BF 06983 Local Road Over Ribstone Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0015
B = 4 m, h = 2.0 m, T_h = 8 m
Use n = 0.045

At Bank Height : Y = 2.0 m, V = 1.0 m/s, Q = 12 cms
At Channel Capacity : Y = 3.0 m, V = 1.5 m/s, Q = 30 cms

Historical Highwater Data :

The 1964 design was based on a HWM 0.3 to 0.6m over the grade (Y = 3.3 – 3.6m u/s) and estimated Q = 42cms.

WSC gauge 05DF005 (1968 – 1990, DA = 1830 km^2) reports Q = 22cms in April 1974 with a stage increase of about 1.2m (actual gauging info not available). The largest storms in the database for this basin are about 150mm in July 1962 and June 1973.

Basin Runoff Potential :

d = 35mm, T_p = 40hrs, q = 0.25 cms/km^2.
Gross DA = 161 km^2.
Q_p = 40 cms.

Conclusion :

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

Recommended Parameters : Y = 3.0 m, V = 1.5 m/s, Q = 30 cms.