BF 00537 Local Road Over Irvine Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0015
B = 2 m, h = 1.5 m, T_h = 5 m
Use n = 0.05

At Bank Height : Y = 1.5 m, V = 0.7 m/s, Q = 4 cms
At Channel Capacity : Y = 2.3 m, V = 1.1 m/s, Q = 10 cms

Historical Highwater Data :

A 1978 report notes a HWM 0.3m above the u/s crown (Y = 2.7m u/s). A 1994 BIM report notes a HWM with Y = 1.5m based on stains in the barrel. A reference is made in 1983 to proposed channel improvements.

There are no WSC gauges on this stream. Gauges in the area suggest HW events in April 1971, April 1974, April 1982, April 1985, July 1990, and April 1997. The storm database shows the largest storms to be about 110mm of rainfall in July 1937, June 1944, July 1953, June 1965, and July 1990.

Basin Runoff Potential :

d = 40 mm, T_p = 20 hrs, q = 0.55 cms/km^2.
Gross DA = 164 km^2.
Q_p = 90 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 = 1.1 m/s, Q = 10 cms.