BF 75197 Hwy 2 Over Swan River
Hydrotechnical Summary

Channel Capacity :

S = 0.00045
B = 25 m, h = 6 m, T_h = 55 m
Use AT equation

At Bank Height : Y = 6 m, V = 1.7 m/s, Q = 400 cms
At Channel Capacity : Y = 7 m, V = 2.0 m/s, Q = 600 cms

Historical Highwater Data :

HW was observed in July 1961 (Y ~ 7.5m), June 1965 (Y ~ 7m), June 1971 (Y ~ 7m), June 1983 (Y ~ 7.5m), July 1988 (Y ~ 7.5m), August 1989 (Y ~ 6.5m), May 1991 (Y ~ 6.5m), and June 1996 (Y ~ 7m). The 1961 design was based on Y ~ 6.5m.

WSC gauge 07BJ001 (DA = 1900km^2, 1915 – 1917, 1961 – Now) reports Q ~ 670cms (June 1996, July 1988, gauged close to peak, ~8m stage rise) and Q ~ 570cms (June 1983). Rating curve is unstable, HW elevation appears to have dropped due to degradation due to channel straightening.

Basin Runoff Potential :

Gross DA = 1925 km^2 (beyond range of technique)

Conclusion :

Historic highwater observations govern. Recommended parameters :

Y = 7.5 m, V = 2.1 m/s, Q = 700 cms.
EL 591.0 m (2935-P)