

# Koondrook-Perricoota Modelling

Murray River, NSW

## Background

The Koondrook-Perricoota Forest is located some 30 km west of Moama in south-west NSW. The Koondrook-Perricoota Forest Cutting project is within one of the six icon sites under the Living Murray Initiative. The Koondrook-Perricoota Forest Cutting will gravitate water from the Torrumbarry Weir into the Koondrook-Perricoota Forest for ecological purposes.

Manly Hydraulics Laboratory (MHL) was commissioned by the Murray-Darling Basin Commission to set up a hydraulic model of the cutting and surrounding floodplains.

## Project Scope

The primary objective of the study was to set up a 1D hydraulic model of the proposed cutting leading from the Murray River to Bullock Head Creek to assist with the design of the cutting.

The proposed cutting will deliver up to 6000 ML/day to the forest to restore flood frequency duration in the forest.

## Our Role

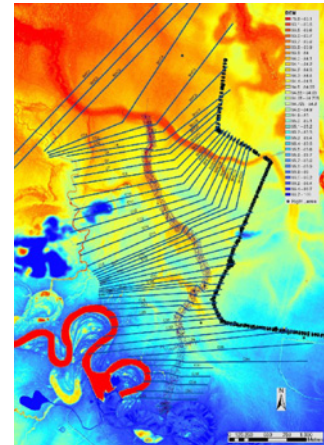
MHL undertook both feasibility modelling and concept design modelling. Model simulations focused on optimising the design to deliver 6000 ML/day to the forest. The main aspects of the project included:

- setting up a MIKE-11 hydraulic model
- feasibility modelling for 6000 ML/day discharge
- concept design modelling for discharges of 2000, 4000 and 6000 ML/day.

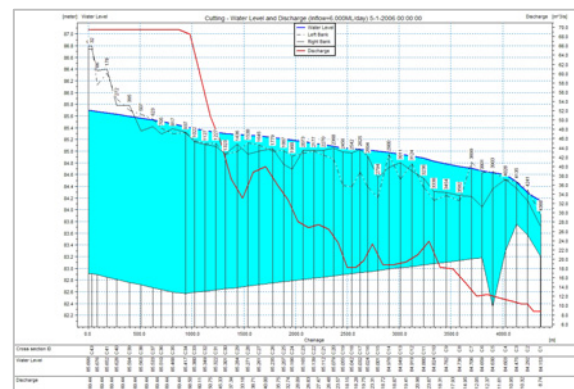
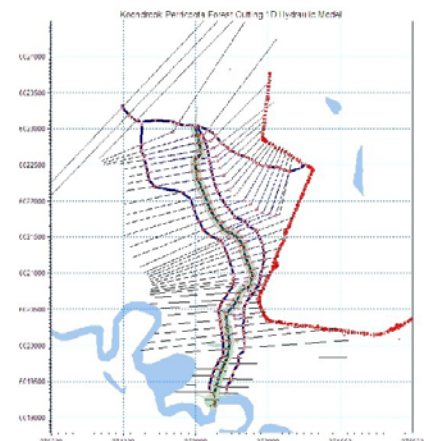
## Outcomes

The hydraulic behaviour of flows through the cutting and in the floodplains was analysed and the design was then optimised to meet the objectives of the project. Results of the 1D model were passed on to the Department of Natural Resources to input into a broader 2D model of the greater forest area.

Digital elevation model



1D hydraulic model network



Long section along cutting showing water level and discharge