BF 01510 Local Road Over Stretton Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0025
B = 3 m, h = 1.5 m, T_h = 7 m
Use n = 0.05

At Bank Height : Y = 1.5 m, V = 1.0 m/s, Q = 7 cms
At Channel Capacity : Y = 2.3 m, V = 1.4 m/s, Q = 18 cms

Historical Highwater Data :

The 1957 design was based on a HWM close to the deck (Y = 2.1 – 2.4m) and over the grade. A d/s scour hole was noted in 1971, and loss of rock d/s was noted in 1980.

WSC gauge 05EE005 (DA = 82km^2, 1979 – Now) reports Q = 5cms in April 1997 (gauged close to peak, stage rise = 0.8 – 1.0m). The largest storm in the database for this area is June 1962 with about 105 mm of rainfall.

Basin Runoff Potential :

d = 35 mm, T_p = 40 hrs, q = 0.25 cms/km^2.
Gross DA = 82 km^2.
Q_p = 21 cms.

Conclusion :

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

Recommended parameters : Y = 2.3 m, V = 1.4 m/s, Q = 18 cms.