Making room for geomorphology in Brisbane!

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# ABSTRACT

Brisbane is known internationally for its thriving and connected greenspaces and waterways. We present a waterway example that is one of the most used by the community, where urbanisation of the catchment has resulted in a number of modifications including waterway and floodplain confinement, velocity increases, erosion and geomorphic adjustment, impacts to infrastructure, poor water quality and reduced riparian habitat.

The waterway is now confined by urban infrastructure, with a primary function of flood conveyance, leaving little room for the waterway to move and adjust. Through erosion of the channel across sandy soils, the waterway is now responding to impacts and reactivating its floodplain. In recent 2022 State-wide flooding, major flooding and erosion occurred within the catchment that severely impacted infrastructure, resulting in an increased focus on the management of the catchment from government and stakeholders.

Forming part of a catchment appraisal document, we undertook a geomorphic assessment that used desktop and field assessments to understand current geomorphic condition, the stages of geomorphic evolution and trajectory towards equilibrium throughout the catchment. This was used to identify higher risk reaches and to provide short to long term strategic planning to make room for water and geomorphic adjustment to provide greater sustainability and climate resilience in the future.