

**PHYSICAL ATTRIBUTES (SECTION E)**

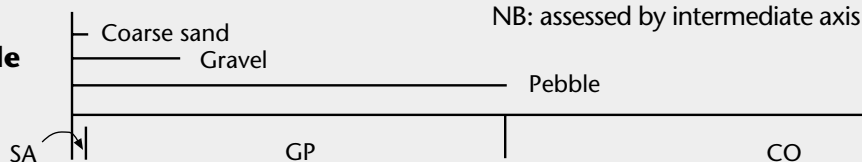
BANKS		CHANNEL	
<p><b>Predominant bank material</b></p> <p><b>NV</b> = not visible</p> <p><b>BE</b> = bedrock  <b>BO</b> = boulder  <b>CO</b> = cobble  <b>GS</b> = gravel/sand  <b>EA</b> = earth (crumbly)  <b>PE</b> = peat  <b>CL</b> = sticky clay</p> <p><b>CC</b> = concrete  <b>SP</b> = sheet piling  <b>WP</b> = wood piling  <b>GA</b> = gabion  <b>BR</b> = brick/laid stone  <b>RR</b> = rip-rap  <b>TD</b> = tipped debris  <b>FA</b> = fabric  <b>BI</b> = bio-engineering materials</p>	<p><b>Bank modifications</b></p> <p><b>NK</b> = not known  <b>NO</b> = none</p> <p><b>RS</b> = resectioned (reprofiled)  <b>RI</b> = reinforced  <b>PC</b> = poached  <b>PC(B)</b> = poached (bare)  <b>BM</b> = artificial berm  <b>EM</b> = embanked</p> <p><b>Marginal and bank features</b></p> <p><b>NV</b> = not visible (e.g. far bank)  <b>NO</b> = none</p> <p><b>EC</b> = eroding cliff (<b>EC</b> if sandy substrate)  <b>SC</b> = stable cliff (<b>SC</b> if sandy substrate)</p> <p><b>PB</b> = unvegetated point bar  <b>VP</b> = vegetated point bar</p> <p><b>SB</b> = unvegetated side bar  <b>VS</b> = vegetated side bar</p> <p><b>NB</b> = natural berm</p>	<p><b>Predominant substrate</b></p> <p><b>NV</b> = not visible</p> <p><b>BE</b> = bedrock  <b>BO</b> = boulder  <b>CO</b> = cobble  <b>GP</b> = gravel/pebble (<b>G</b> or <b>P</b> if predominant)  <b>SA</b> = sand  <b>SI</b> = silt  <b>CL</b> = clay  <b>PE</b> = peat  <b>EA</b> = earth  <b>AR</b> = artificial</p> <p><b>Predominant flow-type</b></p> <p><b>NV</b> = not visible  <b>FF</b> = free fall  <b>CH</b> = chute  <b>BW</b> = broken standing waves (white water)  <b>UW</b> = unbroken standing waves  <b>CF</b> = chaotic flow  <b>RP</b> = rippled  <b>UP</b> = upwelling  <b>SM</b> = smooth  <b>NP</b> = no perceptible flow  <b>DR</b> = no flow (dry)</p>	<p><b>Channel modifications</b></p> <p><b>NK</b> = not known  <b>NO</b> = none</p> <p><b>CV</b> = culverted  <b>RS</b> = resectioned  <b>RI</b> = reinforced  <b>DA</b> = dam/weir/slucice  <b>FO</b> = ford (man-made)</p> <p><b>Channel features</b></p> <p><b>NV</b> = not visible  <b>NO</b> = none</p> <p><b>EB</b> = exposed bedrock  <b>RO</b> = exposed boulders  <b>VR</b> = vegetated rock  <b>MB</b> = unvegetated mid-channel bar  <b>VB</b> = vegetated mid-channel bar  <b>MI</b> = mature island  <b>TR</b> = Trash (urban debris)</p>

