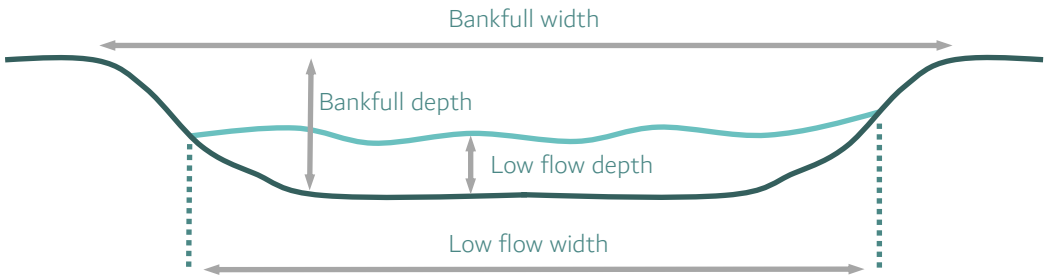
River form survey

A number of features can be measured at a river site to study the form of a river:

- Depth of channel (at bankfull and low flow) - this is usually measured at equal intervals across the river channel, with first and last measurements reading as zero cm.
- Wetted perimeter
- Channel width (at bankfull and low flow)
- Velocity - this is usually done at least three times with the average velocity being recorded.

From these measurements, further features of the river channel can be calculated such as

- Cross sectional area (at bankfull and low flow)
- Discharge
- Hydraulic radius



River Name	
Site of source	
Site of mouth	
River description	
Date of survey	
Preceding weather conditions	

River form survey

SITE NUMBER: _____

Distance from source		Grid Reference	
Gradient		Land Use	
% vegetation cover		Dominant vegetation type	
Evidence of human modification			

Depth

Reading number	1	2	3	4	5	6	7	8	9	10	Average depth reading (cm)
Distance across channel (cm)	0										
Bankfull depth (cm)	0										
Low flow depth (cm)	0										

Velocity

The float was timed over a set distance of _____ metres.

$$\text{Velocity} = \frac{\text{set distance}}{\text{average time}} = \_\_\_\_\_ \text{ m/s}$$

Reading number	1	2	3	Average time taken (sec)
Time taken to travel the set distance (sec)				

River form survey

Calculated Measures

Mean bankfull depth		Bankfull width		Bankfull cross sectional area
	×		=	
_____ m		_____ m		_____ m^2
Mean low flow depth		Low flow width		Low flow cross sectional area
	×		=	
_____ m		_____ m		_____ m^2
Cross sectional area		Wetted perimeter		Hydraulic Radius
	÷		=	
_____ m^2		_____ m		_____
Mean velocity		Cross sectional area		Discharge
	×		=	
_____ m/s		_____ m^2		_____ m^3

Fieldsketch with annotations

River form survey

Summary

Site number								
Channel gradient								
Grid reference								
Distance from source (km)								
Bankfull width (m)								
Mean bankfull depth (m)								
Bankfull cross sectional area (m^2)								
Bankfull wetted perimeter (m)								
Low flow width (m)								
Mean low flow depth (m)								
Low flow cross sectional area (m^2)								
Hydraulic radius								
Velocity (m/s)								
Discharge (m^3)								

