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Abstract: Historical trend analysis is often used at the coastline to provide rates of coastal erosion or accretion as part of shoreline or beach management studies. The long-term data for historical trend analysis at UK sites often come from tidelines (representing high or low water) from Ordnance Survey (or older) maps. Recent Ordnance Survey (OS) digital maps no longer retain the date of survey, which is needed for historical trend analysis. An alternative is to use datum-based tidelines from survey data, although these are different from the proxy-based tidelines on OS maps. The plotting of tidelines on OS maps is reviewed and the errors involved in establishing the positions of tidelines are divided into source uncertainty, interpretation uncertainty and natural shoreline variability. Methods of calculating these errors are presented and examples provided. The methods for including uncertainties in historical trend analysis are introduced. Adoption of these methods would allow the significance of changes in tidelines to be assessed, which will assist coastal management.

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