BF 75427 Local Road Over Kneehills Ck Tributary
Hydrotechnical Summary

Channel Capacity :

S = 0.005
B = 2 m, h = 1.2 m, T_h = 5 m
Use n = 0.05

At Bank Height : Y = 1.2 m, V = 1.1 m/s, Q = 5 cms
At Channel Capacity : Y = 1.8 m, V = 1.7 m/s, Q = 12 cms

Historical Highwater Data :

A 1961 report estimates Q = 11 - 12cms. The 1997 design was based on Y = 1.4m and Q = 8cms. A 1997 BIM report notes a HWM with Y = 3.5m (no description, appears suspect).

There are no WSC gauges on this stream. Gauges in the area suggest HW events in April of 1969, 1971, and 1997. The largest storm in the storm database is June 1970 with about 105mm of rainfall.

Basin Runoff Potential :

d = 35mm, T_p = 40hrs, q = 0.25 cms/km^2.
Gross DA = 49 km^2.
Q_p = 12 cms.

Conclusion :

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

Recommended parameters : Y = 1.8 m, V = 1.7 m/s, Q = 12 cms.