BF 76265 Local Road Over Vixen Ck Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.004
B = 2 m, h = 1.0 m, T_h = 4 m (improved channel u/s)
Use n = 0.05

At Bank Height : Y = 1.0 m, V = 0.9 m/s, Q = 3 cms
At Channel Capacity : Y = 1.5 m, V = 1.4 m/s, Q = 7 cms

Historical Highwater Data :

A 1965 report estimates Q = 7cms. A 1976 note states that scour behind backwalls has been an issue. A 2003 BIM report notes a HWM on the girders (Y ~ 1.5m).

There are no WSC gauges on this stream. Gauges in the area suggest HW events in August 1968, April 1974, April 1979, June 1990, and April 1997. The largest storms in the storm database are about 135mm in August 1982 and 115mm in June 1990.

Basin Runoff Potential :

d = 60 mm, T_p = 20 hrs, q = 0.85 cms/km^2.
Gross DA = 15 km^2.
Q_p = 12 cms.

Conclusion :

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

Recommended parameters : Y = 1.5 m, V = 1.4 m/s, Q = 7 cms.