

## **Dynamics of bank erosion on the River Dane, England**

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**Abstract** Evidence for the temporal and spatial variability in bank erosion rates is provided from air photo evidence for three periods and annual ground mapping evidence since 1981. Data on rate and distances of bank erosion are analysed in relation to parameters of peak discharge. Based on the period 1984–1996, a scaling relationship and calibration equation for calculating mean amount of erosion in each year is produced and tested against actual amounts in the period 1997–2001 and 2001–2007. The variability of the bank erosion has important implications for sediment supply and downstream impacts.

**Key words** river channel; bank erosion rate; flood impacts; river meanders; channel morphology; sediment; England