

Although more than 1m of freeboard is allowed, overflow is anticipated at a flow rate of 1.15 times peak flow. Criteria checking are given in **Table 8** and **Table 9** below.

**Table 8 – Freeboard Calculation of Sewers with Exceed Capacity**

Manhole No.	Cover Level (mPD)	Invert Level (mPD)	Freeboard (m)
FMH1034307	3.10	-0.520	3.620
FMH1034308	3.11	-0.523	3.633

**Table 9 – Overflow Calculation of Sewers with Exceed Capacity**

	Manhole		Peak Flow (L/s)	Capacity (L/s)	Peak Flow/Capacity (%)
	Upstream Manhole No.	Downstream Manhole No.			
Existing	FMH1034307	FMH1034308	76.16	63.81	119%
1.15 times peak flow	FMH1034307	FMH1034308	87.58	63.81	137%

## 5. Conclusion

Sewage from the Proposed Development will be discharged through a 300mm dia. sewer from a new terminal manhole into the existing sewerage network at FMH1034356. The existing sewerage network is expected to exceed its capacity; therefore, improvement works are recommended to ensure sufficient capacity for both the existing and projected additional flow. The recommended improvement works extend from existing sewer manhole FMH1034305 to FMH1034308. (Refer to Fig. 1)

With the implementation of sewerage improvement works, the increase in sewage flow from the proposed development will have no adverse impact on Tolo Harbour Water Control Zone.



**Fig. 1 Indication Plan for improvement work of sewer manhole.**