BF 70008 Local Road Over Blindman River
Hydrotechnical Summary

Channel Capacity :

S = 0.0009
B = 18 m, h = 4.5 m, T_h = 35 m
Use AT equation

At Bank Height : Y = 4.5 m, V = 1.9 m/s, Q = 230 cms
At Channel Capacity : Y = 5.5 m, V = 2.3 m/s, Q = 350 cms

Historical Highwater Data :

A 1962 report notes a HWM with Y = 5.1m. HW was observed in July 1986 (0.2m above bottom chord, Y = 5.3m), and July 1990 (0.4m below top of wheelguard, Y = 5.9m, likely increased headloss due to superstructure blockage).

WSC gauge 05CC008 (DA = 352km^2, 1965 – Now) reports Q = 330cms in July 1990, with other large events in July of 1981, 1982, and 1986 (190 – 230cms). The rating curve shows a stage rise of just under 5m for the July 1990 event, with Q based on extrapolation (highest gauged event Q = 114cms, Y = 2.5m) and may be in the 260 – 300cms range. Gauge 05CC001 (DA = 1790km^2, 1916 – 1922, 1962 - Now) reports Q = 395cms in July 1990. The largest storm in the database for this area is July 1990 with 120mm of rainfall (centred over upper basin), followed by July 1982 and 1986 with about 110mm.

Basin Runoff Potential :

d = 70mm, T_p = 20hrs, q = 1.0 cms/km^2.
Gross DA = 665 km^2.
Q_p = 665 cms.

Conclusion :

The channel capacity estimate is consistent with historic observations and is within the basin runoff potential.

Recommended parameters : Y = 5.5 m, V = 2.3 m/s, Q = 350 cms.