BF 01396 Local Road Over West Arrowwood Creek
Hydrotechnical Summary

Channel Capacity :

S = 0.0007
B = 10 m, h = 2.5 m, T_h = 18 m
Use AT equation

At Bank Height : Y = 2.5 m, V = 1.2 m/s, Q = 40 cms
At Channel Capacity : Y = 3.5 m, V = 1.6 m/s, Q = 85 cms

Historical Highwater Data :

HW was noted in 1947 with damage by ice to 3 piles. A 1963 report notes a HWM with Y = 3.6m and estimates Q = 70cms. A 1994 design was based on Y = 2.8m and Q = 60cms.

WSC gauge 05BM014 (DA = 775km^2, 1967 – Now) reports Q = 90cms in March 1997 (gauged at Q = 74cms, stage increase = 2.6m), with Q = 82cms in April 1971 and Q = 72cms in March 1967. No storms have been recorded over this basin with rainfall exceeding 100mm.

Basin Runoff Potential :

d = 35mm, T_p = 40hrs, q = 0.25 cms/km^2.
Gross DA = 533 km^2.
Q_p = 133 cms.

Conclusion :

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

Recommended parameters : Y = 3.5 m, V = 1.6 m/s, Q = 85 cms.