BF 72616 Local Road Over Henderson Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.004
B = 5 m, h = 2.5 m, T_h = 10 m
Use n = 0.05

At Bank Height : Y = 2.5 m, V = 1.7 m/s, Q = 32 cms
At Channel Capacity : Y = 3.5 m, V = 2.4 m/s, Q = 70 cms

Historical Highwater Data :

HW was observed in June 1968 (partial blockage of the pipe due to buckling) and June 1976 with water 0.6m over the grade for 60 – 100m (H = 7.3m, modelling suggests Q = 50cms through the pipe in addition to the flow over the road). HW was also noted in June 1977 after installation of the second pipe with water 0.3m below the u/s crown and 0.6m below the d/s crown (Y = 2.7m). HW was also noted in 1963 with water to 0.6m below the u/s crown and 0.9m below the d/s crown (Y ~ 2.5m).

There are no WSC gauges on this stream. Nearby gauges suggest June 1990 as the largest event recorded, with other HW events noted in April of 1974 and 1997. There are no storms in the database that exceed 100mm in rainfall for this area.

Basin Runoff Potential :

d = 70 mm, T_p = 20 hrs, q = 1.0 cms/km^2.
Gross DA = 92 km^2.
Q_p = 90 cms.

Conclusion :

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

Recommended parameters : Y = 3.5 m, V = 2.4 m/s, Q = 70 cms.