BF 00819 Local Road Over Tongue Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0045
B = 6 m, h = 1.8 m, T_h = 10 m
Use n = 0.045

At Bank Height : Y = 1.8 m, V = 1.7 m/s, Q = 25 cms
At Channel Capacity : Y = 2.7 m, V = 2.5 m/s, Q = 60 cms

Historical Highwater Data :

HW was noted in January 1986 (~ 1.5m below u/s crown, due to drift blockage at inlet) and June 2005 (structure washed out). A pile was broken by ice in 1935. A 1954 report estimates Q = 42 – 56cms and a 1957 report notes a HWM with Y = 1.5 – 1.8m and estimates Q = 34cms. A 1998 BIM report notes a HWM with Y = 2m.

WSC gauge 05BL016 (DA = 267km^2, 1923 – 1925, 1931) reports no significant HW events. Gauges in the area suggest HW events in June 1915, June 1916, May 1967, June 1969, May 1990, June 1995, and June 2005. The largest storms in the database for this area are 135mm in June 1992, and 110 – 120mm in June 1929, June 1932, and June 1963.

Basin Runoff Potential :

d = 60mm, T_p = 20hrs, q = 0.83 cms/km^2.
Gross DA = 125 km^2.
Q_p = 100 cms.

Conclusion :

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

Recommended parameters : Y = 2.7 m, V = 2.5 m/s, Q = 60 cms.