BF 71543 Local Road Over Callum Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0075
B = 10 m, h = 1.5 m, T_h = 20 m
Use AT equation

At Bank Height : Y = 1.5 m, V = 2.1 m/s, Q = 50 cms
At Channel Capacity : Y = 2.3 m, V = 3.0 m/s, Q = 110 cms

Historical Highwater Data :

HW was noted in June 1953 (0.8m below deck, Y ~ 2.0m). A 1952 report notes a HWM with Y = 1.0m and estimates Q = 17cms. A 1993 BIM report notes a HWM with Y = 1.5m. Rock was added to both abutments in 1986.

Gauge 05AA029 (DA = 189 km^2) is on this stream, but was only in operation in 1973 with no significant flood data. Gauge 05AA023 (DA = 1440km^2, 1950 – Now) suggests HW events in June 1953, June 1975, and June 1995. The largest storms in the storm database are about 180mm in June 2002, about 140mm in May 1923, and about 130mm in August 1976.

Basin Runoff Potential :

d = 100 mm, T_p = 20 hrs, q = 1.4 cms/km^2.
Gross DA = 190 km^2.
Q_p = 270 cms.

Conclusion :

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

Recommended parameters : Y = 2.3 m, V = 3.0 m/s, Q = 110 cms.