BF 72103 Local Road Over Nordegg River
Hydrotechnical Summary

Channel Capacity :

S = 0.003
B = 40 m, h = 2.5 m, T_h = 70 m
Use AT equation

At Bank Height : Y = 2.5 m, V = 2.2 m/s, Q = 300 cms
At Channel Capacity : Y = 3.5 m, V = 2.8 m/s, Q = 600 cms

Historical Highwater Data :

HW was observed in June 1972 (partial washout, drift), July 1982 (Y ~ 1.5m, drift), and July 1986 (Y ~ 3.5m). The 1987 design was based on Y ~ 3.5m (Q ~ 620cms).

WSC Gauge 05DD009 (DA ~ 875 km^2, 1972 – Now) reports Q ~ 620 cms (July 1986), and Q ~ 330cms (June 1972, gauged at Q ~ 160cms, stage rise ~ 1.5m).

Basin Runoff Potential :

d = 60/80 mm, T_p = 20 hrs, q ~ 1.0 cms/km^2.
Gross DA = 880 km^2.
Q_p = 880 cms.

Conclusion :

The channel capacity estimate is consistent with historic observations. Recommended parameters :

Y = 3.5 m, V = 2.8 m/s, Q = 600 cms.
EL 925.5 m (12558-P)