BF 00914 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 June 1974 with washout of the south headslope noted. A 1952 report notes a HWM with Y = 1.8m. A 1973 report estimates Q = 42cms. The 1976 design was based on Y = 2.4m.

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 = 155 km^2.
Q_p = 130 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.