GEOMORPHOLOGICAL INDEX Monitoring Data Sheet

OBSERVER _____ DATE

RIVER
MAP SHEET
LATITUDE & LONGITUDE OF SITE
ALTITUDE (m)_____REACH GRADIENT (from topo. map)

RIVER ZONE CHANNEL TYPE

FINAL RATING (bring scores forward from last page)

Zone	Channel type	Bank stability	Degradation	Aggradation

1. MEASURING SITE

a. Sketch **(use in particular to indicate differences from the reference photograph)**

Show key features such as:

- channel morphology
- flow direction
- north
- roads, footpaths and nearest access
- bridges, crossings
- fences
- gauges and instream barriers
- buildings

Downstream

b. Photographs

Film No	Shot No

Overhead

Upstream

2. PHYSICAL CHARACTERISTICS

Water level at time of sampling

Dry		Isolated Pool		Low Flow		Med Flow		High Flow		Flood	

water turbidity

Clear		**cloudy**		**opaque**	

3. BANK VEGETATION (ACTIVE CHANNEL)

Rate: none - 0; sparse - 1; patchy - 2 continuous - 3; dense (impenetrable) - 4

DENSITY	Reeds	Grasses	Shrubs & Trees
banks of active channel			

Rate: no impact - 0; limited impact - 2, extensive impact - 3; channel blocked - 4.

COARSE ALIEN WOODY DEBRIS (in channel)	Amount (Rate 0 - 5)	Source: Local/Upstream

4. CHANNEL MODIFICATIONS AND BANK IMPACTS

IN-CHANNEL MODIFICATIONS (Tick if present within 100 m of the study)		**BANK IMPACTS (at site) (Note level of impact)**				
weir			**none**	**limited**	**moderate**	**severe**
causeway		**livestock**				
bridge		**wild animals**				
fence across river		**footpaths**				
bulldozing/ gravel extraction		**vegetation removal**				
		invasive vegetation				
gabions		**other**				
canalisation						
other:						

5. CHANNEL CONDITION

GEOMORPHOLOGICAL INDICATORS

BANK CONDITION

Tick if present	
active/recent channel incision	
active-channel shifting	
macro-channel shifting (cut-offs and avulsion)	

Tick appropriate column		LHB	RHB
A. fluvial bank erosion (undercutting, slumping etc. caused by river action) Note % of bank length affected	0 %		
	<10%		
	10-33%		
	33-75%		
	>75%		
B. sub-aerial erosion (sheet wash,rills, etc. on banks not caused by river action): ***tick if present***			
well vegetated banks, no sign of erosion			
sparsely vegetated banks, limited rilling and or livestock tracks			
steep unvegetated banks, active rilling and/or gullying and/or extensive livestock trampling			

COMMENTS

BAR CONDITION

Bar types ***Tick relevant boxes***	dominant bar material		width at widest point (% active channel)	encroaching vegetation (0 none - 4 dense) note veg type	
	sand/ gravel	cobble			
lee					
point					
lateral					
mid-channel					
tributary					

BED CONDITION

Bed material ***(tick the size class of the larger material)***	silt/ clay	sand/ fine gravel	co.gravel/ pebble	cobble/ boulder

Erosion indicators ***tick box if observed***	local (<10% area)	moderate (10 - 50% area)	extensive (>50% area)
local bed scour			
well sorted (uniform) clean gravel/cobble	NA	NA	
bedrock pavement			

Deposition indicators ***tick box if observed***	local (<10% area)	moderate (10 - 50% area)	extensive (>50% area)
silt deposits in pools (give maximum depth of silt)			
silt drapes on channel margins/ over cobbles or boulders			
embedded cobbles	limited	moderate	extensive
riffle, run, plane bed			
pools			

tendency towards flat bed of sand or fine gravel	mod-erate		definite	

	overbank deposition	minor		wide-spread	

6. GENERAL ASSESSMENT (Circle appropriate rating)

Rating table for bank condition

Condition	rating
Stable: erosion resistant soils, no undermining, usually gentle slope, good vegetation cover, no significant damage to bank structure or vegetation, no exposed roots.	0
Limited erosion: good vegetation cover, some minor isolated erosion, no continuous damage to bank structure or vegetation, some exposed roots.	1
Moderate erosion: banks held by discontinuous vegetation, some obvious damage to bank structure and vegetation, generally stable toe, moderately exposed roots, erosion limited to one bank.	2
Extensive erosion: little effective vegetation, mostly unstable toe, large numbers of exposed roots	3
Extreme erosion: evidence of rapid unchecked erosion, no effective vegetation, unstable toe, very recent bank movement, erosion on both banks	4

Rating table for bed degradation

Condition	rating
Nil bed degradation: no evidence of degradation	0
Moderate bed degradation: absence of fine alluvial material, narrow low-flow course, evidence of recent minor deepening	2
Extreme bed degradation: evidence of recent severe deepening, possible erosion heads	4

Rating table for bed aggradation

Condition	rating
Nil bed aggradation: no evidence of aggradation	0
Moderate bed aggradation: accumulation of material at obstructions, bed tending to flat, same size material on bed and bars, evidence of minor overbank siltation, slight to moderately embedded cobbles, moderate silt in pools	2
Extreme bed aggradation: flat bed, channel largely blocked by sand or gravel bars, overbank siltation evident, severely embedded cobbles, extensive silt in pools	4

rating (bank/degradation/aggradation)			