

Annex G

Replacement Page of Sewerage Impact Assessment

Average Dry Weather Flow (ADWF) (m ³ /s)	0.014169 + 0.000022 + 9.08E-05 = 0.01428
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Table 3.4 Calculations of the Average Dry Weather Flow of proposed Area (A) Phase I development

	Resident	Employee	Swimming Pool	Total
Calculated Total Average Flow (m ³ /day)	1206.06	26.04	1.88	1233.98
Contributing Population	4467	97	7	4571
Peaking Factor***	3	3	-	3
Overall Design Peak Flow (m ³ /day)	3618.18	78.12	1.88**	3698.18

Table 3.5 Peaking Factor Calculation of Proposed Area (A) Phase I Development to the Sewage Treatment Plant

**According to Guidelines for Estimating Sewage Flows for Sewage Infrastructure Planning – T-5(b) for Sewage Treatment Works*

***The Total Average Flow include swimming pool flow without peaking factor as swimming pool sewage generation occur at non-peaking hour (about 00:00-06:00 and will be subjected to detail design stage) and in a constant flow*

****STP can be designed to cater for a peak flow of 3 ADWF, excess flow over 3 ADWF being equalized in an equalization tank. Equalization tanks should be designed to hold the excess flow for a period of two hours, 1 ADWF excess sewerage flow will be equalized in an 110m³ equalization tank. The dimension of equalization tank will be subjected to detail design stage*

The proposed design of the treatment plant is subjected to the detailed design stage. The installed capacity of the proposed sewage treatment plants (STPs) is estimated as 0.0428m³/s (Peaking factor do not adopted for swimming pool sewage), which is 3698m³/day. The design of STP would follow EPD’s Guideline for the Design of Small STP, and be duly certified by Authorized Person for compliance of relevant requirements. The responsible party for constructing and maintaining the plant would be the lot owner. The sewage treatment process is briefly discussed in the following. The first process is primary treatment. Physical solids would be settled while the light solid would be floated in the primary sedimentation tank. They will be removed afterwards. Then, the sewage will flow to secondary treatment. Dissolved and suspended biological matters are removed by aerobic biological process. Lastly, tertiary treatment will be done to the wastewater to improve effluent quality before discharging to the receiving environment. According to the information advised by the STP supplier, for the maintenance of the STP, the maintenance frequency would be generally twice a week. The duration of each maintenance would be 1-2 hours. The STP would still operate normally during the regular maintenance. There will be spare parts of the STP on site for maintenance convenience. The location plan of the STP and the proposed discharge point is shown in [Appendix E](#). Discharge licence under WPCO would be obtained prior to operation of the STP. Regular monitoring or audit will be conducted during construction phase (for construction works) and operation phase (for the proposed STP).

Moreover, according to the normal practice advised by the STP supplier, standby equipment (e.g. pumps) of the sewage treatment plant will be stored on site as a contingency plan. When facing any emergency situation, standby equipment will be provided for maintenance. Tankers would be arranged to tanker away raw sewage to avoid