



**Legends:**

- Transfer Station
- Material Recovery Facility
- ▲ Thermal Treatment Plant
- Sanitary Landfill
- Waste Flow
- Highway
- Federal Road
- State Road
- District Area
- Local Authority Area
- Township Area

**Abbreviations:**

TFS: Transfer Station  
MRF: Material Recovery Facility  
TTP: Thermal Treatment Plant  
SLF: Sanitary Landfill  
TPD: Tonne per Day  
Ha: Hectare

**Explanatory Note:**

1. Figures in flow diagram are projected tonnes per day (TPD) of waste collected in Year 2020.
2. The locations of planned SWM facilities are generic.
3. Land areas requirement are estimates.
4. Construction of facilities in 3 phases:  
Phase I: 2003-2009  
Phase II: 2010-2014  
Phase III: 2015-2020

No.	SWM Facilities	Capacity in 2020 (TPD)	Estimated Land Area (Ha)	Phase
1.	Pulau Pinang TFS	300	3	II
2.	Seberang Perai Tengah MRF	750	7	I
3.	Pulau Pinang TTP	1,120	20	I
4.	Seberang Perai Selatan SLF	2,220	90	I, II, III

**Figure 4.3**  
Waste Flow and SWM Facilities in Pulau Pinang in 2020