

Fact Sheet

Kolan River and Gin Gin Creek Flood Study

GHD Pty Ltd was commissioned by Bundaberg Regional Council (BRC) to undertake:

- A regional flood study of the Kolan River and Gin Gin Creek; and
- A local flooding assessment for the township of Gin Gin.

What is a Flood Study?

A Flood Study investigates the nature, frequency and severity of flooding across a catchment. It involves both hydrology (how rainfall becomes flow in creeks and rivers) and hydraulics (the behaviour of water as it travels down a waterway).

Flood Study Objective

The Flood Study has been prepared to assist in the drafting of a new regional planning scheme and to inform planning decisions with respect to flooding issues. It has also been prepared to help Council to satisfy the recommendations of the Queensland Floods Commission of Inquiry that recent flood studies should be available for all floodplains that have the potential to impact communities.

Study Area

The area of focus for this study was the Kolan River floodplain between the Fred Haigh Dam and the River Mouth, and the Gin Gin Creek floodplain between Brushy Creek and the confluence with the Kolan River. In addition, the local overland flow paths within the Gin Gin township were investigated.

Outcomes & Outputs

The main outputs from the study are maps and digital data layers showing flood levels, depths and velocities across the study area for a range of Design Flood Events. This data will be used by Bundaberg Regional Council for planning, community education and emergency management.

Flood Study Tasks

The following activities were undertaken as part of the Flood Study:

- Collecting and reviewing relevant data such as rainfall records, aerial photos, previous reports, catchment contours, topographic and bathymetric survey, and recorded flood levels.
- Reviewing and analysing the history of flooding on the Kolan River and Gin Gin Creek. Significant floods occurred in the catchment in 1875, 1887, 1893, 1913, 1961, 1971, 1992, 2003, 2010, 2012 and 2013.
- Hydrologic and hydraulic modelling using sophisticated computer software to determine the nature of flooding within the study area.
- Calibration of the computer models to the 2010, 2012 and 2013 historic events to give confidence in the accuracy of the results.
- Assessment of Design Flood Events of given probability for use in planning and emergency management.
- Mapping of flood extents, levels, depths, velocities and velocity depth products across the study area for each of the Design Flood Events.

