

# Projects

## Lower Goulburn Floodplain Rehabilitation Scheme

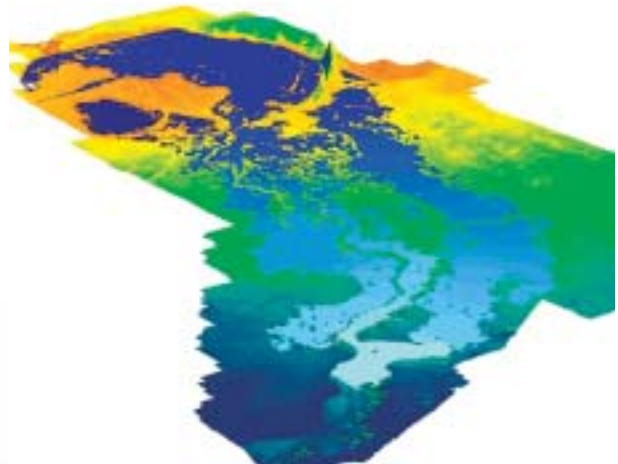


### Client: Goulburn Broken Catchment Management Authority

Flooding on the Lower Goulburn River, in north east Victoria, has been a problem as far back as the 1850's. Downstream of Shepparton the floodplain gradient reduces and the Lower Goulburn River is flanked by an almost continuous system of levees. For floods equal to or larger than approximately a 10 year ARI flood however, the levees overtop and/or fail randomly along the river. The unplanned and virtually arbitrary overtopping and breaching of the levees along the river produces destructive flooding causing substantial damage to agriculture, infrastructure and the levees themselves. Following the damaging floods of 1993, Natural Disaster funds were released by the State Government to reinstate the failed levee system on the understanding that a solution to address the flooding problems on the Lower Goulburn floodplain was implemented.



The Goulburn Broken Catchment Management Authority is the authority responsible for floodplain management on the Lower Goulburn and has resolved to proceed with the Lower Goulburn Floodplain Rehabilitation Scheme. As part of the Lower Goulburn Floodplain Rehabilitation Scheme it is proposed to re-engage the northern floodplain, allowing a flooding regime much closer to that which would have occurred under natural (unaltered) conditions. The scheme will require the development of a banded floodway with a potential buy back of up to 9,700 ha of land from the relevant landholders. The key aim is for the scheme to have the capacity to



safely convey a repeat of the October 1993 flood i.e. 150,000ML/d (1736m<sup>3</sup>/s) and other floods up to 35 years recurrence interval.

Water Technology was commissioned to develop a state of the art, coupled one dimensional and two dimensional hydraulic model to simulate the flooding behaviour of the Lower Goulburn floodplain. The development of the hydraulic model required a major calibration process to insure that the model accurately simulated the complex flooding behaviour of the Lower Goulburn Floodplain, including the operation of major hydraulic structures and levee failures. The calibrated hydraulic model provided a key design tool to undertake extensive hydraulic assessment of the proposed scheme and optimise the arrangement of the required spillway(s) and bund alignment to best meet the objectives of the scheme.

For more information contact Steve Clark ([steve.clark@watech.com.au](mailto:steve.clark@watech.com.au)) or Tim Womersley ([tim.womersley@watech.com.au](mailto:tim.womersley@watech.com.au)).

### Services Provided

- Hydrological modelling
- Floodplain modelling
- Floodplain mapping
- Floodplain management