ABSTRACT

Estuary is a semi-enclosed coastal body of water which has free connection with the sea, thus is strongly affected by the tidal action. Also in these areas, the level of the receiving water body is directly or indirectly affected by tidal or wave effects, including different rainfall conditions in varying intensity and duration. Estuaries as a low-lying area will be facing a direct effect from the conditions of huge tidal and heavy rainfall occurrences. This paper investigates the behaviour of the drainage in estuaries with occurrences of tidal wave and heavy rainfall. Study of the tidal affect and rainfall towards drainage system is carried out in Sungai Dinding Kiri area in Sitiawan, Perak and which the drainage of study area is located in Kampung Baru, Sitiawan which is very near to the estuary. The 100 years ARI rainfall is analysed, as stated in MASMA. Collections of data, consisting of water level and flow of water were conducted for four consecutive months. HEC-RAS Software was then used to simulate and analyse the data. To determine the effective water discharge of channel in the study area, Min and Mean Section Method were used. The peak water discharge from Sungai Dinding is 851.66m³/s.