BF 75145 Local Road Over Grattan Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.001
B = 2 m, h = 1.0 m, T_h = 5 m (channel not well defined)
Use n = 0.05

At Bank Height : Y = 1.0 m, V = 0.5 m/s, Q = 2 cms
At Channel Capacity : Y = 1.5 m, V = 0.7 m/s, Q = 4 cms

Historical Highwater Data :

A 1959 report notes a HWM just over the grade (estimated Q = 4cms if no blockage), and estimates Q = 6cms. A d/s scour hole was repaired with rock in 1978. A 2001 photo shows drift to the inlet crown (Q ~ 3cms, if no blockage). A 2005 BIM report notes a HWM with Y = 1.4m.

There are no WSC Gauges on this stream. Gauges in the area suggest HW events in April 1969, April 1974, April 1997. The largest storms in the storm database are about 120mm in June 1965 and June 1973, and about 110mm in August 1931 and July 1962.

Basin Runoff Potential :

d = 35 mm, T_p = 40 hrs, q = 0.25 cms/km^2.
Gross DA = 950 km^2.
Q_p = 240 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 = 0.7 m/s, Q = 4 cms.