BF 06960 Local Road Over Belly River
Hydrotechnical Summary

Channel Capacity :

S = 0.004
B = 35 m, h = 2.4 m, T_h = 55 m
Use AT equation

At Bank Height : Y = 2.4 m, V = 2.4 m/s, Q = 250 cms
At Channel Capacity : Y = 3.4 m, V = 3.2 m/s, Q = 500 cms

Historical Highwater Data :

HW has been recorded in June 1953 (1.8m below top of stringers, drift removed), June 1964 (1.7m below the deck, Y ~ 2.6m, over grade to east, headslope restored), June 1975 (Y ~ 2.4m), and June 1995 (1.4m below deck, Y ~ 2.9m).

WSC gauge 05AD005 (DA = 319km^2, 1912 – Now) is located u/s and gauge 05AD041 (DA = 657km^2, 1985 – Now) is located d/s. Gauge 05AD005 reports the highest events in June 1964 (Q = 465cms), June 1975 (Q = 415cms), and June 1995 (Q = 330cms). Gauge 05AD041 reports the largest flows in June 1995 (Q = 570cms) and June 2002 (Q = 220cms). The 1995 event at 05AD041 shows a very sharp instantaneous peak (Q max daily = 340cms, peak stage 0.9m higher) and the largest gauged flow was Q = 175cms. Therefore, there is less confidence in the published 1995 instantaneous peak. The largest storms in the database for this area are June 1964 with about 170mm of rainfall, June 1995 with 145mm, May 1964 with 130mm, and June 1975 with 125mm.

Basin Runoff Potential :

Area covers 150, 100 and 40mm ranges.
Gross DA = 550 km^2.
Q_p = 720 cms (based on d = 40mm over area d/s of BF00288).

Conclusion :

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

Recommended parameters : Y = 3.4 m, V = 3.2 m/s, Q = 500 cms.