# BF 13538 Local Road Over Hay Ck
# Hydrotechnical Summary

**Channel Capacity** :

S = 0.003
B = 2 m, h = 1.0 m, $T_h$ = 4 m
Use n = 0.05

At Bank Height : Y = 1.0 m, V = 0.8 m/s, Q = 2 cms
At Channel Capacity : Y = 1.5 m, V = 1.2 m/s, Q = 6 cms

**Historical Highwater Data :**

A 1971 report estimates Q = 14cms. The 1993 design was based on Y = 1.4m and Q = 9cms. A 1994 BIM report notes a HWM with Y = 1.5m.

There are no WSC Gauges on this stream. Gauges in the area suggest HW events in April 1974, June 1990, and April 1997. The largest storms for this area in the storm database are 135mm of rainfall in June 1990, 120mm in July 1951 and June 1964, and 105mm in June 1965.

**Basin Runoff Potential :**

d = 60 mm, $T_p$ = 20 hrs, q = 0.83 cms/$km^2$.
Gross DA = 88 $km^2$.
$Q_p$ = 73 cms.

**Conclusion :**

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

Recommended parameters : Y = 1.5 m, V = 1.2 m/s, Q = 6 cms.