BF 74023 Local Road Over Sweeney Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.003
B = 5 m, h = 2 m, T_h = 10 m
Use n = 0.045

At Bank Height : Y = 2.0 m, V = 1.5 m/s, Q = 22 cms
At Channel Capacity : Y = 3.0 m, V = 2.1 m/s, Q = 55 cms

Historical Highwater Data :

HW was noted in 1952 (Y = 1.5m), August 1953 (washout), June 1965 (over grade, estimated Q = 21cms), and 1996 (over grade, modelled Q = 50cms if no blockage). A 1962 report estimates Q = 10cms. A 1965 report estimates Q = 28cms. A 1988 BIM report notes a HWM with Y = 5m (likely over grade due to u/s ponding).

There are no WSC gauges on this stream. Gauges in the area suggest HW events in June 1968, April 1974, June 1990, and April 1997. There are no storms in the storm database for this area that exceed 100mm of rainfall.

Basin Runoff Potential :

d = 60mm, T_p = 20 hrs, q = 0.83 cms/km^2.
Gross DA = 200 km^2.
Q_p = 165cms.

Conclusion :

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

Recommended parameters : Y = 3.0 m, V = 2.1 m/s, Q = 55 cms.