Riparian Boundaries, unintended consequences in an unconstrained environment

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SUMMARY

Abstract This paper focuses on the boundary determination of watercourses in Queensland and options for boundary location to be realigned with the physical feature (or not), through the impact of either accretion, erosion or avulsion. Riparian boundaries are split into two watercourse categories, either tidal or non-tidal boundaries. If a non-tidal watercourse boundary is deemed to have moved by accretion or erosion, the boundary can move with the physical feature in accordance with the Surveying and Mapping Infrastructure Act (2003) and the Cadastral Survey Requirements, Queensland Department of Resources (DoR). However, should the change be deemed as avulsion, the boundary does not change and remains as it was authoritatively located prior to the First New Plan of Survey (FNPOS). The aim of the project is to investigate the unintended outcomes from the Doctrine of Accretion (and Erosion) in ambulatory boundary (non-tidal) determination. A case study is analysed that has experienced change in the non-tidal boundary by the processes of accretion, erosion, avulsion and man-made activity. The historical aerial imagery and cadastral plans of the case study site are analysed to map the location of the top of bank position. The approximate timing of the boundary changes is analysed against temporal flood events including discussion about how, why, and when the physical and non-tidal boundaries have most likely changed. The case study is assessed against the current legislation and the Doctrine of Accretion.