**FLOW-TYPES**

**DESCRIPTION**

<b>FF: Free fall</b>	clearly separates from back-wall of vertical feature ~ associated with waterfalls
<b>CH: Chute</b>	low curving fall in contact with substrate ~ often associated with cascades
<b>BW: Broken standing waves</b>	white-water tumbling waves must be present ~ mostly associated with rapids
<b>UW: Unbroken standing waves</b>	upstream facing wavelets which are not broken ~ mostly associated with riffles
<b>CF: Chaotic flow</b>	a chaotic mixture of three or more of the four fast flow-types with no predominant one obvious
<b>RP: Rippled</b>	no waves, but general flow direction is downstream with disturbed rippled surface ~ mostly associated with runs
<b>UP: Upwelling</b>	heaving water as upwellings break the surface ~ associated with boils.
<b>SM: Smooth</b>	perceptible downstream movement is smooth (no eddies) ~ mostly associated with glides
<b>NP: No perceptible flow</b>	no net downstream flow ~ associated with pools, ponded reaches and marginal deadwater
<b>DR: No flow (dry)</b>	dry river bed

**Scale**



LEFT

Banks are determined by looking downstream

RIGHT

**CHANNEL MODIFICATION INDICATORS**




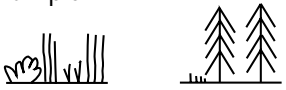




One or more of the following may be indicative of resectioning:

1. Uniform bank profile
2. Straightened planform
3. Bankfull width/bankfull height ratio <4:1
4. Uniform/low energy flow-types
5. No trees/uniformly-aged trees along bank
6. Intensive/urban land-use

**LAND-USE WITHIN 5m OF BANKTOP (SECTION F) & 50m (SECTION H)**

<b>BL</b> = Broadleaf/mixed woodland (semi-natural)	<b>AW</b> = Artificial open water	<b>TL</b> = Tilled land
<b>BP</b> = Broadleaf/mixed plantation	<b>OW</b> = Natural open water	<b>IL</b> = Irrigated land
<b>CW</b> = Coniferous woodland (semi-natural)	<b>RP</b> = Rough unimproved grassland/pasture	<b>PG</b> = Parkland or gardens
<b>CP</b> = Coniferous plantation	<b>IG</b> = Improved/semi-improved grassland	<b>NV</b> = Not visible
<b>SH</b> = Scrub & shrubs	<b>TH</b> = Tall herb/rank vegetation	
<b>OR</b> = Orchard	<b>RD</b> = Rock, scree or sand dunes	
<b>WL</b> = Wetland (e.g. bog, marsh, fen)	<b>SU</b> = Suburban/urban development	
<b>MH</b> = Moorland/heath		

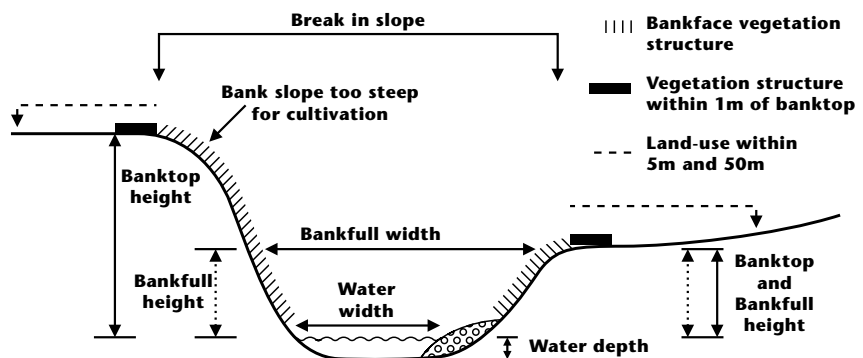
**BANKTOP AND BANKFACE VEGETATION STRUCTURE To be assessed within a 10m wide transect (SECTION F)**

bare	B	bare earth/rock etc.	vegetation types
uniform 	U	predominantly one type (no scrub or trees)	 bryophytes  short/creeping herbs or grasses
simple 	S	two or three vegetation types	 tall herbs/grasses  scrub or shrubs
complex 	C	four or more types	 saplings and trees

**Channel dimensions guidance (Section L)**

- Select location on uniform section.
- If riffle is present, measure there. If not, measure at straightest and shallowest point.
- **Banktop** = first major break in slope above which cultivation or development is possible.
- **Bankfull** = point where river first spills on to floodplain.

**Cross-section of channel showing definitions used to define where spot-check recording and channel dimensions measured**



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