BF 02492 Local Road Over Driedmeat Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0005
B = 5 m, h = 1.8 m, T_h = 10 m
Use n = 0.045

At Bank Height : Y = 1.8 m, V = 0.6 m/s, Q = 8 cms
At Channel Capacity : Y = 2.7 m, V = 0.8 m/s, Q = 20 cms

Historical Highwater Data :

HW was observed at this site in April 1974 with water 0.5m below deck (Y = 2.5 – 2.7m) and a washout at the north abutment. A 1955 report notes a HWM over the grade (Y = 2.1 – 2.4m), and a 1957 report notes a HWM to 0.3m below the deck (Y = 1.5 – 1.8m). A recent design was based on Y = 2.5m (Q = 55cms, but likely due to slope value (S = 0.0028) being too high).

WSC Gauge 05FA018 (DA = 1150km^2, 1976 – 1995) located d/s reports Q = 16cms in July 1983. Other nearby gauges suggest possible HW for this site in April 1974. The storm database indicates that the largest storms were June 1970 and June 1973 with about 100mm of rainfall.

Basin Runoff Potential :

d = 35mm, T_p = 20 hrs, q = 0.25 cms/km^2.
Gross DA = 1127 km^2.
Q_p = 280 cms.

Conclusion :

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

Recommended parameters : Y = 2.7 m, V = 0.8 m/s, Q = 20 cms.