (ii) The secondary settlement of the footings is estimated according to the hyperbolic function model.
 - (iii) The structures to be supported on these footing foundations shall be designed with due consideration of the total settlement and differential settlements or tilting.
 - (iv) A performance review and post-construction monitoring scheme shall be implemented respectively to monitor the settlement and tilting of the footings and superstructures during the construction stage and after occupation.

Decision: Having noted the background information, the clarifications made by the RSE and his consultant team, members endorsed the

recommendations on a case-by-case basis subject to the following additional conditions:

- (a) Upon completion of the works, the building owner should engage an RSE for the post-construction monthly monitoring of settlement, tilting and structural stability of the footing foundations throughout the lifetime of the development with details devised for the post-construction monitoring for the structures. The RSE should promptly report to the BD and notify the building owner at once any undue tilting and settlement of the footing foundations/superstructures or exceedance of the Action Levels and submit remedial proposal and structural assessment on the structural integrity and adequacy of the structures concerned to the BD for consideration.