

6. The monitoring programme

6.1 Frequency of monitoring

A geomorphological baseline assessment is made when the sites are initially set up. This should be repeated after major hydrological events such as the 10 year flood, following significant upstream disturbances such as a forest fire or a major land use change or after a significant period of time (say 5 years if catchment conditions had remained stable). A full survey, including transect surveys using a surveyor's level or total station and possibly hydraulic habitat modelling, should be carried out for reference sites. This could be replaced by a rapid survey at sites where geomorphology is not thought to be an issue, e.g. monitoring below a sewage outfall.

Rapid monitoring of channel condition (rapid monitoring) should normally be made once a year during the low flow period to facilitate access to the channel.

Table 2 indicates the data requirements for a full and rapid baseline survey and follow up monitoring.

Table 2. Components to be included for different levels of assessment of the Geomorphological Index. (U should be included; (U) include if time/resources allow)

	transect surveys	hydraulic habitat modelling	data sheets	survey of bed particle size distribution
full baseline survey	U	(U)	U	U
rapid baseline survey			U	U
full monitoring	U	(U)	U	U
rapid monitoring			U	(U)

6.2 Levels of expertise and resources

The initial site rating and subsequent resurveys

The baseline survey must be carried out by a professional geomorphologist with field experience. A field assistant will be needed to help with transect surveys and to assist in undertaking bed material surveys. From past experience of IFR (Instream Flow Requirement) site assessments the base line assessment would probably take two to three hours of dedicated time at the site, depending on the size of the channel and its complexity. Resources required include the data sheets and camera, a 50 or 100 m measuring tape and a standard template for particle size measurements. The cross-section surveys would take a further one to two hours and would require a surveyor's level and accessories or total station.

Monitoring

Monitoring should be carried out by a trained technician or evaluator. Each site should take about half an hour to assess using the forms provided. The evaluator must be encouraged to move around the site and to get into the river whenever possible as it is not possible to assess the condition of the bed from the river bank. Resources required include the data sheets and a camera.