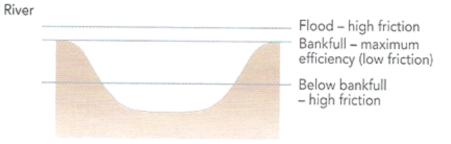
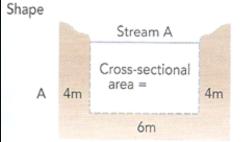
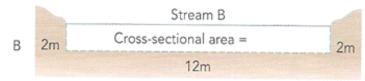
Channel efficiency is measured by the hydraulic radius i.e. cross-sectional area divided by wetted perimeter. It is affected by river level and channel shape.





key ---- Wetted perimeter

Very efficient (low relative friction)



Inefficient (high friction)

Cross-sectional area	Wetted perimeters	Hydraulic radius
Stream A:	Stream A:	Stream A:
Stream B:	Stream B:	Stream B:

Figure 1.15 The hydraulic radius



Channel efficiency is measured by the hydraulic radius i.e. cross-sectional area divided by wetted perimeter. It is affected by river level and channel shape.

River

Flood
Banktefficient

Flood – high friction

Bankfull – maximum

efficiency (low friction)

Below bankfull

– high friction

Shape

Stream A

Cross-sectional area = 4m

6m

key ---- Wetted perimeter

Very efficient (low relative friction)

Stream B

Cross-sectional area = 2m

12m

Inefficient (high friction)

Cross-sectional area	Wetted perimeters	Hydraulic radius
Stream A:	Stream A:	Stream A:
Stream B:	Stream B:	Stream B:

Figure 1.15 The hydraulic radius

