BF 01640 Local Road Over Stretton Ck
Hydrotechnical Summary

Channel Capacity :

S = 0.0035
B = 2 m, h = 1.4 m, T_h = 5 m
Use n = 0.05

At Bank Height : Y = 1.4 m, V = 1.0 m/s, Q = 5 cms
At Channel Capacity : Y = 2.1 m, V = 1.6 m/s, Q = 12 cms

Historical Highwater Data :

HW was noted in May 1962 (0.6m above u/s crown, some loss of rock, estimated Q = 13cms), and in April 1974 (0.4m below u/s crown, some scour d/s, estimated Q = 10cms). The 1961 design was based on Y = 1.5m and Q = 14cms, and a 1993 BIM report noted a HWM with Y = 1.3m.

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 = 45 km^2.
Q_p = 12 cms.

Conclusion :

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

Recommended parameters : Y = 2.1 m, V = 1.6 m/s, Q = 12 cms.