

## APPENDIX 3

### SUMMARY DEFINITIONS FOR AQUATIC, MARGINAL AND BANK ZONES

#### 1 AQUATIC ZONE

a)	Depth:	Indicate on cross-sections (m)	Protruding rocks	In upland rivers boulders are frequently visible above the water level. These provide important habitats for several plant and animal species and the area within a 500m length occupied by them should be indicated by a percentage estimate.
b)	Width:	Indicate on cross-sections (m)		
c)	Substrate:	Expressed as a percentage of area of section		
	Silt/Mud	Unlike fine sands, these are of a soft texture and not abrasive to the hands if rubbed. A fine layer of silt through which gravel, rocks etc. can be seen should be typed according to underlying substrate but the presence of silt noted separately.	d) Flow:	Expressed as a percentage of length of the section
	Clay	Reserved for solid surfaces where flow does not remove the substrate.	Pool	A distinct, deeper area of slow-flowing water, often with an eddying flow, between fast-flowing stretch.
	Sand	Includes coarse and fine sands, the former merging into fine gravel and the latter merging into mud and silt (<2mm).	Slack	Area of deep or shallow water where the velocity is slow due to a very shallow slope in the river, natural or artificial ponding. There is no widespread eddying and as river levels rise the water velocity increases much quicker than areas recorded as "pool".
	Fine gravel/ shingle	2-16mm diameter.	Riffle	Fast flowing; shallow water with a distinctly broken or disturbed surface.
	Coarse gravel/ shingle	16-64mm diameter (conker to half-fist size).	Run	Fast or moderate flowing, deeper water with a surface generally undisturbed except for occasional swirls and eddies.
	Cobbles	64-256mm diameter (half-fist to approximately large head size).	Rapids	Rapid water velocity with a severely broken surface, deeper than a riffle.
	Boulders	Any rocks larger than 256mm in diameter	Waterfall	Solid rock falls exposed causing a vertical (>1m) drop in the river water. If large, in some cases it may be appropriate to record separately.
	Bedrock	Exposure of underlying solid rock in river bed.		
	Peat	Strictly pure peat, not fine peaty deposits over more substantial substrates.		
	Artificial	Any artificial materials covering the river bed e.g. concrete, brick, timber, etc.		

## 2 MARGINAL ZONE

- a) Width: Indicate on cross-sections (m)
- b) Substrate:
- Mud Flat areas of mud in slow-flowing stretches often occurring in the river directly adjacent to steep banks.
- Sand As for mud but formed of sand.
- Bare gravel/cobbles Loose material thrown up by the river. A temporary habitat liable to be re-contoured by each flood.
- Vegetated gravel/shingle More permanent shallow marginated area comprising cobbles constantly being inundated and exposed by variations in flow levels. It should be distinct from the bank yet not forming an island.
- Rock Areas of rock normally under a shallow depth of water and only exposed by the lowest flows.
- Artificial As above, but of artificial substrates.

## 3 BANK ZONE

- a) Height: Indicate on cross-sections (m)
- b) Width: Indicate on cross-sections (m)
- c) Slope: Indicate on cross-sections (°)
- d) Bank characteristics: Expressed as a percentage length of section
- e) Trees: Number per section. NB. This refers to numbers of individual trees where these can be identified (i.e. not woodland).