BF 72581 Local Road Over Hines Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0055
B = 15 m, h = 2.0 m, T = 30 m
Use AT equation

At Bank Height : Y = 2.0 m, V = 2.3 m/s, Q = 100 cms
At Channel Capacity : Y = 3.0 m, V = 3.2 m/s, Q = 250 cms

Historical Highwater Data :

HW was noted in June 1990 at 5.2m below the wheelguard u/s (Y = 1.3m). The 1955 structure was designed based on Y = 3.0m. HW was observed at BF71821 u/s in 1958 with Y = 3.0m, and V between 2.5 and 3.0m/s (Q = 240cms). The bridge at BF71821 was washed away in 1948, and both bridges suffered some erosion in 1974.

WSC gauge 07FD008 (DA = 1240km^2, 1972 – 1991) is located u/s where the channel appears to be less wide and have higher banks, but with similar slope. The largest reported flow is Q = 120cms in April 1974, which was a very high volume, low intensity response. The rating curve shows a stage rise of about 1.8m for Q = 70cms. The storm database indicates that there are no storms in excess of 100mm over this basin.

Basin Runoff Potential :

d = 50mm, T_p = 20hrs, q = 0.7cms/km^2.
Gross DA = 1580km^2
Q_p = 1120cms.

Conclusion :

The channel capacity estimate for this site is consistent with historic observations and is within basin runoff potential.

Recommended parameters : Y = 3.0 m, V = 3.2 m/s, Q = 250 cms